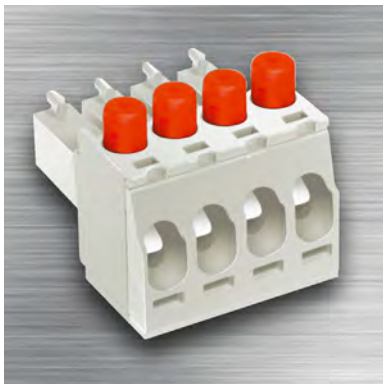
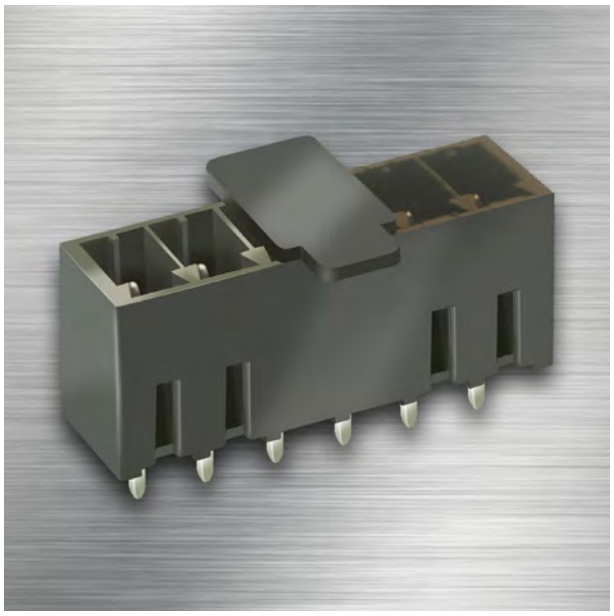
Connection Technology for Printed Circuit Boards Pitch 3.5 mm

WECO - making contact





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210-A-126-SMD

110-A-IDC

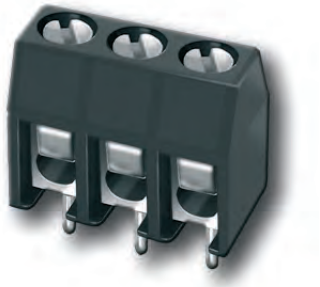
110-S-211

Symbols on data sheets

These symbols can be found on our data sheets on the right side of the product image.

RoHS COMPLIANT	These articles comply with the RoHS regulations and are, in addition, fitted with a high temperature resistant housing.
Tape-on-Reel Product	This product is available in Tape-on-Reel. Detailed information about number of poles, part numbers, tape width, belt height and packing units is given on the data sheet.
pottable	Through its geometry, this product is specially suitable for potting.
„no flame“ after glow-wire test according to household appliance standard DIN EN/IEC 60335-1	The materials used for enclosures are VDE-tested and approved according to the glow-wire tests specified in DIN EN/IEC 60335-1. It is conforms with the requirements of the increased household appliance standard.

Overview



Connectors for printed circuit boards

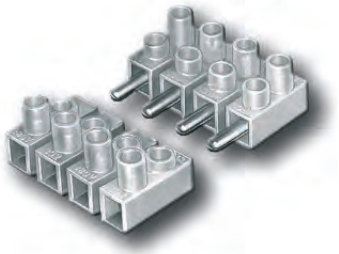
WECO PCB connectors always offer a good solution for almost any connection problem by its big variety of types. The screw connections are available in socket terminal style, in elevator clamping style or as head contact terminals. The plug connectors are especially designed for the connection of components or peripheral devices. Tab connectors and screwless types complete the product program.

Plug-In connector systems

The series of conecta are plug-in connector systems consisting of plug connectors with screw and their corresponding pin strips.
Due to four different pitch sizes, lateral flange executions, tier versions and different plug directions, this product serie suit almost every application on the PCB. All connectors offer coding possibilities to avoid incorrect plugging.

SMD & THR

“SMarTconn” covers terminals and plug connectors for surface mount and reflow soldering technique. Apart from the proven Through-Hole-Technology (THR) we focus on genuine SMD - Surface Mount Devices – in this product serie. With their reliable adhesive forces and their good reflow soldering capabilities, we offer products, which are a worthy replacement for the conventional soldering technique. All products of this series are packed in tape-on-reel or tube magazines for the automatic assembling with a pick & place machine.



Terminal strips

This group contains socket terminals, plug-in connectors, screwless types and additionally the combination of screw and solder tag for the wire-to-wire connection. All types are available for different cross sections, with and without wire protectors. The used Polyamide plastic material pass the ball pressure test with 125°C according to VDE 0470, which is demanded in many IEC and VDE regulations for insulants.

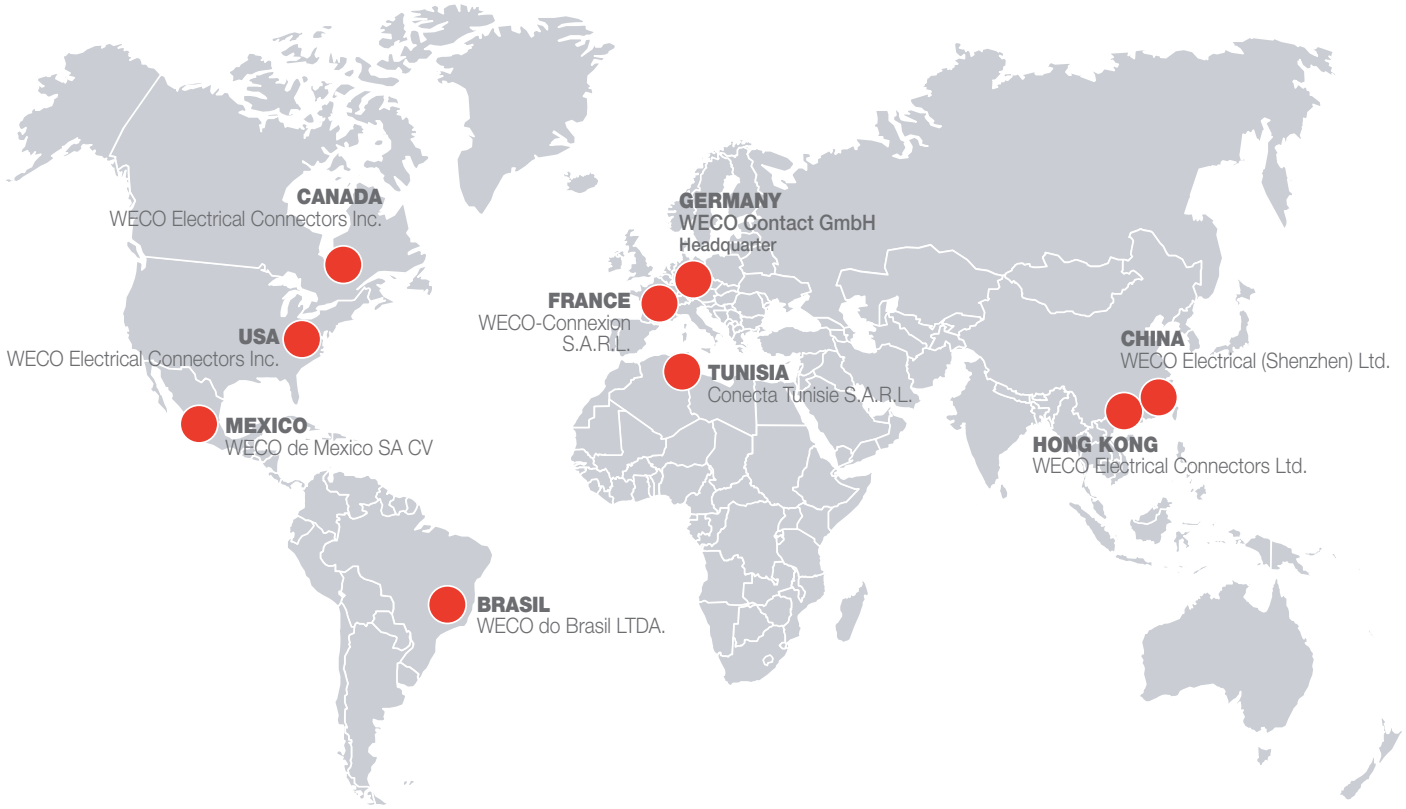
Tab connectors

These connectors are equipped with receptacles in different sizes and styles. Mixed arrangements per terminal block as well as per pole (Multi-Point Tab Connectors) are possible. Combinations of tab / solder connectors, flat plug couplers and space saving tier versions increase the density of connections. The tab connectors offer a wide spectrum of possible combinations, whereby many connection problems can be solved.

Ceramic terminal blocks

This group covers mantle terminals, ceramic terminal strips and terminals for explosion and firedamp-hazard areas. Various sizes and designs permit them to be used for wire cross sections up to 120 mm² and including applications in furnace construction and ship building, for engines and intrinsically safe electrical equipment. The terminal blocks with ceramic insulator can be used at increased temperatures.

The WECO Group



We, WECO Contact GmbH, are a German manufacturer of high reputation in the field of electronics and electrical engineering. Our headquarter is located in Hanau and has own assembly and sales companies in USA, Canada, Brazil, France, China, Hong Kong and Mexico. With over 450 employees and a worldwide distribution network in 56 countries, we speak the language of our customers.

Our extensive product range includes nearly 17,000 different articles.

We are well known for innovation which is particularly evident in the patented SMD series for the genuine surface mounting technology. Hereby, the user experiences real cost savings in the manufacturing process, especially if the terminal is the last component of the customer to be soldered on the board.

Another strength are the customer-specific developments and a fast and flexible project implementation with which we respond to the increasing engineering demands of the middle class customers.

The entire WECO Group is a reliable partner for our customers, and the customers' satisfaction is one of our main goals to achieve.

www.wecogroup.com

Household Appliance Standard DIN EN/IEC 60335-1

What is the household appliance standard all about?

The household appliance standard DIN EN/IEC 60335-1:2007-02 standardizes the safety features of electrical appliances for household use and similar purposes.

The standard requires testing of glow wire resistance for non-metallic materials used in appliances operated with >0,2 A and applies for non-metallic materials which hold active components in position.

These fire protection requirements shall prevent self-ignition of unattended appliances thus significantly increasing fire safety.

For which appliances does this standard apply?

The standard is applicable for electric and electronic components in unattended household appliances with rated currents of >0,2 A, such as

terminals and switches, e.g. in:

- Dishwashers, washing machines, refrigerators
- Kitchen stoves, microwaves
- Small household appliances, such as mixers, coffee machines

Unattended equipment used in small and medium-sized enterprises is also affected, namely:

- Pump components
- Illuminant components
- Industrial and commercial cleaning equipment
- Hair salon equipment etc.

WECO products are compliant with the glow-wire tests according to the household appliance standard!

For the white goods market segment, WECO Contact GmbH offers an extensive range of products meeting the requirements of the Household Appliance Standard DIN EN/IEC 60335-1. Even before the transition period expired in July 2007, many WECO products had already been compliant with the tightened household appliance standard, providing WECO Contact with an enormous edge over competitors, particularly over those in Asia.

The materials used for enclosures are VDE-tested and approved according to the glow-wire tests specified in DIN EN/IEC 60335-1. This applies for all standard WECO colors!

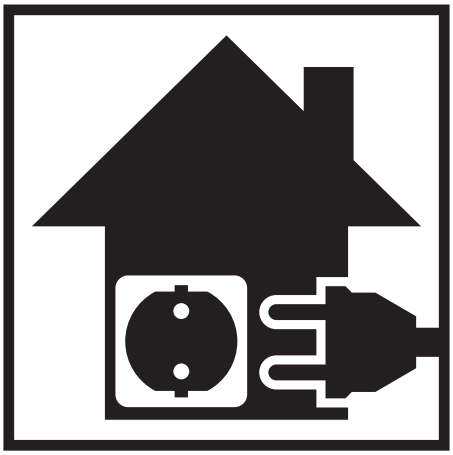
PRODUCTS:

- All products of the connections for printed circuit boards with the exception of large-pole articles of the series 95.., 96.. and 97.. as well as SMD and THR products.
- Series 326 and 327
- Other products: Producibility must verified for each product

We designate products compliant with this tightened household appliance standard, if a specific variant compatible to the household appliance standard is available:

- PART NUMBER:
  The existing 8-digit article number will be continued and supplemented by „EN6“.

- DESIGNATION:
  The existing designation will be continued. A „6“ will be placed before „GP“ resulting in „6GP“.



Are you affected?

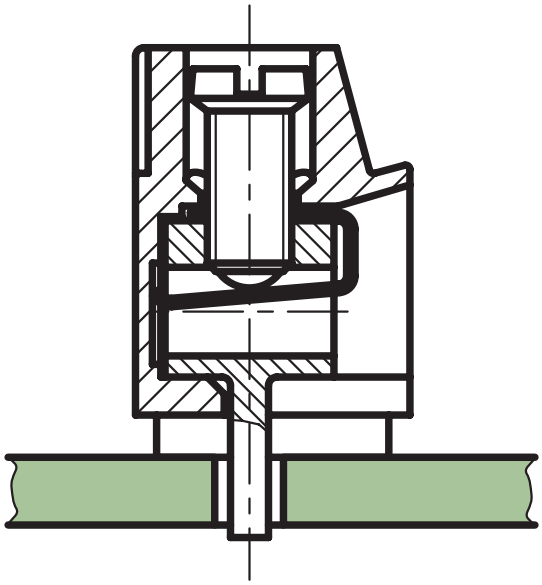
Even today, long after the tightened Household Appliance Standard DIN EN/IEC 60335-1 entered into force, many questions still arise and need clarification.

Even equipment manufacturers affected by this household appliance standard often are unaware of the standard's requirements and only find out that they ARE AFFECTED, when they submit their products at VDE and are denied approval because products do not meet the currently valid standards.

We at WECO Contact take technical support and service for our customers seriously. Therefore, we have compiled on our website a list of all manufacturer products affected by the household appliance standard. At a glance, our customers can now gather information on whether their appliances are affected or not.

The list is also a valuable tool for both sales staff and field reps, helping them to resolve possible unclear issues in project meetings, and enabling them to optimally support the customer.

PCB connectors



WECO Contact offers PCB connectors with a big variety of designs. We offer solutions for almost every application. The smallest connectors and terminals of our product range - 3,5 mm - are shown in this catalogue.

Depending on the type, the connectors are available with standard number of poles from 2 to 12 or 2 to 24. The „-T“ versions are available in of 2 and 3 pole versions. Lateral locking elements allow to mount them in any required pole configuration. Precise guidance and compliance of the pitch is guaranteed.

The screw connections are based on the principle of the socket terminal, built either as a lift system or as a head contact terminal.

Damage to flexible conductors can be prevented reliably by using our wire protection (indicated by „-DS“ in the product designation).

An enlarged terminal compartment with nearly square shape comes with the types of our series 938. Fine-stranded conductors up to 1.5 mm² can be connected with our wire protection-version.

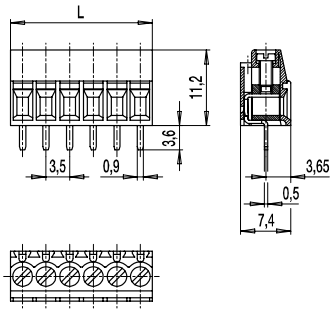
All versions have captive screws which also allow up-side down working.

Our standard terminals come without marking. On request, a marking, e.g. a sequential or individual numbering according to customers request can be printed on the housing.

PCB Connector

210-A-111

Screw connection



Series 210 is a space-saving PCB connector with a pitch of 3,5 mm and with relatively high connection capacity. The 2 to 24 pole connectors are equipped with M2 captive screws offering high-quality screw connection with elevator system. Connectors with such elevator system are ideal for frequent disconnections because terminal body and conductor move parallel towards the pressure clamp. The elevator system allows easy disconnecting and contacting without any material fatigue of the connector. A special feature of the housing is the easy identification of the pole separation, when viewed from the top. The connectors come equipped with a test hole and can be mounted side-by-side without pole loss.

Part Numbers

No. of poles	210-A-111	Length	Pcs
2	10.804.002	7,00	250
3	10.804.003	10,50	250
4	10.804.004	14,00	250
5	10.804.005	17,50	200
6	10.804.006	21,00	200
8	10.804.008	28,00	100
10	10.804.010	35,00	100
12	10.804.012	42,00	100

further number of poles on request

General Information

Pitch	3,5 mm
No. of poles	2 - 24
Areas of application	For all applications requiring low profile but large terminal space of 1,7 x 2,6 mm.

Technical Data

Clamping Range	*solid / flexible / AWG*		
	0,14 - 1,5 mm² / 0,14 - 1,5 mm² / 30 - 16 AWG		
Rated Cross Section	1 mm²		
Wire Stripping Length	5,5 mm ± 0,5 mm		
Overvoltage Category	III	III	II
Pollution Severity Level	3	2	2
Rated Voltage	125 V	160 V	200 V
Rated Impulse Voltage	2,5 kV	2,5 kV	2,5 kV
Rated Insulation Voltage	130 V acc. to EN 60998-1		
Rated Current	13,5 A		
Hole in PCB	ø 1,2 mm		
Torque	0,2 Nm		

Material

Moulding	PBTP, grey, V-0
Comparative Tracking Index	CTI 250
Insulating Group	IIIa
Temperature Range	-40°C up to 100°C
Terminal Body	Nickel plated brass
Pressure clamp	Copper alloy, tin plated
Screw	M2, copper alloy, tin plated
Solder pin	Copper alloy, tin plated

Approvals

	Current	Voltage	Group	AWG	Nm
	10	300	B	30 - 16	0,23
	10	300	B	30 - 16	0,22

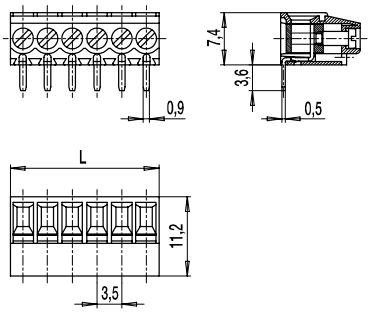
Options / Accessories

- Consecutive numbering
- Special marking accord. drawing
- Self-adhesive marking strip BST-3,50
- Version with anti-twist-peg

PCB connector

210-A-121

Screw connection, wire entrance vertical to PCB



Series 210 is a space-saving PCB connector with a pitch of 3,5 mm and with relatively high connection capacity. The 2 to 24 pole connectors are equipped with M2 captive screws offering high-quality screw connection with elevator system. Connectors with such elevator system are ideal for frequent disconnections because terminal body and conductor move parallel towards the pressure clamp. The elevator system allows easy disconnecting and contacting without any material fatigue of the connector. A special feature of the housing is the easy identification of the pole separation, when viewed from the top. The connectors come equipped with a test hole and can be mounted side-by-side without pole loss.

Part Numbers

No. of poles	210-A-121	Length	Pcs
2	20.804.002	7,00	250
3	20.804.003	10,50	250
4	20.804.004	14,00	250
5	20.804.005	17,50	200
6	20.804.006	21,00	200
8	20.804.008	28,00	100
10	20.804.010	35,00	100
12	20.804.012	42,00	100

further number of poles on request

General Information

Pitch	3,5 mm
No. of poles	2 - 24
Areas of application	For all applications requiring low profile but large terminal space of 1,7 x 2,6 mm.

Technical Data

Clamping Range	*solid / flexible / AWG*		
	0,14 - 1,5 mm² / 0,14 - 1,5 mm² / 30 - 14 AWG		
Rated Cross Section	1 mm²		
Wire Stripping Length	5,5 mm ± 0,5 mm		
Overvoltage Category	III	III	II
Pollution Severity Level	3	2	2
Rated Voltage	125 V	160 V	200 V
Rated Impulse Voltage	2,5 kV	2,5 kV	2,5 kV
Rated Insulation Voltage	130 V acc. to EN 60998-1		
Rated Current	13,5 A		
Hole in PCB	ø 1,2 mm		
Torque	0,2 Nm		

Material

Moulding	PBTP, grey, V-0
Comparative Tracking Index	CTI 250
Insulating Group	IIIa
Temperature Range	-40°C up to 100°C
Terminal Body	Nickel plated brass
Pressure clamp	Copper alloy, tin plated
Screw	M2, copper alloy, tin plated
Solder pin	Copper alloy, tin plated

Approvals

	Current	Voltage	Group	AWG	Nm
	10	300	B	30 - 16	0,23
	10	300	B	30 - 16	0,22

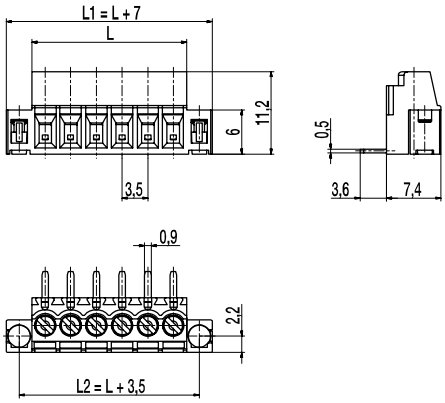
Options / Accessories

- Consecutive numbering
- Special marking accord. drawing
- Self-adhesive marking strip BST-3,50
- Version with anti-twist-peg

PCB connector for SMD

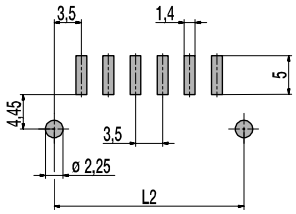
210-A-126-SMD

Screw connection, with solder flanges



L = No. of poles x pitch

PCB Layout



Solder paste thickness: 0,2 mm

The 2 to 12 pole connectors with a pitch of 3,5 mm have a screw connection with elevator clamping system and are equipped with M2 captive screws. Just as the 210-A-SMD, the 210-A-126-SMD represents a space saving and compact connector with a high connecting capacity. The generous clamping range is of 1,7 mm x 2,6 mm.
A distinguishing characteristic to the 210-A-SMD, however, is the clearly increased adhesion force on the PCB. Soldering cylinders on either side of the housing (floating anchors) are movable in vertical direction and thereby they obtain 100% coplanarity between solder pins and soldering cylinders.
They are transferred more to the front in comparison to the connector centre in order to keep the retaining strength, where the wires are connected. Thus, the force, acting on the solder pins, is reduced in a very important way.
Packed in magazines or equipped with Pick Discs in Tape-on-Reel, this genuine SMD terminal is suitable for the automatic assembly.

Part Numbers

No. of poles	210-A-126-SMD	Length	Pcs
2	10.804.232	14,00	888
3	10.804.233	17,50	696
4	10.804.234	21,00	576
6	10.804.236	28,00	432
10	10.804.240	42,00	234
12	10.804.242	49,00	198

further number of poles on request

General Information

Pitch	3,5 mm
No. of poles	2 - 12

Technical Data

Clamping Range	*solid / flexible / AWG*		
	0,14 - 1,5 mm² / 0,14 - 1,5 mm² / 30 - 16 AWG		
Rated Cross Section	1 mm²		
Wire Stripping Length	5,5 mm ± 0,5 mm		
Overvoltage Category	III	III	II
Pollution Severity Level	3	2	2
Rated Voltage	160 V	160 V	320 V
Rated Impulse Voltage	2,5 kV	2,5 kV	2,5 kV
Rated Insulation Voltage	130 V acc. to EN 60998-1		
Rated Current	13,5 A		
Soldering process	Reflow solder		
Torque	0,2 Nm		

Material

Moulding	PA HT, black, V-0
Comparative Tracking Index	CTI ≥ 600
Insulating Group	I
Temperature Range	-40°C up to 150°C; reflow solder temperature (Peak) max. 260°C (15-30 s)
Terminal Body	Nickel plated brass
Pressure clamp	Copper alloy, tin plated
Screw	M2, copper alloy, tin plated
Solder pin	Copper alloy, tin plated
Solder cylinder	Tin plated brass

Approvals

	Current	Voltage	Group	AWG	Nm
	10	300	B	30 - 16	0,23
	10	300	B	30 - 16	0,22

Options / Accessories

- Special marking accord. drawing
- Self-adhesive marking strip BST-3,50 [1]

Part Numbers: Tape-on-Reel

No. of poles	210-A-126-SMD	Tape Width	Tape Height	Pcs
2	10.804.232.A00	44 mm	14,6 mm	325
3	10.804.233.A00	44 mm	14,6 mm	325
4	10.804.234.A00	44 mm	14,6 mm	325
5	10.804.235.A00	44 mm	14,6 mm	325
6	10.804.236.A00	44 mm	14,6 mm	325
8	10.804.238.A00	56 mm	14,6 mm	325

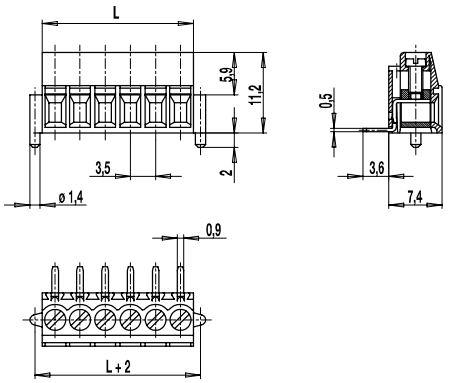
further number of poles on request

[1] To be fitted after reflow soldering process

PCB connector for SMD

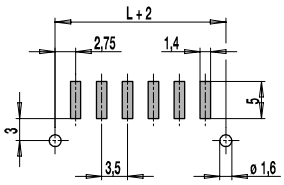
210-A-SMD

Screw connection, with anti-twist peg



L = No. of poles x pitch

PCB Layout



Solder paste thickness: 0,2 mm

The PCB connectors for surface mounting comprise several types for reflow processes.
The SMD connector 210-A-SMD with a pitch of 3,5 mm is designed with screw connections in elevator clamping style.
The terminal clamp and the soldering tag are manufactured as a single unit and permanently engaged in the housing. The solder pins are exactly aligned parallel to the printed circuit board in order to create a coplanar connection after the reflow soldering process.
The moulding is made of heat resistant thermoplastic material and equipped with plastic pegs on both sides to prevent twisting.
The use of a strain relief is recommended. This article is only available in tubes or in Tape-on-Reel.

Part Numbers

No. of poles	210-A-SMD	Length	Pcs
2	10.804.202	7,00	900
3	10.804.203	10,50	684
4	10.804.204	14,00	540
5	10.804.205	17,50	450
6	10.804.206	21,00	378
8	10.804.208	28,00	288
10	10.804.210	35,00	234
12	10.804.212	42,00	198

further number of poles on request

General Information

Pitch	3,5 mm
No. of poles	2 - 12

Technical Data

Clamping Range	*solid / flexible / AWG*		
	0,14 - 1,5 mm² / 0,14 - 1,5 mm² / 30 - 16 AWG		
Rated Cross Section	1 mm²		
Wire Stripping Length	5,5 mm ± 0,5 mm		
Overvoltage Category	III	III	II
Pollution Severity Level	3	2	2
Rated Voltage	160 V	160 V	320 V
Rated Impulse Voltage	2,5 kV	2,5 kV	2,5 kV
Rated Insulation Voltage	130 V acc. to EN 60998-1		
Rated Current	13,5 A		
Soldering process	Reflow solder		
Torque	0,2 Nm		

Material

Moulding	PA HT, black, V-0
Comparative Tracking Index	CTI ≥ 600
Insulating Group	I
Temperature Range	-40°C up to 150°C; reflow solder temperature (Peak) max. 260°C (15-30 s)
Terminal Body	Nickel plated brass
Pressure clamp	Copper alloy, tin plated
Screw	M2, Copper alloy, tin plated
Solder pin	Copper alloy, tin plated

Approvals

	Current	Voltage	Group	AWG	Nm
	10	300	B	30 - 16	0,23
	10	300	B	30 - 16	0,22

Options / Accessories

- Consecutive numbering
- Special marking accord. drawing
- Self-adhesive marking strip BST-3,50 [1]

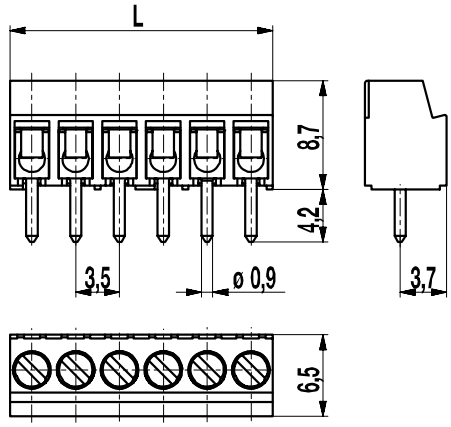
Part Numbers: Tape-on-Reel

No. of poles	210-A-SMD	Tape Width	Tape Height	Pcs
2	10.804.202.A00	44 mm	14,6 mm	325
3	10.804.203.A00	44 mm	14,6 mm	325
4	10.804.204.A00	44 mm	14,6 mm	325
5	10.804.205.A00	44 mm	14,6 mm	325
6	10.804.206.A00	44 mm	14,6 mm	325
7	10.804.207.A00	44 mm	14,6 mm	325

further number of poles on request

[1] To be fitted after reflow soldering process

PCB connector
930(-DS)
Screw connection



Series 930 Mini PCB connectors are designed with a pitch of 3,5 mm. They can be mounted side-by-side without pole loss, and come equipped with captive screws. DS-types are provided with wire protection which reliably prevents damage to flexible conductors.

Part Numbers

No. of poles	930	930-DS	Length	Pcs
2	10.870.402	20.870.402	7,00	250
3	10.870.403	20.870.403	10,50	250
4	10.870.404	20.870.404	14,00	250
5	10.870.405	20.870.405	17,50	200
6	10.870.406	20.870.406	21,00	200
7	10.870.407	20.870.407	24,50	100
8	10.870.408	20.870.408	28,00	100
9	10.870.409	20.870.409	31,50	100
10	10.870.410	20.870.410	35,00	100
11	10.870.411	20.870.411	38,50	100
12	10.870.412	20.870.412	42,00	100
13	10.870.413	20.870.413	45,50	100
14	10.870.414	20.870.414	49,00	100
15	10.870.415	20.870.415	52,50	100
16	10.870.416	20.870.416	56,00	100
17	10.870.417	20.870.417	59,50	100
18	10.870.418	20.870.418	63,00	100
19	10.870.419	20.870.419	66,50	100
20	10.870.420	20.870.420	70,00	100
21	10.870.421	20.870.421	73,50	100
22	10.870.422	20.870.422	77,00	100
23	10.870.423	20.870.423	80,50	100
24	10.870.424	20.870.424	84,00	100

General Information

Pitch	3,5 mm
No. of poles	2 - 24

Technical Data

Clamping Range	*solid / flexible / AWG*		
without wire protector	0,75 - 1,5 mm² / 0,75 - 1,5 mm² / 18 - 16 AWG		
with wire protector	0,34 - 1,5 mm² / 0,34 - 1 mm² / 22 - 16 AWG		
Rated Cross Section	1 mm²		
Wire Stripping Length	5 mm ± 0,5 mm		
Overvoltage Category	III	III	II
Pollution Severity Level	3	2	2
Rated Voltage	160 V	160 V	320 V
Rated Impulse Voltage	2,5 kV	2,5 kV	2,5 kV
Rated Insulation Voltage	130 V acc. to EN 60998-1		
Rated Current	13,5 A		
Hole in PCB	ø 1,2 mm		
Torque	0,2 Nm		

Material

Moulding	PA, grey, V-0
Comparative Tracking Index	CTI ≥ 600
Insulating Group	I
Temperature Range	-40°C up to 100°C
Terminal Body	Tin plated brass
Screw	M2, zinc plated steel, blue passivated
Solder pin	ø 0,9 mm; tin plated brass
Wire protector	German silver

Approvals

	Current	Voltage	Group	AWG	Nm
	10	300	B	26 - 16	0,23
	10	300	B	26 - 16	0,2

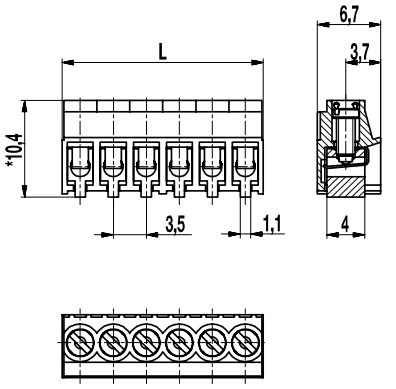
Options / Accessories

- Consecutive numbering
- Special marking accord. drawing
- Self-adhesive marking strip BST-3,50
- Pitch of 7 mm for larger clearance and creepage distances

PCB connector for SMD

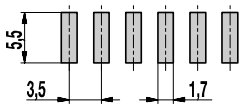
930-D-SMD(-DS)

Screw connection, floating terminal bodies



* = Height without -DS: 10,2 mm
L = No. of poles x pitch + 0,3 mm

PCB Layout



Solder paste thickness: 0,15 - 0,2 mm

This connector is in Tape-on-Reel-version supplied with a removable Pick Disc. That allows this product to be picked-and placed into any automated assembly processes. It's floating terminal bodies compensate for irregularities (non planarity and bumps) on the printed circuit board.
The same feature eliminates CTE (coefficient of thermal expansion) mismatch with the PCB and thus promotes excellent in field reliability and the successful passing of thermal cycling testing.

The screws are turned in to the optimal length of engagement by the factory but due to the movable sockets it is not to be excluded that the position of the screws may change by transport. Therefore it can be necessary that the screw has to be turned back for using the maximum permissible wire cross-section.

Part Numbers

No. of poles	930-D-SMD	930-D-SMD-DS	Length	Pcs
2	10.870.602	20.870.602	7,30	250
3	10.870.603	20.870.603	10,80	250
4	10.870.604	20.870.604	14,30	250
5	10.870.605	20.870.605	17,80	200
6	10.870.606	20.870.606	21,30	200
7	10.870.607	20.870.607	24,80	100
8	10.870.608	20.870.608	28,30	100
9	10.870.609	20.870.609	31,80	100
10	10.870.610	20.870.610	35,30	100
11	10.870.611	20.870.611	38,80	100
12	10.870.612	20.870.612	42,30	100

General Information

Pitch	3,5 mm
No. of poles	2 - 12

Technical Data

Clamping Range	*solid / flexible / AWG*		
without wire protector	0,75 - 1,5 mm² / 0,75 - 1,5 mm² / 18 - 16 AWG		
with wire protector	0,25 - 1 mm² / 0,25 - 1 mm² / 24 - 18 AWG		
Rated Cross Section	1 mm²		
Wire Stripping Length	5 mm ± 0,5 mm		
Overvoltage Category	III	III	II
Pollution Severity Level	3	2	2
Rated Voltage	125 V	160 V	320 V
Rated Impulse Voltage	2,5 kV	2,5 kV	2,5 kV
Rated Insulation Voltage	130 V acc. to EN 60998-1		
Rated Current	13,5 A		
Soldering process	Reflow solder		
Torque	0,2 Nm		

Material

Moulding	PA HT, black, V-0
Comparative Tracking Index	CTI ≥ 600
Insulating Group	I
Temperature Range	-40°C up to 150°C; reflow solder temperature (Peak) max. 260°C (15-30 s)
Terminal Body	Tin plated brass
Screw	M2, tin plated brass
Wire protector	German silver

Approvals

	Current	Voltage	Group	AWG	Nm
	10	150	B	26 - 16	0,23
	10	150	B	26 - 16	0,2

Options / Accessories

- Special marking accord. drawing
- Self-adhesive marking strip BST-3,50 [1]

Part Numbers: Tape-on-Reel

No. of poles	930-D-SMD	930-D-SMD-DS	Tape Width	Tape Height	Pcs
2		20.870.602.A00	24 mm	11,3 mm	500
3		20.870.603.A00	24 mm	11,3 mm	500
4		20.870.604.A00	24 mm	11,3 mm	500
5		20.870.605.A00	32 mm	11,3 mm	500
6		20.870.606.A00	44 mm	11,3 mm	500
10		20.870.610.A00	56 mm	11,3 mm	500
12		20.870.612.A00	56 mm	11,3 mm	500

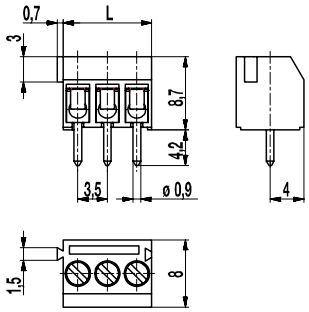
further number of poles on request

[1] To be fitted after reflow soldering process

PCB connector

930-T(-DS)

Screw connection, interlocking



Series 930 Mini PCB connectors are designed with a pitch of 3,5 mm. Lateral locking elements allow mounting them in any required pole configuration while maintaining pitch. All designs come with captive screws. DS-types are provided with wire protection which reliably prevents damage to flexible conductors.

Part Numbers

No. of poles	930-T	930-T-DS	Length	Pcs
2	30.870.002	40.870.002	7,00	250
3	30.870.003	40.870.003	10,50	250

General Information

Pitch	3,5 mm
No. of poles	2 + 3

Technical Data

Clamping Range	*solid / flexible / AWG*		
without wire protector	0,75 - 1,5 mm² / 0,75 - 1,5 mm² / 18 - 16 AWG		
with wire protector	0,34 - 1,5 mm² / 0,34 - 1 mm² / 22 - 16 AWG		
Rated Cross Section	1 mm²		
Wire Stripping Length	5 mm ± 0,5 mm		
Overvoltage Category	III	III	II
Pollution Severity Level	3	2	2
Rated Voltage	160 V	160 V	320 V
Rated Impulse Voltage	2,5 kV	2,5 kV	2,5 kV
Rated Insulation Voltage	130 V acc. to EN 60998-1		
Rated Current	13,5 A		
Hole in PCB	ø 1,2 mm		
Torque	0,2 Nm		

Material

Moulding	PA, grey, V-0
Comparative Tracking Index	CTI ≥ 600
Insulating Group	I
Temperature Range	-40°C up to 100°C
Terminal Body	Tin plated brass
Screw	M2, zinc plated steel, blue passivated
Solder pin	ø 0,9 mm; tin plated brass
Wire protector	German silver

Approvals

	Current	Voltage	Group	AWG	Nm
	10	300	B	26 - 16	0,23
	10	300	B	26 - 16	0,2

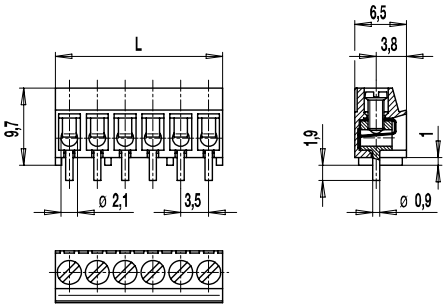
Options / Accessories

- Consecutive numbering
- Special marking accord. drawing
- Self-adhesive marking strip BST-3,50
- Pitch of 7 mm for larger clearance and creepage distances

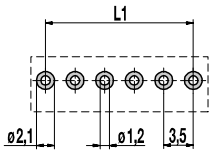
PCB connector for THR

930-THR(-DS)

Screw connection



PCB Layout



L1 = (No. of poles - 1) x pitch
Solder paste thickness: 0,15 - 0,2 mm
Solder pad diameter: ø 2,1 mm

This product based on our established 930 series have been designed for the soldering process in Through-Hole-Reflow technology.
The soldering paste is applied to the plated through holes and the pins are placed in the circuit board and soldered by a reflow oven.
The terminal mouldings are made of heat-resistant material. The stand-offs on the base ensures there is enough room for the soldering paste and facilitates good heat circulation for optimum soldering and enables the soldering joint to be visually inspected.
The solder pin projects very slightly with a circuit board thickness of 1,6 mm and creates a solder point on both sides and thus guarantees a secure mounting. The position of the solder pins enables an equally minimal allocation area on the circuit board as with wave soldering.

Part Numbers

No. of poles	930-THR	930-THR-DS	Length	Pcs
2	10.879.002	20.879.002	7,40	250
3	10.879.003	20.879.003	10,90	250
4	10.879.004	20.879.004	14,40	250
5	10.879.005	20.879.005	17,90	200
6	10.879.006	20.879.006	21,40	200
7	10.879.007	20.879.007	24,90	100
8	10.879.008	20.879.008	28,40	100
9	10.879.009	20.879.009	31,90	100
10	10.879.010	20.879.010	35,40	100
11	10.879.011	20.879.011	38.90	100
12	10.879.012	20.879.012	42,40	100

General Information

Pitch	3,5 mm
No. of poles	2 - 12

Technical Data

Clamping Range	*solid / flexible / AWG*		
without wire protector	0,75 - 1,5 mm² / 0,75 - 1,5 mm² / 18 - 16 AWG		
with wire protector	0,34 - 1,5 mm² / 0,34 - 1 mm² / 22 - 16 AWG		
Rated Cross Section	1 mm²		
Wire Stripping Length	5 mm ± 0,5 mm		
Overvoltage Category	III	III	II
Pollution Severity Level	3	2	2
Rated Voltage	160 V	160 V	320 V
Rated Impulse Voltage	2,5 kV	2,5 kV	2,5 kV
Rated Insulation Voltage	130 V acc. to EN 60998-1		
Rated Current	13,5 A		
Soldering process	Wave solder & reflow solder		
Hole in PCB	ø 1,2 mm		
Torque	0,2 Nm		
PCB thickness	Wave solder max. 1,6 mm; reflow solder 0,8-1,6 mm		

Material

Moulding	PA HT, black, V-0
Comparative Tracking Index	CTI ≥ 600
Insulating Group	I
Temperature Range	-40°C up to 150°C; reflow solder temperature (Peak) max. 260°C (15-30 s)
Terminal Body	Tin plated brass
Screw	M2, zinc plated steel, blue passivated
Solder pin	ø 0,9 mm; tin plated brass
Wire protector	German silver

Approvals

	Current	Voltage	Group	AWG	Nm
	10	300	B	26 - 16	0,23
	10	300	B	26 - 16	0,2

Options / Accessories

- Special marking accord. drawing
- Self-adhesive marking strip BST-3,50 [1]
- Other pin length on request
- Enlarged clamping size on request

Part Numbers: Tape-on-Reel

No. of poles	930-THR	930-THR-DS	Tape Width	Tape Height	Pcs
3		20.879.003.A00	32 mm	13 mm	500
6		20.879.006.A00	56 mm	13 mm	500
12		20.879.012.A00	56 mm	13 mm	500

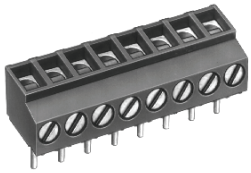
further number of poles on request

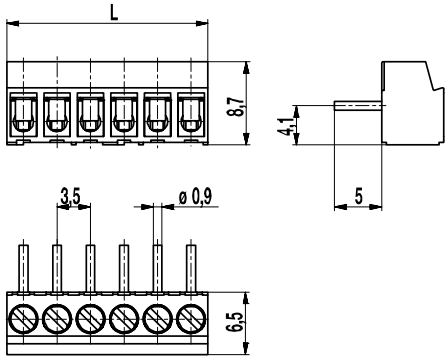
[1] To be fitted after reflow soldering process

PCB connector

931(-DS)

Screw connection, wire entrance vertical to PCB





Series 931 Mini PCB connectors are designed with a pitch of 3,5 mm, can be mounted side-by-side without pole loss, and come equipped with captive screws. DS-types are provided with wire protection which reliably prevents damage to flexible conductors.

Part Numbers

No. of poles	931	931-DS	Length	Pcs
2	10.870.502	20.870.502	7,00	250
3	10.870.503	20.870.503	10,50	250
4	10.870.504	20.870.504	14,00	250
5	10.870.505	20.870.505	17,50	200
6	10.870.506	20.870.506	21,00	200
7	10.870.507	20.870.507	24,50	100
8	10.870.508	20.870.508	28,00	100
9	10.870.509	20.870.509	31,50	100
10	10.870.510	20.870.510	35,00	100
11	10.870.511	20.870.511	38,50	100
12	10.870.512	20.870.512	42,00	100
13	10.870.513	20.870.513	45,50	100
14	10.870.514	20.870.514	49,00	100
15	10.870.515	20.870.515	52,50	100
16	10.870.516	20.870.516	56,00	100
17	10.870.517	20.870.517	59,50	100
18	10.870.518	20.870.518	63,00	100
19	10.870.519	20.870.519	66,50	100
20	10.870.520	20.870.520	70,00	100
21	10.870.521	20.870.521	73,50	100
22	10.870.522	20.870.522	77,00	100
23	10.870.523	20.870.523	80,50	100
24	10.870.524	20.870.524	84,00	100

General Information

Pitch	3,5 mm
No. of poles	2 - 24

Technical Data

Clamping Range	*solid / flexible / AWG*		
without wire protector	0,75 - 1,5 mm² / 0,75 - 1,5 mm² / 18 - 16 AWG		
with wire protector	0,34 - 1,5 mm² / 0,34 - 1 mm² / 22 - 16 AWG		
Rated Cross Section	1 mm²		
Wire Stripping Length	5 mm ± 0,5 mm		
Overvoltage Category	III	III	II
Pollution Severity Level	3	2	2
Rated Voltage	160 V	160 V	320 V
Rated Impulse Voltage	2,5 kV	2,5 kV	2,5 kV
Rated Insulation Voltage	130 V acc. to EN 60998-1		
Rated Current	13,5 A		
Hole in PCB	ø 1,2 mm		
Torque	0,2 Nm		

Material

Moulding	PA, grey, V-0
Comparative Tracking Index	CTI ≥ 600
Insulating Group	I
Temperature Range	-40°C up to 100°C
Terminal Body	Tin plated brass
Screw	M2, zinc plated steel, blue passivated
Solder pin	ø 0,9 mm; tin plated brass
Wire protector	German silver

Approvals

	Current	Voltage	Group	AWG	Nm
	10	300	B	26 - 16	0,23
	10	300	B	26 - 16	0,2

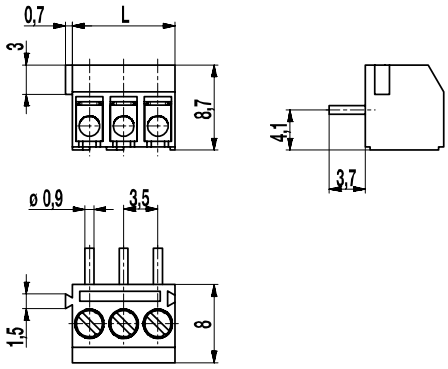
Options / Accessories

- Consecutive numbering
- Special marking accord. drawing
- Self-adhesive marking strip BST-3,50
- Pitch of 7 mm for larger clearance and creepage distances

PCB connector

931-T(-DS)

Screw connection, wire entrance vertical to PCB, interlocking



Series 931 Mini PCB connectors are designed with a pitch of 3,5 mm. Identical with Type 931, this design has locking elements which allow mounting the 2 and 3 pole connectors in any required pole number configuration, while maintaining the pitch.
DS-types are provided with wire protection which reliably prevents damage to flexible conductors.

Part Numbers

No. of poles	931-T	931-T-DS	Length	Pcs
2	10.870.102	20.870.102	7,00	250
3	10.870.103	20.870.102	10,50	250

General Information

Pitch	3,5 mm
No. of poles	2 + 3

Technical Data

Clamping Range	*solid / flexible / AWG*		
without wire protector	0,75 - 1,5 mm² / 0,75 - 1,5 mm² / 18 - 16 AWG		
with wire protector	0,34 - 1,5 mm² / 0,34 - 1 mm² / 22 - 16 AWG		
Rated Cross Section	1 mm²		
Wire Stripping Length	5 mm ± 0,5 mm		
Overvoltage Category	III	III	II
Pollution Severity Level	3	2	2
Rated Voltage	160 V	160 V	320 V
Rated Impulse Voltage	2,5 kV	2,5 kV	2,5 kV
Rated Insulation Voltage	130 V acc. to EN 60998-1		
Rated Current	13,5 A		
Hole in PCB	ø 1,2 mm		
Torque	0,2 Nm		

Material

Moulding	PA, grey, V-0
Comparative Tracking Index	CTI ≥ 600
Insulating Group	I
Temperature Range	-40°C up to 100°C
Terminal Body	Tin plated brass
Screw	M2, zinc plated steel, blue passivated
Solder pin	ø 0,9 mm; tin plated brass
Wire protector	German silver

Approvals

	Current	Voltage	Group	AWG	Nm
	10	300	B	26 - 16	0,23
	10	300	B	26 - 16	0,2

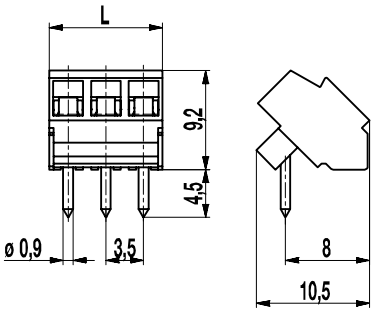
Options / Accessories

- Consecutive numbering
- Special marking accord. drawing
- Self-adhesive marking strip BST-3,50
- Pitch of 7 mm for larger clearance and creepage distances

PCB connector

934(-DS)

Screw connection 45°-angle to PCB



Series 934 Mini PCB connectors are designed with a pitch of 3,5 mm, can be mounted side-by-side without pole loss, and come equipped with captive screws. The wire entrance is located in a 45° angle to the PC board. This allows a space-saving arrangement of the connectors directly behind each other. DS-types are provided with wire protection which reliably prevents damage to flexible conductors.

Part Numbers

No. of poles	934	934-DS	Length	Pcs
2	10.870.552	20.870.552	7,00	250
3	10.870.553	20.870.553	10,50	250
4	10.870.554	20.870.554	14,00	250
5	10.870.555	20.870.555	17,50	200
6	10.870.556	20.870.556	21,00	200
7	10.870.557	20.870.557	24,50	100
8	10.870.558	20.870.558	28,00	100
9	10.870.559	20.870.559	31,50	100
10	10.870.560	20.870.560	35,00	100
11	10.870.561	20.870.561	38,50	100
12	10.870.562	20.870.562	42,00	100
13	10.870.563	20.870.563	45,50	100
14	10.870.564	20.870.564	49,00	100
15	10.870.565	20.870.565	52,50	100
16	10.870.566	20.870.566	56,00	100
17	10.870.567	20.870.567	59,50	100
18	10.870.568	20.870.568	63,00	100
19	10.870.569	20.870.569	66,50	100
20	10.870.570	20.870.570	70,00	100
21	10.870.571	20.870.571	73,50	100
22	10.870.572	20.870.572	77,00	100
23	10.870.573	20.870.573	80,50	100
24	10.870.574	20.870.574	84,00	100

General Information

Pitch	3,5 mm
No. of poles	2 - 24

Technical Data

Clamping Range	*solid / flexible / AWG*		
without wire protector	0,75 - 1,5 mm² / 0,75 - 1,5 mm² / 18 - 16 AWG		
with wire protector	0,34 - 1,5 mm² / 0,34 - 1 mm² / 22 - 16 AWG		
Rated Cross Section	1 mm²		
Wire Stripping Length	5 mm ± 0,5 mm		
Overvoltage Category	III	III	II
Pollution Severity Level	3	2	2
Rated Voltage	160 V	160 V	320 V
Rated Impulse Voltage	2,5 kV	2,5 kV	2,5 kV
Rated Insulation Voltage	130 V acc. to EN 60998-1		
Rated Current	13,5 A		
Hole in PCB	ø 1,2 mm		
Torque	0,2 Nm		

Material

Moulding	PA, grey, V-0
Comparative Tracking Index	CTI ≥ 600
Insulating Group	I
Temperature Range	-40°C up to 100°C
Terminal Body	Tin plated brass
Screw	M2, zinc plated steel, blue passivated
Solder pin	ø 0,9 mm; tin plated brass
Wire protector	German silver

Approvals

	Current	Voltage	Group	AWG	Nm
	10	300	B	26 - 16	0,23
	10	300	B	26 - 16	0,2

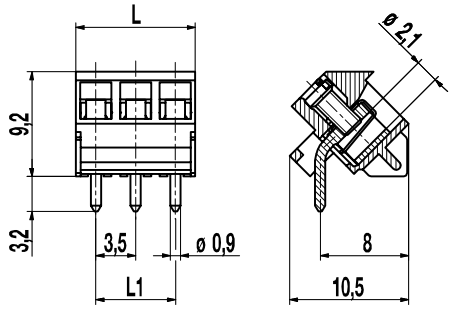
Options / Accessories

- Consecutive numbering
- Special marking accord. drawing
- Self-adhesive marking strip BST-3,50
- Pitch of 7 mm for larger clearance and creepage distances

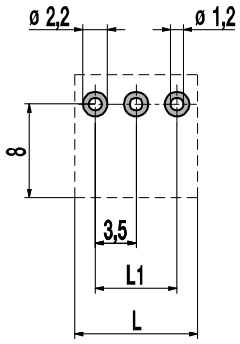
PCB connector for THR

934-THR-DS

Screw connection 45°-angle to PCB



PCB Layout



L1 = (No. of poles - 1) x pitch
Solder paste thickness: 0,15 - 0,2 mm
Solder pad diameter: ø 2,2 mm

By creating the 934-THR-DS, WECO offers a Through-Hole PCB terminal for the reflow soldering process with a pitch of 3,5 mm.
The wire entry has a connection angle of 45° to the PCB. This offers the advantage that terminal rows can be located space saving one directly behind the other. Additionally, the connectors can be arranged side by side without a change of the pitch.
The housing material consists of high temperature resistant plastic. Spacers, so-called "Stand-offs" on the base assure an improved hot-air circulation during the reflow soldering process in the convection oven.
The screw connector 934-THR-DS is standardly equipped with captive screws and wire protectors. It is available in 2 to 12 pole versions.
This connector is packed tape on reel for the automatic assembling. It has a flat roof design on the housing at the middle poles in order to create a flat surface for the vacuum pipette.

Part Numbers

No. of poles	934-THR-DS	Length	Pcs
2	20.879.302	7,00	250
4	20.879.304	14,00	250
6	20.879.306	21,00	200
12	20.879.312	42,00	100

further number of poles on request

General Information

Pitch	3,5 mm
No. of poles	2 - 12
Areas of application	Devices with space critical applications or multi-row connections

Technical Data

Clamping Range	*solid / flexible / AWG*		
	0,25 - 1,5 mm² / 0,25 - 1 mm² / 24 - 16 AWG		
Rated Cross Section	1 mm²		
Wire Stripping Length	5 mm ± 0,5 mm		
Overvoltage Category	III	III	II
Pollution Severity Level	3	2	2
Rated Voltage	160 V	160 V	320 V
Rated Impulse Voltage	2,5 kV	2,5 kV	2,5 kV
Rated Insulation Voltage	130 V acc. to EN 60998-1		
Rated Current	10 A		
Soldering process	Wave solder & reflow solder		
Hole in PCB	ø 1,2 mm		
Torque	0,2 Nm		
PCB thickness	Wave solder max. 1,6 mm; reflow solder 1,6 mm - 3,2 mm		

Material

Moulding	PA HT, black, V-0
Comparative Tracking Index	CTI ≥ 600
Insulating Group	I
Temperature Range	-40°C up to 150°C; reflow solder temperature (Peak) max. 260°C (15-30 s)
Terminal Body	Tin plated brass
Screw	M2, zinc plated steel, blue passivated
Solder pin	ø 0,9 mm; tin plated brass
Wire protector	German silver

Approvals

	Current	Voltage	Group	AWG	Nm
	10	300	B	26 - 16	0,23
	10	300	B	26 - 16	0,2

Options / Accessories

- Consecutive numbering
- Special marking accord. drawing
- Self-adhesive marking strip BST-3,50 [1]
- Other plug pin lengths on request

Part Numbers: Tape-on-Reel

No. of poles	934-THR-DS	Tape Width	Tape Height	Pcs
2	20.879.302.A00	32 mm	15,2 mm	300
5	20.879.305.A00	32 mm	15,2 mm	300

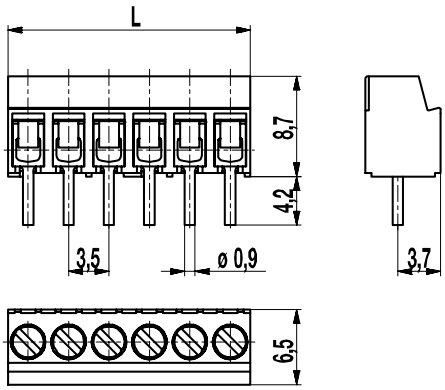
further number of poles on request

[1] To be fitted after reflow soldering process

PCB connector

938(-DS)

Screw connection, large conductor space



Series 938 Mini PCB connectors are designed with a pitch of 3,5 mm pitch, can be mounted side-by-side without pole loss, and come equipped with captive screws. The terminal space of the 938 design is almost square in shape. For designs with wire protection also flexible wires up to 1,5 mm² can be connected.

Part Numbers

No. of poles	938	938-DS	Length	Pcs
2	30.870.402	40.870.402	7,00	250
3	30.870.403	40.870.403	10,50	250
4	30.870.404	40.870.404	14,00	250
5	30.870.405	40.870.405	17,50	200
6	30.870.406	40.870.406	21,00	200
7	30.870.407	40.870.407	24,50	100
8	30.870.408	40.870.408	28,00	100
9	30.870.409	40.870.409	31,50	100
10	30.870.410	40.870.410	35,00	100
11	30.870.411	40.870.411	38,50	100
12	30.870.412	40.870.412	42,00	100
13	30.870.413	40.870.413	45,50	100
14	30.870.414	40.870.414	49,00	100
15	30.870.415	40.870.415	52,50	100
16	30.870.416	40.870.416	56,00	100
17	30.870.417	40.870.417	59,50	100
18	30.870.418	40.870.418	63,00	100
19	30.870.419	40.870.419	66,50	100
20	30.870.420	40.870.420	70,00	100
21	30.870.421	40.870.421	73,50	100
22	30.870.422	40.870.422	77,00	100
23	30.870.423	40.870.423	80,50	100
24	30.870.424	40.870.424	84,00	100

General Information

Pitch	3,5 mm
No. of poles	2 - 24

Technical Data

Clamping Range	*solid / flexible / AWG*		
without wire protector	0,75 - 1,5 mm² / 0,75 - 1,5 mm² / 18 - 16 AWG		
with wire protector	0,34 - 1,5 mm² / 0,34 - 1,5 mm² / 22 - 16 AWG		
Rated Cross Section	1 mm²		
Wire Stripping Length	5 mm ± 0,5 mm		
Overvoltage Category	III	III	II
Pollution Severity Level	3	2	2
Rated Voltage	160 V	160 V	320 V
Rated Impulse Voltage	2,5 kV	2,5 kV	2,5 kV
Rated Insulation Voltage	130 V acc. to EN 60998-1		
Rated Current	13,5 A		
Hole in PCB	ø 1,2 mm		
Torque	0,2 Nm		

Material

Moulding	PA, grey, V-0
Comparative Tracking Index	CTI ≥ 600
Insulating Group	I
Temperature Range	-40°C up to 100°C
Terminal Body	Tin plated brass
Screw	M2, zinc plated steel, blue passivated
Solder pin	ø 0,9 mm; tin plated brass
Wire protector	German silver

Approvals

	Current	Voltage	Group	AWG	Nm
	10	300	B	26 - 16	0,23
	10	300	B	26 - 16	0,2

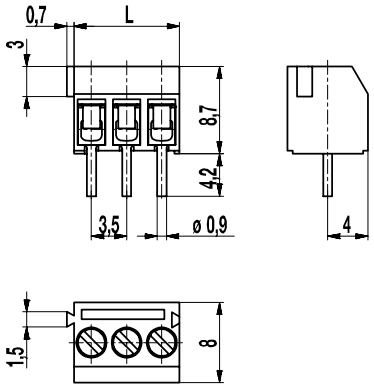
Options / Accessories

- Consecutive numbering
- Special marking according to drawing
- Self-adhesive marking strip BST-3,50
- Pitch of 7 mm for larger clearance and creepage distances

PCB connector

938-T(-DS)

Screw connection, large conductor space, interlocking



Series 938 Mini PCB connectors are designed with a pitch of 3.5 mm. Lateral locking elements allow mounting them in any required pole configuration while maintaining the pitch. All designs come with captive screws. For designs with wire protection also flexible wires up to 1.5 mm² can be connected.

Part Numbers

No. of poles	938-T	938-T-DS	Length	Pcs
2	10.870.002	20.870.002	7,00	250
3	10.870.003	20.870.003	10,50	250

General Information

Pitch	3,5 mm
No. of poles	2 + 3

Technical Data

Clamping Range	*solid / flexible / AWG*		
without wire protector	0,75 - 1,5 mm² / 0,75 - 1,5 mm² / 18 - 16 AWG		
with wire protector	0,34 - 1,5 mm² / 0,34 - 1,5 mm² / 22 - 16 AWG		
Rated Cross Section	1 mm²		
Wire Stripping Length	6 mm ± 0,5 mm		
Overvoltage Category	III	III	II
Pollution Severity Level	3	2	2
Rated Voltage	160 V	160 V	320 V
Rated Impulse Voltage	2,5 kV	2,5 kV	2,5 kV
Rated Insulation Voltage	130 V acc. to EN 60998-1		
Rated Current	13,5 A		
Hole in PCB	ø 1,2 mm		
Torque	0,2 Nm		

Material

Moulding	PA, grey, V-0
Comparative Tracking Index	CTI ≥ 600
Insulating Group	I
Temperature Range	-40°C up to 100°C
Terminal Body	Tin plated brass
Screw	M2, zinc plated steel, blue passivated
Solder pin	ø 0,9 mm; tin plated brass
Wire protector	German silver

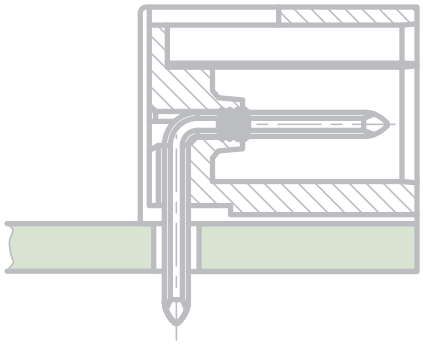
Approvals

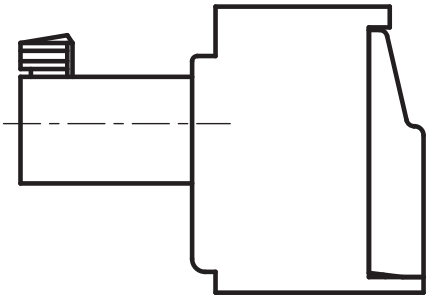
	Current	Voltage	Group	AWG	Nm
	10	300	B	26 - 16	0,23
	10	300	D	26 - 16	0,2

Options / Accessories

- Consecutive numbering
- Special marking according to drawing
- Self-adhesive marking strip BST-3,50
- Pitch of 7 mm for larger clearance and creepage distances

Plug connectors





In this chapter are shown our plug connectors with a pitch of 3.5 mm.

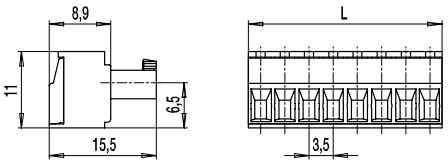
The use of plug connectors in conjunction with the corresponding pin strips, offers a number of advantages:
- a decentralized production of the assemblies,
- avoidance of errors in the wiring,
- slight decoupling for service,
- connection simplification at constricted spaces.

In range of the plug connectors there are solutions with screw designs and solutions with spring clamp technology. The screw connection versions have captive screws. The connectors threaded models have screws that are protected against self-loosening.

The plug connectors of the series 93 can be mounted side-by-side without loosening the pitch.

The series 110 features in the standard version coding pins that can be cut off if necessary. In combination with appropriately coded pin headers it gets an optimized twist and false-plug protection.

Plug connector
110-A-111
Screw connection



Plug connectors of series 110 offer remarkable connection data (1,5 mm² / 160 V-III-3 / 8 A) for their small dimensions. The high-quality elevator system guarantees reliable connection of all conductor types. The compact housings with a pitch of 3,5 mm are available with 2 to 24 poles. The user can choose from different designs with vertical, parallel or diagonal plug direction to the PC board. Variants with connecting flanges further expand the area of application. As standard, the plug connectors come with coding elements which can be cut off, if necessary.

Part Numbers

No. of poles	110-A-111	Length	Pcs
2	10.840.002	7,00	200
3	10.840.003	10,50	200
4	10.840.004	14,00	100
5	10.840.005	17,50	100
6	10.840.006	21,00	100
7	10.840.007	24,50	50
8	10.840.008	28,00	50
9	10.840.009	31,50	50
10	10.840.010	35,00	50
11	10.840.011	38,50	50
12	10.840.012	42,00	50
13	10.840.013	45,50	50
14	10.840.014	49,00	50
15	10.840.015	52,50	50
16	10.840.016	56,00	50
17	10.840.017	59,50	50
18	10.840.018	63,00	50
19	10.840.019	66,50	50
20	10.840.020	70,00	50
21	10.840.021	73,50	50
22	10.840.022	77,00	50
23	10.840.023	80,50	50
24	10.840.024	84,00	50

General Information

Pitch	3,5 mm
No. of poles	2 - 24
Usable with	all pin strips of series 110

Technical Data

Clamping Range	*solid / flexible / AWG*		
	0,14 - 1,5 mm² / 0,14 - 1,5 mm² / 28 - 16 AWG		
Rated Cross Section	1,5 mm²		
Wire Stripping Length	6,5 mm ± 0,5 mm		
Overvoltage Category	III	III	II
Pollution Severity Level	3	2	2
Rated Voltage	160 V	160 V	320 V
Rated Impulse Voltage	2,5 kV	2,5 kV	2,5 kV
Rated Insulation Voltage	130 V acc. to EN 60998-1		
Rated Current	8 A		
Torque	0,2 Nm		

Material

Moulding	PA, grey, V-0
Comparative Tracking Index	CTI ≥ 600
Insulating Group	I
Temperature Range	-40°C up to 100°C
Terminal Body	Nickel plated brass
Pressure clamp	Tin plated tin bronze
Screw	M2, tin plated tin bronze
Spring	Tin plated tin bronze

Approvals

	Current	Voltage	Group	AWG	Nm
	8	300	B, D	30 - 16	0,2
	8	300	B	30 - 16	0,2

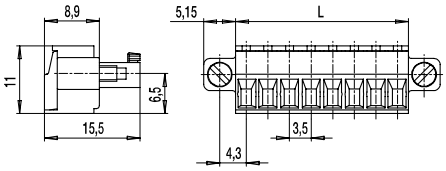
Options / Accessories

- Consecutive numbering
- Special marking accord. drawing
- Self-adhesive marking strip BST-3,50
- Pitch of 7 mm for larger clearance and creepage distances
- Strain relief

Plug connector

110-A-115

Screw connection, with connecting flanges



Plug connectors of series 110 offer remarkable connection data (1,5 mm² / 160 V-III-3 / 8 A) for their small dimensions. The high-quality elevator system guarantees reliable connection of all conductor types. The compact housings with a pitch of 3,5 mm are available with 2 to 24 poles. The user can choose from different designs with vertical, parallel or diagonal plug direction to the PC board. Series 110-A-115 is a version with connecting flanges on both housing sides which further extend the area of application. The corresponding pin strips in connecting flange design feature lateral thread inserts which offer vibration-proof screw-connection of the plug connector and also prevent unintended loosening. As standard, the plug connectors come with coding elements which can be cut off, if necessary.

Part Numbers

No. of poles	110-A-115	Length	Pcs
2	15.840.077	7,00	100
3	15.840.078	10,50	100
4	15.840.079	14,00	100
5	15.840.080	17,50	50
6	15.840.081	21,00	50
7	15.840.082	24,50	50
8	15.840.083	28,00	50
9	15.840.084	31,50	50
10	15.840.085	35,00	50
11	15.840.086	38,50	50
12	15.840.087	42,00	50
13	15.840.088	45,50	50
14	15.840.089	49,00	50
15	15.840.090	52,50	50
16	15.840.091	56,00	50
17	15.840.092	59,50	50
18	15.840.093	63,00	50
19	15.840.094	66,50	50
20	15.840.095	70,00	50
21	15.840.096	73,50	50
22	15.840.097	77,00	50

General Information

Pitch	3,5 mm
No. of poles	2 - 22
Usable with	all pin strips of series 110 with connecting flanges

Technical Data

Clamping Range	*solid / flexible / AWG*		
	0,14 - 1,5 mm² / 0,14 - 1,5 mm² / 28 - 16 AWG		
Rated Cross Section	1,5 mm²		
Wire Stripping Length	6,5 mm ± 0,5 mm		
Overvoltage Category	III	III	II
Pollution Severity Level	3	2	2
Rated Voltage	160 V	160 V	320 V
Rated Impulse Voltage	2,5 kV	2,5 kV	2,5 kV
Rated Insulation Voltage	130 V acc. to EN 60998-1		
Rated Current	8 A		
Torque	0,2 Nm		

Material

Moulding	PA, grey, V-0
Comparative Tracking Index	CTI ≥ 600
Insulating Group	I
Temperature Range	-40°C up to 100°C
Terminal Body	Nickel plated brass
Pressure clamp	Tin plated tin bronze
Screw	M2, tin plated tin bronze
Spring	Tin plated tin bronze

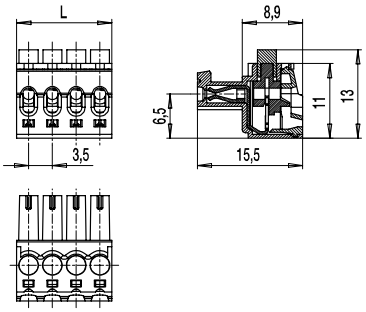
Approvals

	Current	Voltage	Group	AWG	Nm
	8	300	B, D	30 - 16	0,2
	8	300	B	30 - 16	0,2

Options / Accessories

- Consecutive numbering
- Special marking accord. drawing
- Self-adhesive marking strip BST-3,50
- Pitch of 7 mm for larger clearance and creepage distances
- Strain relief

Plug connector
110-A-IDC
Insulation Displacement Contacts



Due to the pitch of 3,5 mm, plug connectors of series 110 are particularly suitable for confined spaces. Socket connectors 110-A-IDC (Insulation Displacement Connector) form an indirect connection with pin strips 110-M, -P and –S.
The insulation displacement contacts connect with non-stripped IDC-suitable wires. The wire is pushed into the guide entry all the way to the stop. By pushing the button, the terminal clamp closes and the cutting contact creates the connection. Special pliers are available for this task. The clamping point can be opened with a small screwdriver, if necessary.

Part Numbers

No. of poles	110-A-IDC	Length	Pcs
2	10.840.202	7,00	200
3	10.840.203	10,50	200
4	10.840.204	14,00	100
5	10.840.205	17,50	100
6	10.840.206	21,00	100
8	10.840.208	28,00	50
10	10.840.210	35,00	50
12	10.840.212	42,00	50

further number of poles on request

General Information

Pitch	3,5 mm
No. of poles	2 - 12
Usable with	all pin strips of series 110
Areas of application	E.g. telecommunication technology
Additonal Information	Flexible wire: • MSR TSR 0.56 mm² according to VDE 0881 • AWG 20/7 Style 1061 • Insulation: Semi-Rigid-(SR-)PVC

Technical Data

Clamping Range	*solid / flexible / AWG*		
	0,5 mm² Spezialleiter / special wire		
Wire Stripping Length	6,5 mm ± 0,5 mm		
Overvoltage Category	III	III	II
Pollution Severity Level	3	2	2
Rated Voltage	160 V	160 V	320 V
Rated Impulse Voltage	2,5 kV	2,5 kV	2,5 kV
Rated Insulation Voltage	130 V acc. to EN 60998-1		
Rated Current	5 A		
Other specifications	Wire insulation diameter 1,45 - 1,7 mm		

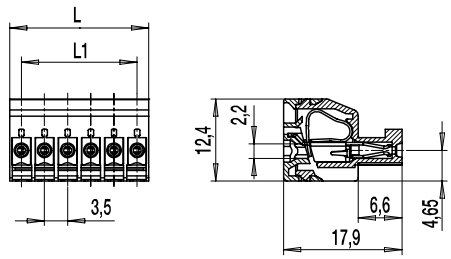
Material

Moulding	PA, light grey, V-0
Comparative Tracking Index	CTI ≥ 600
Insulating Group	I
Temperature Range	-40°C up to 100°C
Contact elements	Copper alloy, tin plated

Options / Accessories

- Consecutive numbering
- Special marking accord. drawing
- Self-adhesive marking strip BST-3,50
- Connecting flanges
- Special flat nose pliers

Plug connector
110-F-111
Spring clamp connection



L = No. of poles x pitch
L1 = No. of poles x pitch - 3,5

Features
- Plug connector to connect wires with spring clamp technology with a pitch of 3,5 mm
- For solid and flexible wires
- Cross section up to 1,5 mm²
- Available in 2 to 12 pole lengths
- Coding possible with standard coding keys in the pin strip
- Special area for marking
- Colour black

Advantages
- High packing density
- Suitable under high vibration load
- Mating compatible with competitor products

Part Numbers

No. of poles	110-F-111	Length	Pcs
2	10.840.902	7,00	100
3	10.840.903	10,50	100
4	10.840.904	14,00	50
5	10.840.905	17,50	50
6	10.840.906	21,00	50
7	10.840.907	24,50	50
8	10.840.908	28,00	50
9	10.840.909	31,50	50
10	10.840.910	35,00	50
11	10.840.911	38,50	50
12	10.840.912	42,00	50

General Information

Pitch	3,5 mm
No. of poles	2 - 12
Usable with	all pin strips of series 110
Additonal Information	Standard screwdrivers, size A 0,4 x 2,5, can be used to open the spring clamp. Also available as version 110-F-115 with flanges.

Technical Data

Clamping Range	*solid / flexible / AWG*		
	0,14 - 1,5 mm² / 0,14 - 1,5 mm² / 26 - 14 AWG		
Rated Cross Section	1,5 mm²		
Wire Stripping Length	8 mm		
Overvoltage Category	III	III	II
Pollution Severity Level	3	2	2
Rated Voltage	125 V	125 V	250 V
Rated Impulse Voltage	2,5 kV	2,5 kV	2,5 kV
Rated Insulation Voltage	130 V acc. to EN 60998-1		
Rated Current	8 A		

Material

Moulding	PA, black, V-0
Comparative Tracking Index	CTI ≥ 600
Insulating Group	I
Temperature Range	-40°C up to 100°C
Pressure clamp	Copper alloy, tin plated
Tension spring	Steel
Spring	Copper alloy, tin plated

Approvals

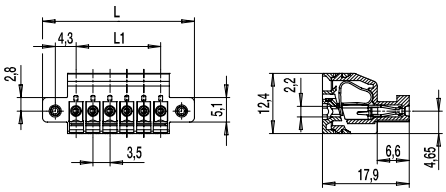
	Current	Voltage	Group	AWG	Nm
	8	300	B, D	30- 16	
	5	300	B	22 - 14	

Options / Accessories
- Consecutive numbering
- Special marking according to drawing
- Self-adhesive marking strip BST-3,50

Plug connector

110-F-115

Spring clamp connection, with connecting flanges



L = No. of poles x pitch + 10,4
L1 = No. of poles x pitch - 3,5

Features
- Plug connector to connect wires with spring clamp technology with a pitch of 3,5 mm
- For solid and flexible wires
- Cross section up to 15 mm²
- Available in 2 to 12 pole lengths
- Coding possible with standard coding keys in the pin strip
- Special area for marking
- Colour black

Advantages
- High packing density
- Suitable under high vibration load
- Mating compatible with competitor products

Part Numbers

No. of poles	110-F-115	Length	Pcs
2	15.840.977	17,40	100
3	15.840.978	20,90	100
4	15.840.979	24,40	50
5	15.840.980	27,90	50
6	15.840.981	31,40	50
7	15.840.982	34,90	50
8	15.840.983	38,40	50
9	15.840.984	41,90	50
10	15.840.985	45,40	50
11	15.840.986	48,90	50
12	15.840.987	52,40	50

General Information

Pitch	3,5 mm
No. of poles	2 - 12
Usable with	all pin strips of series 110
Additonal Information	Standard screwdrivers, size A 0,4 x 2,5, can be used to open the spring clamp. Also available as version 110-F-111 without flanges.

Technical Data

Clamping Range	*solid / flexible / AWG*		
	0,14 - 1,5 mm² / 0,14 - 1,5 mm² / 26 - 14 AWG		
Rated Cross Section	1,5 mm²		
Wire Stripping Length	8 mm		
Overvoltage Category	III	III	II
Pollution Severity Level	3	2	2
Rated Voltage	125 V	125 V	250 V
Rated Impulse Voltage	2,5 kV	2,5 kV	2,5 kV
Rated Insulation Voltage	130 V acc. to EN 60998-1		
Rated Current	8 A		

Material

Moulding	PA, black, V-0
Comparative Tracking Index	CTI ≥ 600
Insulating Group	I
Temperature Range	-40°C up to 100°C
Pressure clamp	Copper alloy, tin plated
Tension spring	Steel
Spring	Copper alloy, tin plated

Approvals

	Current	Voltage	Group	AWG	Nm
	8	300	B, D	30 - 16	
	5	300	B	22 - 14	

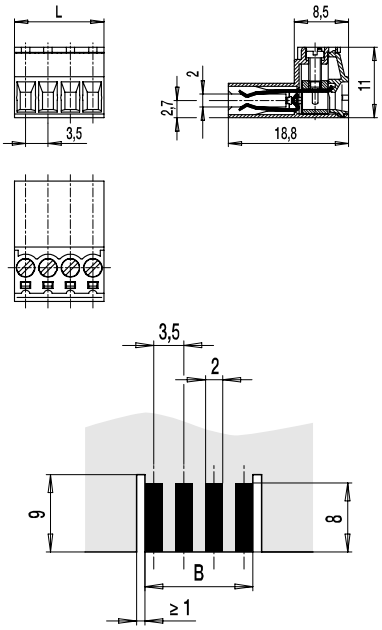
Options / Accessories

- Consecutive numbering
- Special marking according to drawing
- Self-adhesive marking strip BST-3,50

Plug connector

110-AP-211

Screw connection, direct connection to PCB



B = (Number of poles x 3,5) - 1,5

Due to the pitch of 3,5 mm, plug connectors of series 110 are particularly suitable for confined spaces. The Version 110-AP with screw terminals using lift system is suitable for the direct connection to PC boards. Slots corresponding with the housing side walls or the PC board width determine the correct plug connector position on the conductor paths. The board design determines whether the contacting is single- or double-sided.
Slots between the plug connections not only to increase the creepage distances in the housing but also serve as receptacle for coding keys.

Part Numbers

No. of poles	110-AP-211	Length	Pcs
2	10.842.072	7,00	200
3	10.842.073	10,50	200
4	10.842.074	14,00	100
5	10.842.075	17,50	100
6	10.842.076	21,00	100
7	10.842.077	24,50	50
8	10.842.078	28,00	50
9	10.842.079	31,50	50
10	10.842.080	35,00	50
11	10.842.081	38,50	50
12	10.842.082	42,00	50

further number of poles on request

General Information

Pitch	3,5 mm
No. of poles	2 - 12
Areas of application	Telecommunication technology, house telephones, intercoms

Technical Data

Clamping Range	*solid / flexible / AWG* 0,14 - 1,5 mm² / 0,14 - 1,5 mm² / 30 - 16 AWG
Rated Cross Section	1 mm²
Wire Stripping Length	6,5 mm
Overvoltage Category	II
Pollution Severity Level	2
Rated Voltage	320 V
Rated Impulse Voltage	2,5 kV
Rated Insulation Voltage	130 V acc. to EN 60998-1
Rated Current	3 A for one side PCB contact 6 A for two side PCB contact
Torque	0,2 Nm
PCB thickness	1,4 - 1,8 mm

Material

Moulding	PA, grey, V-0
Comparative Tracking Index	CTI ≥ 600
Insulating Group	I
Temperature Range	-40°C up to 100°C
Contact elements	Copper alloy, tin plated
Screw	M2, copper alloy, tin plated

Approvals

	Current	Voltage	Group	AWG	Nm
c UL us	7	150	B	30 - 16	0,23

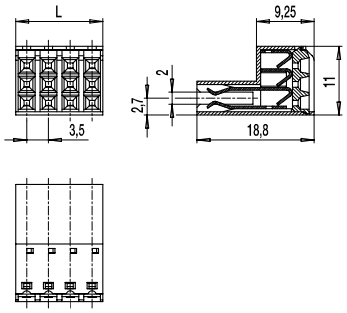
Options / Accessories

- Consecutive numbering
- Special marking accord. drawing
- Self-adhesive marking strip BST-3,50
- Coding keys 110-AP, Part-No.: 10.496.028
- Factory-assembled coding keys on request

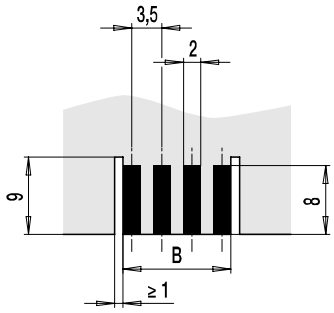
Plug connector

110-FP3-211

Spring contact, trible connection, direct connection to PCB



PCB Layout



B = (Number of poles x 3,5) - 1,5

Due to the pitch of 3,5 mm, plug connectors of series 110 are particularly suitable for confined spaces. The version 110-FP3-211 with spring connection is suitable for direct connection to PC boards. Each pole contains three separate clamping units one on top of the other. Individual wires can be connected without having to use a tool. The wires disconnect by simultaneous twisting and pulling.

Slots corresponding with the housing side walls or the PC board width determine the correct plug connector position on the conductor paths. The board design determines whether the contacting is single- or double-sided.
Slots between the plug connections not only to increase the creepage distances in the housing but also serve as receptacle for coding keys.

Part Numbers

No. of poles	110-FP3-211	Length	Pcs
2	10.842.372	7,00	200
3	10.842.373	10,50	200
4	10.842.374	14,00	100
5	10.842.375	17,50	100
6	10.842.376	21,00	100
8	10.842.378	28,00	50
10	10.842.380	35,00	50
12	10.842.382	42,00	50

further number of poles on request

General Information

Pitch	3,5 mm
No. of poles	2 - 12
Usable with	copper-covered single- or double-sided PCB´s
Areas of application	Telecommunication technology, house telephones, intercoms

Technical Data

Clamping Range	*solid / flexible / AWG* 0,2 - 0,5 mm² / 24 - 20 AWG nur starre Leiter ; only solid wires
Wire Stripping Length	6 mm
Overvoltage Category	II
Pollution Severity Level	2
Rated Voltage	320 V
Rated Impulse Voltage	2,5 kV
Rated Insulation Voltage	130 V acc. to EN 60998-1
Rated Current	3 A for one side PCB contact 6 A for two side PCB contact
PCB thickness	1,4 - 1,8 mm

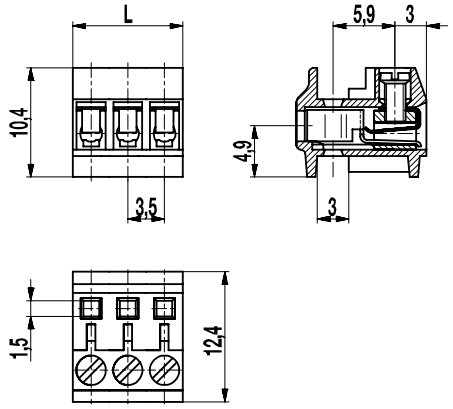
Material

Moulding	PA, grey, V-0
Comparative Tracking Index	CTI ≥ 600
Insulating Group	I
Temperature Range	-40°C up to 100°C
Contact elements	Copper alloy, tin plated

Options / Accessories

- Consecutive numbering
- Special marking accord. drawing
- Self-adhesive marking strip BST-3,50
- Coding keys 110-AP, Part-No.: 10.496.028
- Factory-assembled coding keys on request

Plug connector
930-FL(-DS)
Screw connection



The plug connector 930-FL is designed for the insertion of pin strips 931-SLR-THR-1,1 or 931-SLR-SMD-1,1 both from the top and the bottom.
The possibility to plug from either side allows mounting in reverse order: the plug connector can be pre-assembled in a housing and then the PC board can be slotted in from above. When using pin strips with extra-long pins (available upon request), two plug connectors can be mounted one on top of the other (stacked) thus achieving a parallel connection.

Part Numbers

No. of poles	930-FL	930-FL-DS	Length	Pcs
2	10.870.302	20.870.302	7,00	250
3	10.870.303	20.870.303	10,50	250
4	10.870.304	20.870.304	14,00	250
5	10.870.305	20.870.305	17,50	100
6	10.870.306	20.870.306	21,00	100
7	10.870.307	20.870.307	24,50	100
8	10.870.308	20.870.308	28,00	100
9	10.870.309	20.870.309	31,50	100
10	10.870.310	20.870.310	35,00	100
11	10.870.311	20.870.311	38,50	100
12	10.870.312	20.870.312	42,00	100
13	10.870.313	20.870.313	45,50	50
14	10.870.314	20.870.314	49,00	50
15	10.870.315	20.870.315	52,50	50
16	10.870.316	20.870.316	56,00	50
17	10.870.317	20.870.317	59,50	50
18	10.870.318	20.870.318	63,00	50
19	10.870.319	20.870.319	66,50	50
20	10.870.320	20.870.320	70,00	50
21	10.870.321	20.870.321	73,50	50
22	10.870.322	20.870.322	77,00	50
23	10.870.323	20.870.323	80,50	50
24	10.870.324	20.870.324	84,00	50

General Information

Pitch	3,5 mm
No. of poles	2 - 24
Usable with	pin strip 931-SLR-THR-1,1; 931-SLR-SMD-1,1; tab connector 931-FST

Technical Data

Clamping Range	*solid / flexible / AWG*		
without wire protector	0,34 - 1,5 mm² / 0,34 - 1 mm² / 22 - 18 AWG		
with wire protector	0,14 - 0,75 mm² / 0,14 - 0,75 mm² / 26 - 20 AWG		
Rated Cross Section	0,75 mm²		
Wire Stripping Length	5 mm ± 0,5 mm		
Overvoltage Category	III	III	II
Pollution Severity Level	3	2	2
Rated Voltage	160 V	160 V	320 V
Rated Impulse Voltage	2,5 kV	2,5 kV	2,5 kV
Rated Insulation Voltage	130 V acc. to EN 60998-1		
Rated Current	6 A		
Torque	0,2 Nm		

Material

Moulding	PA, grey, V-0
Comparative Tracking Index	CTI ≥ 600
Insulating Group	I
Temperature Range	-40°C up to 100°C
Terminal Body	Nickle plated brass
Screw	M2, zinc plated steel, blue passivated.
Wire protector	German silver
Spring	Tin plated tin bronze

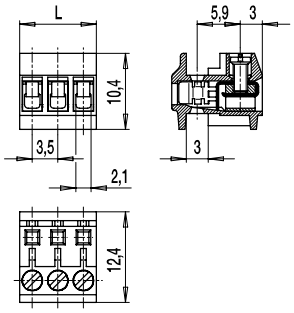
Approvals

	Current	Voltage	Group	AWG	Nm
	6	300	B	30 - 18	0,23
	6	300	B	30 - 18	0,2

Options / Accessories

- Consecutive numbering
- Special marking according to drawing
- Self-adhesive marking strip BST-3,50
- Pitch of 7 mm for larger clearance and creepage distances

Plug connector
938-FLDS
Screw connection, large conductor space



Due to the rectangular shape, the terminal space of plug connector 938-FLDS is dimensioned relatively large. Spring and wire protection are designed in one piece. The plug connector 938-FLDS is designed for the insertion of pin strips 931-SLS both from the top and the bottom side. The possibility to plug from either side allows mounting in reverse order: The plug connector can be pre-assembled in a housing and then the PC board can be slotted in from above. When using pin strips with extra-long pins (available upon request), two plug connectors can be mounted one on top of the other (stacked) thus achieving a parallel connection.

Part Numbers

No. of poles	938-FLDS	Length	Pcs
2	40.870.302	7,00	250
3	40.870.303	10,50	250
4	40.870.304	14,00	250
5	40.870.305	17,50	100
6	40.870.306	21,00	100
8	40.870.308	28,00	100
10	40.870.310	35,00	100
12	40.870.312	42,00	100

further number of poles on request

General Information

Pitch	3,5 mm
No. of poles	2 - 16
Usable with	Pin strip 931-SLS; 931-SLR-THR; 931-SLR-THR-1,3; 931-SLR-SMD-1,3 (pin strip with ø1,3 mm in plug-in area); tab connector 931-FST

Technical Data

Clamping Range	*solid / flexible / AWG*		
	0,2 - 1,5 mm² / 0,2 - 1 mm² / 26 - 16 AWG		
Rated Cross Section	1 mm²		
Wire Stripping Length	5 mm		
Overvoltage Category	III	III	II
Pollution Severity Level	3	2	2
Rated Voltage	160 V	160 V	320 V
Rated Impulse Voltage	2,5 kV	2,5 kV	2,5 kV
Rated Insulation Voltage	130 V acc. to EN 60998-1		
Rated Current	6 A		
Torque	0,2 Nm		

Material

Moulding	PA, grey, V-0
Comparative Tracking Index	CTI ≥ 600
Insulating Group	I
Temperature Range	-40°C up to 100°C
Terminal Body	Nickel plated brass
Screw	M2, zinc plated steel, blue passivated
Wire protector	Copper alloy, tin plated
Spring	Copper alloy, tin plated

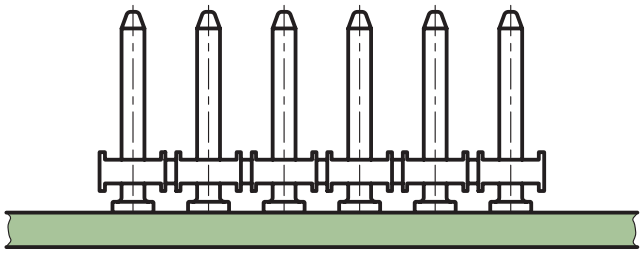
Approvals

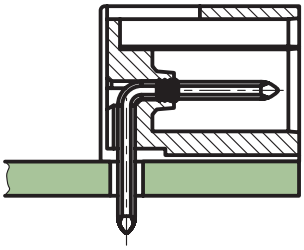
	Current	Voltage	Group	AWG	Nm
	6	300	B	28 - 20	0,23
	6	300	B	28 - 20	0,2

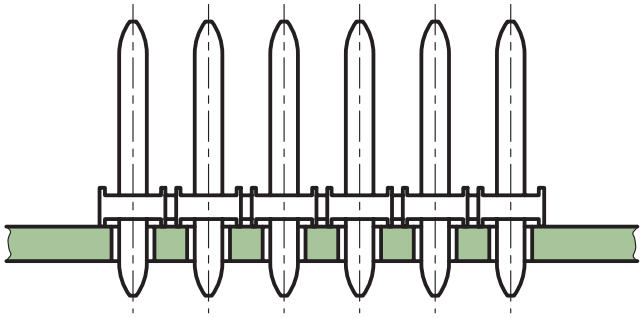
Options / Accessories

- Consecutive numbering
- Special marking according to drawing
- Self-adhesive marking strip BST-3,50
- Plug connectors with special locking system on request

Pin strips







As counterparts to the plug connectors there are pin strips of the series 110.
They offer remarkable connection data at small dimensions.
Depending on the version they are available from 2 to 24 pole, versions with flanges 2 to 22 poles and two-tier versions 4 to 48 poles (4 to 44 poles with flanges).

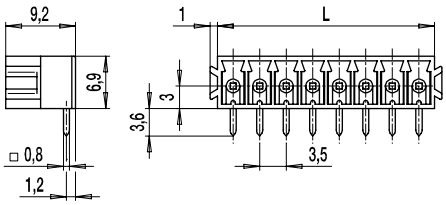
At the direction of insertion, the user can choose between vertical, parallel or at a 45 degree angle to the PCB.

The pin strips of the series 110 feature slots to accommodate the coding elements 120-K. Angle elements on both sides of the housing prevent a false plugging.

Two-tier versions as well as versions with connecting flanges extend the possibilities of application even further.

The pin strips of the series 931 without housing represent the counterparts to the plug connectors 930-FL and 938-FLDS. They are suitable for SMD and THR applications.

Pin strip
110-M-211
Plug-in direction parallel to PCB, with false insertion prevention



Pin strips of series 110 offer remarkable connection data (1,5 mm² / 160 V-III-3 / 8 A) for their small dimensions. In combination with the corresponding plug connectors they guarantee reliable wire connection for all wire types. The compact housings with a pitch of 3,5 mm are available with 2 to 24 poles. The plug direction of the 110-M-211 is parallel to the PC board. The pin strips feature slots to accommodate the coding elements 120-K. Laterally attached dovetail expansions reliably prevent incorrect plugging.

General Information

Pitch	3,5 mm
No. of poles	2 - 24
Usable with	all plug connectors of series 110
Additonal Information	For versions with connecting flanges see 110-M-215.

Technical Data

Overvoltage Category	III	III	II
Pollution Severity Level	3	2	2
Rated Voltage	160 V	160 V	320 V
Rated Impulse Voltage	2,5 kV	2,5 kV	2,5 kV
Rated Insulation Voltage	130 V acc. to EN 60998-1		
Rated Current	8 A		
Hole in PCB	ø 1,3 mm		

Material

Moulding	PA, grey, V-0
Comparative Tracking Index	CTI ≥ 600
Insulating Group	I
Temperature Range	-40°C up to 100°C
Solder pin	0,8 x 0,8 mm; tin plated brass

Part Numbers

No. of poles	110-M-211	Length	Pcs
2	10.841.002	7,00	200
3	10.841.003	10,50	200
4	10.841.004	14,00	100
5	10.841.005	17,50	100
6	10.841.006	21,00	100
7	10.841.007	24,50	50
8	10.841.008	28,00	50
9	10.841.009	31,50	50
10	10.841.010	35,00	50
11	10.841.011	38,50	50
12	10.841.012	42,00	50
13	10.841.013	45,50	50
14	10.841.014	49,00	50
15	10.841.015	52,50	50
16	10.841.016	56,00	50
17	10.841.017	59,50	50
18	10.841.018	63,00	50
19	10.841.019	66,50	50
20	10.841.020	70,00	50
21	10.841.021	73,50	50
22	10.841.022	77,00	50
23	10.841.023	80,50	50
24	10.841.024	84,00	50

Approvals

	Current	Voltage	Group	AWG	Nm
	8	300	B, D		
	8	300	B		

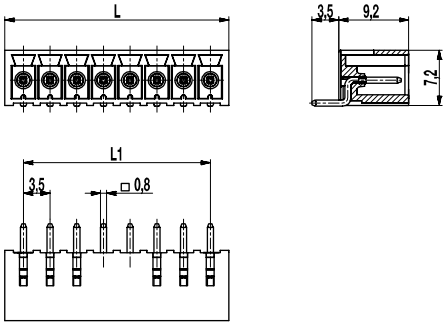
Options / Accessories

- Consecutive numbering
- Special marking accord. drawing
- Self-adhesive marking strip BST-3,50
- Pitch of 7 mm for larger clearance and creepage distances
- Coding elements 120-K
- With smooth side wall

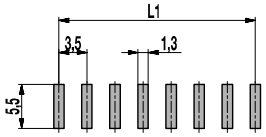
Pin strip for SMD

110-M-211-SMD

Plug-in direction parallel to PCB



PCB Layout



L1 = (No. of poles - 1) x pitch
Solder paste thickness: 0,2 mm

The 110-M-211-SMD is a pin strip for the reflow soldering process in a horizontal version with a pitch of 3.5 mm and available in 2 to 12 poles.
It is compatible with all standard connectors series 110 and 110-A-IDC (Insulation Displacement Contacts).
The housing of the pin strips meets the requirements of the elevated soldering temperatures in the lead-free soldering process.

Part Numbers

No. of poles	110-M-211-SMD	Length	Pcs
2	10.843.102	8,40	992
3	10.843.103	11,90	704
4	10.843.104	15,40	544
5	10.843.105	18,90	432
6	10.843.106	22,40	368
7	10.843.107	25,90	320
8	10.843.108	29,40	272
9	10.843.109	32,90	240
10	10.843.110	36,40	224
11	10.843.111	39,90	208
12	10.843.112	43,40	195

General Information

Pitch	3,5 mm
No. of poles	2 - 12
Usable with	all plug connectors of series 110
Additonal Information	Version with solder flanges see also 110-M-216-SMD

Technical Data

Overvoltage Category	III	III	II
Pollution Severity Level	3	2	2
Rated Voltage	160 V	160 V	320 V
Rated Impulse Voltage	2,5 kV	2,5 kV	2,5 kV
Rated Insulation Voltage	130 V acc. to EN 60998-1		
Rated Current	8 A		
Soldering process	Reflow solder		

Material

Moulding	PA HT, black, V-0
Comparative Tracking Index	CTI ≥ 600
Insulating Group	I
Temperature Range	40°C up to 150°C; reflow solder temperature (Peak) max. 260°C (15-30 s)
Solder pin	0,8 x 0,8 mm; tin plated brass

Approvals

	Current	Voltage	Group	AWG	Nm
	8	300	B, D		
	pending				

Options / Accessories

- Consecutive numbering
- Special marking accord. drawing
- Self-adhesive marking strip BST-3,50 [1]
- Coding elements 120-K [1]

Part Numbers: Tape-on-Reel

No. of poles	110-M-211-SMD	Tape Width	Tape Height	Pcs
4	10.843.104.A00	56 mm	8 mm	475
5	10.841.105.A00	56 mm	8 mm	475
6	10.841.106.A00	56 mm	8 mm	475
7	10.841.107.A00	56 mm	8 mm	475
8	10.841.108.A00	56 mm	8 mm	475
9	10.841.109.A00	56 mm	8 mm	475
10	10.841.110.A00	56 mm	8 mm	475

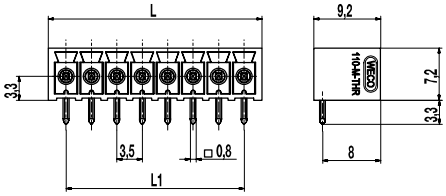
further number of poles on request

[1] To be fitted after reflow soldering process

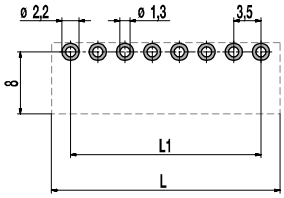
Pin strip for THR

110-M-211-THR

Plug-in direction parallel to PCB



PCB Layout



L1 = (No. of poles - 1) x pitch
Solder paste thickness: 0,15 - 0,2 mm

The 110-M-211-THR is a pin strip, suitable for the reflow soldering process, in horizontal design with a pitch of 3,5 mm and available from 2 to 12 poles. It is compatible to all standard plugs of the series 110 as well as to the Insulation Displacement Connector 110-A-IDC.
The housing of the pin strips correspond to the requirements of the increased soldering temperatures in the lead free soldering process. Spacers, so-called stand-offs, ensure a better hot-air circulation during the reflow soldering process in the convection oven and allow an improved visual control of the solder joint.
All THR pin strips of this series are packed Tape-on-Reel for the assembling with pick & place machines.

Part Numbers

No. of poles	110-M-211-THR	Length	Pcs
2	10.841.302	8,40	200
3	10.841.303	11,90	200
4	10.841.304	15,40	100
5	10.841.305	18,90	100
6	10.841.306	22,40	100
7	10.841.307	25,90	50
8	10.841.308	29,40	50
9	10.841.309	32,90	50
10	10.841.310	36,40	50
11	10.841.311	39,90	50
12	10.841.312	43,40	50

General Information

Pitch	3,5 mm
No. of poles	2 - 12
Usable with	all plug connectors of series 110
Additonal Information	Version with connecting flanges see also 110-M-215-THR

Technical Data

Overvoltage Category	III	III	II
Pollution Severity Level	3	2	2
Rated Voltage	160 V	160 V	320 V
Rated Impulse Voltage	2,5 kV	2,5 kV	2,5 kV
Rated Insulation Voltage	130 V acc. to EN 60998-1		
Rated Current	8 A		
Soldering process	Wave solder & reflow solder		
Hole in PCB	ø 1,3 mm		
PCB thickness	Wave solder max. 1,6 mm; reflow solder 1,6 - 3,2 mm		

Material

Moulding	PA HT, black, V-0
Comparative Tracking Index	CTI ≥ 600
Insulating Group	I
Temperature Range	-40°C up to 150°C; reflow solder temperature (Peak) max. 260°C (15-30 s)
Solder pin	0,8 x 0,8 mm; tin plated brass

Approvals

	Current	Voltage	Group	AWG	Nm
	8	300	B, D		
	8	300	B		

Options / Accessories

- Consecutive numbering
- Special marking accord. drawing
- Self-adhesive marking strip BST-3,50 [1]
- Coding elements 120-K [1]

Part Numbers: Tape-on-Reel

No. of poles	110-M-211-THR	Tape Width	Tape Height	Pcs
2	10.841.302.A00	32 mm	11,8 mm	500
3	10.841.303.A00	32 mm	11,8 mm	500
4	10.841.304.A00	32 mm	11,8 mm	500
5	10.841.305.A00	32 mm	11,8 mm	500

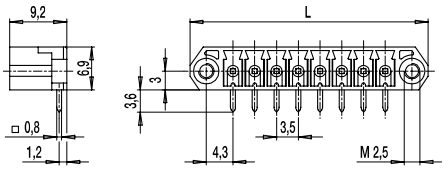
further number of poles on request

[1] To be fitted after reflow soldering process

Pin strip

110-M-215

Plug-in direction parallel to PCB, with connecting flanges



Pin strips of series 110 offer remarkable connection data (1,5 mm² / 160 V-III-3 / 8 A) for their small dimensions. In combination with the corresponding plug connectors they guarantee reliable wire connection for all wire types. The compact housings with a pitch of 3,5 mm are available with 2 to 22 poles. The plug direction of the 110-M-215 is parallel to the PC board. Laterally attached connecting flanges with thread inserts expand the area of application of this variant. The corresponding pin strips in connecting flange design feature lateral thread inserts which offer vibration-proof screw-connection of the plug connector and also prevent unintended loosening. The pin strips feature slots to accommodate the coding elements 120-K.

Part Numbers

No. of poles	110-M-215	Length	Pcs
2	10.841.052	17,30	100
3	10.841.053	20,80	100
4	10.841.054	24,30	100
5	10.841.055	27,80	50
6	10.841.056	31,30	50
7	10.841.057	34,80	50
8	10.841.058	38,30	50
9	10.841.059	41,80	50
10	10.841.060	45,30	50
11	10.841.061	48,80	50
12	10.841.062	52,30	50
13	10.841.063	55,80	50
14	10.841.064	59,30	50
15	10.841.065	62,80	50
16	10.841.066	66,30	50
17	10.841.067	69,80	50
18	10.841.068	73,30	50
19	10.841.069	76,80	50
20	10.841.070	80,30	50
21	10.841.071	83,80	50
22	10.841.072	87,30	50

General Information

Pitch	3,5 mm
No. of poles	2 - 22
Usable with	all plug connectors of series 110 with connecting flanges

Technical Data

Overvoltage Category	III	III	II
Pollution Severity Level	3	2	2
Rated Voltage	160 V	160 V	320 V
Rated Impulse Voltage	2,5 kV	2,5 kV	2,5 kV
Rated Insulation Voltage	130 V acc. to EN 60998-1		
Rated Current	8 A		
Hole in PCB	ø 1,3 mm		

Material

Moulding	PA, grey, V-0
Comparative Tracking Index	CTI ≥ 600
Insulating Group	I
Temperature Range	-40°C up to 100°C
Solder pin	0,8 x 0,8 mm; tin plated brass

Approvals

	Current	Voltage	Group	AWG	Nm
	8	300	B, D		
	8	300	B		

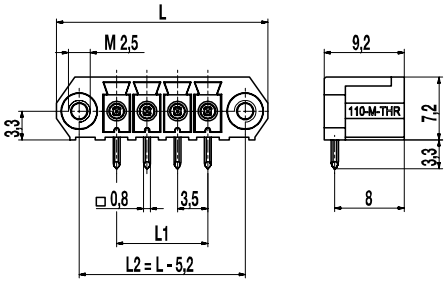
Options / Accessories

- Consecutive numbering
- Special marking accord. drawing
- Self-adhesive marking strip BST-3,50
- Pitch of 7 mm for larger clearance and creepage distances
- Coding elements 120-K

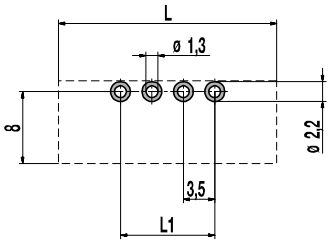
Pin strip for THR

110-M-215-THR

Plug-in direction parallel to PCB, with connecting flanges



PCB Layout



L1 = (No. of poles - 1) x pitch
Solder paste thickness: 0,15 - 0,2 mm

The 110-M-215-THR is a pin strip, suitable for the reflow soldering process, in horizontal design with a pitch of 3,5 mm and available from 2 to 12 poles. It is compatible to all standard plugs of the series 110 as well as to the Insulation Displacement Connector 110-A-IDC.
The housing of the pin strips correspond to the requirements of the increased soldering temperatures in the lead free soldering process. Spacers, so-called stand-offs, ensure a better hot-air circulation during the reflow soldering process in the convection oven and allow an improved visual control of the solder joint.
All THR pin strips of this series are packed Tape-on-Reel for the assembling with pick & place machines.
This version has connecting flanges on both sides of the connector to extend the range of applications additionally.
Description for the application of the flange execution see 110-M-215.

Part Numbers

No. of poles	110-M-215-THR	Length	Pcs
2	10.841.352	17,30	100
3	10.841.353	20,80	100
4	10.841.354	24,30	100
5	10.841.355	27,80	50
6	10.841.356	31,30	50
8	10.841.358	38,30	50
10	10.841.360	45,30	50
11	10.841.361	48,80	50
12	10.841.362	52,30	50

General Information

Pitch	3,5 mm
No. of poles	2 - 12
Usable with	all plug connectors of series 110 with connecting flanges

Technical Data

Overvoltage Category	III	III	II
Pollution Severity Level	3	2	2
Rated Voltage	160 V	160 V	320 V
Rated Impulse Voltage	2,5 kV	2,5 kV	2,5 kV
Rated Insulation Voltage	130 V acc. to EN 60998-1		
Rated Current	8 A		
Soldering process	Wave solder & reflow solder		
Hole in PCB	ø 1,3 mm		
PCB thickness	Wave solder max. 1,6 mm; reflow solder 1,6 mm - 3,2 mm		

Material

Moulding	PA HT, black, V-0
Comparative Tracking Index	CTI ≥ 600
Insulating Group	I
Temperature Range	-40°C up to 150°C; reflow solder temperature (Peak) max. 260°C (15-30 s)
Solder pin	0,8 x 0,8 mm; tin plated brass

Approvals

	Current	Voltage	Group	AWG	Nm
	8	300	B, D		
	8	300	B		

Options / Accessories

- Consecutive numbering
- Special marking accord. drawing
- Self-adhesive marking strip BST-3,50 [1]
- Coding elements 120-K [1]

Part Numbers: Tape-on-Reel

No. of poles	110-M-215-THR	Tape Width	Tape Height	Pcs
2	10.841.352.A00	32 mm	11,8 mm	500
3	10.841.353.A00	32 mm	11,8 mm	500

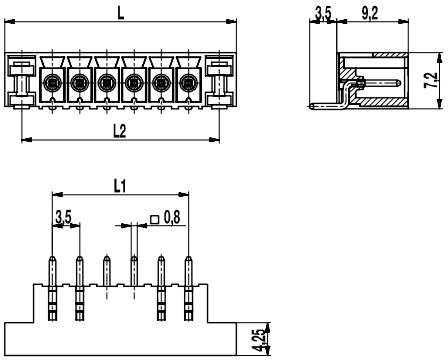
further number of poles on request

[1] To be fitted after reflow soldering process

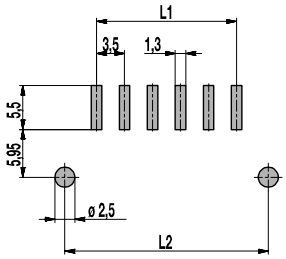
Pin strip for SMD

110-M-216-SMD

Plug-in direction parallel to PCB, with solder flanges



PCB Layout



L1 = (No. of poles - 1) x pitch
Solder paste thickness: 0,2 mm

The 110-M-216-SMD is a pin strip for the reflow soldering process in a horizontal version with a pitch of 3.5 mm and available in 2 to 12 poles.
This product is characterized by the "Floating Anchors". They are movable in vertical direction and achieve 100% coplanarity. Side flanges improve the stability and increase the adhesion force on the PC board.
The pin strip is compatible with all standard connectors series 110 and 110-A-IDC (Insulation Displacement Contacts).
The housing of the pin strips meets the requirements of the elevated soldering temperatures in the lead-free soldering process.

Part Numbers

No. of poles	110-M-216-SMD	Length	Pcs
2	10.843.126	15,80	528
3	10.843.127	19,30	432
4	10.843.128	22,80	368
5	10.843.129	26,30	320
6	10.843.130	29,80	272
7	10.843.131	33,30	240
8	10.843.132	36,80	224
9	10.843.133	40,30	208
10	10.843.134	43,80	192
11	10.843.135	47,30	176
12	10.843.136	50,80	160

General Information

Pitch	3,5 mm
No. of poles	2 - 12
Usable with	all plug connectors of series 110

Technical Data

Overvoltage Category	III	III	II
Pollution Severity Level	3	2	2
Rated Voltage	160 V	160 V	320 V
Rated Impulse Voltage	2,5 kV	2,5 kV	2,5 kV
Rated Insulation Voltage	130 V acc. to EN 60998-1		
Rated Current	8 A		
Soldering process	Reflow solder		

Material

Moulding	PA HT, black, V-0
Comparative Tracking Index	CTI ≥ 600
Insulating Group	I
Temperature Range	40°C up to 150°C; reflow solder temperature (Peak) max. 260°C (15-30 s)
Solder pin	0,8 x 0,8 mm; tin plated brass
Solder cylinder	tin plated brass

Approvals

	Current	Voltage	Group	AWG	Nm
	8	300	B, D		
	pending				

Options / Accessories

- Consecutive numbering
- Special marking accord. drawing
- Self-adhesive marking strip BST-3,50 [1]
- Coding elements 120-K [1]

Part Numbers: Tape-on-Reel

No. of poles	110-M-216-SMD	Tape Width	Tape Height	Pcs
2	10.843.126.A00	56 mm	8 mm	475
3	10.843.127.A00	56 mm	8 mm	475
4	10.843.128.A00	56 mm	8 mm	475
5	10.843.129.A00	56 mm	8 mm	475
6	10.843.130.A00	56 mm	8 mm	475
7	10.843.131.A00	56 mm	8 mm	475
8	10.843.132.A00	56 mm	8 mm	475

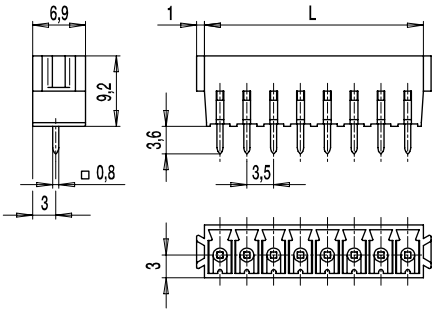
further number of poles on request

[1] To be fitted after reflow soldering process

Pin strip

110-M-221

Plug-in direction vertical to PCB, with false insertion prevention



Pin strips of series 110 offer remarkable connection data (1,5 mm² / 160 V-III-3 / 8 A) for their small dimensions. In combination with the corresponding plug connectors they guarantee reliable wire connection for all wire types. The compact housings with a pitch of 3,5 mm are available with 2 to 24 poles. The plug direction of the 110-M-221 is vertical to the PC board. The pin strips feature slots to accommodate the coding elements 120-K. Laterally attached dovetail expansions reliably prevent false insertion.

General Information

Pitch	3,5 mm
No. of poles	2 - 24
Usable with	all plug connectors of series 110
Additonal Information	For versions with connecting flanges see 110-M-225

Technical Data

Overvoltage Category	III	III	II
Pollution Severity Level	3	2	2
Rated Voltage	160 V	160 V	320 V
Rated Impulse Voltage	2,5 kV	2,5 kV	2,5 kV
Rated Insulation Voltage	130 V acc. to EN 60998-1		
Rated Current	8 A		
Hole in PCB	ø 1,3 mm		

Material

Moulding	PA, grey, V-0
Comparative Tracking Index	CTI ≥ 600
Insulating Group	I
Temperature Range	-40°C up to 100°C
Solder pin	0,8 x 0,8 mm; tin plated brass

Part Numbers

No. of poles	110-M-221	Length	Pcs
2	20.841.002	7,00	200
3	20.841.003	10,50	200
4	20.841.004	14,00	100
5	20.841.005	17,50	100
6	20.841.006	21,00	100
7	20.841.007	24,50	50
8	20.841.008	28,00	50
9	20.841.009	31,50	50
10	20.841.010	35,00	50
11	20.841.011	38,50	50
12	20.841.012	42,00	50
13	20.841.013	45,50	50
14	20.841.014	49,00	50
15	20.841.015	52,50	50
16	20.841.016	56,00	50
17	20.841.017	59,50	50
18	20.841.018	63,00	50
19	20.841.019	66,50	50
20	20.841.020	70,00	50
21	20.841.021	73,50	50
22	20.841.022	77,00	50
23	20.841.023	80,50	50
24	20.841.024	84,00	50

Approvals

	Current	Voltage	Group	AWG	Nm
	8	300	B, D		
	8	300	B		

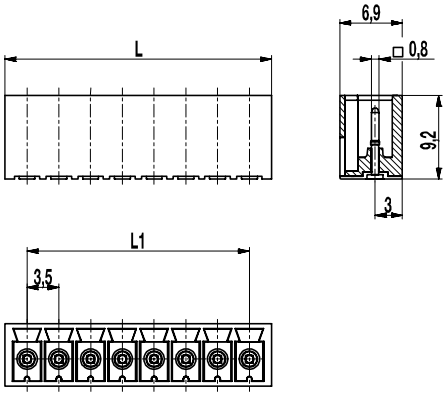
Options / Accessories

- Consecutive numbering
- Special marking accord. drawing
- Self-adhesive marking strip BST-3,50
- Pitch of 7 mm for larger clearance and creepage distances
- Coding elements 120-K
- With smooth side wall

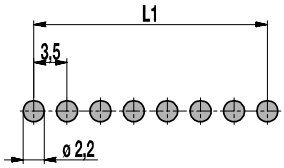
Pin strip for SMD

110-M-221-SMD

Plug-in direction vertical to PCB



PCB Layout



L1 = (No. of poles - 1) x pitch
Solder paste thickness: 0,15 - 0,2 mm

The 110-M-221-SMD is a pin strip for the reflow soldering process in a vertical version with a pitch of 3.5 mm and available in 2 to 12 poles.
This product is characterized by the so-called "Floating Pins". They are movable in vertical direction and achieve a 100% coplanarity.
It is compatible with all standard connectors series 110 and 110-A-IDC (Insulation Displacement Contacts).
The housing of the pin strips meets the requirements of the elevated soldering temperatures in the lead-free soldering process.
The pin strips of this series are available in Tape-on-Reel for automatic pick & place and are equipped with high temperature resistant Pick Caps which can easily be removed after the soldering process.

Part Numbers

No. of poles	110-M-221-SMD	Length	Pcs
2	20.843.152	8,40	200
3	20.843.153	11,90	200
4	20.843.154	15,40	100
5	20.843.155	18,90	100
6	20.843.156	22,40	100
7	20.843.157	25,90	50
8	20.843.158	29,40	50
9	20.843.159	32,90	50
10	20.843.160	36,40	50
11	20.843.161	39,90	50
12	20.843.162	43,40	50

General Information

Pitch	3,5 mm
No. of poles	2 - 12
Usable with	all plug connectors of series 110
Additonal Information	Version with solder flanges see also 110-M-226-SMD

Technical Data

Overvoltage Category	III	III	II
Pollution Severity Level	3	2	2
Rated Voltage	160 V	160 V	320 V
Rated Impulse Voltage	2,5 kV	2,5 kV	2,5 kV
Rated Insulation Voltage	130 V acc. to EN 60998-1		
Rated Current	8 A		
Soldering process	Reflow solder		

Material

Moulding	PA HT, black, V-0
Comparative Tracking Index	CTI ≥ 600
Insulating Group	I
Temperature Range	-40°C up to 150°C; reflow solder temperature (Peak) max. 260°C (15-30 s)
Solder pin	0,8 x 0,8 mm; tin plated brass

Approvals

	Current	Voltage	Group	AWG	Nm
	8	150	B		
	8	300	D		
	pending				

Options / Accessories

- Consecutive numbering
- Special marking accord. drawing
- Self-adhesive marking strip BST-3,50 [1]
- Coding elements 120-K [1]

Part Numbers: Tape-on-Reel

No. of poles	110-M-221-SMD	Tape Width	Tape Height	Pcs
5	20.843.155.A00	56 mm	10,9 mm	550
6	20.843.156.A00	56 mm	10,9 mm	550
7	20.843.157.A00	56 mm	10,9 mm	550
8	20.843.158.A00	56 mm	10,9 mm	550
9	20.843.159.A00	56 mm	10,9 mm	550
10	20.843.160.A00	56 mm	10,9 mm	550

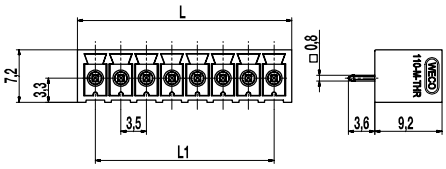
further number of poles on request

[1] To be fitted after reflow soldering process

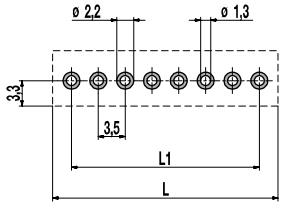
Pin strip for THR

110-M-221-THR

Plug-In direction vertical to PCB



PCB Layout



L1 = (No. of poles - 1) x pitch
Solder paste thickness: 0,15 - 0,2 mm

The 110-M-221-THR is a pin strip, suitable for the reflow soldering process, in vertical design with a pitch of 3,5 mm and available from 2 to 12 poles. It is compatible to all standard plugs of the series 110 as well as to the Insulation Displacement Connector 110-A-IDC.
The housing of the pin strips correspond to the requirements of the increased soldering temperatures in the lead free soldering process. Spacers, so-called stand-offs, ensure a better hot-air circulation during the reflow soldering process in the convection oven and allow an improved visual control of the solder joint.
All THR pin strips of this series are packed Tape-on-Reel for the assembling with pick & place machines. They are equipped with high temperature resistant Pick Caps (see picture), which can be comfortably removed after the soldering process.

Part Numbers

No. of poles	110-M-221-THR	Length	Pcs
2	20.841.302	8,40	200
3	20.841.303	11,90	200
4	20.841.304	15,40	100
5	20.841.305	18,90	100
6	20.841.306	22,40	100
7	20.841.307	25,90	50
8	20.841.308	29,40	50
9	20.841.309	32,90	50
10	20.841.310	36,40	50
11	20.841.311	39,90	50
12	20.841.312	43,40	50

General Information

Pitch	3,5 mm
No. of poles	2 - 12
Usable with	all plug connectors of series 110
Additonal Information	Version with connecting flanges see also 110-M-225-THR

Technical Data

Overvoltage Category	III	III	II
Pollution Severity Level	3	2	2
Rated Voltage	160 V	160 V	320 V
Rated Impulse Voltage	2,5 kV	2,5 kV	2,5 kV
Rated Insulation Voltage	130 V acc. to EN 60998-1		
Rated Current	8 A		
Soldering process	Wave solder & reflow solder		
Hole in PCB	ø 1,3 mm		
PCB thickness	Wave solder max. 1,6 mm; reflow solder 1,6 mm - 3,2 mm		

Material

Moulding	PA HT, black, V-0
Comparative Tracking Index	CTI ≥ 600
Insulating Group	I
Temperature Range	-40°C up to 150°C; reflow solder temperature (Peak) max. 260°C (15-30 s)
Solder pin	0,8 x 0,8 mm; tin plated brass

Approvals

	Current	Voltage	Group	AWG	Nm
	8	300	B, D		
	8	300	B		

Options / Accessories

- Consecutive numbering
- Special marking accord. drawing
- Self-adhesive marking strip BST-3,50 [1]
- Coding elements 120-K [1]

Part Numbers: Tape-on-Reel

No. of poles	110-M-221-THR	Tape Width	Tape Height	Pcs
5	20.841.305.A00	56 mm	14,9 mm	300
6	20.841.306.A00	56 mm	14,9 mm	300
7	20.841.307.A00	56 mm	14,9 mm	300
8	20.841.308.A00	56 mm	14,9 mm	300
9	20.841.309.A00	56 mm	14,9 mm	300
10	20.841.310.A00	56 mm	14,9 mm	300

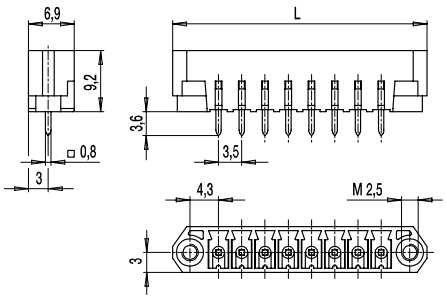
further number of poles on request

[1] To be fitted after reflow soldering process

Pin strip

110-M-225

Plug-in direction vertical to PCB, with connecting flanges



Pin strips of series 110 offer remarkable connection data (1,5 mm² / 160 V-III-3 / 8 A) for their small dimensions. In combination with the corresponding plug connectors they guarantee reliable wire connection for all wire types. The compact housings with a pitch of 3,5 mm are available with 2 to 22 poles. The plug direction of the 110-M-225 is vertical to the PC board. Laterally attached connecting flanges with thread inserts expand the area of application of this variant. The corresponding pin strips in connecting flange design feature lateral thread inserts which offer vibration-proof screw-connection of the plug connector and also prevent unintended loosening. In addition, pin strip connectors can be attached to housing walls with screws (not included in the delivery extent). The pin strips feature slots to accommodate the coding elements 120-K.

Part Numbers

No. of poles	110-M-225	Length	Pcs
2	20.841.052	17,30	100
3	20.841.053	20,80	100
4	20.841.054	24,30	100
5	20.841.055	27,80	50
6	20.841.056	31,30	50
7	20.841.057	34,80	50
8	20.841.058	38,30	50
9	20.841.059	41,80	50
10	20.841.060	45,30	50
11	20.841.061	48,80	50
12	20.841.062	52,30	50
13	20.841.063	55,80	50
14	20.841.064	59,30	50
15	20.841.065	62,80	50
16	20.841.066	66,30	50
17	20.841.067	69,80	50
18	20.841.068	73,30	50
19	20.841.069	76,80	50
20	20.841.070	80,30	50
21	20.841.071	83,80	50
22	20.841.072	87,30	50

further number of poles on request

General Information

Pitch	3,5 mm
No. of poles	2 - 22
Usable with	all plug connectors of series 110 with connecting flanges

Technical Data

Overvoltage Category	III	III	II
Pollution Severity Level	3	2	2
Rated Voltage	160 V	160 V	320 V
Rated Impulse Voltage	2,5 kV	2,5 kV	2,5 kV
Rated Insulation Voltage	130 V acc. to EN 60998-1		
Rated Current	8 A		
Hole in PCB	ø 1,3 mm		

Material

Moulding	PA, grey, V-0
Comparative Tracking Index	CTI ≥ 600
Insulating Group	I
Temperature Range	-40°C up to 100°C
Solder pin	0,8 x 0,8 mm; tin plated brass

Approvals

	Current	Voltage	Group	AWG	Nm
	8	300	B, D		
	8	300	B		

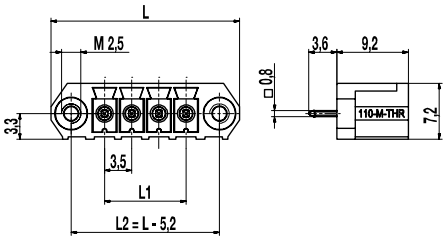
Options / Accessories

- Consecutive numbering
- Special marking accord. drawing
- Self-adhesive marking strip BST-3,50
- Pitch of 7 mm for larger clearance and creepage distances
- Coding elements 120-K

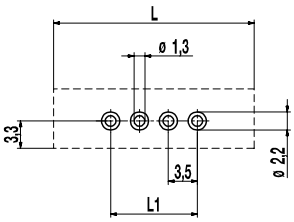
Pin strip for THR

110-M-225-THR

Plug-In direction vertical to PCB, with connecting flanges



PCB Layout



L1 = (No. of Poles - 1) x pitch
Solder paste thickness: 0,15 - 0,2 mm

The 110-M-225-THR is a pin strip, suitable for the reflow soldering process, in vertical design with a pitch of 3,5 mm and available from 2 to 12 poles. It is compatible to all standard plugs of the series 110 as well as to the Insulation Displacement Connector 110-A-IDC.
This version has connecting flanges on both sides of the connector to extend the range of applications additionally.
The housing of the pin strips correspond to the requirements of the increased soldering temperatures in the lead free soldering process. Spacers, so-called stand-offs, ensure a better hot-air circulation during the reflow soldering process in the convection oven and allow an improved visual control of the solder joint.
All THR pin strips of this series are packed Tape-on-Reel for the assembling with pick & place machines. They are equipped with high temperature resistant Pick Caps, which can comfortably be removed after the soldering process.

Part Numbers

No. of poles	110-M-225-THR	Length	Pcs
2	20.841.352	17,30	100
3	20.841.353	20,80	100
4	20.841.354	24,30	100
5	20.841.355	27,80	50
6	20.841.356	31,30	50
8	20.841.358	38,30	50
10	20.841.360	45,30	50
11	20.841.361	48,80	50
12	20.841.362	52,30	50

General Information

Pitch	3,5 mm
No. of poles	2 - 12
Usable with	all plug connectors of series 110 with connecting flanges

Technical Data

Overvoltage Category	III	III	II
Pollution Severity Level	3	2	2
Rated Voltage	160 V	160 V	320 V
Rated Impulse Voltage	2,5 kV	2,5 kV	2,5 kV
Rated Insulation Voltage	130 V acc. to EN 60998-1		
Rated Current	8 A		
Soldering process	Wave solder & reflow solder		
Hole in PCB	ø 1,3 mm		
PCB thickness	Wave solder max. 1,6 mm; reflow solder 1,6 mm - 3,2 mm		

Material

Moulding	PA HT, black, V-0
Comparative Tracking Index	CTI ≥ 600
Insulating Group	I
Temperature Range	-40°C up to 150°C; reflow solder temperature (Peak) max. 260°C (15-30 s)
Solder pin	0,8 x 0,8 mm; tin plated brass

Approvals

	Current	Voltage	Group	AWG	Nm
	8	300	B, D		
	8	300	B		

Options / Accessories

- Consecutive numbering
- Special marking accord. drawing
- Self-adhesive marking strip BST-3,50 [1]
- Coding elements 120-K [1]

Part Numbers: Tape-on-Reel

No. of poles	110-M-225-THR	Tape Width	Tape Height	Pcs
3	20.841.353.A00	56 mm	14,9 mm	300
4	20.841.354.A00	56 mm	14,9 mm	300
5	20.841.355.A00	56 mm	14,9 mm	300
6	20.841.356.A00	56 mm	14,9 mm	300
7	20.841.357.A00	56 mm	14,9 mm	300
8	20.841.358.A00	56 mm	14,9 mm	300

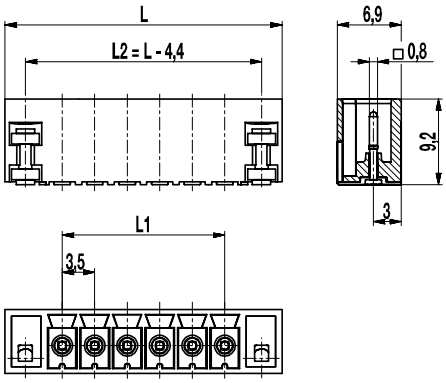
further number of poles on request

[1] To be fitted after reflow soldering process

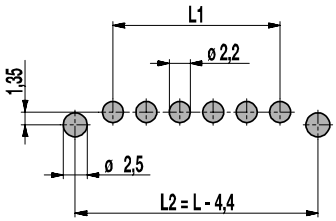
Pin strip for SMD

110-M-226-SMD

Plug-in direction vertical to PCB, with solder flanges



PCB Layout



L1 = (No. of poles - 1) x pitch
Solder paste thickness: 0,15 - 0,2 mm

The 110-M-226-SMD is a pin strip for the reflow soldering process in a vertical version with a pitch of 3.5 mm and available in 2 to 12 poles.
This product is characterized by the "Floating Anchors" and "Floating Pins". They are movable in vertical direction and achieve a 100% coplanarity. Side flanges improve the stability and increase the adhesion force on the PC board.
It is compatible with all standard connectors series 110 and 110-A-IDC (Insulation Displacement Contacts).
The housing of the pin strips meets the requirements of the elevated soldering temperatures in the lead-free soldering process.
The pin strips of this series are available in Tape-on-Reel for automatic pick & place and are equipped with high temperature resistant Pick Caps which can easily be removed after the soldering process.

Part Numbers

No. of poles	110-M-226-SMD	Length	Pcs
2	20.843.176	15,80	200
3	20.843.177	19,30	200
4	20.843.178	22,80	100
5	20.843.179	26,30	100
6	20.843.180	29,80	100
7	20.843.181	33,30	50
8	20.843.182	36,80	50
9	20.843.183	40,30	50
10	20.843.184	43,80	50
11	20.843.185	47,30	50
12	20.843.186	50,80	50

General Information

Pitch	3,5 mm
No. of poles	2 - 12
Usable with	all plug connectors of series 110

Technical Data

Overvoltage Category	III	III	II
Pollution Severity Level	3	2	2
Rated Voltage	160 V	160 V	320 V
Rated Impulse Voltage	2,5 kV	2,5 kV	2,5 kV
Rated Insulation Voltage	130 V acc. to EN 60998-1		
Rated Current	8 A		
Soldering process	Reflow solder		

Material

Moulding	PA HT, black, V-0
Comparative Tracking Index	CTI ≥ 600
Insulating Group	I
Temperature Range	-40°C up to 150°C; reflow solder temperature (Peak) max. 260°C (15-30 s)
Solder pin	0,8 x 0,8 mm; tin plated brass
Solder cylinder	tin plated brass

Approvals

	Current	Voltage	Group	AWG	Nm
	8	150	B		
	8	300	D		
	pending				

Options / Accessories

- Consecutive numbering
- Special marking accord. drawing
- Self-adhesive marking strip BST-3,50 [1]
- Coding elements 120-K [1]

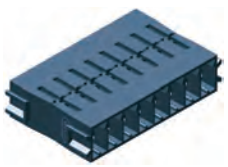
Part Numbers: Tape-on-Reel

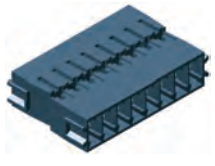
No. of poles	110-M-226-SMD	Tape Width	Tape Height	Pcs
3	20.843.177.A00	56 mm	10,9 mm	550
4	20.843.178.A00	56 mm	10,9 mm	550
5	20.843.179.A00	56 mm	10,9 mm	550
6	20.843.180.A00	56 mm	10,9 mm	550
7	20.843.181.A00	56 mm	10,9 mm	550
8	20.843.182.A00	56 mm	10,9 mm	550

further number of poles on request

[1] To be fitted after reflow soldering process

Coupler
110-M-241(-R)





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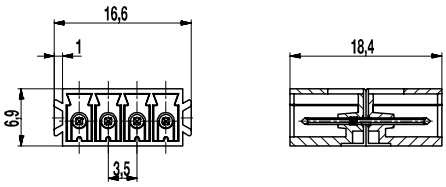
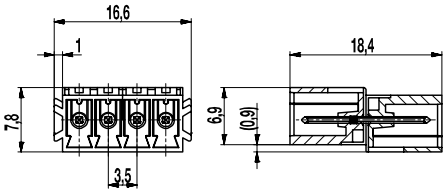


110-M-241



110-M-241-R

All couplers consist of two vertical pin strips 110-M assembled back-to-back with continuous pins for both pin strips. This allows plugging and coding on both sides.

In addition, pin strips with connecting flange can be screw connected with each other or alternatively with plug connectors.
Rotating one pin strip generates the R-variant (R for reverse), on which pole markings of both plug connectors match.

Advantages:
- Pre-assembled functional units can be quickly connected and disconnected
- Shorter assembly times, easier unit exchange
- Current handling capability identical to all other 110-products
- Coding possibility
- Printed upon request with markings readable in plugged condition
- Easier maintenance and trouble-shooting

Part Numbers

No. of poles	110-M-241	110-M-241-R	Length	Pcs
2	10.841.702	40.841.702	7,00	100
3	10.841.703	40.841.703	10,50	100
4	10.841.704	40.841.704	14,00	50
8	10.841.708	40.841.708	28,00	25
12	10.841.712	40.841.712	42,00	25

further number of poles on request

General Information

Pitch	3,5 mm
No. of poles	2 - 12
Usable with	all plug connectors of series 110

Technical Data

Overvoltage Category	III	III	II
Pollution Severity Level	3	2	2
Rated Voltage	160 V	160 V	320 V
Rated Impulse Voltage	2,5 kV	2,5 kV	2,5 kV
Rated Insulation Voltage	130 V acc. to EN 60998-1		
Rated Current	8 A		

Material

Moulding	PA, grey, V-0
Comparative Tracking Index	CTI ≥ 600
Insulating Group	I
Temperature Range	-40°C up to 100°C
Pin	0,8 x 0,8 mm; tin plated brass

Approvals

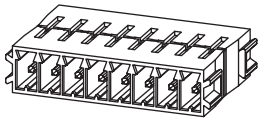
	Current	Voltage	Group	AWG	Nm
	8	300	B		
	8	300	B		

Options / Accessories

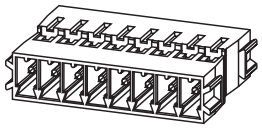
- Consecutive numbering
- Special marking according to drawing
- Self-adhesive marking strip BST-3,50

Coupler
110-M-241(-R)
ADDITION: Overview variants

110-M-241/..
Standard version



110-M-241/..-R
like 110-M-241,
but one pin strip turned 180°



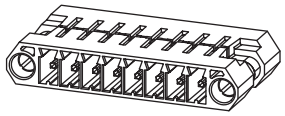
Matching Parts: 2x 110-A-111

Part numbers

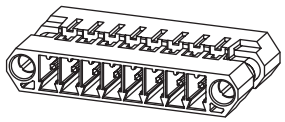
No. of poles	110-M-241	110-M-241-R	Length	Pcs
2	10.841.702	40.841.702	7,00	100
3	10.841.703	40.841.703	10,50	100
4	10.841.704	40.841.704	14,00	50
8	10.841.708	40.841.708	28,00	25
12	10.841.712	40.841.712	42,00	25

further number of poles on request

110-M-245/..
like 110-M-241,
but both pin strips fixed together with screws



110-M-245/..-R
like 110-M-241,
but both pin strips fixed together with screws

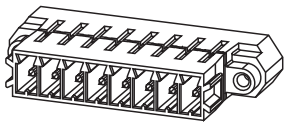


Part numbers

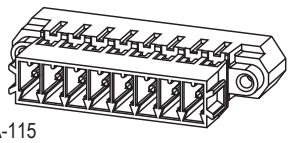
No. of poles	110-M-245	110-M-245-R	Length	Pcs
2	10.841.751		17,30	100
3			20,80	
4		40.841.754	24,30	50
8			38,30	
10	10.841.760	40.841.760	45,30	50

further number of poles on request

110-M-345/..
like 110-M-241,
but one pin strip with connecting flanges



110-M-345/..-R
like 110-M-345,
but one pin strip turned 180°



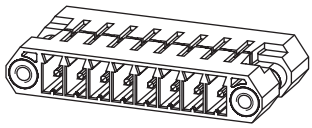
Matching Parts: 1x 110-A-111 and 1x 110-A-115

Part numbers

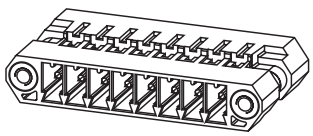
No. of poles	110-M-345	110-M-345-R	Length	Pcs
2	10.841.902	40.841.902	17,30	100
3			20,80	
4	10.841.904	40.841.904	24,30	50
8			38,30	
12	10.841.912	40.841.912	45,30	25

further number of poles on request

110-M-445/..
like 110-M-241,
but both pin strips with connecting flanges



110-M-445/..-R
like 110-M-445,
but one pin strip turned 180°



Matching Parts: 2x 110-A-115

Part numbers

No. of poles	110-M-445	110-M-445-R	Length	Pcs
2	10.841.927	40.841.927	17,30	100
3			20,80	
4	10.841.929	40.841.929	24,30	50
8			38,30	
12	10.841.937	40.841.937	45,30	50

further number of poles on request

Pin strip
110-P-211
Two-tier version, plug-in direction parallel to PCB, with false insertion prevention

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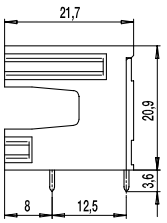
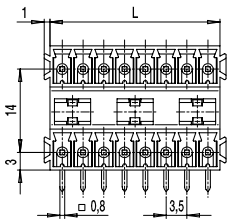




Pin strips of series 110 offer remarkable connection data (1,5 mm² / 160 V-III-3 / 8 A) for their small dimensions. The compact housings of these two-tier versions with a pitch of 3,5 mm are available with 4 to 48 poles. The plug direction of the 110-P-211 is parallel to the PC board. The pin strips feature slots to accommodate the coding elements 120-K. Laterally attached dovetail expansions reliably prevent false insertion.

Part Numbers

No. of poles	110-P-211	Length	Pcs
4	10.841.602	7,00	100
6	10.841.603	10,50	100
8	10.841.604	14,00	50
10	10.841.605	17,50	50
12	10.841.606	21,00	50
14	10.841.607	24,50	50
16	10.841.608	28,00	25
18	10.841.609	31,50	25
20	10.841.610	35,00	25
22	10.841.611	38,50	25
24	10.841.612	42,00	25
26	10.841.613	45,50	25
28	10.841.614	49,00	25
30	10.841.615	52,50	25
32	10.841.616	56,00	25
34	10.841.617	59,50	25
36	10.841.618	63,00	25
38	10.841.619	66,50	25
40	10.841.620	70,00	25
42	10.841.621	73,50	25
44	10.841.622	77,00	10
46	10.841.623	80,50	10
48	10.841.624	84,00	10

General Information

Pitch	3,5 mm
No. of poles	4 - 48
Usable with	all plug connectors of series 110
Additonal Information	For versions with connecting flanges see 110-P-215

Technical Data

Overvoltage Category	III	III	II
Pollution Severity Level	3	2	2
Rated Voltage	160 V	160 V	320 V
Rated Impulse Voltage	2,5 kV	2,5 kV	2,5 kV
Rated Insulation Voltage	130 V acc. to EN 60998-1		
Rated Current	8 A		
Hole in PCB	ø 1,3 mm		

Material

Moulding	PA, grey, V-0
Comparative Tracking Index	CTI ≥ 600
Insulating Group	I
Temperature Range	-40°C up to 100°C
Solder pin	0,8 x 0,8 mm; tin plated brass

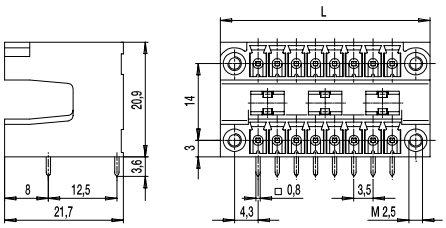
Approvals

	Current	Voltage	Group	AWG	Nm
	8	300	B, D		
	8	300	B		

Options / Accessories

- Consecutive numbering
- Special marking according to drawing
- Self-adhesive marking strip BST-3,50
- Pitch of 7 mm for larger clearance and creepage distances
- Coding elements 120-K
- With flat side walls

Pin strip
110-P-215
Two-tier version, plug-in direction parallel to PCB, with connecting flanges



Pin strips of series 110 offer remarkable connection data (1,5 mm² / 160 V-III-3 / 8 A) for their small dimensions. The compact housings of these two-tier versions with a pitch of 3,5 mm are available with 4 to 44 poles. The plug direction of the 110-P-215 is parallel to the PC board. Laterally attached connecting flanges with thread inserts expand the area of application of this version. The corresponding pin strips in connecting flange design feature lateral thread inserts which offer vibration-proof screw-connection of the plug connector and also prevent unintended loosening. The pin strips feature slots to accommodate the coding elements 120-K.

Part Numbers

No. of poles	110-P-215	Length	Pcs
4	10.841.652	17,30	100
6	10.841.653	20,80	10
8	10.841.654	24,30	50
10	10.841.655	27,80	50
12	10.841.656	31,30	50
14	10.841.657	34,80	50
16	10.841.658	38,30	25
18	10.841.659	41,80	25
20	10.841.660	45,30	25
22	10.841.661	48,80	25
24	10.841.662	52,30	25
26	10.841.663	55,80	25
28	10.841.664	59,30	25
30	10.841.665	62,80	25
32	10.841.666	66,30	25
34	10.841.667	69,80	25
36	10.841.668	73,30	25
38	10.841.669	76,80	25
40	10.841.670	80,30	25
42	10.841.671	83,80	25
44	10.841.672	87,30	10

General Information

Pitch	3,5 mm
No. of poles	4 - 44
Usable with	all plug connectors of series 110 with connecting flanges

Technical Data

Overvoltage Category	III	III	II
Pollution Severity Level	3	2	2
Rated Voltage	160 V	160 V	320 V
Rated Impulse Voltage	2,5 kV	2,5 kV	2,5 kV
Rated Insulation Voltage	130 V acc. to EN 60998-1		
Rated Current	8 A		
Hole in PCB	ø 1,3 mm		

Material

Moulding	PA, grey, V-0
Comparative Tracking Index	CTI ≥ 600
Insulating Group	I
Temperature Range	-40°C up to 100°C
Solder pin	0,8 x 0,8 mm; tin plated brass

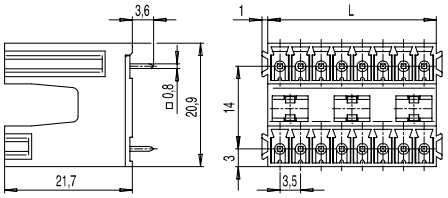
Approvals

	Current	Voltage	Group	AWG	Nm
	8	300	B, D		
	8	300	B		

Options / Accessories

- Consecutive numbering
- Special marking according to drawing
- Self-adhesive marking strip BST-3,50
- Pitch of 7 mm for larger clearance and creepage distances
- Coding elements 120-K
- With PCB location pin

Pin strip
110-P-221
Two-tier version, plug-in direction vertical to PCB, with false insertion prevention



Pin strips of series 110 offer remarkable connection data (1,5 mm² / 160 V-III-3 / 8 A) for their small dimensions. The compact housings of these two-tier versions with a pitch of 3,5 mm are available with 4 to 48 poles. The plug direction of the 110-P-221 is vertical to the PC board. The pin strips feature slots to accommodate the coding elements 120-K. Laterally attached dovetail expansions reliably prevent false insertion.

General Information

Pitch	3,5 mm
No. of poles	4 - 48
Usable with	all plug connectors of series 110
Additonal Information	For versions with connecting flanges see 110-P-225

Technical Data

Overvoltage Category	III	III	II
Pollution Severity Level	3	2	2
Rated Voltage	160 V	160 V	320 V
Rated Impulse Voltage	2,5 kV	2,5 kV	2,5 kV
Rated Insulation Voltage	130 V acc. to EN 60998-1		
Rated Current	8 A		
Hole in PCB	ø 1,3 mm		

Material

Moulding	PA, grey, V-0
Comparative Tracking Index	CTI ≥ 600
Insulating Group	I
Temperature Range	-40°C up to 100°C
Solder pin	0,8 x 0,8 mm; tin plated brass

Approvals

	Current	Voltage	Group	AWG	Nm
	8	300	B, D		
	8	300	B		

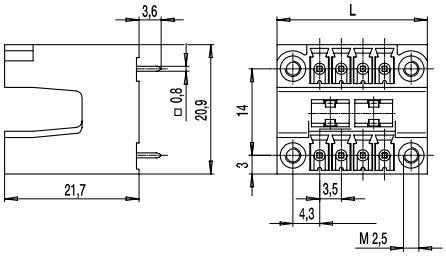
Part Numbers

No. of poles	110-P-221	Length	Pcs
4	20.841.602	7,00	100
6	20.841.603	10,50	100
8	20.841.604	14,00	50
10	20.841.605	17,50	50
12	20.841.606	21,00	50
14	20.841.607	24,50	50
16	20.841.608	28,00	25
18	20.841.609	31,50	25
20	20.841.610	35,00	25
22	20.841.611	38,50	25
24	20.841.612	42,00	25
26	20.841.613	45,50	25
28	20.841.614	49,00	25
30	20.841.615	52,50	25
32	20.841.616	56,00	25
34	20.841.617	59,50	25
36	20.841.618	63,00	25
38	20.841.619	66,50	25
40	20.841.620	70,00	25
42	20.841.621	73,50	25
44	20.841.622	77,00	10
46	20.841.623	80,50	10
48	20.841.624	84,00	10

Options / Accessories

- Consecutive numbering
- Special marking according to drawing
- Self-adhesive marking strip BST-3,50
- Pitch of 7 mm for larger clearance and creepage distances
- Coding elements 120-K
- With flat side walls

Pin strip
110-P-225
Two-tier version, plug-in direction vertical to PCB, with connecting flanges



Pin strips of series 110 offer remarkable connection data (1,5 mm² / 160 V-III-3 / 8 A) for their small dimensions. The compact housings of these two-tier versions with a pitch of 3,5 mm are available with 4 to 44 poles. The plug direction of the 110-P-225 is vertical to the PC board. Laterally attached connecting flanges with thread inserts expand the area of application of this version. The corresponding pin strips in connecting flange design feature lateral thread inserts which offer vibration-proof screw-connection of the plug connector and also prevent unintended loosening. The pin strips feature slots to accommodate the coding elements 120-K.

Part Numbers

No. of poles	110-P-225	Length	Pcs
4	20.841.652	17,30	100
6	20.841.653	20,80	100
8	20.841.654	24,30	50
10	20.841.655	27,80	50
12	20.841.656	31,30	50
14	20.841.657	34,80	50
16	20.841.658	38,30	25
18	20.841.659	41,80	25
20	20.841.660	45,30	25
22	20.841.661	48,80	25
24	20.841.662	52,30	25
26	20.841.663	55,80	25
28	20.841.664	59,30	25
30	20.841.665	62,80	25
32	20.841.666	66,30	25
34	20.841.667	69,80	25
36	20.841.668	73,30	25
38	20.841.669	76,80	25
40	20.841.670	80,30	25
42	20.841.671	83,80	25
44	20.841.672	87,30	10

General Information

Pitch	3,5 mm
No. of poles	4 - 44
Usable with	all plug connectors of series 110 with connecting flanges

Technical Data

Overvoltage Category	III	III	II
Pollution Severity Level	3	2	2
Rated Voltage	160 V	160 V	320 V
Rated Impulse Voltage	2,5 kV	2,5 kV	2,5 kV
Rated Insulation Voltage	130 V acc. to EN 60998-1		
Rated Current	8 A		
Hole in PCB	ø 1,3 mm		

Material

Moulding	PA, grey, V-0
Comparative Tracking Index	CTI ≥ 600
Insulating Group	I
Temperature Range	-40°C up to 100°C
Solder pin	0,8 x 0,8 mm; tin plated brass

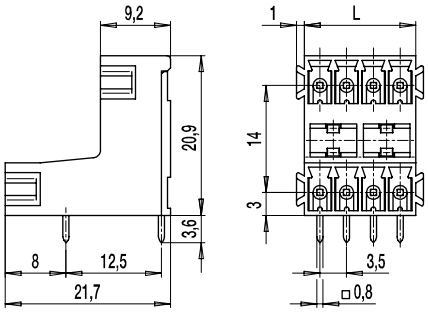
Approvals

	Current	Voltage	Group	AWG	Nm
	8	300	B, D		
	8	300	B		

Options / Accessories

- Consecutive numbering
- Special marking according to drawing
- Self-adhesive marking strip BST-3,50
- Pitch of 7 mm for larger clearance and creepage distances
- Coding elements 120-K

Pin strip
110-S-211
Staggered two-tier version, plug-in direction parallel to PCB, with false insertion prevention



Pin strips of series 110 offer remarkable connection data (1,5 mm² / 160 V-III-3 / 8 A) for their small dimensions. The compact housings of these two-tier versions with a pitch of 3,5 mm are available with 4 to 48 poles. The plug direction of the 110-S-211 is parallel to the PC board. The pin strips feature slots to accommodate the coding elements 120-K. Laterally attached dovetail expansions reliably prevent false insertion.

Part Numbers

No. of poles	110-S-211	Length	Pcs
4	10.841.402	7,00	100
6	10.841.403	10,50	100
8	10.841.404	14,00	50
10	10.841.405	17,50	50
12	10.841.406	21,00	50
14	10.841.407	24,50	50
16	10.841.408	28,00	25
18	10.841.409	31,50	25
20	10.841.410	35,00	25
22	10.841.411	38,50	25
24	10.841.412	42,00	25
26	10.841.413	45,50	25
28	10.841.414	49,00	25
30	10.841.415	52,50	25
32	10.841.416	56,00	25
34	10.841.417	59,50	25
36	10.841.418	63,00	25
38	10.841.419	66,50	25
40	10.841.420	70,00	25
42	10.841.421	73,50	25
44	10.841.422	77,00	10
46	10.841.423	80,50	10
48	10.841.424	84,00	10

General Information

Pitch	3,5 mm
No. of poles	4 - 48
Usable with	all plug connectors of series 110
Additonal Information	For versions with connecting flanges see 110-S-215

Technical Data

Overvoltage Category	III	III	II
Pollution Severity Level	3	2	2
Rated Voltage	160 V	160 V	320 V
Rated Impulse Voltage	2,5 kV	2,5 kV	2,5 kV
Rated Insulation Voltage	130 V acc. to EN 60998-1		
Rated Current	8 A		
Hole in PCB	ø 1,3 mm		

Material

Moulding	PA, grey, V-0
Comparative Tracking Index	CTI ≥ 600
Insulating Group	I
Temperature Range	-40°C up to 100°C
Solder pin	0,8 x 0,8 mm; tin plated brass

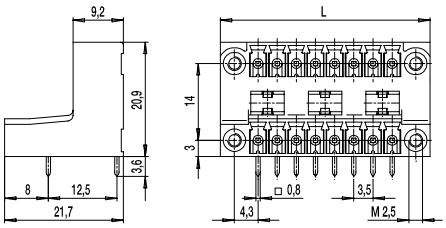
Approvals

	Current	Voltage	Group	AWG	Nm
	8	300	B, D		
	8	300	B		

Options / Accessories

- Consecutive numbering
- Special marking according to drawing
- Self-adhesive marking strip BST-3,50
- Pitch of 7 mm for larger clearance and creepage distances
- Coding elements 120-K

Pin strip
110-S-215
Staggered two-tier version, plug-in direction parallel to PCB, with connecting flanges



Pin strips of series 110 offer remarkable connection data (1,5 mm² / 160 V-III-3 / 8 A) for their small dimensions. The compact housings of these two-tier versions with a pitch of 3,5 mm are available with 4 to 44 poles. The plug direction of the 110-S-215 is parallel to the PC board. Laterally attached connecting flanges with thread inserts expand the area of application of this version. The corresponding pin strips in connecting flange design feature lateral thread inserts which offer vibration-proof screw-connection of the plug connector and also prevent unintended loosening. The pin strips feature slots to accommodate the coding elements 120-K.

Part Numbers

No. of poles	110-S-215	Length	Pcs
4	10.841.452	17,30	100
6	10.841.453	20,80	10
8	10.841.454	24,30	50
10	10.841.455	27,80	50
12	10.841.456	31,30	50
14	10.841.457	34,80	50
16	10.841.458	38,30	25
18	10.841.459	41,80	25
20	10.841.460	45,30	25
22	10.841.461	48,80	25
24	10.841.462	52,30	25
26	10.841.463	55,80	25
28	10.841.464	59,30	25
30	10.841.465	62,80	25
32	10.841.466	66,30	25
34	10.841.467	69,80	25
36	10.841.468	73,30	25
38	10.841.469	76,80	25
40	10.841.470	80,30	25
42	10.841.471	83,80	25
44	10.841.472	87,30	10

General Information

Pitch	3,5 mm
No. of poles	4 - 44
Usable with	all plug connectors of series 110 with connecting flanges

Technical Data

Overvoltage Category	III	III	II
Pollution Severity Level	3	2	2
Rated Voltage	160 V	160 V	320 V
Rated Impulse Voltage	2,5 kV	2,5 kV	2,5 kV
Rated Insulation Voltage	130 V acc. to EN 60998-1		
Rated Current	8 A		
Hole in PCB	ø 1,3 mm		

Material

Moulding	PA, grey, V-0
Comparative Tracking Index	CTI ≥ 600
Insulating Group	I
Temperature Range	-40°C up to 100°C
Solder pin	0,8 x 0,8 mm; tin plated brass

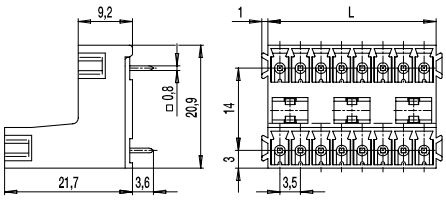
Approvals

	Current	Voltage	Group	AWG	Nm
	8	300	B, D		
	8	300	B		

Options / Accessories

- Consecutive numbering
- Special marking according to drawing
- Self-adhesive marking strip BST-3,50
- Pitch of 7 mm for larger clearance and creepage distances
- Coding elements 120-K
- With PCB location pin

Pin strip
110-S-221
Staggered two-tier version, plug-in direction vertical to PCB, with false insertion prevention



Pin strips of series 110 offer remarkable connection data (1,5 mm² / 160 V-III-3 / 8 A) for their small dimensions. The compact housings of these two-tier versions with a pitch of 3,5 mm are available with 4 to 48 poles. The plug direction of the 110-S-221 is vertical to the PC board. The pin strips feature slots to accommodate the coding elements 120-K. Laterally attached dovetail expansions reliably prevent false insertion.

General Information

Pitch	3,5 mm
No. of poles	4 - 48
Usable with	all plug connectors of series 110
Additonal Information	For versions with connecting flanges see 110-S-225

Technical Data

Overvoltage Category	III	III	II
Pollution Severity Level	3	2	2
Rated Voltage	160 V	160 V	320 V
Rated Impulse Voltage	2,5 kV	2,5 kV	2,5 kV
Rated Insulation Voltage	130 V acc. to EN 60998-1		
Rated Current	8 A		
Hole in PCB	ø 1,3 mm		

Material

Moulding	PA, grey, V-0
Comparative Tracking Index	CTI ≥ 600
Insulating Group	I
Temperature Range	-40°C up to 100°C
Solder pin	0,8 x 0,8 mm; tin plated brass

Approvals

	Current	Voltage	Group	AWG	Nm
	8	300	B, D		
	8	300	B		

Options / Accessories

- Consecutive numbering
- Special marking according to drawing
- Self-adhesive marking strip BST-3,50
- Pitch of 7 mm for larger clearance and creepage distances
- Coding elements 120-K

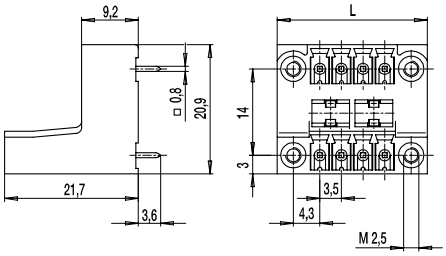
Part Numbers

No. of poles	110-S-221	Length	Pcs
4	20.841.402	7,00	100
6	20.841.403	10,50	100
8	20.841.404	14,00	50
10	20.841.405	17,50	50
12	20.841.406	21,00	50
14	20.841.407	24,50	50
16	20.841.408	28,00	25
18	20.841.409	31,50	25
20	20.841.410	35,00	25
22	20.841.411	38,50	25
24	20.841.412	42,00	25
26	20.841.413	45,50	25
28	20.841.414	49,00	25
30	20.841415	52,50	25
32	20.841.416	56,00	25
34	20.841.417	59,50	25
36	20.841.418	63,00	25
38	20.841.419	66,50	25
40	20.841.420	70,00	25
42	20.841.421	73,50	25
44	20.841.422	77,00	10
46	20.841.423	80,50	10
48	20.841.424	84,00	10

Pin strip
110-S-225
Staggered two-tier version, plug-in direction vertical to PCB, with connecting flanges

conecta®

RoHS COMPLIANT



Pin strips of series 110 offer remarkable connection data (1,5 mm² / 160 V-III-3 / 8 A) for their small dimensions. The compact housings of these two-tier versions with a pitch of 3,5 mm are available with 4 to 44 poles. The plug direction of the 110-S-225 is vertical to the PC board. Laterally attached connecting flanges with thread inserts expand the area of application of this version. The corresponding pin strips in connecting flange design feature lateral thread inserts which offer vibration-proof screw-connection of the plug connector and also prevent unintended loosening. The pin strips feature slots to accommodate the coding elements 120-K.

Part Numbers

No. of poles	110-S-225	Length	Pcs
4	20.841.452	17,30	100
6	20.841.453	20,80	10
8	20.841.454	24,30	50
10	20.841.455	27,80	50
12	20.841.456	31,30	50
14	20.841.457	34,80	50
16	20.841.458	38,30	25
18	20.841.459	41,80	25
20	20.841.460	45,30	25
22	20.841.461	48,80	25
24	20.841.462	52,30	25
26	20.841.463	55,80	25
28	20.841.464	59,30	25
30	20.841.465	62,80	25
32	20.841.466	66,30	25
34	20.841.467	69,80	25
36	20.841.468	73,30	25
38	20.841.469	76,80	25
40	20.841.470	80,30	25
42	20.841.471	83,80	25
44	20.841.472	87,30	10

General Information

Pitch	3,5 mm
No. of poles	4 - 44
Usable with	all plug connectors of series 110 with connecting flanges

Technical Data

Overvoltage Category	III	III	II
Pollution Severity Level	3	2	2
Rated Voltage	160 V	160 V	320 V
Rated Impulse Voltage	2,5 kV	2,5 kV	2,5 kV
Rated Insulation Voltage	130 V acc. to EN 60998-1		
Rated Current	8 A		
Hole in PCB	ø 1,3 mm		

Material

Moulding	PA, grey, V-0
Comparative Tracking Index	CTI ≥ 600
Insulating Group	I
Temperature Range	-40°C up to 100°C
Solder pin	0,8 x 0,8 mm; tin plated brass

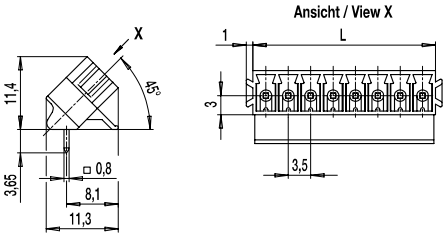
Approvals

	Current	Voltage	Group	AWG	Nm
	8	300	B, D		
	8	300	B		
VDE					

Options / Accessories

- Consecutive numbering
- Special marking according to drawing
- Self-adhesive marking strip BST-3,50
- Pitch of 7 mm for larger clearance and creepage distances
- Coding elements 120-K

Pin strip
110-V-211
Plug-in direction diagonal 45° to PCB, with false insertion prevention



Pin strips of series 110 offer remarkable connection data (1,5 mm² / 160 V-III-3 / 8 A) for their small dimensions.
In combination with the corresponding plug connectors they guarantee reliable wire connection for all wire types. The compact housings with a pitch of 3.5 mm are available with 2 to 22 poles. The plug direction of the 110-V-211 is diagonal 45° to the PC board.
The pin strips feature slots to accommodate the coding elements 120-K. Laterally attached dovetail expansions reliably prevent false insertion.

General Information

Pitch	3,5 mm
No. of poles	2 - 24
Usable with	all plug connectors of series 110
Additonal Information	For versions with connecting flanges see 110-V-215

Technical Data

Overvoltage Category	III	III	II
Pollution Severity Level	3	2	2
Rated Voltage	160 V	160 V	320 V
Rated Impulse Voltage	2,5 kV	2,5 kV	2,5 kV
Rated Insulation Voltage	130 V acc. to EN 60998-1		
Rated Current	8 A		
Hole in PCB	ø 1,3 mm		

Material

Moulding	PA, grey, V-0
Comparative Tracking Index	CTI ≥ 600
Insulating Group	I
Temperature Range	-40°C up to 100°C
Solder pin	0,8 x 0,8 mm; tin plated brass

Approvals

	Current	Voltage	Group	AWG	Nm
	8	300	B, D		
	8	300	B		

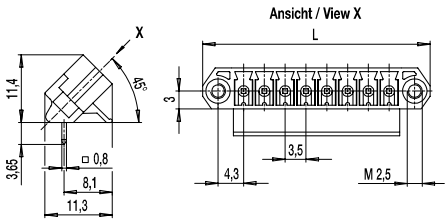
Part Numbers

No. of poles	110-V-211	Length	Pcs
2	10.841.202	7,00	200
3	10.841.203	10,50	200
4	10.841.204	14,00	100
5	10.841.205	17,50	100
6	10.841.206	21,00	100
7	10.841.207	24,50	50
8	10.841.208	28,00	50
9	10.841.209	31,50	50
10	10.841.210	35,00	50
11	10.841.211	38,50	50
12	10.841.212	42,00	50
13	10.841.213	45,50	50
14	10.841.214	49,00	50
15	10.841.215	52,50	50
16	10.841.216	56,00	50
17	10.841.217	59,50	50
18	10.841.218	63,00	50
19	10.841.219	66,50	50
20	10.841.220	70,00	50
21	10.841.221	73,50	50
22	10.841.222	77,00	50
23	10.841.223	80,50	50
24	10.841.224	84,00	50

Options / Accessories

- Consecutive numbering
- Special marking according to drawing
- Self-adhesive marking strip BST-3,50
- Pitch of 7 mm for larger clearance and creepage distances
- Coding elements 120-K
- With flat side walls

Pin strip
110-V-215
Plug-in direction diagonal 45° to PCB, with connecting flanges



Pin strips of series 110 offer remarkable connection data (1,5 mm² / 160 V-III-3 / 8 A) for their small dimensions.
In combination with the corresponding plug connectors they guarantee reliable wire connection for all wire types. The compact housings with a pitch of 3.5 mm are available with 2 to 24 poles. The plug direction of the 110-V-215 is diagonal 45° to the PC board.
Laterally attached connecting flanges with thread inserts expand the area of application of this variant. The corresponding pin strips in connecting flange design feature lateral thread inserts which offer vibration-proof screw-connection of the plug connector and also prevent unintended loosening.
The pin strips feature slots to accommodate the coding elements 120-K.

Part Numbers

No. of poles	110-V-215	Length	Pcs
2	10.841.252	17,30	100
3	10.841.253	20,80	100
4	10.841.254	24,30	100
5	10.841.255	27,80	50
6	10.841.256	31,30	50
7	10.841.257	34,80	50
8	10.841.258	38,30	50
9	10.841.259	41,80	50
10	10.841.260	45,30	50
11	10.841.261	48,80	50
12	10.841.262	52,30	50
13	10.841.263	55,80	50
14	10.841.264	59,30	50
15	10.841.265	62,80	50
16	10.841.266	66,30	50
17	10.841.267	69,80	50
18	10.841.268	73,30	50
19	10.841.269	76,80	50
20	10.841.270	80,30	50
21	10.841.271	83,80	50
22	10.841.272	87,30	50

General Information

Pitch	3,5 mm
No. of poles	2 - 22
Usable with	all plug connectors of series 110 with connecting flanges

Technical Data

Overvoltage Category	III	III	II
Pollution Severity Level	3	2	2
Rated Voltage	160 V	160 V	320 V
Rated Impulse Voltage	2,5 kV	2,5 kV	2,5 kV
Rated Insulation Voltage	130 V acc. to EN 60998-1		
Rated Current	8 A		
Hole in PCB	ø 1,3 mm		

Material

Moulding	PA, grey, V-0
Comparative Tracking Index	CTI ≥ 600
Insulating Group	I
Temperature Range	-40°C up to 100°C
Solder pin	0,8 x 0,8 mm; tin plated brass

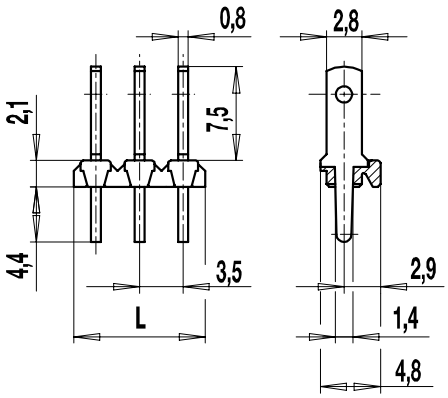
Approvals

	Current	Voltage	Group	AWG	Nm
	8	300	B, D		
	8	300	B		

Options / Accessories

- Consecutive numbering
- Special marking according to drawing
- Self-adhesive marking strip BST-3,50
- Pitch of 7 mm for larger clearance and creepage distances
- Coding elements 120-K

Tab connector
931-FST



The tab connector 931-FST with tabs 2,8 x 0,8 mm can be used both with plug connector 930-FL or 938-FLDS and to connect individual wires with tab receptacles B 2.8-DIN 46 247 whose crimped points must be insulated. The tab connector is inserted in the plug connector 930-FL in direction of the wire entrance, which minimizes the space requirements on the PC board compared to the combination with pin strip 931-SLS or 931-SLR.
The receptacles are not parts of our production program.

Part Numbers

No. of poles	931-FST	Length	Pcs
2	12.893.705	7,00	1000
3	13.893.705	10,50	1000
4	14.893.705	14,00	500
5	15.893.705	17,50	500
6	16.893.705	21,00	500
7	17.893.705	24,50	500
8	18.893.705	28,00	250
9	19.893.705	31,50	200
10	20.893.705	35,00	200
11	21.893.705	38,50	200
12	22.893.705	42,00	250
13	23.893.705	45,50	200
14	24.893.705	49,00	200
15	25.893.705	52,50	200
16	26.893.705	56,00	200

General Information

Pitch	3,5 mm
No. of poles	2 - 16
Usable with	plug connector 930-FL; 938-FLDS; receptacle B 2,8

Technical Data

Overvoltage Category	III	III	II
Pollution Severity Level	3	2	2
Rated Voltage	160 V	160 V	250 V
Rated Impulse Voltage	2,5 kV	2,5 kV	2,5 kV
Rated Insulation Voltage	130 V acc. to EN 60998-1		
Rated Current	6 A: with receptacles 2,8; wire 1 mm² (16 AWG)		
Hole in PCB	ø 1,8 mm		
Other specifications	Rated voltage with insulated receptacles		

Material

Moulding	PA, grey, V-0
Comparative Tracking Index	CTI 250
Insulating Group	IIIa
Temperature Range	-40°C up to 100°C
Solder pin	1,4 x 0,8 mm; tin plated brass
Tab	2,8 x 0,8 mm; tin plated brass

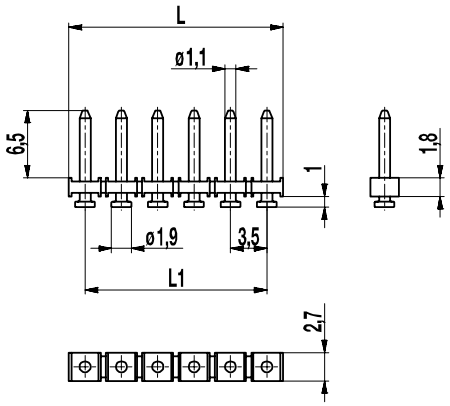
Approvals

	Current	Voltage	Group	AWG	Nm
	6	300	B		
	6	300	B		

Options / Accessories

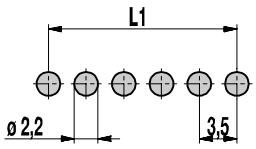
- Pitch of 7 mm for larger clearance and creepage distances

Pin strip for SMD
931-SLR-SMD-1,1
Plug-in area ø 1,1 mm



L1 = (No. of poles - 1) x pitch

PCB Layout



Solder paste thickness: 0,15 - 0,2 mm

931-SLR-SMD is a pin strip with a pitch of 3,5 mm for the application in a reflow soldering process. Contrary to the pin strips 931-SLR-THR and 931-SLR-THR-1,1, for which holes in the PCB are necessary, the SMD types of WECO base on true surface assembly. Soldering expanses at the end of the pins guarantee optimal retention force on the printed circuit board.
The pin strip 931-SLR-SMD-1,1, comes with a constant pin ø of 1,1 mm at the plug-in area.
Just like all THR versions of WECO, also the housings of the SMD series are made out of high temperature resistant plastic material and exhibit a very high CTI value.
For the automatic assembling all pin strips of this series are packed in Tape-on-Reel and equipped with high temperature resistant Pick Caps, which can easily be removed after the soldering process.

Part Numbers

No. of poles	931-SLR-SMD-1,1	Length	Pcs
2	12.893.732	6,50	1000
3	13.893.732	10,00	1000
4	14.893.732	13,50	500
5	15.893.732	17,00	500
6	16.893.732	20,50	500
8	18.893.732	27,50	250
10	20.893.732	34,50	200
12	22.893.732	41,50	200
16	26.893.732	55,50	200

further number of poles on request

General Information

Pitch	3,5 mm
No. of poles	2 - 16
Usable with	plug connector 930-FL(-DS)
Additonal Information	Also, please take into consideration the pin strips 931-SLS for wave soldering and series 931-SLR-THR for Through-Hole-Reflow.

Technical Data

Overvoltage Category	III	III	II
Pollution Severity Level	3	2	2
Rated Voltage	160 V	160 V	320 V
Rated Impulse Voltage	2,5 kV	2,5 kV	2,5 kV
Rated Insulation Voltage	130 V acc. to EN 60998-1		
Rated Current	6 A		
Soldering process	Reflow solder		

Material

Moulding	PA HT, black, V-0
Comparative Tracking Index	CTI ≥ 600
Insulating Group	I
Temperature Range	-40°C up to 150°C; reflow solder temperature (Peak) max. 260°C (15-30 s)
Solder pin	ø 1,1 mm (plug-in area); tin plated brass

Approvals

	Current	Voltage	Group	AWG	Nm
	6	150	B		
	6	300	D		
	6	150	B		
	6	300	D		

Options / Accessories

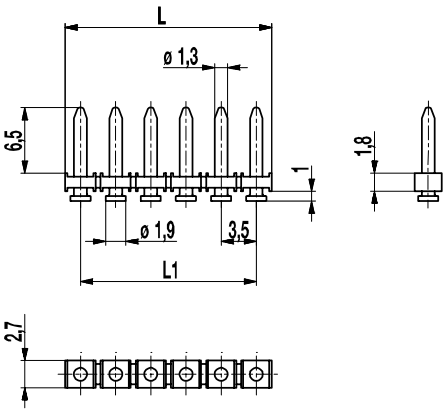
- Other plug pin lengths on request
- Other solder pin surfaces on request

Part Numbers: Tape-on-Reel

No. of poles	931-SLR-SMD-1,1	Tape Width	Tape Height	Pcs
3	13.893.732.A00	32 mm	14,6 mm	500
4	14.893.732.A00	32 mm	14,6 mm	500
5	15.893.732.A00	32 mm	14,6 mm	500
6	16.893.732.A00	56 mm	14,6 mm	500
7	17.893.732.A00	56 mm	14,6 mm	500
8	18.893.732.A00	56 mm	14,6 mm	500
9	19.893.732.A00	56 mm	14,6 mm	500
10	20.893.732.A00	56 mm	14,6 mm	500
11	21.893.732.A00	56 mm	14,6 mm	500
12	22.893.732.A00	72 mm	14,9 mm	500
13	23.893.732.A00	72 mm	14,9 mm	500
14	24.893.732.A00	72 mm	14,9 mm	500

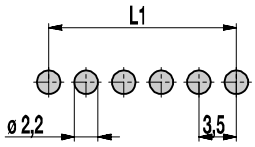
further number of poles on request

Pin strip for SMD
931-SLR-SMD-1,3
Plug-in area ø 1,3 mm



L1 = (No. of poles - 1) x pitch

PCB Layout



Solder paste thickness: 0,15 - 0,2 mm

931-SLR-SMD is a pin strip with a pitch of 3,5 mm for the application in a reflow soldering process. Contrary to the pin strips 931-SLR-THR and 931-SLR-THR-1,3, for which holes in the PCB are necessary, the SMD types of WECO base on true surface assembly. Soldering expanses at the end of the pins guarantee optimal retention force on the printed circuit board.
The pin strip 931-SLR-SMD-1,3, comes with a constant pin ø of 1,3 mm at the plug-in area.
Just like all THR versions of WECO, also the housings of the SMD series are made out of high temperature resistant plastic material and exhibit a very high CTI value.
For the automatic assembling all pin strips of this series are packed in Tape-on-Reel and equipped with high temperature resistant Pick Caps, which can easily be removed after the soldering process.

Part Numbers

No. of poles	931-SLR-SMD-1,3	Length	Pcs
2	12.893.731	6,50	1000
3	13.893.731	10,00	1000
4	14.893.731	13,50	500
6	16.893.731	20,50	500
8	18.893.731	27,50	250
10	20.893.731	34,50	200
12	22.893.731	41,50	200
16	26.893.731	55,50	200

further number of poles on request

General Information

Pitch	3,5 mm
No. of poles	2 - 16
Usable with	plug connector 938-FLDS
Additonal Information	Also, please take into consideration the pin strips 931-SLS for wave soldering and series 931-SLR-THR for Through-Hole-Reflow.

Technical Data

Overvoltage Category	III	III	II
Pollution Severity Level	3	2	2
Rated Voltage	160 V	160 V	320 V
Rated Impulse Voltage	2,5 kV	2,5 kV	2,5 kV
Rated Insulation Voltage	130 V acc. to EN 60998-1		
Rated Current	6 A		
Soldering process	Reflow solder		

Material

Moulding	PA HT, black, V-0
Comparative Tracking Index	CTI ≥ 600
Insulating Group	I
Temperature Range	-40°C up to 150°C; reflow solder temperature (Peak) max. 260°C (15-30 s)
Solder pin	ø 1,3 mm (plug-in area); tin plated brass

Approvals

	Current	Voltage	Group	AWG	Nm
	6	150	B		
	6	300	D		
	6	150	B		
	6	300	D		

Options / Accessories

- Other plug pin lengths on request
- Other solder pin surfaces on request

Part Numbers: Tape-on-Reel

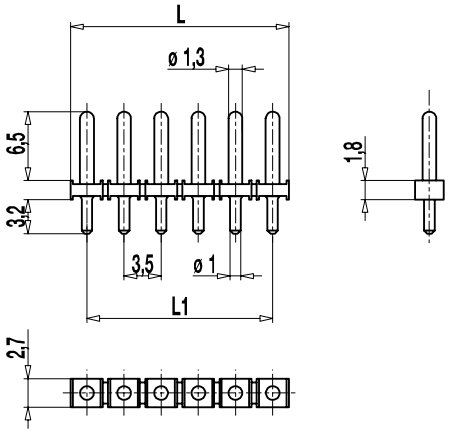
No. of poles	931-SLR-SMD-1,3	Tape Width	Tape Height	Pcs
3	13.893.731.A00	32 mm	14,6 mm	500
4	14.893.731.A00	32 mm	14,6 mm	500
5	15.893.731.A00	32 mm	14,6 mm	500
6	16.893.731.A00	56 mm	14,6 mm	500
7	17.893.731.A00	56 mm	14,6 mm	500
8	18.893.731.A00	56 mm	14,6 mm	500
9	19.893.731.A00	56 mm	14,6 mm	500
10	20.893.731.A00	56 mm	14,6 mm	500
11	21.893.731.A00	56 mm	14,6 mm	500
12	22.893.731.A00	72 mm	14,9 mm	500
13	23.893.731.A00	72 mm	14,9 mm	500
14	24.893.731.A00	72 mm	14,9 mm	500

further number of poles on request

Pin strip for THR

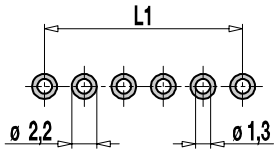
931-SLR-THR

Soldering area ø 1 mm; plug-in area ø 1,3 mm



L1 = (No. of poles - 1) x pitch

PCB Layout



Solder paste thickness: 0,15 - 0,2 mm
Solder pad diameter: ø 2,2 mm

931-SLR-THR is a pin strip with a pitch of 3,5 mm for the application in a reflow soldering process. The high temperature resistant plastic housing has a very high CTI value and is equipped with spacers, so-called stand-offs, which ensure a better hot-air circulation during the reflow soldering process in the convection oven. Beyond this, they assure an improved optical control of the solder joints.
The pin strips of the series 931-SLR-THR comes with a stepped pin, ø 1,3 mm in the plug-in area and ø 1 mm in the soldering area.
For the automatic assembling all pin strips of this series are packed in Tape-on-Reel and equipped with high temperature resistant Pick Caps, which can easily be removed after the soldering process.

Part Numbers

No. of poles	931-SLR-THR	Length	Pcs
2	12.893.721	6,50	1000
3	13.893.721	10,00	1000
4	14.893.721	13,50	500
5	15.893.721	17,00	500
6	16.893.721	20,50	500
8	18.893.721	27,50	250
10	20.893.721	34,50	200
12	22.893.721	41,50	200
16	26.893.721	55,50	200

further number of poles on request

General Information

Pitch	3,5 mm
No. of poles	2 - 16
Usable with	plug connector 938-FLDS
Additonal Information	Also, please take into consideration the pin strips 931-SLR-SMD-1,3 in genuine surface mount technology.

Technical Data

Overvoltage Category	III	III	II
Pollution Severity Level	3	2	2
Rated Voltage	160 V	160 V	320 V
Rated Impulse Voltage	2,5 kV	2,5 kV	2,5 kV
Rated Insulation Voltage	130 V acc. to EN 60998-1		
Rated Current	6 A		
Soldering process	Wave solder & reflow solder		
Hole in PCB	ø 1,3 mm		
PCB thickness	Wave solder max. 1,6 mm; reflow solder 1,6 - 3,2 mm		

Material

Moulding	PA HT, black, V-0
Comparative Tracking Index	CTI ≥ 600
Insulating Group	I
Temperature Range	-40°C up to 150°C; reflow solder temperature (Peak) max. 260°C (15-30 s)
Solder pin	ø 1,3 mm (plug-in area) / ø 1,0 mm (soldering area); tin plated brass

Approvals

	Current	Voltage	Group	AWG	Nm
	6	150	B		
	6	300	D		
	6	150	B		
	6	300	D		

Options / Accessories

- Other plug pin lengths on request
- Other solder pin surfaces on request

Part Numbers: Tape-on-Reel

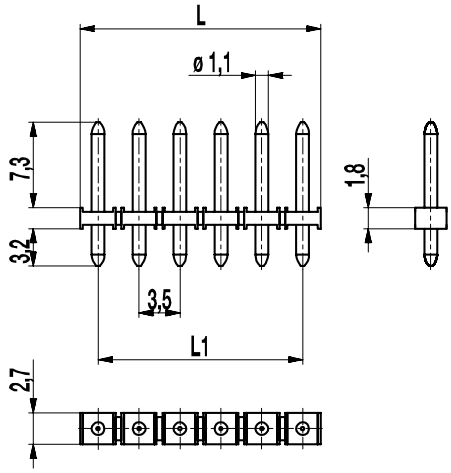
No. of poles	931-SLR-THR	Tape Width	Tape Height	Pcs
3	13.893.721.A00	32 mm	14,6 mm	500
4	14.893.721.A00	32 mm	14,6 mm	500
5	15.893.721.A00	32 mm	14,6 mm	500
6	16.893.721.A00	56 mm	14,6 mm	500
7	17.893.721.A00	56 mm	14,6 mm	500
8	18.893.721.A00	56 mm	14,6 mm	500
9	19.893.721.A00	56 mm	14,6 mm	500
10	20.893.721.A00	56 mm	14,6 mm	500
11	21.893.721.A00	56 mm	14,6 mm	500
12	22.893.721.A00	72 mm	14,9 mm	500
13	23.893.721.A00	72 mm	14,9 mm	500
14	24.893.721.A00	72 mm	14,9 mm	500

further number of poles on request

Pin strip for THR

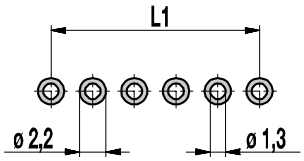
931-SLR-THR-1,1

Soldering/plug-in area ø 1,1 mm



L1 = (No. of poles - 1) x pitch

PCB Layout



Solder paste thickness: 0,15 - 0,2 mm
Solder pad diameter: ø 2,2 mm

931-SLR-THR-1,1 is a pin strip with a pitch of 3,5 mm for the application in a reflow soldering process. The high temperature resistant plastic housing has a very high CTI value and is equipped with spacers, so-called "Stand-offs", which ensure a better hot-air circulation during the reflow soldering process in the convection oven. Beyond this, they assure an improved optical control of the solder joints.
The pin strips of the series 931-SLR-THR-1,1 comes with a constant pin ø of 1,1 mm.
For the automatic assembling process, all pin strip versions are packed Tape-on-Reel and are equipped with high temperature resistant Pick Caps, which can comfortably be removed after the soldering process.

Part Numbers

No. of poles	931-SLR-THR-1,1	Length	Pcs
2	32.893.727	6,50	1000
3	33.893.727	10,00	1000
4	34.893.727	13,50	500
5	35.893.727	17,00	500
6	36.893.727	20,50	500
8	38.893.727	27,50	250
10	40.893.727	34,50	200
12	42.893.727	41,50	200
16	46.893.727	55,50	200

further number of poles on request

General Information

Pitch	3,5 mm
No. of poles	2 - 16
Usable with	plug connector 930-FL(DS)
Additonal Information	Also, please take into consideration the pin strips 931-SLR-THR, 931-SLR-THR-1,3 and 931-SLR-SMD-1,3 in genuine surface mount technology.

Technical Data

Overvoltage Category	III	III	II
Pollution Severity Level	3	2	2
Rated Voltage	160 V	160 V	320 V
Rated Impulse Voltage	2,5 kV	2,5 kV	2,5 kV
Rated Insulation Voltage	130 V acc. to EN 60998-1		
Rated Current	6 A		
Soldering process	Wave solder & reflow solder		
Hole in PCB	ø 1,3 mm		
PCB thickness	Wave solder max. 1,6 mm; reflow solder 1,6 - 3,2 mm		

Material

Moulding	PA HT, black, V-0
Comparative Tracking Index	CTI ≥ 600
Insulating Group	I
Temperature Range	-40°C up to 150°C; reflow solder temperature (Peak) max. 260°C (15-30 s)
Solder pin	ø 1,1 mm; tin plated brass

Approvals

	Current	Voltage	Group	AWG	Nm
	6	300	B, D		
	6	300	B, D		

Options / Accessories

- Other plug pin lengths on request
- Other solder pin surfaces on request

Part Numbers: Tape-on-Reel

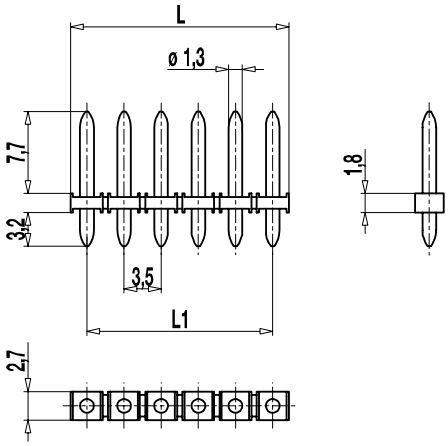
No. of poles	931-SLR-THR-1,1	Tape Width	Tape Height	Pcs
3	33.893.727.A00	32 mm	14,6 mm	500
4	34.893.727.A00	32 mm	14,6 mm	500
5	35.893.727.A00	32 mm	14,6 mm	500
6	36.893.727.A00	56 mm	14,6 mm	500
7	37.893.727.A00	56 mm	14,6 mm	500
8	38.893.727.A00	56 mm	14,6 mm	500
9	39.893.727.A00	56 mm	14,6 mm	500
10	40.893.727.A00	56 mm	14,6 mm	500
11	41.893.727.A00	56 mm	14,6 mm	500
12	42.893.727.A00	72 mm	14,9 mm	500
13	43.893.727.A00	72 mm	14,9 mm	500
14	44.893.727.A00	72 mm	14,9 mm	500

further number of poles on request

Pin strip for THR

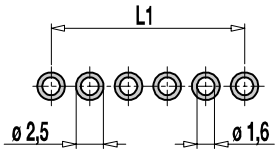
931-SLR-THR-1,3

Soldering/plug-in area ø 1,3 mm



L1 = (No. of poles - 1) x pitch

PCB Layout



Solder paste thickness: 0,15 - 0,2 mm
Solder pad diameter: ø 2,5 mm

931-SLR-THR-1,3 is a pin strip with a pitch of 3,5 mm for the application in a reflow soldering process. The high temperature resistant plastic housing has a very high CTI value and is equipped with spacers, so-called "Stand-offs", which ensure a better hot-air circulation during the reflow soldering process in the convection oven. Beyond this, they assure an improved optical control of the solder joints.
The pin strips of the series 931-SLR-THR-1,3 comes with a constant pin ø of 1,3 mm.
For the automatic assembling process, all pin strip versions are packed Tape-on-Reel and are equipped with high temperature resistant Pick Caps, which can comfortably be removed after the soldering process.

Part Numbers

No. of poles	931-SLR-THR-1,3	Length	Pcs
2	12.893.726	6,50	1000
3	13.893.726	10,00	1000
4	14.893.726	13,50	500
5	15.893.726	17,00	500
6	16.893.726	20,50	500
8	18.893.726	27,50	250
10	20.893.726	34,50	200
12	22.893.726	41,50	200
16	26.893.726	55,50	200

further number of poles on request

General Information

Pitch	3,5 mm
No. of poles	2 - 16
Usable with	plug connector 938-FLDS
Additonal Information	Also, please take into consideration the pin strips 931-SLR-SMD-1,3 in genuine surface mount technology.

Technical Data

Overvoltage Category	III	III	II
Pollution Severity Level	3	2	2
Rated Voltage	160 V	160 V	320 V
Rated Impulse Voltage	2,5 kV	2,5 kV	2,5 kV
Rated Insulation Voltage	130 V acc. to EN 60998-1		
Rated Current	6 A		
Soldering process	Wave solder & reflow solder		
Hole in PCB	ø 1,6 mm		
PCB thickness	Wave solder max. 1,6 mm; reflow solder 1,6 - 3,2 mm		

Material

Moulding	PA HT, black, V-0
Comparative Tracking Index	CTI ≥ 600
Insulating Group	I
Temperature Range	-40°C up to 150°C; reflow solder temperature (Peak) max. 260°C (15-30 s)
Solder pin	ø 1,3 mm; tin plated brass

Approvals

	Current	Voltage	Group	AWG	Nm
	6	150	B		
	6	300	D		
	6	150	B		
	6	300	D		

Options / Accessories

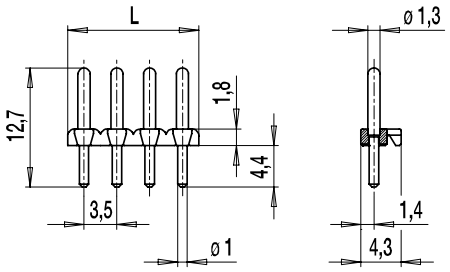
- Other plug pin lengths on request
- Other solder pin surfaces on request

Part Numbers: Tape-on-Reel

No. of poles	931-SLR-THR-1,3	Tape Width	Tape Height	Pcs
3	13.893.726.A00	32 mm	14,6 mm	500
4	14.893.726.A00	32 mm	14,6 mm	500
5	15.893.726.A00	32 mm	14,6 mm	500
6	16.893.726.A00	56 mm	14,6 mm	500
7	17.893.726.A00	56 mm	14,6 mm	500
8	18.893.726.A00	56 mm	14,6 mm	500
9	19.893.726.A00	56 mm	14,6 mm	500
10	20.893.726.A00	56 mm	14,6 mm	500
11	21.893.726.A00	56 mm	14,6 mm	500
12	22.893.726.A00	72 mm	14,9 mm	500
13	23.893.726.A00	72 mm	14,9 mm	500
14	24.893.726.A00	72 mm	14,9 mm	500

further number of poles on request

Pin strip
931-SLS
Soldering area ø 1 mm; plug-in area ø 1,3 mm



The pin strip 931-SLS features a pin diameter of 1,3 mm in the plug-in area and 1,0 mm in soldering area. When using with plug connector 938-FLDS, the housing extensions prevent incorrect plugging.

Part Numbers

No. of poles	931-SLS	Length	Pcs
2	12.893.701	7,00	1000
3	13.893.701	10,50	1000
4	14.893.701	14,00	500
5	15.893.701	17,50	500
6	16.893.701	21,00	500
7	17.893.701	24,50	500
8	18.893.701	28,00	250
9	19.893.701	31,50	200
10	20.893.701	35,00	200
11	21.893.701	38,50	200
12	22.893.701	42,00	200
13	23.893.701	45,50	200
14	24.893.701	49,00	200
15	25.893.701	52,50	200
16	26.893.701	56,00	200

General Information

Pitch	3,5 mm
No. of poles	2 - 16
Usable with	plug connector 938-FLDS

Technical Data

Overvoltage Category	III	III	II
Pollution Severity Level	3	2	2
Rated Voltage	100 V	160 V	200 V
Rated Impulse Voltage	2,5 kV	2,5 kV	2,5 kV
Rated Insulation Voltage	130 V acc. to EN 60998-1		
Rated Current	6 A		
Hole in PCB	ø 1,3 mm		

Material

Moulding	PA, grey, V-0
Comparative Tracking Index	CTI 250
Insulating Group	IIIa
Temperature Range	-40°C up to 100°C
Solder pin	ø 1,3 mm (plug-in-area); ø 1,0 mm (soldering area); tin plated brass

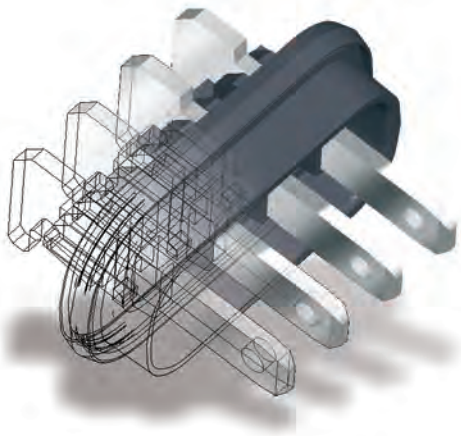
Approvals

	Current	Voltage	Group	AWG	Nm
	6	150	B		
	6	150	B		

Options / Accessories

- Consecutive numbering
- Pitch of 7 mm for larger clearance and creepage distances
- Other pin length on request
- Single solder pins LST-1,3 x 6,5. ATTENTION: Reduced clearance and creepage distance due to pin form!

Looking for a Customer Designed Solution?



„Sealed“

With a pitch of 3.5 mm, this insert with four tabs 2.8 x 0.8 mm was designed to seal the contacts, for an application which required the protection class IP54.

„Top“

Version of a terminal our series 970 in 5 mm pitch.
In order to achieve a distance of 100 mm from the PCB, a housing was constructed, which not only does protect the pins but also positions them in a special arrangement. In the terminal area are also placed elongated ribs.

Our Product Information Centre will assist you with every technical inquiry.

- Please, call us under +49 6181 105-151.
- Contact us via e-mail at products@wecogroup.com.
- You want us to pay you a visit? We are pleased to arrange an appointment.
- You would prefer a visit in Hanau?
  Of course, you are welcomed anytime.

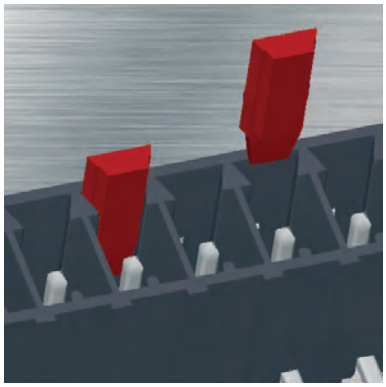
We are looking forward to your call.

„Well Contacted“

This plug connector with the pitch of 5 mm is designed with outer gold-plated contact surfaces. Additionally, the side walls provide ribs for receiving a corresponding locking hook.

Accessories / Options

Coding Elements



This coding element is applicable for the Conecta Series of 110, 120, 121 and 122.
For coding, all pin strips and plug connectors of this series are equipped with a trapezoidal slot per pole into which the coding elements can easily be inserted.
With this, simple solution error free plugging is ensured.
In the standard version the coding elements have a bright red colour, making them clearly visible in mated condition. Alternatively, they are also available in light grey. 12 of each coding element are related to a strip.
The coding elements are not reflow solderable and for SMD & THR products they can only be used after the soldering process.
The 110-AP coding elements are white and come as an endless chain for self cutting.

Part number	Type	Pcs
20.496.025	120-K/12 KODIEREL.	120
17.496.025	120-K/12 KODIEREL. LIGHT GREY	120
10.496.028	110-AP KODIERPLAETTCHEN	100

Marking Strips

These marking strips are made of polyester with black print on a silver background. They have a scratch resistant mylar surface.
Numbering begins with 1, the specified pole number is the last digit respectively.
The marking strips withstand printed circuit board cleaning agents containing water and soap, freon, fluorinated or chlorinated ingredients; they are not suitable for reflow soldering procedures.
They are supplied on adhesive cards each containing ten strips.

Part number	Type	Pitch	Lenght (L)	Width (a)	Pcs
24.499.013	BST-3,50/24	3,50	84	3	100

Marking

Alternatively to the self-adhesive marking strips, we offer a special marking to meet almost any special and individual marking requirement. The printing is carried out on pre-designed marking areas.
Depending upon the housing colour, the numbers are imprinted in white or in black.
Other printing colours are possible on request.

Accessories / Options

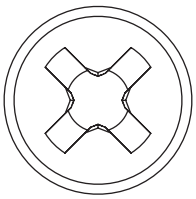
Colours

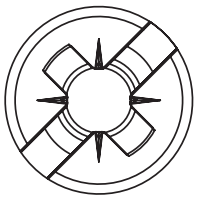
WECO offers a wide range of housing colours.
Besides our standard housing colours, you can choose between many other colours.
Please contact us for further information.

Screws

Our standard products are fitted with slotted screws.
On enquiry and customer‘s request, we also offer screws with Philips/Pozidrive or +/- screw heads.

Further materials:
Standard screws are made of steel; also screws out of various materials, e.g. brass, are available on request.





Packaging: Card board boxes, Tape-on-Reel, Magazines

According to standard, we pack our products in pollution free folding boxes from card board and from corrugated board. Besides, we offer transfer tubes (magazines) as packing for the use with feeders and dispensers for automated insertion machinery. Transfer tubes offer the advantage of a better transportation facility and a simple withdrawal over the cardboards.

Our SMD and THR products are packed in “Tape-on-Reel” for the automated assembly process in pick and place machines. Please find data sheet information about products packed on Tape-on-Reel on our website.

Technical Information

Rating of Clearance and Creepage Distances according to DIN EN 60664-1 (VDE 0110-1)

The rating of clearance and creepage distances depends on the expected electrical surge, the characteristic values of the electronic protection measures as well as the contamination at the place of installation.

Clearanece distances are dimensioned in accordance with the rated impulse voltage table F.1, which results out of the overvoltage category and phase-to-earth voltage.

The minimum clearance in air is stated at altitudes of less than 2000 m above sea level and ascertained in accordance with the impulse voltage and the contamination level, table 2.

Creepage distances are measured by the operating voltage, the characteristic of the insulants (CTI value), the expected contamination level as well as the preventive measures against contamination.

Basis of the creepage distance is the rated voltage derived from the operating and / or system voltage.

The minimum creepage distance (depending on the respective degree of contamination) are assigned to the rated voltage, see table F.4.

Overvoltage categories

Overvoltage category IV:

Electrical equipments for the use at the connection point of the installation e.g. electricity meter and primary over-current protection devices.

Overvoltage category III:

Electrical equipment in firm installations and for such cases in which special demands are made against the reliability and the availability of the electrical equipment, e.g. switches in firm installations and devices for industrial use with continuing connection to the firm installation.

Overvoltage category II:

Energy using electrical equipment, which is energised by a firm installation e.g. household appliances, portable tools and other domestic appliances as well as similar devices.

Overvoltage category I:

Electrical equipment for the connection to electric circuits, in which measures are taken for the delimitation of the transient overvoltages to a suitable low value, e.g. devices with electronic circuits and appropriate protection level.

F.2 DIN EN 60664-1 (VDE 0110-1), table F.2 (extract) Clearance for transient overvoltages

Required impulse withstand voltage [1] [5]	Mimimum clearence in air up to 2 000 m above sea level		
	Case A Inhomogeneous field (see 3.15)		
	Pollution degree		
	1	2	3
kV	mm	mm	mm
1,2	0,25	0,25	0,8 [4]
1,5 [2]	0,5	0,5	
2,0	1,0	1,0	1,0
2,5 [2]	1,5	1,5	1,5
3,0	2,0	2,0	2,0
4,0 [2]	3,0	3,0	3,0
5,0	4,0	4,0	4,0
6,0 [2]	5,5	5,5	5,5
8,0 [2]	8,0	8,0	8,0

[1] This voltage is
- for functional insulation, the maximum impulse voltage expected to occur accross the clearence (see 5.1.5),
- for basic insulation directly exposed to or significantly influenced by transient overvoltages from the low-voltage mains (see 4.3.3.3, 4.3.3.4.1 and 5.1.6), the rated impulse voltage of the equipment,
- for other basic insulation (see 4.3.3.4.2), the highest impulse voltage that can occur in the circuit.

[2] Prefered values as specified in 4.2.3.

[4] The minimum clearences given for pollution degrees 2 and 3 are based on the reduced withstand characteristics of the associated creepage distance under humidity conditions (see IEC 60664-5).

[5] For parts or circuits within equipment subject to impulse voltages according to 4.3.3.4.2, interpolation of values is allowed. However, standardization is achieved by using the preferred series of impulse voltage values in 4.2.3.

F.4 DIN EN 60664-1 (VDE 0110-1), table F.4 (extract) Creepage distance for the avoidance of the failure by tracking

Voltage r.m.s. [1]	Minimum creepage distances								
	Printed wiring material								
	Pollution degree								
	1	2	1	2			3		
	All material groups	All material groups except IIIb	All material groups	Material group I	Material group II	Material group III	Material group I	Material group II	Material group III [2]
V	mm	mm	mm	mm	mm	mm	mm	mm	mm
25	0,025	0,040	0,125	0,500	0,500	0,500	1,250	1,250	1,250
32	0,025	0,040	0,14	0,53	0,53	0,53	1,30	1,30	1,30
40	0,025	0,040	0,16	0,56	0,80	1,10	1,40	1,60	1,80
50	0,025	0,040	0,18	0,60	0,85	1,20	1,50	1,70	1,90
63	0,040	0,063	0,20	0,63	0,90	1,25	1,60	1,80	2,00
80	0,063	0,100	0,22	0,67	0,95	1,30	1,70	1,90	2,10
100	0,100	0,160	0,25	0,71	1,00	1,40	1,80	2,00	2,20
125	0,160	0,250	0,28	0,75	1,05	1,50	1,90	2,10	2,40
160	0,250	0,400	0,32	0,80	1,10	1,60	2,00	2,20	2,50
200	0,400	0,630	0,42	1,00	1,40	2,00	2,50	2,80	3,20
250	0,560	1,000	0,56	1,25	1,80	2,50	3,20	3,60	4,00
320	0,75	1,60	0,75	1,60	2,20	3,20	4,00	4,50	5,00
400	1,0	2,0	1,0	2,0	2,8	4,0	5,0	5,6	6,3
500	1,3	2,5	1,3	2,5	3,6	5,0	6,3	7,1	8,0
630	1,8	3,2	1,8	3,2	4,5	6,3	8,0	9,0	10,0
800	2,4	4,0	2,4	4,0	5,6	8,0	10,0	11,0	12,5
1000	3,2	5,0	3,2	5,0	7,1	10,0	12,5	14,0	16,0

[1] This voltage is
- for functional insulation, the working voltage,
- for basic and supplementary insulation of the circuit energized directly from the supply mains (see 4.3.2.2.1), the voltage rationalized through Table F.3a or Table F.3b, based on the rated voltage of the equipment, or the rated insulation voltage,
- for basic and supplementary insulation of systems, equipment and internal circuits not energized directly from the mains (see 4.3.2.2.2), the highest r.m.s. voltage which can occur in the system, equipment or internal circuit when supplied at rated voltage and under the most onerous combination of conditions of operation within equipment rating.

[2] Material group IIIb is no not recommended for application in pollution degree 3 above 630 V.

Degree of contamination

The micro environment determines the influence of the contamination on the isolation.

However the macro environment must be considered with the view of the micro environment.

Resources to achieve a reduction of the contamination on the regarded isolation can be planned by the effective employment of casings (housings), encapsulations or hermetic sealings.

The influence of the contamination is considered with the calculation of air and creepage distances by degrees of pollution.

F.1 DIN EN 60664-1 (VDE 0110-1), table F.1 (extract) Rated impulse voltages for electrical equipments, which are energised directly by a low-voltage system

Nominal voltage of the supply system [1] based on IEC 60038 [3]		Rated impulse voltage [2]			
		Overvoltage catagory [4]			
Three phase	Single phase	I	II	III	IV
V	V	V	V	V	V
	120-240	800	1 500	2 500	4 000
230/400 277/480		1 500	2 500	4 000	6 000
400/690		2 500	4 000	6 000	8 000
1 000		4 000	6 000	8 000	12 000

[1] See Annex B for application to existing different low-voltage mains and their nominal voltages.

[2] Equipment with these rated impulse voltages can be used in installations in accordance with IEC 60364-4-44.

[3] The / mark indicates a four-wire three-phase distribution system. The lower value is the voltage line-to-neutral, while the higher value is the voltage line-to-line. Where only one

Technical Information

Four degrees of contamination levels are defined for the micro environment:

Contamination level 1
No contamination or only dry, non-conductive contamination occurs. The contamination has no influence.

Contamination level 2
Only non-conductive contamination occurs. However, occasional temporary conductivity must be expected as a result of moisture condensation.

Contamination level 3
Conductive contamination occurs; dry, non-conductive contamination which becomes conductive as a result of moisture condensation may also occur.

Contamination level 4
Impurities in the form of conductive dust, rain or humidity result in permanent conductivity.

Insulant
DIN EN 60664-1 (VDE 0110-1) divides the insulants according to their CTI values in four groups. These are:

Insulant I:	600 = CTI
Insulant II:	400 = CTI < 600
Insulant IIIa:	175 = CTI < 400
Insulant IIIb:	100 = CTI < 175

The check numbers of the tracking must be determined according to IEC 60112 at an examination body using test solution A. The check number of the tracking is used as a proof of the creepage characteristics of insulants.

Rated cross section

The current carrying capacity depends not only on the terminal design, but also on the application of the terminals. The appropriate specifications for the devices, e.g. DIN EN 60335-1 (VDE 0700-1), should be taken into account.
According to DIN EN 60999-1/VDE 0609 part 1, the current cross section and respectively the rated connection ability of a connection referres to the wire cross section indicated by the manufacturer, to which determined thermal, mechanical and electrical requirements apply to.
The relationship between rated connection abilities and diameters of the wires is represented in table 1.
If nothing else is specified in the product standard, each connection point must be able to take up not only its rated cross section (rated connection ability) but also the next two lower cross sections.
Connecting points must be able to take up unprepared wires.
Regarded as unprepared wires are all cables stripped at their ends, whose form is adjusted before insertion or whose wires are twisted for the purpose of the solidification.

T1 DIN EN 60999-1, table 1 (extract)
Relation between rated connection abilities and wires

Rated cross section	Theoretical diameter of the largest conductor						
	metric			AWG			
	solid		flexible	solid			flexible
	single wire	multi-stranded wire			b) single wire	b) Class B multi-stranded wire	c) Class I, K, M multi-stranded wire
mm²	mm	mm	mm	No.	mm	mm	mm
0,2	0,51	0,53	0,61	24	0,54	0,61	0,64
0,34	0,63	0,66	0,8	22	0,68	0,71	0,80
0,5	0,9	1,1	1,1	20	0,85	0,97	1,02
0,75	1,0	1,2	1,3	18	1,07	1,23	1,28
1,0	1,2	1,4	1,5	–	–	–	–
1,5	1,5	1,7	1,8	16	1,35	1,55	1,60
2,5	1,9	2,2	2,3 a)	14	1,71	1,95	2,08
4,0	2,4	2,7	2,9 a)	12	2,15	2,45	2,70
6,0	2,9	3,3	3,9 a)	10	2,72	3,09	3,36
10,0	3,7	4,2	5,1	8	3,34	3,89	4,32
16,0	4,6	5,3	6,3	6	4,32	4,91	5,73
25,0	–	6,6	7,8	4	5,45	6,18	7,26
35	–	7,9	9,2	2	6,87	7,78	9,02

NOTE The diameter of the largest solid and flexible wire is based on Table 1 according to IEC 60228A and IEC 60344 and for AWG conductors on ASTM B 172-71 [4], ICEA-Publication S-19-81 [5], ICEA-Publication S-66-524 [6] and ICEA-Publication S-66-516 [7].

a) Information only for flexible wires in class 5 of IEC 60228A.
b) Nominal + 5 %.
c) Largest diameter for each of the three classes I, K, M + 5 %.

In the USA and Canada an identification is used by leader sizes (AWG) instead of the cross section indicated in mm².

Current carrying capacity

Current carrying capacity In the technical data a current carrying capacity is shown, with which no thermal damage and no disturbance of the function arise under consideration of the rated cross section and the ambient temperature.
testing currents according to DIN EN 60998-1 (VDE 0613 part 1) are assigned to the rated cross sections in table 2.
With the testing currents the heating up of energized parts of the connecting point may not exceed 45 K.
The permitted carrying capacity not only depends on the terminal construction, but also on the use of the terminal.
The appropriate technical regulations for devices, e.g. DIN EN 60335-1 (VDE 0700-1) should be taken into consideration.

T2 DIN EN 60998-1, table 2 (extract)
Relation between rated connection abilities and testing current

Rated Cross-section	Load capacity
mm²	A
0,2	4
0,34	5
0,5	6
0,75	9
1	13,5
1,5	17,5
2,5	24
4	32
6	41
10	57
16	76
25	101
35	125

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2: Pitch 5 mm
3: Pitch 5.08 mm
4: Pitch 7.5 mm
5: Pitch >10 mm
6: SMD & THR

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Art.-No.: 43 955 102
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Connection Technology for Printed Circuit Boards Pitch 5 mm

WECO - making contact

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950-D-SMD-DS

120-A-111

900-SUB-5

Symbols on data sheets

These symbols can be found on our data sheets on the right side of the product image.

RoHS COMPLIANT	These articles comply with the RoHS regulations and are, in addition, fitted with a high temperature resistant housing.
Tape-on-Reel Product	This product is available in Tape-on-Reel. Detailed information about number of poles, part numbers, tape width, belt height and packing units is given on the data sheet.
pottable	Through its geometry, this product is specially suitable for potting.
„no flame“ after glow-wire test according to household appliance standard DIN EN/IEC 60335-1	The materials used for enclosures are VDE-tested and approved according to the glow-wire tests specified in DIN EN/IEC 60335-1. It is conforms with the requirements of the increased household appliance standard.

We reserve the right to make technical as well as changes to measurements, colours and formats after print. Only the values given in our written confirmations will be binding for us. Please take notice that it is not allowed to use our photos, drawings or catalogue pages for your own applications without having our written agreement.

Overview

Connectors for printed circuit boards

WECO PCB connectors always offer a good solution for almost any connection problem by its big variety of types. The screw connections are available in socket terminal style, in elevator clamping style or as head contact terminals. The plug connectors are especially designed for the connection of components or peripheral devices. Tab connectors and screwless types complete the product program.

Plug-In connector systems

The series of conecta are plug-in connector systems consisting of plug connectors with screw and their corresponding pin strips.
Due to four different pitch sizes, lateral flange executions, tier versions and different plug directions, this product serie suit almost every application on the PCB. All connectors offer coding possibilities to avoid incorrect plugging.

SMD & THR

“SMarTconn” covers terminals and plug connectors for surface mount and reflow soldering technique. Apart from the proven Through-Hole-Technology (THR) we focus on genuine SMD - Surface Mount Devices – in this product serie. With their reliable adhesive forces and their good reflow soldering capabilities, we offer products, which are a worthy replacement for the conventional soldering technique. All products of this series are packed in tape-on-reel or tube magazines for the automatic assembling with a pick & place machine.

Terminal strips

This group contains socket terminals, plug-in connectors, screwless types and additionally the combination of screw and solder tag for the wire-to-wire connection. All types are available for different cross sections, with and without wire protectors. The used Polyamide plastic material pass the ball pressure test with 125°C according to VDE 0470, which is demanded in many IEC and VDE regulations for insulants.

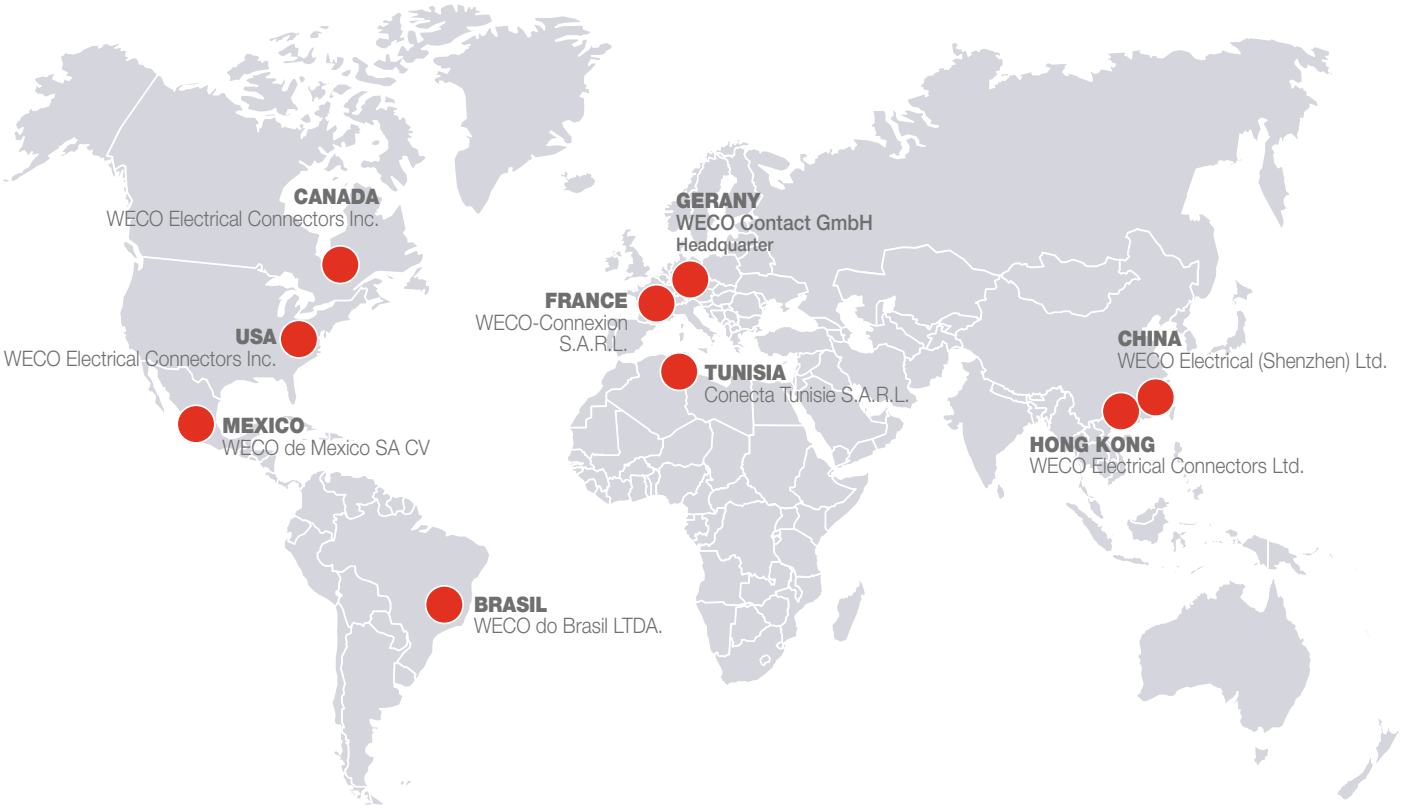
Tab connectors

These connectors are equipped with receptacles in different sizes and styles. Mixed arrangements per terminal block as well as per pole (Multi-Point Tab Connectors) are possible. Combinations of tab / solder connectors, flat plug couplers and space saving tier versions increase the density of connections. The tab connectors offer a wide spectrum of possible combinations, whereby many connection problems can be solved.

Ceramic terminal blocks

This group covers mantle terminals, ceramic terminal strips and terminals for explosion and firedamp-hazard areas. Various sizes and designs permit them to be used for wire cross sections up to 120 mm² and including applications in furnace construction and ship building, for engines and intrinsically safe electrical equipment. The terminal blocks with ceramic insulator can be used at increased temperatures.

The WECO Group



We, WECO Contact GmbH, are a German manufacturer of high reputation in the field of electronics and electrical engineering. Our headquarter is located in Hanau and has own assembly and sales companies in USA, Canada, Brazil, France, China, Hong Kong and Mexico. With over 450 employees and a worldwide distribution network in 56 countries, we speak the language of our customers.

Our extensive product range includes nearly 17,000 different articles.

We are well known for innovation which is particularly evident in the patented SMD series for the genuine surface mounting technology. Hereby, the user experiences real cost savings in the manufacturing process, especially if the terminal is the last component of the customer to be soldered on the board.

Another strength are the customer-specific developments and a fast and flexible project implementation with which we respond to the increasing engineering demands of the middle class customers.

The entire WECO Group is a reliable partner for our customers, and the customers' satisfaction is one of our main goals to achieve.

www.wecogroup.com

Household Appliance Standard DIN EN/IEC 60335-1

What is the household appliance standard all about?

The household appliance standard DIN EN/IEC 60335-1:2007-02 standardizes the safety features of electrical appliances for household use and similar purposes.

The standard requires testing of glow wire resistance for non-metallic materials used in appliances operated with >0,2 A and applies for non-metallic materials which hold active components in position.

These fire protection requirements shall prevent self-ignition of unattended appliances thus significantly increasing fire safety.

For which appliances does this standard apply?

The standard is applicable for electric and electronic components in unattended household appliances with rated currents of >0,2 A, such as

terminals and switches, e.g. in:

- Dishwashers, washing machines, refrigerators
- Kitchen stoves, microwaves
- Small household appliances, such as mixers, coffee machines

Unattended equipment used in small and medium-sized enterprises is also affected, namely:

- Pump components
- Illuminant components
- Industrial and commercial cleaning equipment
- Hair salon equipment etc.

WECO products are compliant with the glow-wire tests according to the household appliance standard!

For the white goods market segment, WECO Contact GmbH offers an extensive range of products meeting the requirements of the Household Appliance Standard DIN EN/IEC 60335-1. Even before the transition period expired in July 2007, many WECO products had already been compliant with the tightened household appliance standard, providing WECO Contact with an enormous edge over competitors, particularly over those in Asia.

The materials used for enclosures are VDE-tested and approved according to the glow-wire tests specified in DIN EN/IEC 60335-1. This applies for all standard WECO colors!

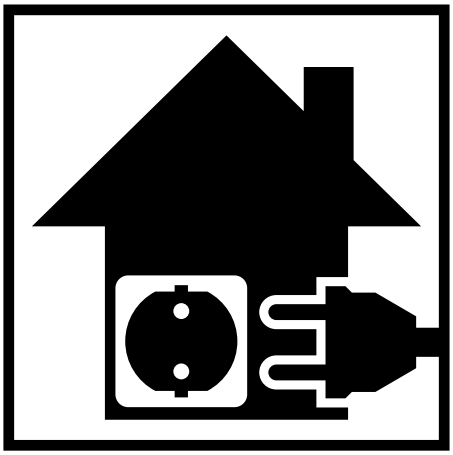
PRODUCTS:

- All products of the connections for printed circuit boards with the exception of large-pole articles of the series 95.., 96.. and 97.. as well as SMD and THR products.
- Series 326 and 327
- Other products: Producibility must verified for each product

We designate products compliant with this tightened household appliance standard, if a specific variant compatible to the household appliance standard is available:

- PART NUMBER:
  The existing 8-digit article number will be continued and supplemented by „EN6“.

- DESIGNATION:
  The existing designation will be continued. A „6“ will be placed before „GP“ resulting in „6GP“.



Are you affected?

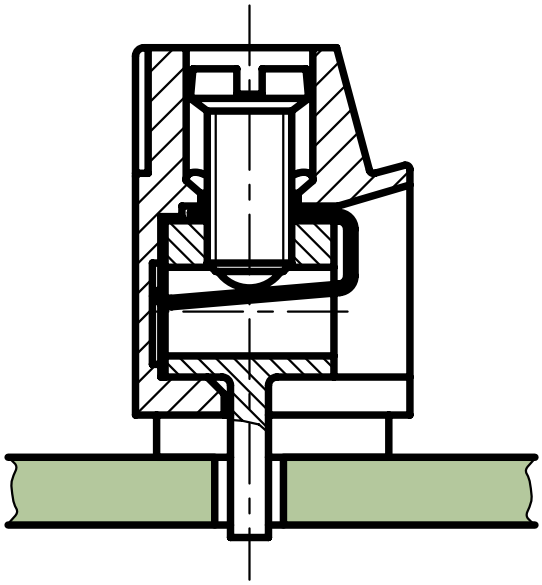
Even today, long after the tightened Household Appliance Standard DIN EN/IEC 60335-1 entered into force, many questions still arise and need clarification.

Even equipment manufacturers affected by this household appliance standard often are unaware of the standard's requirements and only find out that they ARE AFFECTED, when they submit their products at VDE and are denied approval because products do not meet the currently valid standards.

We at WECO Contact take technical support and service for our customers seriously. Therefore, we have compiled on our website a list of all manufacturer products affected by the household appliance standard. At a glance, our customers can now gather information on whether their appliances are affected or not.

The list is also a valuable tool for both sales staff and field reps, helping them to resolve possible unclear issues in project meetings, and enabling them to optimally support the customer.

PCB connectors



Thanks to their versatile design, WECO Contact PCB connectors offers a solution for every connection application. Here, you can find all 5.08 mm pitch connector systems available for printed circuits.

Depending on the respective series, PCB connectors are available with the standard pole numbers 2 to 12 or 2 to 24 poles. With their lateral latching elements they can be locked to terminal strips of any pole number. That way, maintaining accuracy and correctness of the pitch is always guaranteed.

The screw terminals are built on the principle of the socket terminal, either as a lift system or as a head contact terminal.

Damage to flexible conductors can be prevented through the use of our products with wire protection (indicated by the name "-DS" in the product) reliably prevented. An enlarged clamping space with nearly square shape offered in the versions of our products of the series 958 and 978. In the version with wire protection also fine-stranded conductors up to 2.5 mm² can be connected.

Our articles with wire protection (recognizable by the "DS" in the product description) reliably prevent damage to flexible conductors.

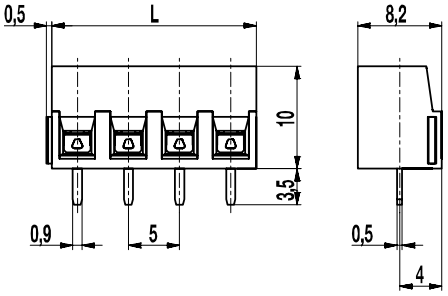
All versions are equipped with captive screws which also allow over-head assembly.

As standard, our terminals are delivered unmarked. Upon request, they can also be printed, e.g. with consecutive numbering or individual labeling according to customer requirement.

PCB connector

140-A-111

Screw connection, interlocking



The PCB connector 140-A-111 with lift system is designed as one-tier basic version with a pitch of 5 mm and available with 2 to 24 poles.

Lateral latching elements on the housing allow to latch the PCB connector to longer terminal rows without pole loss. The wire entrance is parallel to the PCB. The screws are captive.

Part Numbers

No. of poles	140-A-111	Length	Pcs
2	10.801.402	10,00	250
3	10.801.403	15,00	250
4	10.801.404	20,00	200
5	10.801.405	25,00	100
6	10.801.406	30,00	100
7	10.801.407	35,00	100
8	10.801.408	40,00	100
9	10.801.409	45,00	100
10	10.801.410	50,00	100
11	10.801.411	55,00	100
12	10.801.412	60,00	100
13	10.801.413	65,00	100
14	10.801.414	70,00	100
15	10.801.415	75,00	100
16	10.801.416	80,00	100
17	10.801.417	85,00	100
18	10.801.418	90,00	100
19	10.801.419	95,00	100
20	10.801.420	100,00	100
21	10.801.421	105,00	100
22	10.801.422	110,00	100
23	10.801.423	115,00	100
24	10.801.424	120,00	100

General Information

Pitch	5 mm
No. of poles	2 - 24

Technical Data

Clamping Range	*solid / flexible / AWG*		
	0,14 - 2,5 mm² / 0,14 - 1,5 mm² / 26 - 14 AWG		
Rated Cross Section	1,5 mm²		
Wire Stripping Length	6 mm ± 0,5 mm		
Overvoltage Category	III	III	II
Pollution Severity Level	3	2	2
Rated Voltage	200 V	320 V	500 V
Rated Impulse Voltage	4 kV	4 kV	4 kV
Rated Insulation Voltage	250 V acc. to EN 60998-1		
Rated Current	16 A		
Hole in PCB	ø 1,2 mm		
Torque	0,5 Nm		

Material

Moulding	PA, grey, V-0
Comparative Tracking Index	CTI ≥ 600
Insulating Group	I
Temperature Range	-40°C up to 100°C
Terminal body	Nickel plated brass
Pressure clamp	Tin plated tin bronze
Screw	M3; zinc plated steel, blue passivated
Solder pin	0,9 x 0,5 mm; tin plated tin bronze

Approvals

	Current	Voltage	Group	AWG	Nm
	10 [1]	300	B, D	30 - 14	0,51
	15	300	B	30 - 14	0,51

[1] 20 A max for factory-wiring applications only

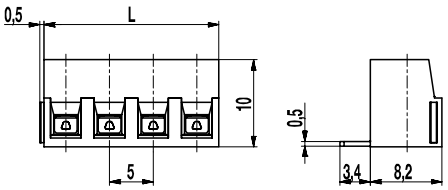
Options / Accessories

- Consecutive numbering
- Special marking according to drawing
- Self-adhesive marking strip BST-5,00
- Pitch of 10 mm for larger clearance and creepage distances

PCB connector

140-A-121

Screw connection, wire entrance vertical to PCB, interlocking



The PCB connector 140-A-121 with lift system is the horizontal version of 140-A-111 with a pitch of 5 mm and available with 2 to 24 poles.

Lateral latching elements on the housing allow to lock the PCB connector to longer terminal rows without pole loss. The wire entrance is vertical to the PCB.
The screws are captive.

Part Numbers

No. of poles	140-A-121	Length	Pcs
2	20.801.402	10,00	250
3	20.801.403	15,00	250
4	20.801.404	20,00	100
5	20.801.405	25,00	100
6	20.801.406	30,00	100
7	20.801.407	35,00	100
8	20.801.408	40,00	100
9	20.801.409	45,00	100
10	20.801.410	50,00	100
11	20.801.411	55,00	100
12	20.801.412	60,00	100
13	20.801.413	65,00	100
14	20.801.414	70,00	100
15	20.801.415	75,00	100
16	20.801.416	80,00	100
17	20.801.417	85,00	100
18	20.801.418	90,00	100
19	20.801.419	95,00	100
20	20.801.420	100,00	100
21	20.801.421	105,00	100
22	20.801.422	110,00	100
23	20.801.423	115,00	100
24	20.801.424	120,00	100

General Information

Pitch	5 mm
No. of poles	2 - 24

Technical Data

Clamping Range	*solid / flexible / AWG*		
	0,14 - 2,5 mm² / 0,14 - 1,5 mm² / 26 - 14 AWG		
Rated Cross Section	1,5 mm²		
Wire Stripping Length	6 mm ± 0,5 mm		
Overvoltage Category	III	III	II
Pollution Severity Level	3	2	2
Rated Voltage	200 V	320 V	500 V
Rated Impulse Voltage	4 kV	4 kV	4 kV
Rated Insulation Voltage	250 V acc. to EN 60998-1		
Rated Current	16 A		
Hole in PCB	ø 1,2 mm		
Torque	0,5 Nm		

Material

Moulding	PA, grey, V-0
Comparative Tracking Index	CTI ≥ 600
Insulating Group	I
Temperature Range	-40°C up to 100°C
Terminal body	Nickel plated brass
Pressure clamp	Tin plated tin bronze
Screw	M3; zinc plated steel, blue passivated
Solder pin	0,9 x 0,5 mm; tin plated tin bronze

Approvals

	Current	Voltage	Group	AWG	Nm
	10 [1]	300	B, D	30 - 14	0,51
	15	300	B	30 - 14	0,51

[1] 20 A max for factory-wiring applications only

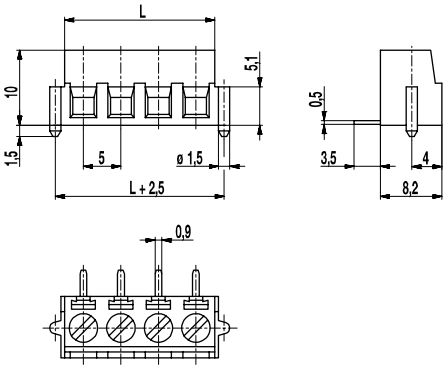
Options / Accessories

- Consecutive numbering
- Special marking according to drawing
- Self-adhesive marking strip BST-5,00
- Pitch of 10 mm for larger clearance and creepage distances

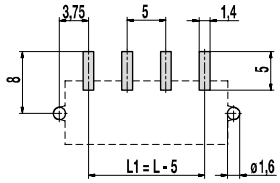
PCB connector for SMD

140-A-SMD

Screw connection, with anti-twist peg



PCB Layout



Solder paste thickness: 0,15 - 0,2 mm

The 2 to 12 pole terminals with a pitch of 5 mm have a screw connection with elevator clamping system and are equipped with M3 captive screws. The wire clamp and soldering tag are manufactured as a single unit and permanently engaged in the housing. The solder pins are exactly aligned parallel to the printed circuit board in order to create a coplanar connection after the reflow soldering process.
The moulding is made of heat resistant thermoplastic material and equipped with plastic pegs on both sides to prevent twisting.
Packed in magazines or equipped with Pick Discs in Tape-on-Reel, this genuine SMD terminal is suitable for the automatic assembly.

Part Numbers

No. of poles	140-A-SMD	Length	Pcs
2	10.801.602	10,00	1036
3	10.801.603	15,00	756
4	10.801.604	20,00	588
5	10.801.605	25,00	504
6	10.801.606	30,00	420
7	10.801.607	35,00	364
8	10.801.608	40,00	308
9	10.801.609	45,00	280
10	10.801.610	50,00	252
11	10.801.611	55,00	224
12	10.801.612	60,00	224

General Information

Pitch	5 mm
No. of poles	2 - 12

Technical Data

Clamping Range	*solid / flexible / AWG*		
	0,14 - 2,5 mm² / 0,14 - 1,5 mm² / 26 - 16 AWG		
Rated Cross Section	1,5 mm²		
Wire Stripping Length	6 mm ± 0,5 mm		
Overvoltage Category	III	III	II
Pollution Severity Level	3	2	2
Rated Voltage	200 V	320 V	500 V
Rated Impulse Voltage	4 kV	4 kV	4 kV
Rated Insulation Voltage	250 V acc. to EN 60998-1		
Rated Current	15 A		
Soldering process	Reflow solder		
Torque	0,5 Nm		

Material

Moulding	PA HT, black, V-0
Comparative Tracking Index	CTI ≥ 600
Insulating Group	I
Temperature Range	-40°C up to 150°C; reflow solder temperature (Peak) max 260°C (15-30 s)
Terminal body	Nickle plated brass
Pressure clamp	Tin plated tin bronze
Screw	M3; zinc plated steel, blue passivated
Solder pin	0,5 x 0,9 mm; tin plated tin bronze

Approvals

	Current	Voltage	Group	AWG	Nm
	10 [1]	300	B, D	30 - 14	0,51
	15	300	B	30 - 14	0,51

Options / Accessories

- Consecutive numbering
- Special marking according to drawing
- Self-adhesive marking strip BST-5,00 [2]

Part Numbers: Tape-on-Reel

No. of poles	140-A-SMD	Tape Width	Tape Height	Pcs
2	10.801.602.A00	32 mm	13 mm	375

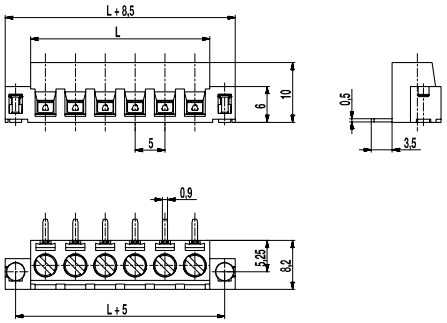
further number of poles on request

[1] 20 A max for factory-wiring applications only
[2] To be fitted after reflow soldering process

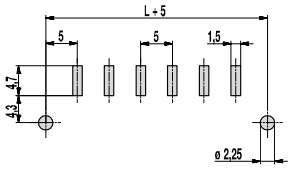
PCB connector for SMD

140-A-126-SMD

Screw connection, with solder flanges



PCB Layout



Solder paste thickness: 0,15 - 0,2 mm

The 2 to 12 pole terminals with a pitch of 5 mm have a screw connection with elevator clamping system and are equipped with M3 captive screws. The wire clamp and soldering tag are manufactured as a single unit and permanently engaged in the casing. The solder pins are exactly aligned parallel to the printed circuit board in order to create a coplanar connection after the reflow soldering process.
Soldering cylinders on either side of the housing (floating anchors), are movable in vertical direction and thereby they obtain 100% coplanarity between solder pins and soldering cylinders. They are transferred more to the front in comparison to the connector centre in order to keep the retaining strength, where the wires are connected. Thus, the force, acting on the solder pins, is reduced in a very important way.
At the base side the housing is equipped with spacers (stand offs), which ensure a better air circulation during the Reflow soldering process and thus an optimal soldering result.

Packed in magazines or equipped with Pick Discs in Tape-on-Reel, this genuine SMD terminal is suitable for the automatic assembly.

Part Numbers

No. of poles	140-A-126-SMD	Length	Pcs
2	10.801.632	10,00	784
4	10.801.634	20,00	504
6	10.801.636	30,00	364
8	10.801.638	40,00	280
10	10.801.640	50,00	224
12	10.801.642	60,00	196

further number of poles on request

General Information

Pitch	5 mm
No. of poles	2 - 12
Areas of application	Systems for measurement and control

Technical Data

Clamping Range	*solid / flexible / AWG*		
	0,14 - 2,5 mm² / 0,14 - 1,5 mm² / 26 - 16 AWG		
Rated Cross Section	1,5 mm²		
Wire Stripping Length	6 mm ± 0,5 mm		
Overvoltage Category	III	III	II
Pollution Severity Level	3	2	2
Rated Voltage	200 V	320 V	500 V
Rated Impulse Voltage	4 kV	4 kV	4 kV
Rated Insulation Voltage	250 V acc. to EN 60998-1		
Rated Current	15 A		
Soldering process	Reflow solder		
Torque	0,5 Nm		

Material

Moulding	PA HT, black, V-0
Comparative Tracking Index	CTI ≥ 600
Insulating Group	I
Temperature Range	-40°C up to 150°C; reflow solder temperature (Peak) max. 260°C (15-30 s)
Terminal body	Nickel plated brass
Pressure clamp	Tin plated tin bronze
Screw	M3; zinc plated steel, blue passivated
Solder pin	0,9 x 0,5 mm; tin plated tin bronze
Solder cylinder	Tin plated brass

Approvals

	Current	Voltage	Group	AWG	Nm
	10 [1]	300	B, D	30 - 14	0,51
	15	300	B	30 - 14	0,51

Options / Accessories

- Consecutive numbering
- Special marking according to drawing
- Self-adhesive marking strip BST-5,00 [2]

Part Numbers: Tape-on-Reel

No. of poles	140-A-126-SMD	Tape Width	Tape Height	Pcs
2	10.801.632.A00	32 mm	13 mm	375
3	10.801.633.A00	56 mm	13 mm	375
4	10.801.634.A00	56 mm	13 mm	375
5	10.801.635.A00	56 mm	13 mm	375
6	10.801.636.A00	56 mm	13 mm	375

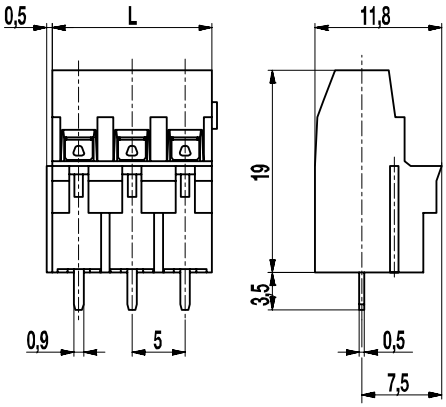
further number of poles on request

[1] 20 A max for factory-wiring applications only
[2] To be fitted after reflow soldering process

PCB connector

140-B-111

Screw connection, interlocking, raised version



The PCB connector 140-B-111 with lift system is the raised version with a pitch of 5 mm and available with 2 or 3 poles.

Due to the raised design, the clamping space projects over e.g. parts or housing edges in front. This PCB connector can also be used for encapsulating circuits.

Lateral latching elements on the housing allow to lock the PCB connector to longer terminal rows without pole loss. The wire entrance is parallel to the PCB.
The screws are captive.

Connecting the two PCB connectors 140-B-111 and 140-A-111 yields the two-tier versions 140-B-151 and 140-B-153.

Part Numbers

No. of poles	140-B-111	Length	Pcs
2	10.801.472	10,00	200
3	10.801.473	15,00	200

General Information

Pitch	5 mm
No. of poles	2 + 3
Usable with	PCB connector 140-A-111

Technical Data

Clamping Range	*solid / flexible / AWG*		
	0,14 - 1,5 mm² / 0,14 - 1,5 mm² / 26 - 16 AWG		
Rated Cross Section	1,5 mm²		
Wire Stripping Length	6 mm ± 0,5 mm		
Overvoltage Category	III	III	II
Pollution Severity Level	3	2	2
Rated Voltage	160 V	160 V	320 V
Rated Impulse Voltage	2,5 kV	2,5 kV	2,5 kV
Rated Insulation Voltage	250 V acc. to EN 60998-1		
Rated Current	16 A		
Hole in PCB	ø 1,2 mm		
Torque	0,5 Nm		

Material

Moulding	PA, grey, V-0
Comparative Tracking Index	CTI ≥ 600
Insulating Group	I
Temperature Range	-40°C up tp 100°C
Terminal body	Nickel plated brass
Pressure clamp	Copper alloy, tin plated
Screw	M3; zinc plated steel, blue passivated
Solder pin	0,9 x 0,5 mm; copper alloy, tin plated

Approvals

	Current	Voltage	Group	AWG	Nm
	10 [1]	300	B	30 - 14	0,51
	15	300	B	30 - 14	0,51
	10	300	D	30 - 14	0,51

[1] 20 A max for factory-wiring applications only

Options / Accessories

- Consecutive numbering
- Special marking according to drawing
- Self-adhesive marking strip BST-5,00
- Pitch of 10 mm for larger clearance and creepage distances
- Can be fitted together to larger pole numbers

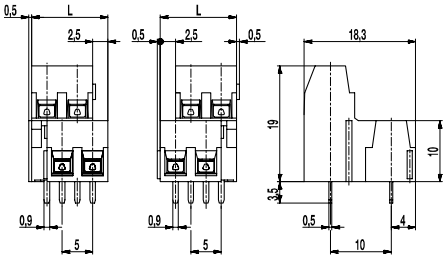
PCB connector

140-B-151/-153

Screw connection, interlocking (only -153), two-tier version

RoHS COMPLIANT

140-B-151 140-B-153



The PCB connectors 140-B-151 and 140-B-153 with lift system are designed as two-tier version with a pitch of 5 mm and available with 4 or 6 poles.

The two-tier version offers higher connection density. Offset individual rows of PCB connectors provide easy access to the terminal leads.

The housing has lateral latching elements. The version ..-153 allows the customer to lock the 4 or 6 pole PCB connectors to longer terminal rows without any pole loss. The ..-151 does not have this option, but is available as a PCB connector with a higher number of poles.
The wire entry is parallel to the PCB.

Part Numbers

No. of poles	140-B-151	140-B-153	Length	Pcs
4	30.801.472	40.801.472	12,50	100
6	30.801.473	40.801.473	17,50	100

General Information

Pitch	5 mm
No. of poles	4 + 6
Additonal Information	Ordering information: ..-151: Front PCB connector is offset to the right ..-153: Front PCB connector is offset to the left

Technical Data

Clamping Range	*solid / flexible / AWG*		
	0,14 - 1,5 mm² / 0,14 - 1,5 mm² / 26 - 16 AWG		
Rated Cross Section	1,5 mm²		
Wire Stripping Length	6 mm ± 0,5 mm		
Overvoltage Category	III	III	II
Pollution Severity Level	3	2	2
Rated Voltage	160 V	160 V	320 V
Rated Impulse Voltage	2,5 kV	2,5 kV	2,5 kV
Rated Insulation Voltage	250 V acc. to EN 60998-1		
Rated Current	16 A		
Hole in PCB	ø 1,2 mm		
Torque	0,5 Nm		

Material

Moulding	PA, grey, V-0
Comparative Tracking Index	CTI ≥ 600
Insulating Group	I
Temperature Range	-40°C up to 100°C
Terminal body	Nickel plated brass
Pressure clamp	Copper alloy, tin plated
Screw	M3; zinc plated steel, blue passivated
Solder pin	0,9 x 0,5 mm; Copper alloy, tin plated

Approvals

	Current	Voltage	Group	AWG	Nm
	10 [1]	300	B	30 - 14	0,5
	15	300	B	30 - 14	0,51

[1] 20 A max for factory-wiring applications only

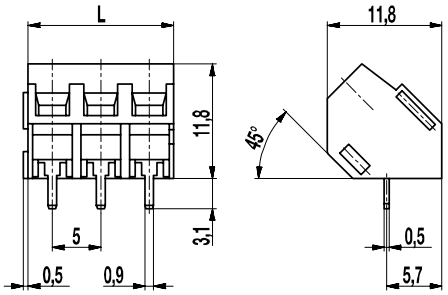
Options / Accessories

- Consecutive numbering
- Special marking according to drawing
- Self-adhesive marking strip BST-5,00
- Pitch of 10 mm for larger clearance and creepage distances
- Can be fitted together to larger pole numbers

PCB connector

140-C-111

Screw connection diagonal 45° to PCB, interlocking



The PCB connector 140-C-111 is the inclined version with lift system with a pitch of 5 mm and available with 2 to 24 poles.

The wire entrance is diagonal, i.e. in a 45° angle to the PC board. Therefore, this PCB connector is ideal for the assembly in the center of PCBs. The design of this PCB connector allows space-saving arrangement of consecutive rows of terminals.

Lateral latching elements on the housing allow to lock the PCB connector to longer terminal rows without pole loss.
The screws are captive.

Part Numbers

No. of poles	140-C-111	Length	Pcs
2	10.801.502	10,00	250
3	10.801.503	15,00	250
4	10.801.504	20,00	200
5	10.801.505	25,00	100
6	10.801.506	30,00	100
7	10.801.507	35,00	100
8	10.801.508	40,00	100
9	10.801.509	45,00	100
10	10.801.510	50,00	100
11	10.801.511	55,00	100
12	10.801.512	60,00	100
13	10.801.513	65,00	100
14	10.801.514	70,00	100
15	10.801.515	75,00	100
16	10.801.516	80,00	100
17	10.801.517	85,00	100
18	10.801.518	90,00	100
19	10.801.519	95,00	100
20	10.801.520	100,00	100
21	10.801.521	105,00	100
22	10.801.522	110,00	100
23	10.801.523	115,00	100
24	10.801.524	120,00	100

General Information

Pitch	5 mm
No. of poles	2 - 24

Technical Data

Clamping Range	*solid / flexible / AWG*
	0,14 - 2,5 mm² / 0,14 - 1,5 mm² / 26 - 14 AWG
Rated Cross Section	1,5 mm²
Wire Stripping Length	6 mm
Overvoltage Category	III
Pollution Severity Level	3
Rated Voltage	200 V
Rated Impulse Voltage	4 kV
Rated Insulation Voltage	250 V acc. to EN 60998-1
Rated Current	16 A
Hole in PCB	ø 1,2 mm
Torque	0,5 Nm

Material

Moulding	PA, grey, V-0
Comparative Tracking Index	CTI ≥ 600
Insulating Group	I
Temperature Range	-40°C up to 100°C
Terminal body	Nickel plated brass
Pressure clamp	Copper alloy, tin plated
Screw	M3; zinc plated steel, blue passivated
Solder pin	0,9 x 0,5 mm; Copper alloy, tin plated

Approvals

	Current	Voltage	Group	AWG	Nm
	10 [1]	300	B, D	30 - 14	0,51
	15	300	B	30 - 14	0,51

[1] 20 A max for factory-wiring applications only

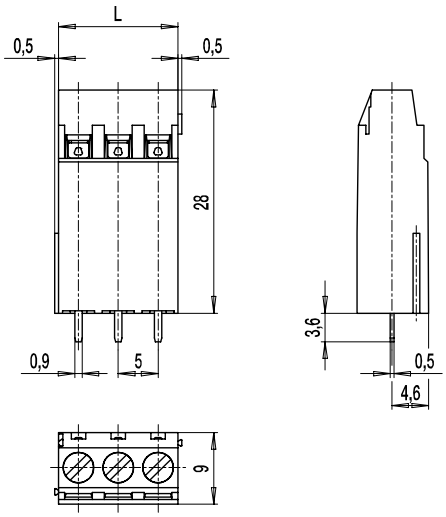
Options / Accessories

- Consecutive numbering
- Special marking according to drawing
- Self-adhesive marking strip BST-5,00
- Pitch of 10 mm for larger clearance and creepage distances
- Can be fitted together to larger pole numbers

PCB connector

140-E-111

Screw connection, interlocking, tall version



The PCB connector 140-E-111, tall version with lift system with a pitch of 5 mm, is available with 2 or 3 poles.

Due to the raised design, the clamping space projects over e.g. parts or housing edges in front. This PCB connector can also be used for encapsulating circuits.

Lateral latching elements on the housing allow to lock the 2- or 3-pole PCB connector to connectors of any pole number without pole loss. The wire entrance is parallel to the PCB.
The screws are captive.

Part Numbers

No. of poles	140-E-111	Length	Pcs
2	10.801.482	10,00	100
3	10.801.483	15,00	100

General Information

Pitch	5 mm
No. of poles	2 + 3

Technical Data

Clamping Range	*solid / flexible / AWG*		
	0,14 - 1,5 mm² / 0,14 - 1,5 mm² / 26 - 16 AWG		
Rated Cross Section	1,5 mm²		
Wire Stripping Length	6 mm ± 0,5 mm		
Overvoltage Category	III	III	II
Pollution Severity Level	3	2	2
Rated Voltage	160 V	160 V	320 V
Rated Impulse Voltage	2,5 kV	2,5 kV	2,5 kV
Rated Insulation Voltage	250 V acc. to EN 60998-1		
Rated Current	16 A		
Hole in PCB	ø 1,2 mm		
Torque	0,5 Nm		

Material

Moulding	PA, grey, V-0
Comparative Tracking Index	CTI ≥ 600
Insulating Group	I
Temperature Range	-40°C up to 100°C
Terminal body	Nickel plated brass
Pressure clamp	Copper alloy, tin plated
Screw	M3; zinc plated steel, blue passivated
Solder pin	0,9 x 0,5 mm; Copper alloy, tin plated

Approvals

	Current	Voltage	Group	AWG	Nm
	10 [1]	300	B	30 - 14	0,51
	15	150	B	30 - 14	0,51
	10	300	D	30 - 14	0,51

[1] 20 A max for factory-wiring applications only

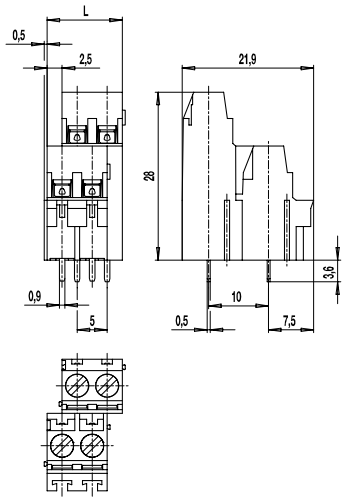
Options / Accessories

- Consecutive numbering
- Special marking according to drawing
- Self-adhesive marking strip BST-5,00
- Pitch of 10 mm for larger clearance and creepage distances
- Can be fitted together to larger pole numbers

PCB connector

140-E-253

Screw connection, interlocking, two-tier tall version



The PCB connector 140-E-253 with lift system is designed as two-tier tall version with a pitch of 5 mm and available with 4 or 6 poles.

The multi-tier version offers higher connection density. Offset individual rows of PCB connectors provide easy access to the terminal leads. This PCB connector can also be used for encapsulating circuits.

This 4- or 6-pole PCB connector has lateral locking elements which allow to lock the connectors to any pole number without pole loss. The wire entrance is parallel to the PCB.

Connecting PCB connectors 140-E-253 with 140-A-111 yields the three-tier versions 140-E-271 and/or 140-E-273.

Part Numbers

No. of poles	140-E-253	Length	Pcs
4	10.801.494	12,50	100
6	10.801.496	17,50	100

General Information

Pitch	5 mm
No. of poles	4 + 6

Technical Data

Clamping Range	*solid / flexible / AWG*		
	0,14 - 1,5 mm² / 0,14 - 1,5 mm² / 26 - 16 AWG		
Rated Cross Section	1,5 mm²		
Wire Stripping Length	6 mm ± 0,5 mm		
Overvoltage Category	III	III	II
Pollution Severity Level	3	2	2
Rated Voltage	160 V	160 V	320 V
Rated Impulse Voltage	2,5 kV	2,5 kV	2,5 kV
Rated Insulation Voltage	250 V acc. to EN 60998-1		
Rated Current	16 A		
Hole in PCB	ø 1,2 mm		
Torque	0,5 Nm		

Material

Moulding	PA, grey, V-0
Comparative Tracking Index	CTI ≥ 600
Insulating Group	I
Temperature Range	-40°C up to 100°C
Terminal body	Nickel plated brass
Pressure clamp	Copper alloy, tin plated
Screw	M3; zinc plated steel, blue passivated
Solder pin	0,9 x 0,5 mm; Copper alloy, tin plated

Approvals

	Current	Voltage	Group	AWG	Nm
	10 [1]	300	B	30 - 14	0,51
	15	300	B	30 - 14	0,51

[1] 20 A max for factory-wiring applications only

Options / Accessories

- Consecutive numbering
- Special marking according to drawing
- Self-adhesive marking strip BST-5,00
- Pitch of 10 mm for larger clearance and creepage distances
- Can be fitted together to larger pole numbers

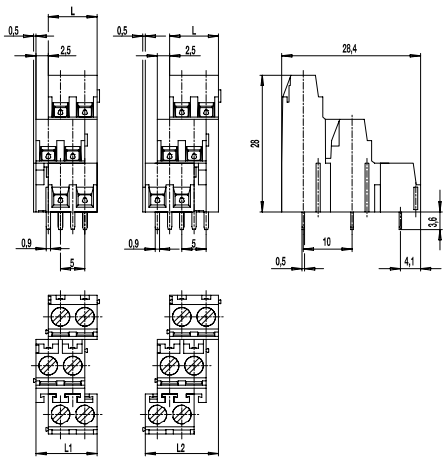
PCB connector

140-E-271/-273

Screw connection, interlocking (only -273), three-tier version

RoHS COMPLIANT

140-E-271 140-E-273



L1 = L + 2,5 mm
L2 = L + 5 mm

The PCB connectors 140-E-271 and 140-E-273 with lift system are designed as three-tier version with a pitch of 5 mm and are available with 4 to 6 poles.

These three-tier versions offer highest connection density. Offset individual rows of PCB connectors provide easy access to the terminal leads.

The housing has lateral latching elements. The version ..-273 allow the customer to lock the 6 or 9 pole PCB connectors to longer terminal rows without pole loss. The ..-271 does not have this option, but it is available as PCB connector with larger pole numbers.
The wire entrance is parallel to the PCB.

Part Numbers

No. of poles	140-E-271	140-E-273	Length	Pcs
6	30.801.402	40.801.402	10,00	100
9	30.801.403	40.801.403	15,00	100

General Information

Pitch	5 mm
No. of poles	6 + 9
Additonal Information	Ordering information: ..-271: Front PCB connector is offset to the right ..-273: Front PCB connector is offset to the left

Technical Data

Clamping Range	*solid / flexible / AWG*		
	0,14 - 1,5 mm² / 0,14 - 1,5 mm² / 26 - 16 AWG		
Rated Cross Section	1,5 mm²		
Wire Stripping Length	6 mm ± 0,5 mm		
Overvoltage Category	III	III	II
Pollution Severity Level	3	2	2
Rated Voltage	160 V	160 V	320 V
Rated Impulse Voltage	2,5 kV	2,5 kV	2,5 kV
Rated Insulation Voltage	250 V acc. to EN 60998-1		
Rated Current	16 A		
Hole in PCB	ø 1,2 mm		
Torque	0,5 Nm		

Material

Moulding	PA, grey, V-0
Comparative Tracking Index	CTI ≥ 600
Insulating Group	I
Temperature Range	-40°C up to 100°C
Terminal body	Nickel plated brass
Pressure clamp	Copper alloy, tin plated
Screw	M3; zinc plated steel, blue passivated
Solder pin	0,9 x 0,5 mm; Copper alloy, tin plated

Approvals

	Current	Voltage	Group	AWG	Nm
	10 [1]	300	B	30 - 14	0,51
	15	300	B	30 - 14	0,51

[1] 20 A max for factory-wiring applications only

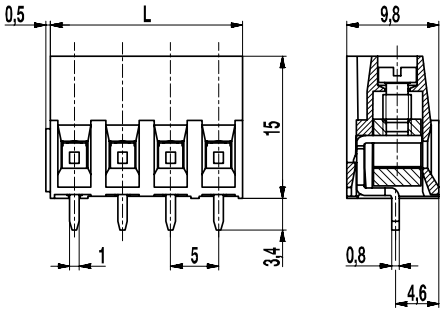
Options / Accessories

- Consecutive numbering
- Special marking according to drawing
- Self-adhesive marking strip BST-5,00
- Pitch of 10 mm for larger clearance and creepage distances
- Can be fitted together to larger pole numbers

PCB connector

145-A-111

Screw connection, interlocking



The PCB connector 145-A-111 with lift system is designed as single-tier basic version with a pitch of 5 mm and is available with 2 to 24 poles.

Lateral latching elements on the housing allow to connect the PCB connector to longer terminal strips without pole loss. The wire entrance is parallel to the PCB. The screws are captive.

Part Numbers

No. of poles	145-A-111	Length	Pcs
2	10.805.402	10,00	250
3	10.805.403	15,00	250
4	10.805.404	20,00	200
5	10.805.405	25,00	100
6	10.805.406	30,00	100
7	10.805.407	35,00	100
8	10.805.408	40,00	100
9	10.805.409	45,00	100
10	10.805.410	50,00	100
11	10.805.411	55,00	100
12	10.805.412	60,00	100
13	10.805.413	65,00	100
14	10.805.414	70,00	100
15	10.805.415	75,00	100
16	10.805.416	80,00	100
17	10.805.417	85,00	100
18	10.805.418	90,00	100
19	10.805.419	95,00	100
20	10.805.420	100,00	100
21	10.805.421	105,00	100
22	10.805.422	110,00	100
23	10.805.423	115,00	100
24	10.805.424	120,00	100

General Information

Pitch	5 mm
No. of poles	2 - 24

Technical Data

Clamping Range	*solid / flexible / AWG*		
	0,14 - 4 mm² / 0,14 - 2,5 mm² / 26 - 14 AWG		
Rated Cross Section	2,5 mm²		
Wire Stripping Length	7 mm ± 0,5 mm		
Overvoltage Category	III	III	II
Pollution Severity Level	3	2	2
Rated Voltage	250 V	320 V	630 V
Rated Impulse Voltage	4 kV	4 kV	4 kV
Rated Insulation Voltage	250 V acc. to EN 60998-1		
Rated Current	24 A		
Hole in PCB	ø 1,4 mm		
Torque	0,5 Nm		

Material

Moulding	PA, grey, V-0
Comparative Tracking Index	CTI ≥ 600
Insulating Group	I
Temperature Range	-40°C up to 100°C
Terminal body	Nickel plated brass
Pressure clamp	Copper alloy, tin plated
Screw	M3; zinc plated steel, blue passivated
Solder pin	1,0 x 0,8 mm; copper alloy, tin plated

Approvals

	Current	Voltage	Group	AWG	Nm
	20	300	B	26 - 12	0,51
	10	300	D	26 - 12	0,51
	20	300	B	26 - 12	0,51
	10	300	D, E	26 - 12	0,51

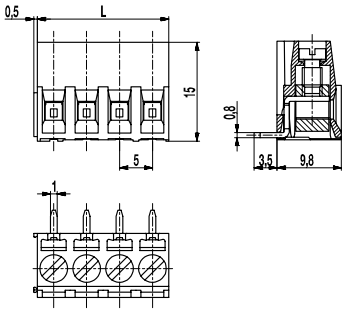
Options / Accessories

- Consecutive numbering
- Special marking according to drawing
- Self-adhesive marking strip BST-5,00
- Pitch of 10 mm for larger clearance and creepage distances

PCB connector

145-A-121

Screw connection, wire entrance vertical to PCB, interlocking



The PCB connector 145-A-121 with lift system is the horizontal version of 145-A-111 with a pitch of 5 mm and is available with 2 to 24 poles.

Lateral latching elements on the housing allow to connect the PCB connector to longer terminal strips without pole loss. The wire entrance is vertical to the PCB. The screws are captive.

Part Numbers

No. of poles	145-A-121	Length	Pcs
2	20.805.402	10,00	250
3	20.805.403	15,00	250
4	20.805.404	20,00	200
5	20.805.405	25,00	100
6	20.805.406	30,00	100
7	20.805.407	35,00	100
8	20.805.408	40,00	100
9	20.805.409	45,00	100
10	20.805.410	50,00	100
11	20.805.411	55,00	100
12	20.805.412	60,00	100
13	20.805.413	65,00	100
14	20.805.414	70,00	100
15	20.805.415	75,00	100
16	20.805.416	80,00	100
17	20.805.417	85,00	100
18	20.805.418	90,00	100
19	20.805.419	95,00	100
20	20.805.420	100,00	100
21	20.805.421	105,00	100
22	20.805.422	110,00	100
23	20.805.423	115,00	100
24	20.805.424	120,00	100

General Information

Pitch	5 mm
No. of poles	2 - 24

Technical Data

Clamping Range	*solid / flexible / AWG*		
	0,14 - 4 mm² / 0,14 - 2,5 mm² / 26 - 14 AWG		
Rated Cross Section	2,5 mm²		
Wire Stripping Length	7 mm ± 0,5 mm		
Overvoltage Category	III	III	II
Pollution Severity Level	3	2	2
Rated Voltage	250 V	320 V	630 V
Rated Impulse Voltage	4 kV	4 kV	4 kV
Rated Insulation Voltage	250 V acc. to EN 60998-1		
Rated Current	24 A		
Hole in PCB	ø 1,4 mm		
Torque	0,5 Nm		

Material

Moulding	PA, grey, V-0
Comparative Tracking Index	CTI ≥ 600
Insulating Group	I
Temperature Range	-40°C up to 100°C
Terminal body	Nickel plated brass
Pressure clamp	Copper alloy, tin plated
Screw	M3; zinc plated steel, blue passivated
Solder pin	1,0 x 0,8 mm; copper alloy, tin plated

Approvals

	Current	Voltage	Group	AWG	Nm
	20	300	B	26 - 12	0,51
	10	300	D	26 - 12	0,51
	20	300	B	26 - 12	0,51
	10	300	D, E	26 - 12	0,51

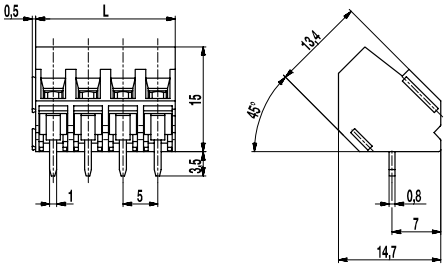
Options / Accessories

- Consecutive numbering
- Special marking according to drawing
- Self-adhesive marking strip BST-5,00
- Pitch of 10 mm for larger clearance and creepage distances

PCB connector

145-C-111

Screw connection diagonal 45° to PCB, with test holes, interlocking



The PCB connector 145-C-111 is the inclined version with lift system with a pitch of 5 mm and available with 2 to 24 poles.

The wire entrance is located in a 45° angle to the PC board. Therefore, this PCB connector is ideal for the assembly in the center of PCBs. The design of this PCB connector allows space-saving arrangement of consecutive rows of terminals.

Lateral latching elements on the housing allow to connect the PCB connector to longer terminal strips without pole loss.
The screws are captive.

This PCB connector has test holes for ø 2.3 mm test plugs.

Part Numbers

No. of poles	145-C-111	Length	Pcs
2	10.805.502	10,00	250
3	10.805.503	15,00	250
4	10.805.504	20,00	200
5	10.805.505	25,00	100
6	10.805.506	30,00	100
7	10.805.507	35,00	100
8	10.805.508	40,00	100
9	10.805.509	45,00	100
10	10.805.510	50,00	100
11	10.805.511	55,00	100
12	10.805.512	60,00	100
13	10.805.513	65,00	100
14	10.805.514	70,00	100
15	10.805.515	75,00	100
16	10.805.516	80,00	100
17	10.805.517	85,00	100
18	10.805.518	90,00	100
19	10.805.519	95,00	100
20	10.805.520	100,00	100
21	10.805.521	105,00	100
22	10.805.522	110,00	100
23	10.805.523	115,00	100
24	10.805.524	120,00	100

General Information

Pitch	5 mm
No. of poles	2 - 24

Technical Data

Clamping Range	*solid / flexible / AWG*		
	0,14 - 4 mm² / 0,14 - 2,5 mm² / 26 - 12 AWG		
Rated Cross Section	2,5 mm²		
Wire Stripping Length	7 mm ± 0,5 mm		
Overvoltage Category	III	III	II
Pollution Severity Level	3	2	2
Rated Voltage	250 V	320 V	630 V
Rated Impulse Voltage	4 kV	4 kV	4 kV
Rated Insulation Voltage	250 V acc. to EN 60998-1		
Rated Current	24 A		
Hole in PCB	ø 1,4 mm		
Torque	0,5 Nm		

Material

Moulding	PA, grey, V-0
Comparative Tracking Index	CTI ≥ 600
Insulating Group	I
Temperature Range	-40°C up to 100°C
Terminal body	Nickel plated brass
Pressure clamp	Copper alloy, tin plated
Screw	M3; zinc plated steel, blue passivated
Solder pin	1,0 x 0,8 mm; copper alloy, tin plated

Approvals

	Current	Voltage	Group	AWG	Nm
	20	300	B	26 - 12	0,51
	10	300	D	26 - 12	0,51
	20	300	B	26 - 12	0,51
	10	300	D, E	26 - 12	0,51

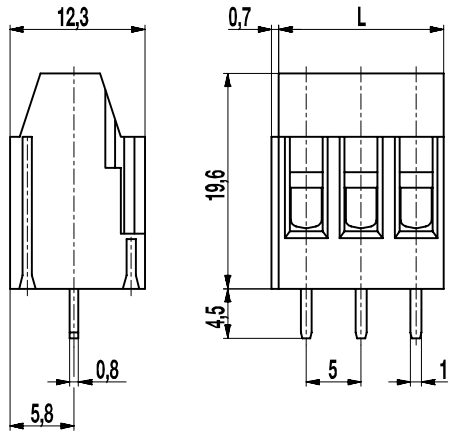
Options / Accessories

- Consecutive numbering
- Special marking according to drawing
- Self-adhesive marking strip BST-5,00
- Pitch of 10 mm for larger clearance and creepage distances

PCB connector

150-A-111

Screw connection, interlocking, with test holes



The PCB connector 150-A-111 with a pitch of 5 mm is available with 2 or 3 poles.

Due to the ample terminal space and the lift system, this PCB connector is particularly user-friendly. Optimum wire protection is guaranteed even after countless disconnections of one or multiple wires.

Lateral latching elements on the housing allow to connect the PCB connector to longer terminal strips without pole loss. The wire entrance is parallel to the PCB. The screws are captive.

This PCB connector has test holes for ø 2.3 mm test plugs.

Part Numbers

No. of poles	150-A-111	Length	Pcs
2	10.801.002	10,00	200
3	10.801.003	15,00	200

General Information

Pitch	5 mm
No. of poles	2 + 3

Technical Data

Clamping Range	*solid / flexible / AWG*		
	0,14 - 4 mm² / 0,14 - 2,5 mm² / 26 - 14 AWG		
Rated Cross Section	2,5 mm²		
Wire Stripping Length	7,5 mm ± 0,5 mm		
Overvoltage Category	III	III	II
Pollution Severity Level	3	2	2
Rated Voltage	250 V	320 V	630 V
Rated Impulse Voltage	4 kV	4 kV	4 kV
Rated Insulation Voltage	250 V acc. to EN 60998-1		
Rated Current	24 A		
Hole in PCB	ø 1,3 mm		
Torque	0,5 Nm		

Material

Moulding	PA, grey, V-0
Comparative Tracking Index	CTI ≥ 600
Insulating Group	I
Temperature Range	-40°C up to 100°C
Terminal body	Nickel plated brass
Pressure clamp	Copper alloy, tin plated
Screw	M3; zinc plated steel, blue passivated
Solder pin	1,0 x 0,8 mm; copper alloy, tin plated

Approvals

	Current	Voltage	Group	AWG	Nm
	20 [1]	300	B	22-10 [2]	0,51
	10	300	D	22-10 [2]	0,51
	20	300	B	26 - 10	0,51
	10	300	D, E	26 - 10	0,51

[1] 20 A max for factory-wiring only
[2] Wire sizes No. 26 - 24 AWG for factory-wiring only

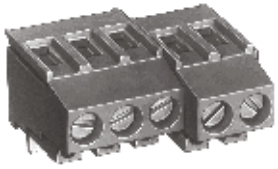
Options / Accessories

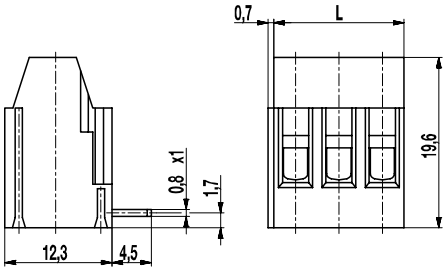
- Consecutive numbering
- Special marking according to drawing
- Self-adhesive marking strip BST-5,00
- Pitch of 10 mm for larger clearance and creepage distances
- Can be fitted together to larger pole numbers

PCB connector

150-A-121

Screw connection, wire entrance vertical to PCB, interlocking, with test holes





The PCB connector 150-A-121 is the horizontal version of 150-A-111 with a pitch of 5 mm and is available with 2 or 3 poles.

Due to the ample terminal space and the lift system, this PCB connector is particularly user-friendly. Optimum wire protection is guaranteed even after countless disconnections of one or multiple wires.

Lateral latching elements on the housing allow to connect the PCB connector to longer terminal strips without pole loss. The wire entrance is vertical to the PCB. The screws are captive.

This PCB connector has test holes for ø 2.3 mm test plugs.

Part Numbers

No. of poles	150-A-121	Length	Pcs
2	20.801.002	10,00	200
3	20.801.003	15,00	200

General Information

Pitch	5 mm
No. of poles	2 + 3

Technical Data

Clamping Range	*solid / flexible / AWG*		
	0,14 - 4 mm² / 0,14 - 2,5 mm² / 26 - 14 AWG		
Rated Cross Section	2,5 mm²		
Wire Stripping Length	7,5 mm ± 0,5 mm		
Overvoltage Category	III	III	II
Pollution Severity Level	3	2	2
Rated Voltage	250 V	320 V	630 V
Rated Impulse Voltage	4 kV	4 kV	4 kV
Rated Insulation Voltage	250 V acc. to EN 60998-1		
Rated Current	24 A		
Hole in PCB	ø 1,3 mm		
Torque	0,5 Nm		

Material

Moulding	PA, grey, V-0
Comparative Tracking Index	CTI ≥ 600
Insulating Group	I
Temperature Range	-40°C up to 100°C
Terminal body	Nickel plated brass
Pressure clamp	Copper alloy, tin plated
Screw	M3; zinc plated steel, blue passivated
Solder pin	1,0 x 0,8 mm; copper alloy, tin plated

Approvals

	Current	Voltage	Group	AWG	Nm
	20 [1]	300	B	22-10 [2]	0,51
	10	300	D	22-10 [2]	0,51
	20	300	B	26 - 10	0,51
	10	300	D, E	26 - 10	0,51

[1] 20 A max for factory-wiring only
[2] Wire sizes No. 26 - 24 AWG for factory-wiring only

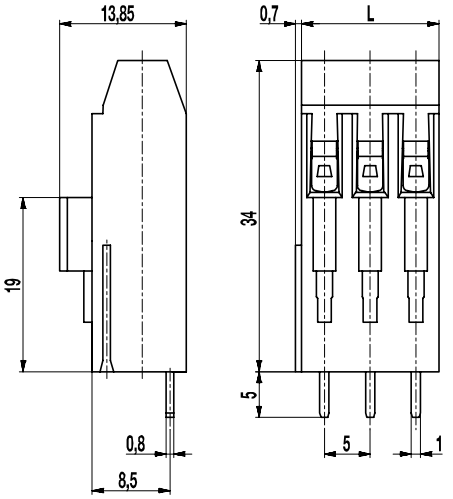
Options / Accessories

- Consecutive numbering
- Special marking according to drawing
- Self-adhesive marking strip BST-5,00
- Pitch of 10 mm for larger clearance and creepage distances
- Can be fitted together to larger pole numbers

PCB connector

150-B-111

Screw connection, interlocking, tall version



The PCB connector 150-B-111, tall version with a pitch of 5 mm, is available with 2 or 3 poles.

Due to the ample terminal space and the lift system, this PCB connector is particularly user-friendly. Optimum wire protection is guaranteed even after countless disconnections of one or multiple wires.

Lateral latching elements on the housing allow to connect the PCB connector to longer terminal strips without pole loss. The wire entrance is parallel to the PCB. The screws are captive.

Connecting the two PCB connectors 150-B-111 and 150-A-111 yields the two-tier versions 150-B-151 and 140-B-153.

Part Numbers

No. of poles	150-B-111	Length	Pcs
2	10.801.014	10,00	100
3	10.801.016	15,00	100

General Information

Pitch	5 mm
No. of poles	2 + 3

Technical Data

Clamping Range	*solid / flexible / AWG*
	0,14 - 4 mm² / 0,14 - 2,5 mm² / 26 - 14 AWG
Rated Cross Section	2,5 mm²
Wire Stripping Length	8 mm
Overvoltage Category	III
Pollution Severity Level	3
Rated Voltage	250 V
Rated Impulse Voltage	4 kV
Rated Insulation Voltage	250 V acc. to EN 60998-1
Rated Current	24 A
Hole in PCB	ø 1,3 mm
Torque	0,5 Nm

Material

Moulding	PA, grey, V-0
Comparative Tracking Index	CTI ≥ 600
Insulating Group	I
Temperature Range	-40°C up to 100°C
Terminal body	Nickel plated brass
Pressure clamp	Copper alloy, tin plated
Screw	M3; zinc plated steel, blue passivated
Solder pin	1,0 x 0,8 mm; copper alloy, tin plated

Approvals

	Current	Voltage	Group	AWG	Nm
	20	300	B	22 - 10	0,51 [1]
	10	300	D	22 - 10	0,51
	20	300	B	26 - 10	0,51
	10	300	D, E	26 - 10	0,51

[1] Wire sizes No. 26 - 24 AWG and 20 A max for factory-wiring only

Options / Accessories

- Consecutive numbering
- Special marking according to drawing
- Self-adhesive marking strip BST-5,00
- Pitch of 10 mm for larger clearance and creepage distances
- Can be fitted together to larger pole numbers

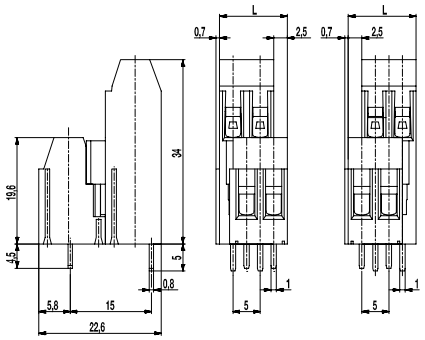
PCB connector

150-B-151/-153

Screw connection, interlocking (only -153), two-tier version

RoHS COMPLIANT

150-B-151 150-B-153



The PCB connectors 150-B-151 and 150-B-153 are designed as two-tier version with a pitch of 5 mm and are available with 4 or 6 poles.

Due to the ample terminal space and the lift system, this PCB connector is particularly user-friendly. The lift system guarantees optimum wire protection even after countless disconnections of one or multiple wires. The two-tier version provides high wiring density in a confined space.
In order to simplify the assembly, the rear solder pins protrude farther from the housing than the front pins.

The housing has lateral latching elements. The version ..-153 allows the customer to lock the 4 or 6 pole PCB connectors to longer terminal rows without pole loss. The ..-151 does not have this option, but it is available as PCB connector with larger pole numbers.
The wire entrance is parallel to the PCB.
The screws are captive.

Part Numbers

No. of poles	150-B-151	150-B-153	Length	Pcs
4	30.801.014	40.801.014	12,50	100
6	30.801.016	40.801.016	17,50	50

General Information

Pitch	5 mm
No. of poles	4 + 6
Additonal Information	Ordering information: ..-151: Front PCB connector is offset to the right ..-153: Front PCB connector is offset to the left

Technical Data

Clamping Range	*solid / flexible / AWG* 0,14 - 4 mm² / 0,14 - 2,5 mm² / 26 - 14 AWG
Rated Cross Section	2,5 mm²
Wire Stripping Length	8 mm
Overvoltage Category	III
Pollution Severity Level	3
Rated Voltage	250 V
Rated Impulse Voltage	4 kV
Rated Insulation Voltage	250 V acc. to EN 60998-1
Rated Current	24 A
Hole in PCB	ø 1,3 mm
Torque	0,5 Nm

Material

Moulding	PA, grey, V-0
Comparative Tracking Index	CTI ≥ 600
Insulating Group	I
Temperature Range	-40°C up to 100°C
Terminal body	Nickel plated brass
Pressure clamp	Copper alloy, tin plated
Screw	M3; zinc plated steel, blue passivated
Solder pin	1,0 x 0,8 mm; copper alloy, tin plated

Approvals

	Current	Voltage	Group	AWG	Nm
	20	300	B	22 - 10	0,51 [1]
	10	300	D	22 - 10	0,51
	20	300	B	26 - 10	0,51
	10	300	D, E	26 - 10	0,51

[1] Wire sizes No. 26 - 24 AWG and 20 A max for factory-wiring only

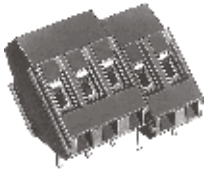
Options / Accessories

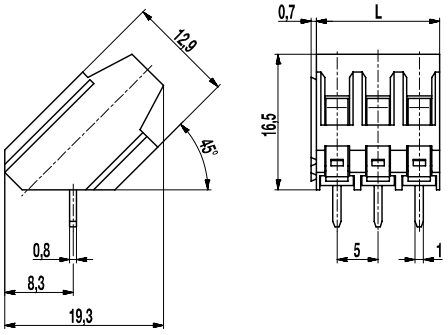
- Consecutive numbering
- Special marking according to drawing
- Self-adhesive marking strip BST-5,00
- Pitch of 10 mm for larger clearance and creepage distances
- Can be fitted together to larger pole numbers

PCB connector

150-C-111

Screw connection diagonal 45° to PCB, interlocking, with test holes





The PCB connector 150-C-111 is the inclined version with lift system with a pitch of 5 mm and available with 2 or 3 poles.

The wire entrance is in a 45° angle to the PC board. Therefore, this PCB connector is ideal for the assembly in the center of PCBs. The design of this PCB connector allows space-saving arrangement of consecutive rows of terminals.

Due to the ample terminal space and the lift system, this PCB connector is particularly user-friendly. The lift system guarantees optimum wire protection even after countless disconnections of one or multiple wires.

Lateral latching elements on the housing allow to connect the PCB connector to longer terminal strips without pole loss.
The screws are captive.

This PCB connector has test holes for ø 2.3 mm test plug.

Part Numbers

No. of poles	150-C-111	Length	Pcs
2	10.801.022	10,00	200
3	10.801.023	15,00	200

General Information

Pitch	5 mm
No. of poles	2 + 3

Technical Data

Clamping Range	*solid / flexible / AWG*
	0,14 - 4 mm² / 0,14 - 2,5 mm² / 26 - 14 AWG
Rated Cross Section	2,5 mm²
Wire Stripping Length	8 mm
Overvoltage Category	III
Pollution Severity Level	3
Rated Voltage	250 V
Rated Impulse Voltage	4 kV
Rated Insulation Voltage	250 V acc. to EN 60998-1
Rated Current	24 A
Hole in PCB	ø 1,3 mm
Torque	0,5 Nm

Material

Moulding	PA, grey, V-0
Comparative Tracking Index	CTI ≥ 600
Insulating Group	I
Temperature Range	-40°C up to 100°C
Terminal body	Nickel plated brass
Pressure clamp	Copper alloy, tin plated
Screw	M3; zinc plated steel, blue passivated
Solder pin	1,0 x 0,8 mm; copper alloy, tin plated

Approvals

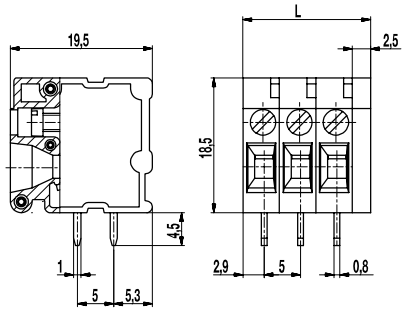
	Current	Voltage	Group	AWG	Nm
	20	300	B	22 - 10	0,51 [1]
	10	300	D	22 - 10	0,51
	20	300	B	26 - 10	0,51
	10	300	D, E	26 - 10	0,51

[1] Wire sizes No. 26 - 24 AWG and 20 A max for factory-wiring only

Options / Accessories

- Consecutive numbering
- Special marking according to drawing
- Self-adhesive marking strip BST-5,00
- Pitch of 10 mm for larger clearance and creepage distances
- Can be fitted together to larger pole numbers

PCB connector
180-A-111
Screw connection



Part Numbers

No. of poles	180-A-111	Length	Pcs
1	11.819.002	7,50	500
2	12.819.002	12,50	250
3	13.819.002	17,50	250
4	14.819.002	22,50	100
5	15.819.002	27,50	50
6	16.819.002	32,50	50
7	17.819.002	37,50	50
8	18.819.002	42,50	50
9	19.819.002	47,50	50
10	20.819.002	52,50	25
11	21.819.002	57,50	25
12	22.819.002	62,50	25

further number of poles on request

General Information

Pitch	5 mm
No. of poles	1 - 12
Areas of application	Especially suitable for narrow spaces or restricted access.

Technical Data

Clamping Range	*solid / flexible / AWG*		
	0,14 - 4 mm² / 0,14 - 2,5 mm² / 26 - 12 AWG		
Rated Cross Section	2,5 mm²		
Wire Stripping Length	9 mm ± 0,5 mm		
Overvoltage Category	III	III	II
Pollution Severity Level	3	2	2
Rated Voltage	320 V	320 V	630 V
Rated Impulse Voltage	4 kV	4 kV	4 kV
Rated Insulation Voltage	450 V acc. to EN 60998-1		
Rated Current	24 A		
Hole in PCB	ø 1,4 mm		
Torque	0,4 Nm		

Material

Moulding	PA, grey, V-0
Comparative Tracking Index	CTI ≥ 600
Insulating Group	I
Temperature Range	-40°C up to 100°C
Pressure clamp	Tin plated copper
Screw	M2,5; zinc plated steel, blue passivated
Solder pin	1,0 x 0,8 mm; tin plated copper
Terminal body	Zinc plated steel, blue passivated
Pressure plate	Brass, bright

Approvals

	Current	Voltage	Group	AWG	Nm
	20	300	B	24 - 12	0,4
	10	300	D	24 - 12	0,4
	20	300	B	24 - 12	0,4
	10	300	D, E	24 - 12	0,4

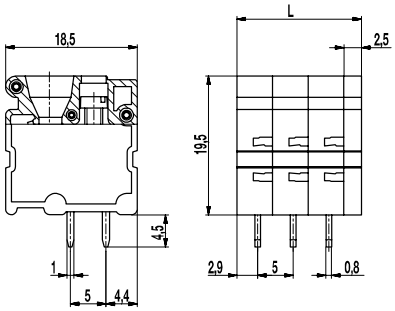
Options / Accessories

- Consecutive numbering
- Special marking according to drawing
- Self-adhesive marking strip BST-5,00

PCB connector

180-A-121

Screw connection, wire entrance vertical to PCB



Part Numbers

No. of poles	180-A-121	Length	Pcs
1	11.819.001	7,50	500
2	12.819.001	12,50	250
3	13.819.001	17,50	250
4	14.819.001	22,50	100
5	15.819.001	27,50	50
6	16.819.001	32,50	50
7	17.819.001	37,50	50
8	18.819.001	42,50	50
9	19.819.001	47,50	50
10	20.819.001	52,50	25
11	21.819.001	57,50	25
12	22.819.001	62,50	25

further number of poles on request

General Information

Pitch	5 mm
No. of poles	1 - 12
Areas of application	Especially suitable for narrow spaces or restricted access.

Technical Data

Clamping Range	*solid / flexible / AWG*		
	0,14 - 4 mm² / 0,14 - 2,5 mm² / 26 - 12 AWG		
Rated Cross Section	2,5 mm²		
Wire Stripping Length	9 mm ± 0,5 mm		
Overvoltage Category	III	III	II
Pollution Severity Level	3	2	2
Rated Voltage	320 V	320 V	630 V
Rated Impulse Voltage	4 kV	4 kV	4 kV
Rated Insulation Voltage	450 V acc. to EN 60998-1		
Rated Current	24 A		
Hole in PCB	ø 1,4 mm		
Torque	0,4 Nm		

Material

Moulding	PA, grey, V-0
Comparative Tracking Index	CTI ≥ 600
Insulating Group	I
Temperature Range	-40°C up to 100°C
Pressure clamp	Tin plated copper
Screw	M2,5; zinc plated steel, blue passivated
Solder pin	1,0 x 0,8 mm; tin plated copper
Terminal body	Zinc plated steel, blue passivated
Pressure plate	Brass, bright

Approvals

	Current	Voltage	Group	AWG	Nm
	20	300	B	24 - 12	0,4
	10	300	D	24 - 12	0,4
	20	300	B	24 - 12	0,4
	10	300	D, E	24 - 12	0,4

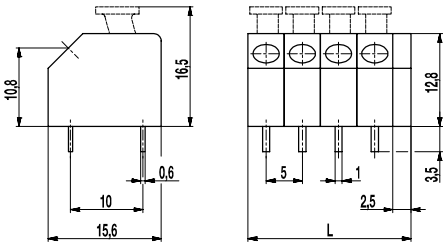
Options / Accessories

- Consecutive numbering
- Special marking according to drawing
- Self-adhesive marking strip BST-5,00

PCB connector

874(-DR)

Spring clamp connection diagonal 45° to PCB



The PCB connectors 874 und 874-DR with spring clamp connection and a pitch of 5 mm, are available with 2 to 12 poles.

They provide easy connection of solid and stranded conductors and feature a stainless steel spring clamp which ensures safe permanent contact. The spring clamp of version 874 is operated by pressing a pusher inside the housing with a screwdriver whereas the spring clamp of version 874-DR is manually operated by a protruding lever.
The wire entrance is in a 45° angle to the PC board.

Each pole has a double solder termination with 10 mm pin spacing.

Part Numbers

No. of poles	874	874-DR	Length	Pcs
1	11.812.001	41.812.001	7,50	250
2	12.812.001	42.812.001	12,50	200
3	13.812.001	43.812.001	17,50	100
4	14.812.001	44.812.001	22,50	100
5	15.812.001	45.812.001	27,50	100
6	16.812.001	46.812.001	32,50	50
7	17.812.001	47.812.001	37,50	50
8	18.812.001	48.812.001	42,50	50
9	19.812.001	49.812.001	47,50	50
10	20.812.001	50.812.001	52,50	50
11	21.812.001	51.812.001	57,50	50
12	22.812.001	52.812.001	62,50	50

further number of poles on request

General Information

Pitch	5 mm
No. of poles	1 - 12

Technical Data

Clamping Range	*solid / flexible / AWG*		
	0,14 - 2,5 mm² / 0,14 - 1,5 mm² / 26 - 16 AWG		
Rated Cross Section	1,5 mm²		
Wire Stripping Length	10 mm ± 0,5 mm		
Overvoltage Category	III	III	II
Pollution Severity Level	3	2	2
Rated Voltage	250 V	320 V	630 V
Rated Impulse Voltage	4 kV	4 kV	4 kV
Rated Insulation Voltage	250 V acc. to EN 60998-1		
Rated Current	10 A		
Hole in PCB	ø 1,3 mm		

Material

Moulding	PA, red, V-2
Comparative Tracking Index	CTI ≥ 600
Insulating Group	I
Temperature Range	-40°C up to 100°C
Terminal body	Tin plated brass
Solder pin	0,6 x 1,0 mm; tin plated brass
Spring	Stainless strip steel

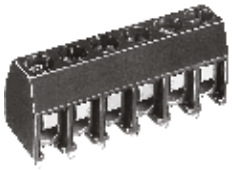
Approvals

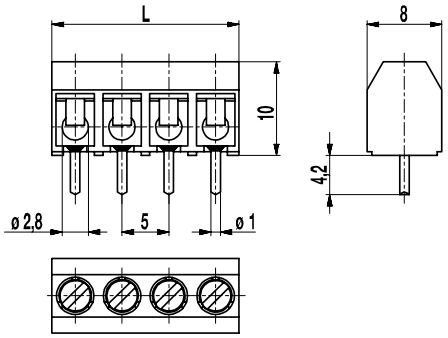
	Current	Voltage	Group	AWG	Nm
	10	300	B	22 - 16	
	10	300	B, D, E	22 - 16	

Options / Accessories

- Consecutive numbering
- Special marking according to drawing
- Self-adhesive marking strip BST-5,00
- Other Pitch

PCB connector
950(-DS)
Screw connection





PCB connectors 950 with a pitch of 5 mm are available in 2- to 32-pole design and can be mounted side-by-side without pole loss.

Wire protection in DS-design reliably prevents damage to stranded wires by the screw.
The screws are secured against self-loosening.

Part Numbers

No. of poles	950	950-DS	Length	Pcs
2	10.871.006	20.871.006	10,00	250
3	10.871.053	20.871.053	15,00	250
4	10.871.054	20.871.054	20,00	100
5	10.871.055	20.871.055	25,00	100
6	10.871.056	20.871.056	30,00	100
7	10.871.001	20.871.001	35,00	100
8	10.871.008	20.871.008	40,00	100
9	10.871.009	20.871.009	45,00	100
10	10.871.010	20.871.010	50,00	100
11	10.871.011	20.871.011	55,00	100
12	10.871.062	20.871.062	60,00	100
13	10.871.063	20.871.063	65,00	100
14	10.871.064	20.871.064	70,00	100
15	10.871.065	20.871.065	75,00	100
16	10.871.066	20.871.066	80,00	100
17	10.871.067	20.871.067	85,00	100
18	10.871.068	20.871.068	90,00	100
19	10.871.069	20.871.069	95,00	100
20	10.871.070	20.871.070	100,00	100
21	10.871.071	20.871.071	105,00	100
22	10.871.072	20.871.072	110,00	100
23	10.871.073	20.871.073	115,00	100
24	10.871.074	20.871.074	120,00	100
25	10.871.075	20.871.075	125,00	100
26	10.871.076	20.871.076	130,00	100
27	10.871.077	20.871.077	135,00	100
28	10.871.078	20.871.078	140,00	100
29	10.871.079	20.871.079	145,00	100
30	10.871.080	20.871.080	150,00	100
31	10.871.061	20.871.061	155,00	100
32	10.871.052	20.871.052	160,00	100

General Information

Pitch	5 mm
No. of poles	2 - 32

Technical Data

Clamping Range	*solid / flexible / AWG*		
without wire protector	0,75 - 4 mm² / 0,75 - 2,5 mm² / 18 - 12 AWG		
with wire protector	0,34 - 2,5 mm² / 0,34 - 2,5 mm² / 22 - 14 AWG		
Rated Cross Section	1,5 mm²		
Wire Stripping Length	6 mm ± 0,5 mm		
Overvoltage Category	III	III	II
Pollution Severity Level	3	2	2
Rated Voltage	160 V	160 V	320 V
Rated Impulse Voltage	2,5 kV	2,5 kV	2,5 kV
Rated Insulation Voltage	130 V acc. to EN 60998-1		
Rated Current	17,5 A		

Hole in PCB	ø 1,3 mm
Torque	0,4 Nm
Other specifications	2-8 poles types: "no-flame" acc. to glow-wire test

Material

Moulding	PA, grey, V-0
Comparative Tracking Index	2-8 poles: CTI ≥ 600; 9-32 poles: CTI 400
Insulating Group	2-8 poles: I; 9-32 poles: II
Temperature Range	-40°C up to 100°C
Terminal body	Tin plated brass
Screw	M2,6; zinc plated steel, blue passivated
Solder pin	ø 1 mm; tin plated copper
Wire protector	Tin plated tin bronze

Approvals

	Current	Voltage	Group	AWG	Nm
	15	300	B	26 - 14	0,4
	15	300	B	26 - 14	0,4
	Current	Voltage	mm²		
	17,5	250	1,5		

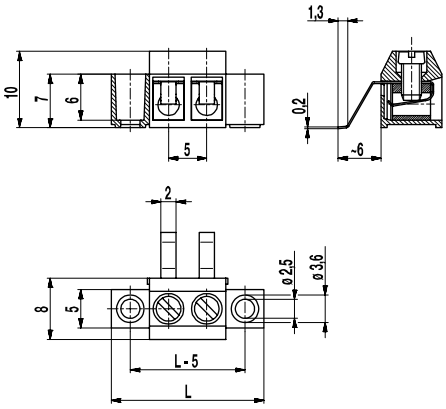
Options / Accessories

- Consecutive numbering
- Special marking according to drawing
- Self-adhesive marking strip BST-5,00
- Longer P.C. pins up to 75 mm

PCB connector for SMD

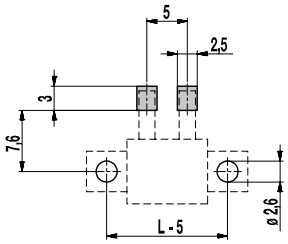
950-A-SMD

Screw connection, with solder tags



L = No. of poles x pitch + 10 mm

PCB Layout



Solder paste thickness: 0,15 - 0,2 mm

Screw connections with wire protection are used on versions 950-A-SMD with a pitch of 5 mm.
This wire protection is extended beyond the rear panel of the housing and bent downwards for connection to the soldering pads. When the terminal strip is fitted, the preloaded soldering tags push against the soldering pads. This assures current transfer with high contact stability.
The housings have mounting flanges at either side, for reliable mechanical fastening on the circuit board. This terminals are packed in tube magazines.

Part Numbers

No. of poles	950-A-SMD	Length	Pcs
2	20.871.266	20,00	624
3	20.871.267	25,00	504
4	20.871.268	30,00	408
5	20.871.269	35,00	360
6	20.871.270	40,00	312
7	20.871.271	45,00	264
8	20.871.272	50,00	240
9	20.871.273	55,00	216
10	20.871.274	60,00	192
11	20.871.275	65,00	192
12	20.871.276	70,00	168

General Information

Pitch	5 mm
No. of poles	2 - 12

Technical Data

Clamping Range	*solid / flexible / AWG*
	0,34 - 2,5 mm² / 0,34 - 2,5 mm² / 22 - 14 AWG
Rated Cross Section	1,5 mm²
Wire Stripping Length	6 mm
Overvoltage Category	III
Pollution Severity Level	3
Rated Voltage	125 V
Rated Impulse Voltage	2,5 kV
Rated Insulation Voltage	130 V acc. to EN 60998-1
Rated Current	6 A
Soldering process	Reflow solder
Torque	0,4 Nm

Material

Moulding	PA, black, V-0
Comparative Tracking Index	CTI 250
Insulating Group	IIIa
Temperature Range	-40°C up to 105°C; reflow solder temperature (Peak) max. 250°C (15-30 s)
Terminal body	Nickel plated brass
Screw	M2,6; zinc plated steel, blue passivated
Wire protector	Tin plated tin bronze

Approvals

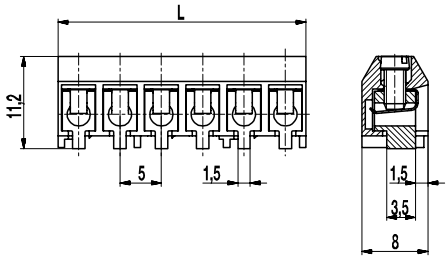
	Current	Voltage	Group	AWG	Nm
	15	300	B	26 - 14	0,4
	15	300	B	26 - 14	0,4

Options / Accessories

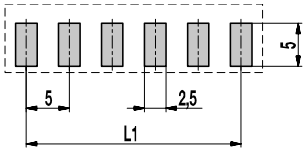
- Consecutive numbering
- Special marking according to drawing
- Self-adhesive marking strip BST-5,00 [1]
- Tape-on-Reel on request

[1] To be fitted after reflow soldering process

PCB connector for SMD
950-D-SMD-DS
Screw connection



PCB Layout



L1 = (No. of poles - 1) x pitch
Solder paste thickness: 0,2 - 0,25 mm

The 950-D-SMD-DS is a reflow solderable PCB terminal for true surface mounting with a pitch of 5 mm.
The geometry of the terminal Body creates enough space for the solder paste and it also enables a good heat circulation for flawless soldering and an optical solder joint inspection.
The housing is made of high temperature material. Its design ensures a good hot-air circulation during the reflow soldering process in a convection oven. The connection side of this product should be positioned in the direction of passage.
This terminal can be delivered from 2 to 12 poles.

Part Numbers

No. of poles	950-D-SMD-DS	Length	Pcs
2	20.879.502	10,00	250
3	20.879.503	15,00	250
4	20.879.504	20,00	100
5	20.879.505	25,00	100
6	20.879.506	30,00	100
7	20.879.507	35,00	100
8	20.879.508	40,00	100
9	20.879.509	45,00	100
10	20.879.510	50,00	100
11	20.879.511	55,00	100
12	20.879.512	60,00	100

General Information

Pitch	5 mm
No. of poles	2 - 12

Technical Data

Clamping Range	*solid / flexible / AWG*		
with wire protector	0,34 - 2,5 mm² / 0,34 - 2,5 mm² / 22 - 14 AWG		
Rated Cross Section	1,5 mm²		
Wire Stripping Length	6 mm ± 0,5 mm		
Overvoltage Category	III	III	II
Pollution Severity Level	3	2	2
Rated Voltage	160 V	160 V	320 V
Rated Impulse Voltage	2,5 kV	2,5 kV	2,5 kV
Rated Insulation Voltage	130 V acc. to EN 60998-1		
Rated Current	17,5 A		
Soldering process	Reflow solder		
Torque	0,4 Nm		

Material

Moulding	PA, black, V-0
Comparative Tracking Index	CTI ≥ 600
Insulating Group	I
Temperature Range	-40°C up to 150°C; reflow solder temperature (Peak) max. 260°C (15-30 s)
Terminal body	Tin plated brass
Screw	M2,6; zinc plated steel, blue passivated
Wire protector	Tin plated tin bronze

Approvals

	Current	Voltage	Group	AWG	Nm
	15	300	B	26 - 14	0,4
	15	300	B	26 - 14	0,4

Options / Accessories

- Consecutive numbering
- Special marking according to drawing
- Self-adhesive marking strip BST-5,00 [1]
- Special packaging on request: Tape-on-Reel - Tray - Tube magazine

Part Numbers: Tape-on-Reel

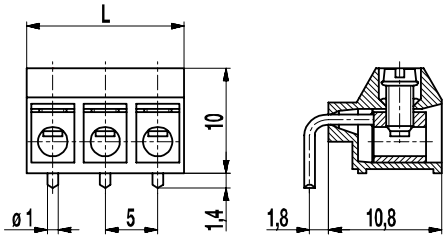
No. of poles	950-D-SMD-DS	Tape Width	Tape Height	Pcs
2	20.879.502.A00	32 mm	12,3 mm	500

[1] To be fitted after reflow soldering process

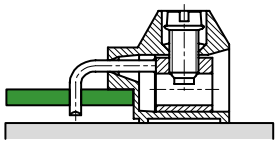
PCB connector

950-LH(-DS)

Screw connection, with angled solder pin, pottable



Example of application



By placing the circuit board below the point where the solder pins leaves the housing, a reduction of the effective height can be achieved. Longer terminal pins and another position of the bend upon request.

The 950-LH series PCB screw connector with a pitch of 5 mm features an angled solder pin and is particularly suited for potting printed circuits. For such potting applications, the solder pin is sealed at the housing opening against seeping casting resin. This PCB screw connector with a pitch of 5 mm is available in 2- to 12-pole design and can be mounted side-by-side without pole loss.

Wire protection in DS-design reliably prevents damage to stranded wires by the screw.

The wire entrance is parallel to the PCB whereas the casting resin surface is vertical to the wire entrance. Version 951-LH alternatively provides wire entrance vertical to the PCB.

Part Numbers

No. of poles	950-LH	950-LH-DS	Length	Pcs
2	10.871.452	20.871.452	10,00	250
3	10.871.453	20.871.453	15,00	250
4	10.871.454	20.871.454	20,00	200
5	10.871.455	20.871.455	25,00	100
6	10.871.456	20.871.456	30,00	100
7	10.871.457	20.871.457	35,00	100
8	10.871.458	20.871.458	40,00	100
9	10.871.459	20.871.459	45,00	100
10	10.871.460	20.871.460	50,00	100
11	10.871.461	20.871.461	55,00	100
12	10.871.462	20.871.462	60,00	100

General Information

Pitch	5 mm
No. of poles	2 - 12

Technical Data

Clamping Range	*solid / flexible / AWG*		
without wire protector	0,75 - 2,5 mm² / 0,75 - 2,5 mm² / 18 - 14 AWG		
with wire protector	0,34 - 2,5 mm² / 0,34 - 2,5 mm² / 22 - 14 AWG		
Rated Cross Section	1,5 mm²		
Wire Stripping Length	6 mm ± 0,5 mm		
Overvoltage Category	III	III	II
Pollution Severity Level	3	2	2
Rated Voltage	160 V	160 V	320 V
Rated Impulse Voltage	2,5 kV	2,5 kV	2,5 kV
Rated Insulation Voltage	130 V acc. to EN 60998-1		
Rated Current	17,5 A		
Hole in PCB	ø 1,3 mm		
Torque	0,4 Nm		

Material

Moulding	PA, grey, V-0
Comparative Tracking Index	CTI ≥ 600
Insulating Group	I
Temperature Range	-40°C up to 100°C
Terminal body	Tin plated brass
Screw	M2,6; zinc plated steel, blue passivated
Solder pin	ø 1 mm; tin plated copper
Wire protector	Tin plated tin bronze

Approvals

	Current	Voltage	Group	AWG	Nm
	15	300	B	26 - 14	0,4
	15	300	B	26 - 14	0,4
	Current	Voltage	mm²		
	17,5	250	1,5		

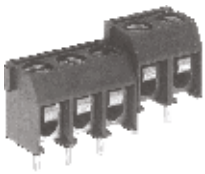
Options / Accessories

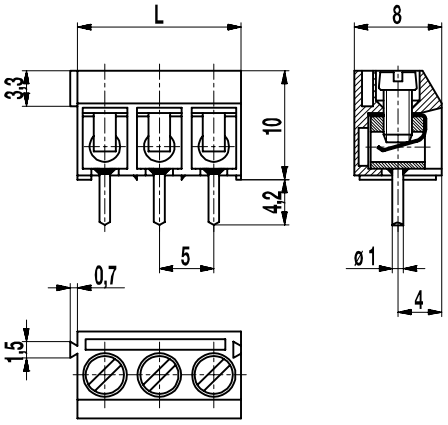
- Consecutive numbering
- Special marking according to drawing
- Self-adhesive marking strip BST-5,00
- Pitch of 10 mm for larger clearance and creepage distance
- Other P.C. pin length and bending positions on request

PCB connector

950-T(-DS)

Screw connection, interlocking





Part Numbers

No. of poles	950-T	950-T-DS	Length	Pcs
2	10.871.602	20.871.602	10,00	250
3	10.871.603	20.871.603	15,00	250

General Information

Pitch	5 mm
No. of poles	2 + 3

Technical Data

Clamping Range	*solid / flexible / AWG*		
without wire protector	0,75 - 4 mm² / 0,75 - 2,5 mm² / 18 - 12 AWG		
with wire protector	0,34 - 2,5 mm² / 0,34 - 2,5 mm² / 22 - 14 AWG		
Rated Cross Section	1,5 mm²		
Wire Stripping Length	6 mm ± 0,5 mm		
Overvoltage Category	III	III	II
Pollution Severity Level	3	2	2
Rated Voltage	160 V	160 V	320 V
Rated Impulse Voltage	2,5 kV	2,5 kV	2,5 kV
Rated Insulation Voltage	130 V acc. to EN 60998-1		
Rated Current	17,5 A		
Hole in PCB	ø 1,3 mm		
Torque	0,4 Nm		

Material

Moulding	PA, grey, V-0
Comparative Tracking Index	CTI ≥ 600
Insulating Group	I
Temperature Range	-40°C up to 100°C
Terminal body	Tin plated brass
Screw	M2,6; zinc plated steel, blue passivated
Solder pin	ø 1 mm; tin plated copper
Wire protector	Tin plated tin bronze

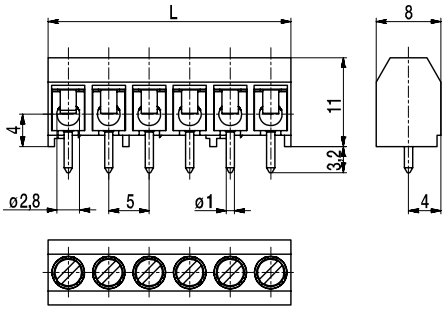
Approvals

	Current	Voltage	Group	AWG	Nm
	15	300	B	26 - 14	0,4
	15	300	B	26 - 14	0,4
	Current	Voltage	mm²		
	17,5	250	1,5		

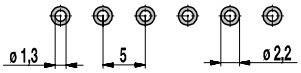
Options / Accessories

- Consecutive numbering
- Special marking according to drawing
- Self-adhesive marking strip BST-5,00
- Longer P.C. pins up to 75 mm

PCB connector for THR
950-THR(-DS)
Screw connection



PCB Layout



Solder paste thickness: 0,15 - 0,2 mm
Solder pad diameter: ø 2,2 mm

The products based on our established 950 series have been designed for the soldering process in Through-Hole-Reflow technology.
The soldering paste is applied to the plated through holes and the pins are placed in the circuit board and soldered by a reflow oven.
The terminal mouldings are made of heat-resistant material. The stand-offs on the base ensures there is enough room for the soldering paste and facilitates good heat circulation for optimum soldering and enables the soldering joint to be visually inspected.
The solder pin projects very slightly with a circuit board thickness of 1,6 mm and creates a solder point on both sides and thus guarantees a secure mounting. The position of the solder pins enables an equally minimal allocation area on the circuit board as with wave soldering.
This PCB terminal is for a conductor cross sections of 1,5 mm² in 5 mm pitch and available in 2 to 12 pole lengths, with or without wire protector as well as a version with enlarged clamping size (958-THR).

Part Numbers

No. of poles	950-THR	950-THR-DS	Length	Pcs
2	10.879.102	20.879.102	10,00	250
3	10.879.103	20.879.103	15,00	250
4	10.879.104	20.879.104	20,00	100
5	10.879.105	20.879.105	25,00	100
6	10.879.106	20.879.106	30,00	100
7	10.879.107	20.879.107	35,00	100
8	10.879.108	20.879.108	40,00	100
9	10.879.109	20.879.109	45,00	100
10	10.879.110	20.879.110	50,00	100
11	10.879.111	20.879.111	55,00	100
12	10.879.112	20.879.112	60,00	100

General Information

Pitch	5 mm
No. of poles	2 - 12

Technical Data

Clamping Range	*solid / flexible / AWG*		
without wire protector	0,75 - 4 mm² / 0,75 - 2,5 mm² / 18 - 12 AWG		
with wire protector	0,34 - 2,5 mm² / 0,34 - 2,5 mm² / 22 - 14 AWG		
Rated Cross Section	1,5 mm²		
Wire Stripping Length	6 mm ± 0,5 mm		
Overvoltage Category	III	III	II
Pollution Severity Level	3	2	2
Rated Voltage	160 V	160 V	320 V
Rated Impulse Voltage	2,5 kV	2,5 kV	2,5 kV
Rated Insulation Voltage	130 V acc. to EN 60998-1		
Rated Current	17,5 A		
Soldering process	Wave solder & reflow solder		
Hole in PCB	ø 1,3 mm		
PCB thickness	Wave solder max. 1,6 mm; reflow solder 1,6 - 3,2 mm		
Torque	0,4 Nm		

Material

Moulding	PA HT, black, V-0
Comparative Tracking Index	CTI ≥ 600
Insulating Group	I
Temperature Range	-40°C up to 150°C; reflow solder temperature (Peak) max. 260°C (15-30 s)
Terminal body	Tin plated brass
Screw	M2,6; zinc plated steel, blue passivated
Solder pin	ø 1 mm; tin plated brass
Wire protector	Tin plated tin bronze

Approvals

	Current	Voltage	Group	AWG	Nm
	15	300	B	26 - 14	0,4
	15	300	B	26 - 14	0,4

Options / Accessories

- Consecutive numbering
- Special marking according to drawing
- Self-adhesive marking strip BST-5,00 [1]
- Other P.C. pin lengths on request

Part Numbers: Tape-on-Reel

No. of poles	950-THR	950-THR-DS	Tape Width	Tape Height	Pcs
6		20.879.106.A00	56 mm	15,7 mm	300

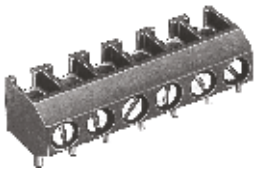
further number of poles on request

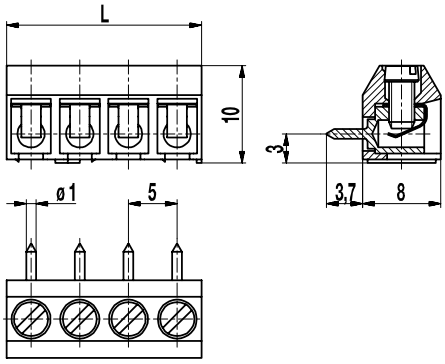
[1] To be fitted after reflow soldering process

PCB connector

951(-DS)

Screw connection, wire entrance vertical to PCB





Part Numbers

No. of poles	951	951-DS	Length	Pcs
2	10.871.012	20.871.012	10,00	250
3	10.871.083	20.871.083	15,00	250
4	10.871.084	20.871.084	20,00	200
5	10.871.085	20.871.085	25,00	100
6	10.871.086	20.871.086	30,00	100
7	10.871.022	20.871.022	35,00	100
8	10.871.018	20.871.018	40,00	100
9	10.871.019	20.871.019	45,00	100
10	10.871.020	20.871.020	50,00	100
11	10.871.021	20.871.021	55,00	100
12	10.871.082	20.871.082	60,00	100
13	10.871.023	20.871.023	65,00	100
14	10.871.024	20.871.024	70,00	100
15	10.871.025	20.871.025	75,00	100
16	10.871.026	20.871.026	80,00	100
17	10.871.027	20.871.027	85,00	100
18	10.871.028	20.871.028	90,00	100
19	10.871.029	20.871.029	95,00	100
20	10.871.030	20.871.030	100,00	100
21	10.871.031	20.871.031	105,00	100
22	10.871.032	20.871.032	110,00	100
23	10.871.039	20.871.039	115,00	100
24	10.871.040	20.871.040	120,00	100
25	10.871.041	20.871.041	125,00	100
26	10.871.042	20.871.042	130,00	100
27	10.871.037	20.871.037	135,00	100
28	10.871.088	20.871.088	140,00	100
29	10.871.089	20.871.089	145,00	100
30	10.871.090	20.871.090	150,00	100
31	10.871.091	20.871.091	155,00	100
32	10.871.092	20.871.092	160,00	100

General Information

Pitch	5 mm
No. of poles	2 - 32

Technical Data

Clamping Range	*solid / flexible / AWG*		
without wire protector	0,75 - 4 mm² / 0,75 - 2,5 mm² / 18 - 12 AWG		
with wire protector	0,34 - 2,5 mm² / 0,34 - 2,5 mm² / 22 - 14 AWG		
Rated Cross Section	1,5 mm²		
Wire Stripping Length	5 mm ± 0,5 mm		
Overvoltage Category	III	III	II
Pollution Severity Level	3	2	2
Rated Voltage	160 V (125 V)	160 V	320 V (250 V)
Rated Impulse Voltage	2,5 kV	2,5 kV	2,5 kV
Rated Insulation Voltage	130 V acc. to EN 60998-1		
Rated Current	17,5 A		
Hole in PCB	ø 1,3 mm		
Torque	0,4 Nm		
Other specifications	Voltage data in brackets are valid for 9-32 poles types. 2-8 poles types are "no-flame" acc. to glow-wire test.		

Material

Moulding	PA, grey, V-0
Comparative Tracking Index	2-8 poles: CTI ≥ 600; 9-32 poles: CTI 400
Insulating Group	2-8 poles: I; 9-32 poles: II
Temperature Range	-40°C up to 100°C
Terminal body	Tin plated brass
Screw	M2,6; zinc plated steel, blue passivated
Solder pin	ø 1 mm; tin plated brass
Wire protector	Tin plated tin bronze

Approvals

	Current	Voltage	Group	AWG	Nm
	15	300	B	26 - 14	0,4
	15	300	B	26 - 14	0,4
	Current	Voltage	mm²		
	17,5	250	1,5		

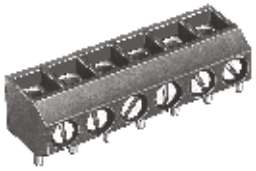
Options / Accessories

- Consecutive numbering
- Special marking according to drawing
- Self-adhesive marking strip BST-5,00

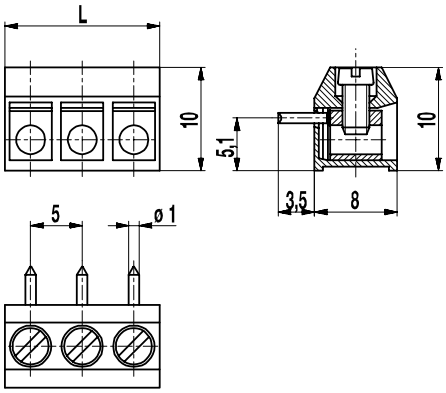
PCB connector

951-HG(-DS)

Screw connection, wire entrance vertical to PCB, extended insertion length



RoHS COMPLIANT



The PCB connector 951-HG has a solder pin welded on top of the socket bore, which expands the insertion length to series 950 socket depth.
Extra-long solder pins are available upon request.

The wire entrance is vertical to the PCB.
Wire protection in DS-design reliably prevents damage to stranded wires by the screw.

Part Numbers

No. of poles	951-HG	951-HG-DS	Length	Pcs
2	10.871.202	20.871.202	10,00	250
3	10.871.203	20.871.203	15,00	250
4	10.871.204	20.871.204	20,00	200
5	10.871.205	20.871.205	25,00	100
6	10.871.206	20.871.206	30,00	100
7	10.871.207	20.871.207	35,00	100
8	10.871.208	20.871.208	40,00	100
9	10.871.209	20.871.209	45,00	100
10	10.871.210	20.871.210	50,00	100
11	10.871.211	20.871.211	55,00	100
12	10.871.212	20.871.212	60,00	100
13	10.871.213	20.871.213	65,00	100
14	10.871.214	20.871.214	70,00	100
15	10.871.215	20.871.215	75,00	100
16	10.871.216	20.871.216	80,00	100
17	10.871.217	20.871.217	85,00	100
18	10.871.218	20.871.218	90,00	100
19	10.871.219	20.871.219	95,00	100
20	10.871.220	20.871.220	100,00	100
21	10.871.221	20.871.221	105,00	100
22	10.871.222	20.871.222	110,00	100
23	10.871.223	20.871.223	115,00	100
24	10.871.224	20.871.224	120,00	100
25	10.871.225	20.871.225	125,00	100
26	10.871.226	20.871.226	130,00	100
27	10.871.227	20.871.227	135,00	100
28	10.871.228	20.871.228	140,00	100
29	10.871.229	20.871.229	145,00	100

further number of poles on request

General Information

Pitch	5 mm
No. of poles	2 - 32

Technical Data

Clamping Range	*solid / flexible / AWG*		
without wire protector	0,75 - 4 mm² / 0,75 - 2,5 mm² / 18 - 12 AWG		
with wire protector	0,34 - 2,5 mm² / 0,34 - 2,5 mm² / 22 - 14 AWG		
Rated Cross Section	1,5 mm²		
Wire Stripping Length	6 mm ± 0,5 mm		
Overvoltage Category	III	III	II
Pollution Severity Level	3	2	2
Rated Voltage	160 V	160 V	320 V
Rated Impulse Voltage	2,5 kV	2,5 kV	2,5 kV
Rated Insulation Voltage	130 V acc. to EN 60998-1		
Rated Current	17,5 A		
Hole in PCB	ø 1,3 mm		
Torque	0,4 Nm		
Other specifications	2-8 poles types are "no-flame" acc. to glow-wire test.		

Material

Moulding	PA, grey, V-0
Comparative Tracking Index	2-8 poles: CTI ≥ 600; 9-32 poles: CTI 400
Insulating Group	2-8 poles: I; 9-32 poles: II
Temperature Range	-40°C up to 100°C
Terminal body	Tin plated brass
Screw	M2,6; zinc plated steel, blue passivated
Solder pin	ø 1 mm; tin plated copper
Wire protector	Tin plated tin bronze

Approvals

	Current	Voltage	Group	AWG	Nm
	15	300	B	26 - 14	0,4
	15	300	B	26 - 14	0,4
	Current	Voltage	mm²		
	17,5	250	1,5		

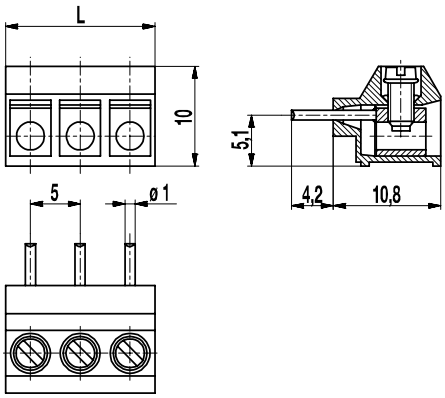
Options / Accessories

- Consecutive numbering
- Special marking according to drawing
- Self-adhesive marking strip BST-5,00
- Longer P.C. pins up to 75 mm

PCB connector

951-LH(-DS)

Screw connection, wire entrance vertical to PCB, pottable



The 951-LH series PCB screw connector with a pitch of 5 mm is particularly suited for potting printed circuits. For such potting applications, the solder pin is sealed at the housing opening against seeping casting resin. This PCB screw connector with a pitch of 5 mm is available in 2- to 12-pole design and can be mounted side-by-side without pole loss.

Wire protection in DS-design reliably prevents damage to stranded wires by the screw.

The wire entrance is vertical to the PCB - the casting resin surface is also vertical to the wire entrance. Version 950-LH alternatively provides wire entrance parallel to the PCB.

Part Numbers

No. of poles	951-LH	951-LH-DS	Length	Pcs
2	15.871.452	25.871.452	10,00	250
3	15.871.453	25.871.453	15,00	250
4	15.871.454	25.871.454	20,00	200
5	15.871.455	25.871.455	25,00	100
6	15.871.456	25.871.456	30,00	100
7	15.871.457	25.871.457	35,00	100
8	15.871.458	25.871.458	40,00	100
9	15.871.459	25.871.459	45,00	100
10	15.871.460	25.871.460	50,00	100
11	15.871.461	25.871.461	55,00	100
12	15.871.462	25.871.462	60,00	100

General Information

Pitch	5 mm
No. of poles	2 - 12

Technical Data

Clamping Range	*solid / flexible / AWG*		
without wire protector	0,75 - 2,5 mm² / 0,75 - 2,5 mm² / 18 - 14 AWG		
with wire protector	0,34 - 2,5 mm² / 0,34 - 2,5 mm² / 22 - 14 AWG		
Rated Cross Section	1,5 mm²		
Wire Stripping Length	6 mm ± 0,5 mm		
Overvoltage Category	III	III	II
Pollution Severity Level	3	2	2
Rated Voltage	160 V	160 V	320 V
Rated Impulse Voltage	2,5 kV	2,5 kV	2,5 kV
Rated Insulation Voltage	130 V acc. to EN 60998-1		
Rated Current	17,5 A		
Hole in PCB	ø 1,3 mm		
Torque	0,4 Nm		

Material

Moulding	PA, grey, V-0
Comparative Tracking Index	CTI ≥ 600
Insulating Group	I
Temperature Range	-40°C up to 100°C
Terminal body	Tin plated brass
Screw	M2,6; zinc plated steel, blue passivated
Solder pin	ø 1 mm; tin plated brass
Wire protector	Tin plated tin bronze

Approvals

	Current	Voltage	Group	AWG	Nm
	15	300	B	26 - 14	0,4
	15	300	B	26 - 14	0,4
	Current	Voltage	mm²		
	17,5	250	1,5		

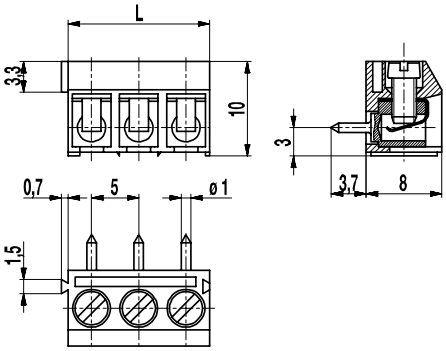
Options / Accessories

- Consecutive numbering
- Special marking according to drawing
- Self-adhesive marking strip BST-5,00
- Pitch of 10 mm for larger clearance and creepage distances
- Other P.C. pin lengths on request

PCB connector

951-T(-DS)

Screw connection, wire entrance vertical to PCB, interlocking



Part Numbers

No. of poles	951-T	951-T-DS	Length	Pcs
2	10.871.612	20.871.612	10,00	250
3	10.871.613	20.871.613	15,00	250

General Information

Pitch	5 mm
No. of poles	2 + 3

Technical Data

Clamping Range	*solid / flexible / AWG*		
without wire protector	0,75 - 4 mm² / 0,75 - 2,5 mm² / 18 - 12 AWG		
with wire protector	0,34 - 2,5 mm² / 0,34 - 2,5 mm² / 22 - 14 AWG		
Rated Cross Section	1,5 mm²		
Wire Stripping Length	6 mm ± 0,5 mm		
Overvoltage Category	III	III	II
Pollution Severity Level	3	2	2
Rated Voltage	160 V	160 V	320 V
Rated Impulse Voltage	2,5 kV	2,5 kV	2,5 kV
Rated Insulation Voltage	130 V acc. to EN 60998-1		
Rated Current	17,5 A		
Hole in PCB	ø 1,3 mm		
Torque	0,4 Nm		

Material

Moulding	PA, grey, V-0
Comparative Tracking Index	CTI ≥ 600
Insulating Group	I
Temperature Range	-40°C up to 100°C
Terminal body	Tin plated brass
Screw	M2,6; zinc plated steel, blue passivated
Solder pin	ø 1 mm; tin plated brass
Wire protector	Tin plated tin bronze

Approvals

	Current	Voltage	Group	AWG	Nm
	15	300	B	26 - 14	0,4
	15	300	B	26 - 14	0,4
	Current	Voltage	mm²		
	17,5	250	1,5		

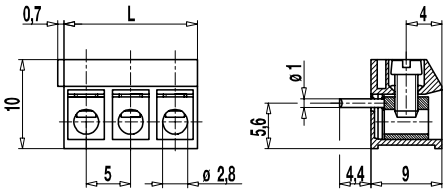
Options / Accessories

- Consecutive numbering
- Special marking according to drawing
- Self-adhesive marking strip BST-5,00

PCB connector

951-THG(-DS)

Screw connection, wire entrance vertical to PCB, extended insertion length, interlocking



On version 951-THG(-DS) the copper solder pin is welded on top of the socket bore which expands the insertion length to series 950 socket depth and allows to use extra-long solder pins.

Wire protection in DS-design reliably prevents damage to stranded wires by the screw.

Lateral latching elements allow to link this type of screw connector with terminal strips of any length.

Part Numbers

No. of poles	951-THG	951-THG-DS	Length	Pcs
2	10.871.622	20.871.622	10,00	250
3	10.871.623	20.871.623	15,00	250

General Information

Pitch	5 mm
No. of poles	2 + 3

Technical Data

Clamping Range	*solid / flexible / AWG*
without wire protector	0,75 - 4 mm² / 0,75 - 2,5 mm² / 18 - 12 AWG
with wire protector	0,34 - 2,5 mm² / 0,34 - 2,5 mm² / 22 - 14 AWG
Rated Cross Section	1,5 mm²
Wire Stripping Length	6 mm
Overvoltage Category	III
Pollution Severity Level	3
Rated Voltage	160 V
Rated Impulse Voltage	2,5 kV
Rated Insulation Voltage	130 V acc. to EN 60998-1
Rated Current	17,5 A
Hole in PCB	ø 1,3 mm
Torque	0,4 Nm

Material

Moulding	PA, grey, V-0
Comparative Tracking Index	CTI ≥ 600
Insulating Group	I
Temperature Range	-40°C up to 100°C
Terminal body	Tin plated brass
Screw	M2,6; zinc plated steel, blue passivated
Solder pin	ø 1 mm; tin plated copper
Wire protector	Tin plated tin bronze

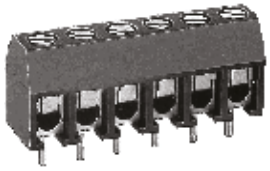
Approvals

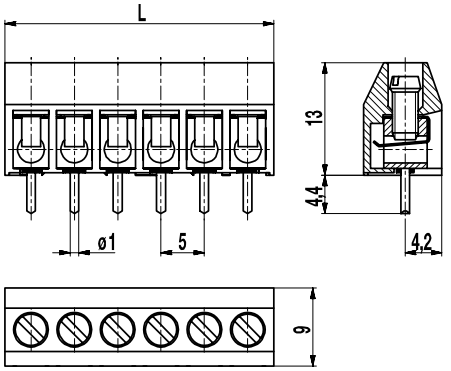
	Current	Voltage	Group	AWG	Nm
	15	300	B	26 - 14	0,4
	15	300	B	26 - 14	0,4
	Current	Voltage	mm²		
	17,5	250	1,5		

Options / Accessories

- Consecutive numbering
- Special marking according to drawing
- Self-adhesive marking strip BST-5,00
- Longer P.C. pins up to 75 mm
- Up to 8 poles

PCB connector
970(-DS)
Screw connection





Part Numbers

No. of poles	970	970-DS	Length	Pcs
2	10.872.002	20.872.002	11,00	250
3	10.872.003	20.872.003	16,00	250
4	10.872.004	20.872.004	21,00	200
5	10.872.005	20.872.005	26,00	100
6	10.872.006	20.872.006	31,00	100
7	10.872.007	20.872.007	36,00	100
8	10.872.008	20.872.008	41,00	100
9	10.872.009	20.872.009	46,00	100
10	10.872.010	20.872.010	51,00	100
11	10.872.011	20.872.011	56,00	100
12	10.872.012	20.872.012	61,00	100
13	10.872.013	20.872.013	66,00	100
14	10.872.014	20.872.014	71,00	100
15	10.872.015	20.872.015	76,00	100
16	10.872.016	20.872.016	81,00	100
17	10.872.017	20.872.017	86,00	100
18	10.872.018	20.872.018	91,00	100
19	10.872.019	20.872.019	96,00	100
20	10.872.020	20.872.020	101,00	100
21	10.872.021	20.872.021	106,00	100
22	10.872.022	20.872.022	111,00	100
23	10.872.023	20.872.023	116,00	100
24	10.872.024	20.872.024	121,00	100
25	10.872.025	20.872.025	126,00	100
26	10.872.026	20.872.026	131,00	100
27	10.872.027	20.872.027	136,00	100
28	10.872.028	20.872.028	141,00	100
29	10.872.029	20.872.029	146,00	100
30	10.872.030	20.872.030	151,00	100
31	10.872.031	20.872.031	156,00	100
32	10.872.032	20.872.032	161,00	100

General Information

Pitch	5 mm
No. of poles	2 - 32

Technical Data

Clamping Range	*solid / flexible / AWG*		
without wire protector	1 - 6 mm² / 1 - 2,5 mm² / 16 - 12 AWG		
with wire protector	0,75 - 4 mm² / 0,75 - 2,5 mm² / 18 - 12 AWG		
Rated Cross Section	2,5 mm²		
Wire Stripping Length	6,5 mm ± 0,5 mm		
Overvoltage Category	III	III	II
Pollution Severity Level	3	2	2
Rated Voltage	250 V (200 V)	320 V	630 V (400 V)
Rated Impulse Voltage	4 kV	4 kV	4 kV
Rated Insulation Voltage	250 V acc. to EN 60998-1		
Rated Current	24 A		
Hole in PCB	ø 1,3 mm		
Torque	0,5 Nm		
Other specifications	Voltage data in brackets are valid for 9-32 poles types. 2-8 poles types are "no-flame" acc. to glow-wire test.		

Material

Moulding	PA, grey, V-0
Comparative Tracking Index	2-8 poles: CTI ≥ 600; 9-32 poles: CTI 400
Insulating Group	2-8 poles: I; 9-32 poles: II
Temperature Range	-40°C up to 100°C
Terminal body	Tin plated brass
Screw	M3; zinc plated steel, blue passivated
Solder pin	ø 1 mm; tin plated copper
Wire protector	Tin plated tin bronze

Approvals

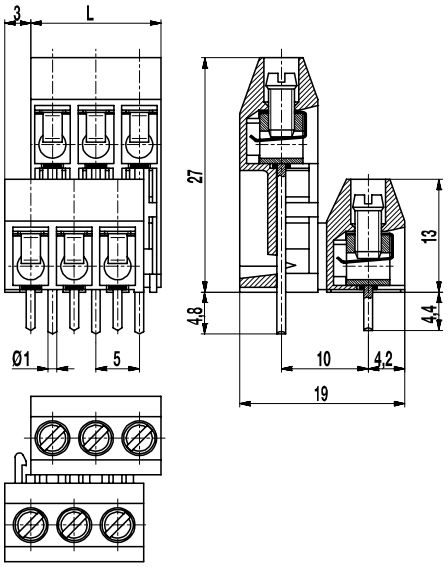
	Current	Voltage	Group	AWG	Nm
	20	300	B	22-12 [1]	0,51
	10	300	D	22-12 [1]	0,51
	20	300	B	26 - 12	0,51
	10	300	D, E	26 - 12	0,51
	Current	Voltage	mm²		
	24	400	2,5		

[1] Min No. 26 AWG for factory-wiring only

Options / Accessories

- Consecutive numbering
- Special marking according to drawing
- Self-adhesive marking strip BST-5,00
- Longer P.C. pins up to 95 mm
- With test holes, see 970-MP(-DS)
- Version with extended wire entrance
- Double wire protector as bridge

PCB connector
970-EN(-DS)
Screw connection, two-tier version



The PCB screw connector 970-EN is a two-tier version with a pitch of 5 mm and available with 4 to 24 poles.
This connector is a combination of the 979-HEN with the 970 version. The rear latching hook on the 970 series locks both terminals to one unit. This configuration allows application-specific locking combinations.

Wire protection in DS-design reliably prevents damage to stranded wires by the screw.

Part Numbers

No. of poles	970-EN	970-EN-DS	Length	Pcs
4	10.872.962	20.872.962	10,00	100
6	10.872.963	20.872.963	15,00	50
8	10.872.964	20.872.964	20,00	50
10	10.872.965	20.872.965	25,00	50
12	10.872.966	20.872.966	30,00	50
14	10.872.967	20.872.967	35,00	25
16	10.872.968	20.872.968	40,00	25
18	10.872.969	20.872.969	45,00	25
20	10.872.970	20.872.970	50,00	25
22	10.872.971	20.872.971	55,00	25
24	10.872.972	20.872.972	60,00	25

General Information

Pitch	5 mm
No. of poles	4 - 24

Technical Data

Clamping Range	*solid / flexible / AWG*		
without wire protector	1 - 6 mm² / 1 - 2,5 mm² / 16 - 12 AWG		
with wire protector	0,75 - 4 mm² / 0,75 - 2,5 mm² / 18 - 12 AWG		
Rated Cross Section	2,5 mm²		
Wire Stripping Length	6,5 mm		
Overvoltage Category	III	III	II
Pollution Severity Level	3	2	2
Rated Voltage	250 V	320 V	630 V
Rated Impulse Voltage	4 kV	4 kV	4 kV
Rated Insulation Voltage	250 V acc. to EN 60998-1		
Rated Current	24 A		
Hole in PCB	ø 1,3 mm		
Torque	0,5 Nm		

Material

Moulding	PA, grey, V-0
Comparative Tracking Index	CTI ≥ 600
Insulating Group	I
Temperature Range	-40°C up to 100°C
Terminal body	Tin plated brass
Screw	M3; zinc plated steel, blue passivated
Solder pin	ø 1 mm; tin plated copper
Wire protector	Tin plated tin bronze

Approvals

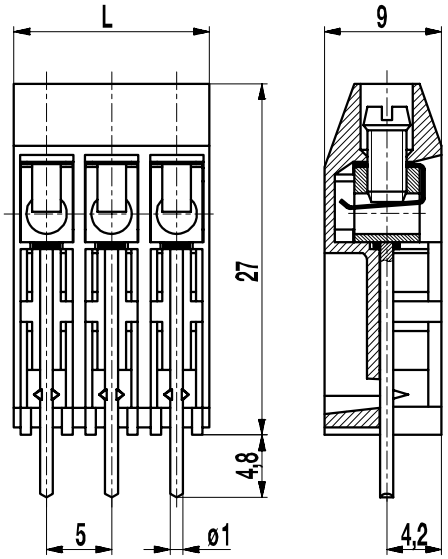
	Current	Voltage	Group	AWG	Nm
	20	300	B	22-12 [1]	0,51
	10	300	D	22-12 [1]	0,51
	20	300	B	26 - 12	0,51
	10	300	D, E	26 - 12	0,51
	Current	Voltage	mm²		
	24	250	2,5		

[1] Min No. 26 AWG for factory-wiring only

Options / Accessories

- Consecutive numbering
- Special marking according to drawing
- Self-adhesive marking strip BST-5,00
- Pitch of 10 mm for larger clearance and creepage distances
- Other P.C. pin lengths on request
- Double wire protector as bridge
- Cover for the solder pins for additional misplacing and contact protection
- Two-tier version with front PCB connector offset to the right

PCB connector
970-HEN(-DS)
Screw connection, tall version



The PCB connector 970-HEN is a tall version with a pitch of 5 mm and available with 2 to 12 poles.

This tall version is particularly designed for encapsulating PCBs whose mounting location shall provide connection outside the housing.

Wire protection in DS-design reliably prevents damage to stranded wires by the screw.

Connecting the two PCB connectors 970 and 970-EN yields the two-tier version 970-EN.

Part Numbers

No. of poles	970-HEN	970-HEN-DS	Length	Pcs
2	17.872.962	27.872.962	10,00	250
3	17.872.963	27.872.963	15,00	200
4	17.872.964	27.872.964	20,00	100
5	17.872.965	27.872.965	25,00	100
6	17.872.966	27.872.966	30,00	50
7	17.872.967	27.872.967	35,00	50
8	17.872.968	27.872.968	40,00	50
9	17.872.969	27.872.969	45,00	50
10	17.872.970	27.872.970	50,00	50
11	17.872.971	27.872.971	55,00	50
12	17.872.972	27.872.972	60,00	50

General Information

Pitch	5 mm
No. of poles	2 - 12

Technical Data

Clamping Range	*solid / flexible / AWG*		
without wire protector	1 - 6 mm² / 1 - 2,5 mm² / 16 - 12 AWG		
with wire protector	0,75 - 4 mm² / 0,75 - 2,5 mm² / 18 - 12 AWG		
Rated Cross Section	2,5 mm²		
Wire Stripping Length	6,5 mm ± 0,5 mm		
Overvoltage Category	III	III	II
Pollution Severity Level	3	2	2
Rated Voltage	250 V	320 V	630 V
Rated Impulse Voltage	4 kV	4 kV	4 kV
Rated Insulation Voltage	250 V acc. to EN 60998-1		
Rated Current	24 A		
Hole in PCB	ø 1,3 mm		
Torque	0,5 Nm		

Material

Moulding	PA, grey, V-0
Comparative Tracking Index	CTI ≥ 600
Insulating Group	I
Temperature Range	-40°C up to 100°C
Terminal body	Tin plated brass
Screw	M3; zinc plated steel, blue passivated
Solder pin	ø 1 mm; tin plated copper
Wire protector	Tin plated tin bronze

Approvals

	Current	Voltage	Group	AWG	Nm
	20	300	B	22-12 [1]	0,51
	10	300	D	22-12 [1]	0,51
	20	300	B	26 - 12	0,51
	10	300	D, E	26 - 12	0,51
	Current	Voltage	mm²		
	24	250	2,5		

[1] Min No. 26 AWG for factory-wiring only

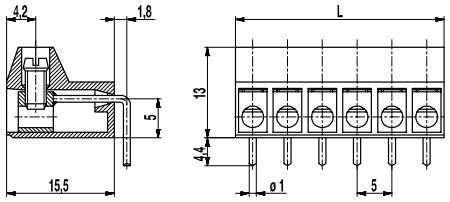
Options / Accessories

- Consecutive numbering
- Special marking according to drawing
- Self-adhesive marking strip BST-5,00
- Other P.C. pin lengths on request
- Double wire protector as bridge
- Cover for the solder pins for additional misplacing and contact protection

PCB connector

970-LH(-DS)

Screw connection, right angle solder pin, pottable



The 970-LH series PCB screw connector with a pitch of 5 mm features an angled solder pin is particularly suited for potting printed circuits. For such potting applications, the solder pin is sealed at the housing opening against seeping casting resin. This PCB screw connector is available in 2- to 12-pole design and can be mounted side-by-side without pole loss.

Wire protection in DS-design reliably prevents damage to stranded wires by the screw.

The wire entrance is parallel to the PCB whereas the casting resin surface is vertical to the wire entrance. Version 971-LH alternatively provides wire entrance vertical to the PCB.

Part Numbers

No. of poles	970-LH	970-LH-DS	Length	Pcs
2	10.873.402	20.873.402	10,00	100
3	10.873.403	20.873.403	15,00	100
4	10.873.404	20.873.404	20,00	100
5	10.873.405	20.873.405	25,00	500
6	10.873.406	20.873.406	30,00	100
7	10.873.407	20.873.407	35,00	50
8	10.873.408	20.873.408	40,00	50
9	10.873.409	20.873.409	45,00	50
10	10.873.410	20.873.410	50,00	50
11	10.873.411	20.873.411	55,00	50
12	10.873.412	20.873.412	60,00	50

General Information

Pitch	5 mm
No. of poles	2 - 12

Technical Data

Clamping Range	*solid / flexible / AWG*		
without wire protector	1 - 6 mm² / 1 - 2,5 mm² / 16 - 12 AWG		
with wire protector	0,75 - 4 mm² / 0,75 - 2,5 mm² / 18 - 12 AWG		
Rated Cross Section	2,5 mm²		
Wire Stripping Length	8 mm ± 0,5 mm		
Overvoltage Category	III	III	II
Pollution Severity Level	3	2	2
Rated Voltage	250 V	320 V	630 V
Rated Impulse Voltage	4 kV	4 kV	4 kV
Rated Insulation Voltage	250 V acc. to EN 60998-1		
Rated Current	24 A		
Hole in PCB	ø 1,3 mm		
Torque	0,5 Nm		

Material

Moulding	PA, grey, V-0
Comparative Tracking Index	CTI ≥ 600
Insulating Group	I
Temperature Range	-40°C up to 100°C
Terminal body	Tin plated brass
Screw	M3; zinc plated steel, blue passivated
Solder pin	ø 1 mm; tin plated copper
Wire protector	Tin plated tin bronze

Approvals

	Current	Voltage	Group	AWG	Nm
	20	300	B	22-12 [1]	0,51
	10	300	D	22-12 [1]	0,51
	20	300	B	26 - 12	0,51
	10	300	D, E	26 - 12	0,51
	Current	Voltage	mm²		
	24	400	2,5		

[1] Min No. 26 AWG for factory-wiring only

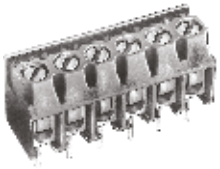
Options / Accessories

- Consecutive numbering
- Special marking according to drawing
- Self-adhesive marking strip BST-5,00
- Other P.C. pin lengths and bending positions on request
- Version with extended wire entrance
- Version with larger clamping range
- Double wire protector as bridge

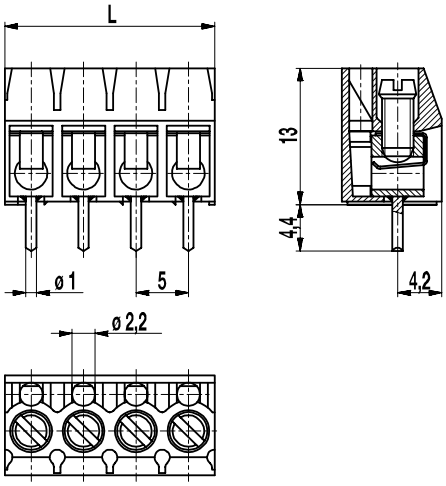
PCB connector

970-MP(-DS)

Screw connection, with test holes



RoHS COMPLIANT



Part Numbers

No. of poles	970-MP	970-MP-DS	Length	Pcs
2	10.872.202	20.872.202	10,00	250
3	10.872.203	20.872.203	15,00	250
4	10.872.204	20.872.204	20,00	200
5	10.872.205	20.872.205	25,00	100
6	10.872.206	20.872.206	30,00	100
7	10.872.207	20.872.207	35,00	100
8	10.872.208	20.872.208	40,00	100
9	10.872.209	20.872.209	45,00	100
10	10.872.210	20.872.210	50,00	100
11	10.872.211	20.872.211	55,00	100
12	10.872.212	20.872.212	60,00	100
13	10.872.213	20.872.213	65,00	100
14	10.872.214	20.872.214	70,00	100
15	10.872.215	20.872.215	75,00	100
16	10.872.216	20.872.216	80,00	100
17	10.872.217	20.872.217	85,00	100
18	10.872.218	20.872.218	90,00	100
19	10.872.219	20.872.219	95,00	100
20	10.872.220	20.872.220	100,00	100
21	10.872.221	20.872.221	105,00	100
22	10.872.222	20.872.222	110,00	100
23	10.872.223	20.872.223	115,00	100
24	10.872.224	20.872.224	120,00	100

General Information

Pitch	5 mm
No. of poles	2 - 24

Technical Data

Clamping Range	*solid / flexible / AWG*
without wire protector	1 - 6 mm² / 1 - 2,5 mm² / 16 - 12 AWG
with wire protector	0,75 - 4 mm² / 0,75 - 2,5 mm² / 18 - 12 AWG
Rated Cross Section	2,5 mm²
Wire Stripping Length	7 mm
Overvoltage Category	III
Pollution Severity Level	3
Rated Voltage	250 V (200 V)
Rated Impulse Voltage	4 kV
Rated Insulation Voltage	250 V acc. to EN 60998-1
Rated Current	24 A
Hole in PCB	ø 1,3 mm
Torque	0,5 Nm

Material

Moulding	PA, grey, V-0
Comparative Tracking Index	2-8 poles: CTI ≥ 600; 9-24 poles: CTI 250
Insulating Group	2-8 poles: I; 9-24 poles: IIIa
Temperature Range	-40°C up to 100°C
Terminal body	Tin plated brass
Screw	M3; zinc plated steel, blue passivated
Solder pin	ø 1 mm; tin plated copper
Wire protector	Tin plated tin bronze

Approvals

	Current	Voltage	Group	AWG	Nm
	20	300	B	22-12 [1]	0,51
	10	300	D	22-12 [1]	0,51
	20	300	B	26 - 12	0,51
	10	300	D, E	26 - 12	0,51
	Current	Voltage	mm²		
	24	400	2,5		

[1] Min No. 26 AWG for factory-wiring only

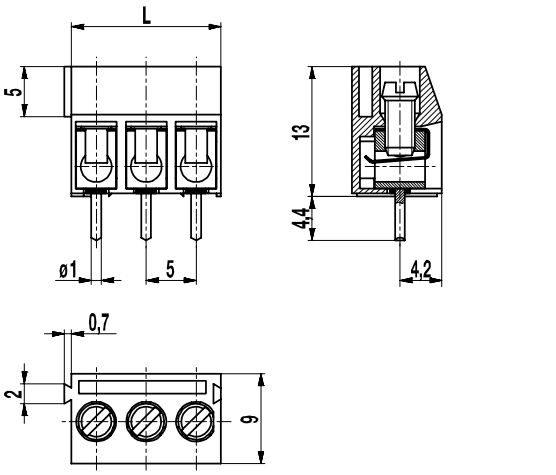
Options / Accessories

- Consecutive numbering
- Special marking according to drawing
- Self-adhesive marking strip BST-5,00
- Pitch of 10 mm for larger clearance and creepage distances
- Longer P.C. pins up to 95 mm
- Version with larger clamping range
- Version with two P.C. pins per pole
- Version with extended wire entrance
- Double wire protector as bridge

PCB connector

970-T(-DS)

Screw connection, interlocking



Part Numbers

No. of poles	970-T	970-T-DS	Length	Pcs
2	10.872.602	20.872.602	10,00	250
3	10.872.603	20.872.603	15,00	250

General Information

Pitch	5 mm
No. of poles	2 + 3

Technical Data

Clamping Range	*solid / flexible / AWG*		
without wire protector	1 - 6 mm² / 1 - 2,5 mm² / 16 - 12 AWG		
with wire protector	0,75 - 4 mm² / 0,75 - 2,5 mm² / 18 - 12 AWG		
Rated Cross Section	2,5 mm²		
Wire Stripping Length	6,5 mm ± 0,5 mm		
Overvoltage Category	III	III	II
Pollution Severity Level	3	2	2
Rated Voltage	250 V	320 V	630 V
Rated Impulse Voltage	4 kV	4 kV	4 kV
Rated Insulation Voltage	250 V acc. to EN 60998-1		
Rated Current	24 A		
Hole in PCB	ø 1,3 mm		
Torque	0,5 Nm		

Material

Moulding	PA, grey, V-0
Comparative Tracking Index	CTI ≥ 600
Insulating Group	I
Temperature Range	-40°C up to 100°C
Terminal body	Tin plated brass
Screw	M3; zinc plated steel, blue passivated
Solder pin	ø 1 mm; tin plated copper
Wire protector	Tin plated tin bronze

Approvals

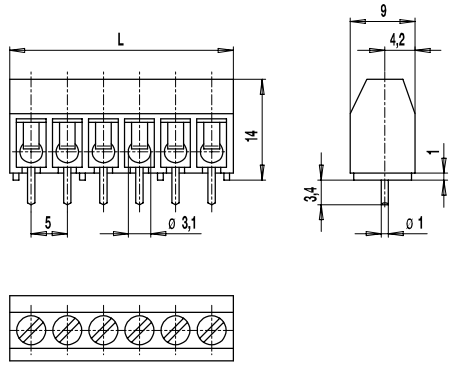
	Current	Voltage	Group	AWG	Nm
	20	300	B	22-12 [1]	0,51
	10	300	D	22-12 [1]	0,51
	20	300	B	26 - 12	0,51
	10	300	D, E	26 - 12	0,51
	Current	Voltage	mm²		
	24	400	2,5		

[1] Min No. 26 AWG for factory-wiring only

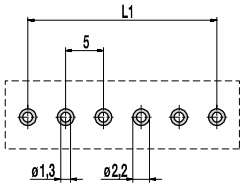
Options / Accessories

- Consecutive numbering
- Special marking according to drawing
- Self-adhesive marking strip BST-5,00
- Longer P.C. pins up to 95 mm
- Version with extended wire entrance
- With test hole, see 970-TMP
- Double wire protector as bridge

PCB connector for THR
970-THR(-DS)
Screw connection



PCB Layout



L1 = (No. of poles - 1) x pitch
Solder paste thickness: 0,15 - 0,2 mm
Solder pad diameter: ø 2,2 mm

The products based on our established 970 series have been designed for the soldering process in Through-Hole-Reflow technology.
The soldering paste is applied to the plated through holes and the pins are placed in the circuit board and soldered by a reflow oven.
The terminal mouldings are made of heat-resistant material. The stand-offs on the base ensures there is enough room for the soldering paste and facilitates good heat circulation for optimum soldering and enables the soldering joint to be visually inspected.
The solder pin projects very slightly with a circuit board thickness of 1,6 mm and creates a solder point on both sides and thus guarantees a secure mounting. The position of the solder pins enables an equally minimal allocation area on the circuit board as with wave soldering.
This PCB connector with a pitch of 5 mm is for a conductor cross sections of 2,5 mm² and available in 2 to 12 pole lengths, with or without wire protector.
This connector is also available with enlarged clamping size.

Part Numbers

No. of poles	970-THR	970-THR-DS	Length	Pcs
2	10.879.202	20.879.202	11,00	250
3	10.879.203	20.879.203	16,00	250
4	10.879.204	20.879.204	21,00	200
5	10.879.205	20.879.205	26,00	100
6	10.879.206	20.879.206	31,00	100
8	10.879.208	20.879.208	41,00	100
10	10.879.210	20.879.210	51,00	100
12	10.879.212	20.879.212	61,00	100

further number of poles on request

General Information

Pitch	5 mm
No. of poles	2 - 12

Technical Data

Clamping Range	*solid / flexible / AWG*		
without wire protector	1 - 6 mm² / 1 - 2,5 mm² / 16 - 12 AWG		
with wire protector	0,75 - 4 mm² / 0,75 - 2,5 mm² / 18 - 12 AWG		
Rated Cross Section	2,5 mm²		
Wire Stripping Length	6,5 mm ± 0,5 mm		
Overvoltage Category	III	III	II
Pollution Severity Level	3	2	2
Rated Voltage	250 V	320 V	630 V
Rated Impulse Voltage	4 kV	4 kV	4 kV
Rated Insulation Voltage	250 V acc. to EN 60998-1		
Rated Current	24 A		
Soldering process	Wave solder & reflow solder		
Hole in PCB	ø 1,3 mm		
PCB thickness	Wave solder max. 1,6 mm; reflow solder 1,6 - 3,2 mm		
Torque	0,5 Nm		

Material

Moulding	PA HT, black, V-0
Comparative Tracking Index	CTI ≥ 600
Insulating Group	I
Temperature Range	-40°C up to 150°C; reflow solder temperature (Peak) max. 260°C (15-30 s)
Terminal body	Tin plated brass
Screw	M3; zinc plated steel, blue passivated
Solder pin	ø 1 mm; tin plated copper
Wire protector	Tin plated tin bronze

Approvals

	Current	Voltage	Group	AWG	Nm
	20	300	B	22-12 [1]	0,51
	10	300	D	22-12 [1]	0,51
	20	300	B	26 - 12	0,51
	10	300	D, E	26 - 12	0,51

Options / Accessories

- Consecutive numbering / Special marking according to drawing
- Self-adhesive marking strip BST-5,00 [2]
- Other P.C. pin lengths on request

Part Numbers: Tape-on-Reel

No. of poles	970-THR	970-THR-DS	Tape Width	Tape Height	Pcs
2		20.879.202.A00	32 mm	18,8 mm	225
4		20.879.204.A00	32 mm	18,8 mm	225

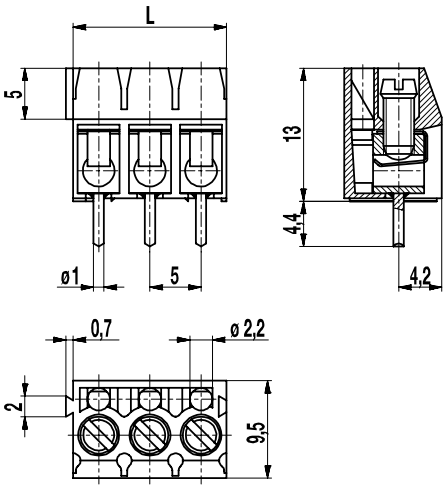
further number of poles on request

[1] No. 26 AWG min for factory-wiring only
[2] To be fitted after reflow soldering process

PCB connector

970-TMP(-DS)

Screw connection, with test holes, interlocking



Part Numbers

No. of poles	970-TMP	970-TMP-DS	Length	Pcs
2	10.872.232	20.872.232	10,00	250
3	10.872.233	20.872.233	15,00	250

General Information

Pitch	5 mm
No. of poles	2 + 3

Technical Data

Clamping Range	*solid / flexible / AWG*
without wire protector	1 - 6 mm² / 1 - 2,5 mm² / 16 - 12 AWG
with wire protector	0,75 - 4 mm² / 0,75 - 2,5 mm² / 18 - 12 AWG
Rated Cross Section	2,5 mm²
Wire Stripping Length	7 mm
Overvoltage Category	III
Pollution Severity Level	3
Rated Voltage	250 V
Rated Impulse Voltage	4 kV
Rated Insulation Voltage	250 V acc. to EN 60998-1
Rated Current	24 A
Hole in PCB	ø 1,3 mm
Torque	0,5 Nm

Material

Moulding	PA, grey, V-0
Comparative Tracking Index	CTI ≥ 600
Insulating Group	I
Temperature Range	-40°C up to 100°C
Terminal body	Tin plated brass
Screw	M3; zinc plated steel, blue passivated
Solder pin	ø 1 mm; tin plated copper
Wire protector	Tin plated tin bronze

Approvals

	Current	Voltage	Group	AWG	Nm
	20	300	B	22-12 [1]	0,51
	10	300	D	22-12 [1]	0,51
	20	300	D	26 - 12	0,51
	10	300	D, E	26 - 12	0,51
	Current	Voltage	mm²		
	24	400	2,5		

[1] Min No. 26 AWG for factory-wiring only

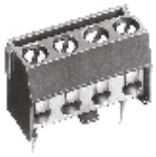
Options / Accessories

- Consecutive numbering
- Special marking according to drawing
- Self-adhesive marking strip BST-5,00
- Pitch of 10 mm for larger clearance and creepage distances
- Longer P.C. pins up to 95 mm
- Version with two P.C. pins per pole
- Version with extended wire entrance
- Version with larger clamping range
- Double wire protector as bridge

PCB connector

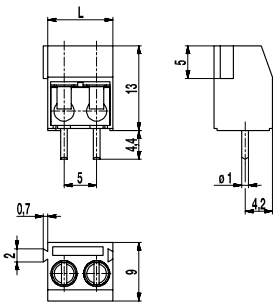
970-TX..(-DS)

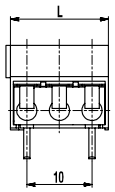
Screw connection, 2 to 4 screw connections at only one pole, interlocking



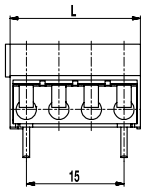
RoHS COMPLIANT

970-TX2-DS/01





970-TX3-DS/01



970-TX4-DS/01

The PCB screw connector 970-TX with a „pitch" of 5 mm has 2 to 4 screw connections at only one pole and can be used e.g. as potential distributors. This allows to loop through earth conductors easily.

Lateral latching elements allow to latch this type of screw connector to terminal strips of any length.
Wire protection in DS-design reliably prevents damage to stranded wires by the screw.

A not latchable version with 2 to 12 screw connections at one pole is available as type 970-X..

NOTE:
The pole numbers indicated in the article number do not designate the actual number of poles but the number of screw connections instead!

Part Numbers

No. of poles	970-TX..	970-TX..-DS	Length	Pcs
2	10.872.619	20.872.619	10,00	250
3	10.872.620	20.872.620	15,00	250
4	10.872.621	20.872.621	20,00	200

General Information

Pitch	5 mm
No. of poles	1

Technical Data

Clamping Range	*solid / flexible / AWG*		
without wire protector	1 - 6 mm² / 1 - 2,5 mm² / 16 - 12 AWG		
with wire protector	0,75 - 4 mm² / 0,75 - 2,5 mm² / 18 - 12 AWG		
Rated Cross Section	2,5 mm²		
Wire Stripping Length	6,5 mm ± 0,5 mm		
Overvoltage Category	III	III	II
Pollution Severity Level	3	2	2
Rated Voltage	250 V	320 V	630 V
Rated Impulse Voltage	4 kV	4 kV	4 kV
Rated Insulation Voltage	250 V acc. to EN 60998-1		
Rated Current	24 A		
Hole in PCB	ø 1,3 mm		
Torque	0,5 Nm		

Material

Moulding	PA, grey, V-0
Comparative Tracking Index	CTI ≥ 600
Insulating Group	I
Temperature Range	-40°C up to 100°C
Terminal Body	Tin plated brass
Screw	M3; zinc plated steel, blue passivated
Solder pin	ø 1 mm; tin plated copper
Wire protector	Tin plated tin bronze

Approvals

	Current	Voltage	Group	AWG	Nm
	20	300	B	22-12 [1]	0,51
	10	300	D	22-12 [1]	0,51
	20	300	B	26 - 12	0,51
	10	300	D, E	26 - 12	0,51
	Current	Voltage	mm²		
	24	400	2,5		

[1] Min No. 26 AWG for factory-wiring only

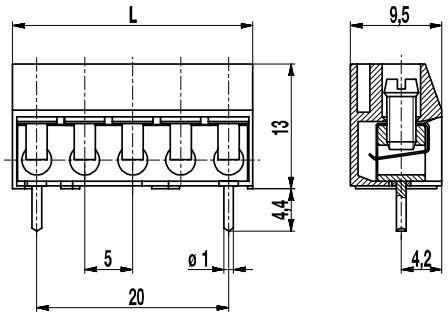
Options / Accessories

- Consecutive numbering
- Special marking according to drawing
- Self-adhesive marking strip BST-5,00
- Longer P.C. pins up to 95 mm
- P.C. pins with different lengths between each other
- Version with extended wire entrance
- Other position of P.C. pins

PCB connector

970-X..(-DS)

Screw connection, 2 to 12 screw connections at only one pole



The PCB screw connector 970-X.. with a “pitch" of 5 mm has 2 to 12 screw connections at only one pole and can be used e.g. as potential distributors. This allows to loop through earth conductors easily.

Wire protection in DS-design reliably prevents damage to stranded wires by the screw.

A latchable version with 2 to 4 screw connections at one pole is available as type 970-TX..

NOTE:
The pole numbers indicated in the article number do not designate the actual number of poles but the number of screw connections instead!

Part Numbers

No. of poles	970-X..	970-X..-DS	Length	Pcs
2	10.872.582	20.872.582	10,00	250
3	10.872.583	20.872.583	15,00	250
4	10.872.584	20.872.584	20,00	100
5	10.872.585	20.872.585	25,00	100
6	10.872.586	20.872.586	30,00	100
7	10.872.587	20.872.587	35,00	100
8	10.872.588	20.872.588	40,00	100
9	10.872.589	20.872.589	45,00	100
10	10.872.590	20.872.590	50,00	100
11	10.872.591	20.872.591	55,00	100
12	10.872.592	20.872.592	60,00	100

General Information

Pitch	5 mm
No. of poles	1

Technical Data

Clamping Range	*solid / flexible / AWG*		
without wire protector	1 - 6 mm² / 1 - 2,5 mm² / 16 - 12 AWG		
with wire protector	0,75 - 4 mm² / 0,75- 2,5 mm² / 18 - 12 AWG		
Rated Cross Section	2,5 mm²		
Wire Stripping Length	6,5 mm ± 0,5 mm		
Overvoltage Category	III	III	II
Pollution Severity Level	3	2	2
Rated Voltage	250 V	320 V	630 V
Rated Impulse Voltage	4 kV	4 kV	4 kV
Rated Insulation Voltage	250 V acc. to EN 60998-1		
Rated Current	24 A		
Hole in PCB	ø 1,3 mm		
Torque	0,5 Nm		

Material

Moulding	PA, grey, V-0
Comparative Tracking Index	CTI ≥ 600
Insulating Group	I
Temperature Range	-40°C up to 100°C
Terminal Body	Tin plated brass
Screw	M3; zinc plated steel, blue passivated
Solder pin	ø 1 mm; tin plated copper
Wire protector	Tin plated tin bronze

Approvals

	Current	Voltage	Group	AWG	Nm
	20	300	B	22-12 [1]	0,51
	10	300	D	22-12 [1]	0,51
	20	300	B	26 - 12	0,51
	10	300	D, E	26 - 12	0,51
	Current	Voltage	mm²		
	24	400	2,5		

[1] Min No. 26 AWG for factory-wiring only

Options / Accessories

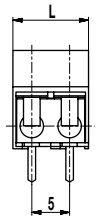
- Consecutive numbering
- Special marking according to drawing
- Self-adhesive marking strip BST-5,00
- Longer P.C. pins up to 95 mm
- P.C. pins with different lengths between each other
- Version with extended wire entrance
- Other position of P.C. pins

PCB connector

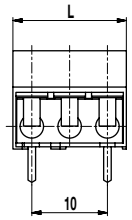
970-X.. (-DS)

ADDITION: Overview 2 to 12 screw terminals, 1 pole

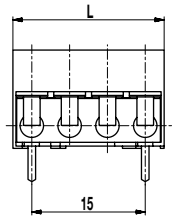
970-X02-DS/01



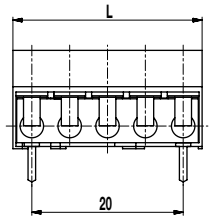
970-X03-DS/01



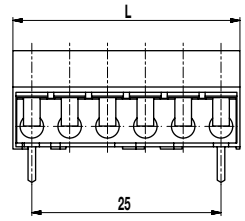
970-X04-DS/01



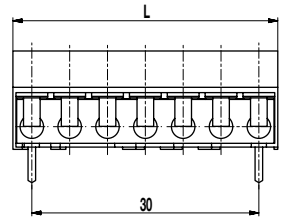
970-X05-DS/01



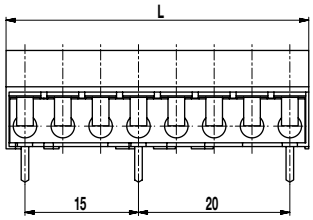
970-X06-DS/01



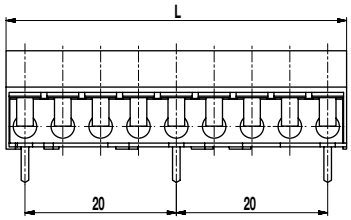
970-X07-DS/01



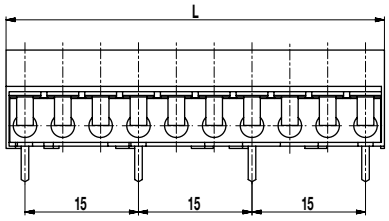
970-X08-DS/01



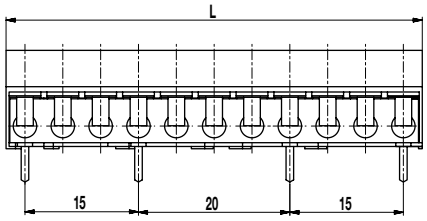
970-X09-DS/01



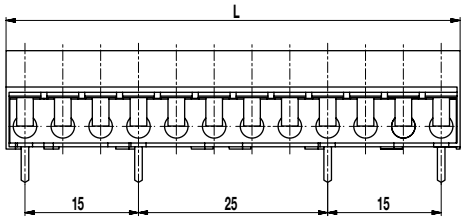
970-X10-DS/01



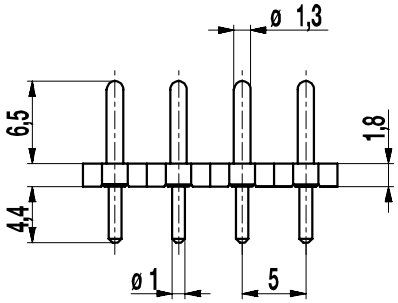
970-X11-DS/01

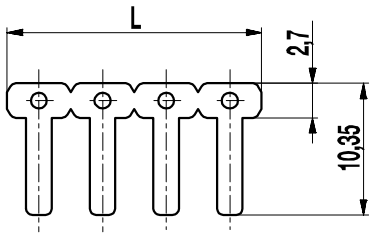


970-X12-DS/01



Pin strip
971-SLW
Soldering area ø 1 mm; plug-in area ø 1,3 mm, with long support





General Information

Pitch	5 mm
No. of poles	2 - 24
Usable with	all sockets and plugs of series 95-FB und 97-FB, 97-FBW, 97-FBS
Additonal Information	Application tip: In combination with 95-FB or 97-FB series socket connectors, printed circuit boards can be directly connected.

Technical Data

Overvoltage Category	III	III	II
Pollution Severity Level	3	2	2
Rated Voltage	200 V	320 V	320 V
Rated Impulse Voltage	4 kV	4 kV	4 kV
Rated Insulation Voltage	250 V acc. to EN 60998-1		
Rated Current	6 A		
Hole in PCB	ø 1,3 mm		

Material

Moulding	PBTP, black , V-0
Comparative Tracking Index	CTI 175
Insulating Group	IIIa
Temperature Range	-40°C up to 100°C
Solder pin	ø 1,3 mm (plug-in area) / ø 1,0 mm (soldering area); tin plated brass

Approvals

	Current	Voltage	Group	AWG	Nm
	10	300	B		
	10	300	B		

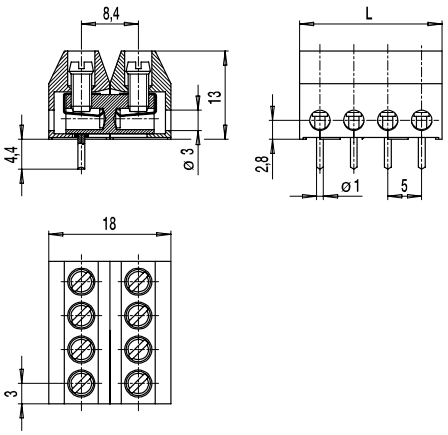
Part Numbers

No. of poles	971-SLW	Length	Pcs
2	12.893.603	10,00	1000
3	13.893.603	15,00	500
4	14.893.603	20,00	250
5	15.893.603	25,00	250
6	16.893.603	30,00	250
7	17.893.603	35,00	250
8	18.893.603	40,00	100
9	19.893.603	45,00	100
10	20.893.603	50,00	100
11	21.893.603	55,00	100
12	22.893.603	60,00	100
13	23.893.603	65,00	100
14	24.893.603	70,00	100
15	25.893.603	75,00	100
16	26.893.603	80,00	100
17	27.893.603	85,00	100
18	28.893.603	90,00	100
19	29.893.603	95,00	100
20	30.893.603	100,00	100
21	31.893.603	105,00	100
22	32.893.603	110,00	100
23	33.893.603	115,00	100
24	34.893.603	120,00	100

Options / Accessories

- Pitch of 10 mm for larger clearance and creepage distances
- Other pin lengths on request
- Other P.C. pin surfaces on request

PCB connector
971-DOPG(-DS)
Screw connection, 2 clamping units per pole



The 971-DOP terminal is based on our well known 970 terminals.
However, it has 2 clamping units positioned behind one another. This is a space efficient terminal solution. The versions with solder pin (called -DOPG) are used for direct application onto the printed circuit
board.
The terminal 971-DOPG-TX contains a one piece terminal body for all connections. This means all wires have the same potential.
Combinations of WECO standard terminals with a single clamping unit per pole are possible. Therefore is the 2 and 3 pole version also available with dovetail feature.

Part Numbers

No. of poles	971-DOPG	971-DOPG-DS	Length	Pcs
2	84.872.102	94.872.102	11,00	100
3	84.872.103	94.872.103	16,00	100
4	84.872.104	94.872.104	21,00	300
5	84.872.105	94.872.105	26,00	50
6	84.872.106	94.872.106	31,00	50
8	84.872.108	94.872.108	41,00	50

further number of poles on request

General Information

Pitch	5 mm
No. of poles	2 - 8

Technical Data

Clamping Range	*solid / flexible / AWG*		
without wire protector	1 - 1,5 mm² / 1 - 1,5 mm² / 16 AWG		
with wire protector	0,75 - 1,5 mm² / 0,75 - 1,5 mm² / 18 - 16 AWG		
Rated Cross Section	1,5 mm²		
Wire Stripping Length	6,5 mm ± 0,5 mm		
Overvoltage Category	III	III	II
Pollution Severity Level	3	2	2
Rated Voltage	250 V	320 V	630 V
Rated Impulse Voltage	4 kV	4 kV	4 kV
Rated Insulation Voltage	250 V acc. to EN 60998-1		
Rated Current	17,5 A		
Hole in PCB	ø 1,3 mm		
Torque	0,5 Nm		

Material

Moulding	PA, grey, V-0
Comparative Tracking Index	CTI ≥ 600
Insulating Group	I
Temperature Range	-40°C up to 100°C
Terminal body	Tin plated brass
Screw	M3, zinc plated steel, blue passivated
Solder pin	ø 1 mm; tin plated copper
Wire protector	Tin plated tin bronze

Approvals

	Current	Voltage	Group	AWG	Nm
	20	300	B	22-12 [1]	0,51
	10	300	D	22-12 [1]	0,51
	20	300	B	26 - 12	0,51
	10	300	D, E	26 - 12	0,51

[1] Min No. 26 AWG for factory-wiring only

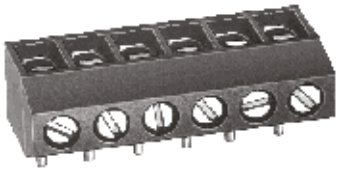
Options / Accessories

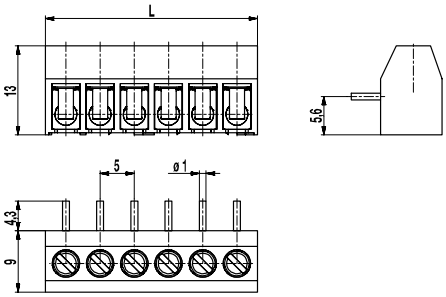
- Consecutive numbering
- Special marking according to drawing
- Self-adhesive marking strip BST-5,00
- Pitch of 5,08 mm or 7,5 mm for larger clearance and creepage distances
- Other P.C. pin lengths on request
- Available without or with two solder pins
- Double clamping units to be combined with single clamping units
- 1 pole version with 4 clamping units (971-DOPG-TX2) on request

PCB connector

971-HG(-DS)

Screw connection, wire entrance vertical to PCB, extended insertion length





The PCB connector 971-HG with a pitch of 5 mm is available in 2- to 32-pole design and can be mounted side-by-side without pole loss.

On this PCB connector the copper solder pin is welded on top of the socket bore. This expands the insertion length to series 970 socket depth and allows to use extra-long solder pins.

Wire protection in DS-design reliably prevents damage to stranded wires by the screw. The wire entrance is vertical to the PCB.

Part Numbers

No. of poles	971-HG	971-HG-DS	Length	Pcs
2	10.872.512	20.872.512	10,00	250
3	10.872.513	20.872.513	15,00	250
4	10.872.514	20.872.514	20,00	200
5	10.872.515	20.872.515	25,00	100
6	10.872.516	20.872.516	30,00	100
7	10.872.517	20.872.517	35,00	100
8	10.872.518	20.872.518	40,00	100
9	10.872.519	20.872.519	45,00	100
10	10.872.520	20.872.520	50,00	100
11	10.872.521	20.872.521	55,00	100
12	10.872.522	20.872.522	60,00	100
13	10.872.523	20.872.523	65,00	100
14	10.872.524	20.872.524	70,00	100
15	10.872.525	20.872.525	75,00	100
16	10.872.526	20.872.526	80,00	100
17	10.872.527	20.872.527	85,00	100
18	10.872.528	20.872.528	90,00	100
19	10.872.529	20.872.529	95,00	100
20	10.872.530	20.872.530	100,00	100
21	10.872.531	20.872.531	105,00	100
22	10.872.532	20.872.532	110,00	100
23	10.872.533	20.872.533	115,00	100
24	10.872.534	20.872.534	120,00	100
25	10.872.535	20.872.535	125,00	100
26	10.872.536	20.872.536	130,00	100
27	10.872.537	20.872.537	135,00	100
28	10.872.538	20.872.538	140,00	100
29	10.872.539	20.872.539	145,00	100
30	10.872.540	20.872.540	150,00	100
31	10.872.541	20.872.541	155,00	100
32	10.872.542	20.872.542	160,00	100

General Information

Pitch	5 mm
No. of poles	2 - 32

Technical Data

Clamping Range	*solid / flexible / AWG*		
without wire protector	1 - 6 mm² / 1 - 2,5 mm² / 16 - 12 AWG		
with wire protector	0,75 - 4 mm² / 0,75 - 2,5 mm² / 18 - 12 AWG		
Rated Cross Section	2,5 mm²		
Wire Stripping Length	6,5 mm ± 0,5 mm		
Overvoltage Category	III	III	II
Pollution Severity Level	3	2	2
Rated Voltage	250 V (200 V)	320 V	630 V (320 V)
Rated Impulse Voltage	4 kV	4 kV	4 kV
Rated Insulation Voltage	250 V acc. to EN 60998-1		
Rated Current	24 A		
Hole in PCB	ø 1,3 mm		
Torque	0,5 Nm		
Other specifications	Voltage data in brackets are valid for 9-32 poles types. 2-8 poles types are "no-flame" acc. to glow-wire test.		

Material

Moulding	PA, grey, V-0
Comparative Tracking Index	2-8 poles: CTI ≥ 600; 9-32 poles: CTI 250
Insulating Group	2-8 poles: I; 9-32 poles: IIIa
Temperature Range	-40°C up to 100°C
Terminal body	Tin plated brass
Screw	M3; zinc plated steel, blue passivated
Solder pin	ø 1 mm; tin plated copper
Wire protector	Tin plated tin bronze

Approvals

	Current	Voltage	Group	AWG	Nm
	20	300	B	22-12 [1]	0,51
	10	300	D	22-12 [1]	0,51
	20	300	B	26 - 12	0,51
	10	300	D, E	26 - 12	0,51
	Current	Voltage	mm²		
	24	400	2,5		

[1] Min No. 26 AWG for factory-wiring only

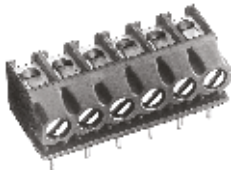
Options / Accessories

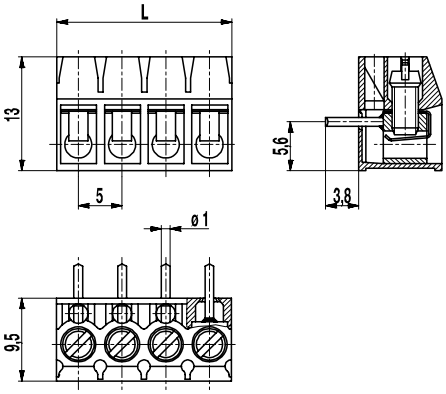
- Consecutive numbering
- Special marking according to drawing
- Self-adhesive marking strip BST-5,00
- Longer P.C. pins up to 75 mm
- Version with extended wire entrance
- Version with larger clamping range
- Double wire protector as bridge
- With test holes, see 971-HM(-DS)

PCB connector

971-HM(-DS)

Screw connection, wire entrance vertical to PCB, extended insertion length, with test holes





The PCB connector 971-HM with a pitch of 5 mm is available in 2- to 24-pole design and can be mounted side-by-side without pole loss.

Wire protection in DS-design reliably prevents damage to stranded wires by the screw. The wire entrance is vertical to the PCB.

The screws are secured against self-loosening. For the connection to the grid, these PCB connectors are equipped with a M3 thread.

Part Numbers

No. of poles	971-HM	971-HM-DS	Length	Pcs
2	10.872.252	20.872.252	10,00	250
3	10.872.253	20.872.253	15,00	250
4	10.872.254	20.872.254	20,00	200
5	10.872.255	20.872.255	25,00	100
6	10.872.256	20.872.256	30,00	100
7	10.872.257	20.872.257	35,00	100
8	10.872.258	20.872.258	40,00	100
9	10.872.259	20.872.259	45,00	100
10	10.872.260	20.872.260	50,00	100
11	10.872.261	20.872.261	55,00	100
12	10.872.262	20.872.262	60,00	100
13	10.872.263	20.872.263	65,00	100
14	10.872.264	20.872.264	70,00	100
15	10.872.265	20.872.265	75,00	100
16	10.872.266	20.872.266	80,00	100
17	10.872.267	20.872.267	85,00	100
18	10.872.268	20.872.268	90,00	100
19	10.872.269	20.872.269	95,00	100
20	10.872.270	20.872.270	100,00	100
21	10.872.271	20.872.271	105,00	100
22	10.872.272	20.872.272	110,00	100
23	10.872.273	20.872.273	115,00	100
24	10.872.274	20.872.274	120,00	100

General Information

Pitch	5 mm
No. of poles	2 - 24

Technical Data

Clamping Range	*solid / flexible / AWG*		
without wire protector	1 - 6 mm² / 1 - 2,5 mm² / 16 - 12 AWG		
with wire protector	0,75 - 4 mm² / 0,75 - 2,5 mm² / 18 - 12 AWG		
Rated Cross Section	2,5 mm²		
Wire Stripping Length	7 mm		
Overvoltage Category	III	III	II
Pollution Severity Level	3	2	2
Rated Voltage	250 V (200 V)	320 V	630 V (320 V)
Rated Impulse Voltage	4 kV	4 kV	4 kV
Rated Insulation Voltage	250 V acc. to EN 60998-1		
Rated Current	24 A		
Hole in PCB	ø 1,3 mm		
Torque	0,5 Nm		
Other specifications	Voltage data in brackets are valid for 9-24 poles types. 2-8 poles types are "no-flame" acc. to glow-wire test.		

Material

Moulding	PA. grey, V-0
Comparative Tracking Index	2-8 poles: CTI ≥ 600; 9-32 poles: CTI 250
Insulating Group	2-8 poles: I; 9-32 poles: IIIa
Temperature Range	-40°C up to 100°C
Terminal body	Tin plated brass
Screw	M3; zinc plated steel, blue passivated
Solder pin	ø 1 mm; tin plated copper
Wire protector	Tin plated tin bronze

Approvals

	Current	Voltage	Group	AWG	Nm
	20	300	B	22-12 [1]	0,51
	10	300	D	22-12 [1]	0,51
	20	300	B	26 - 12	0,51
	10	300	D, E	26 - 12	0,51
	Current	Voltage	mm²		
	24	400	2,5		

[1] Min No. 26 AWG for factory-wiring only

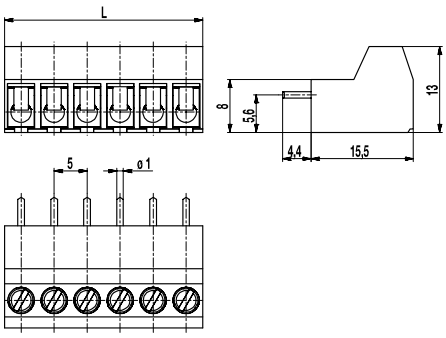
Options / Accessories

- Consecutive numbering
- Special marking according to drawing
- Self-adhesive marking strip BST-5,00
- Pitch of 10 mm for larger clearance and creepage distances
- Longer P.C. pins up to 75 mm
- Version with extended wire entrance
- Double wire protector as bridge

PCB connector

971-LH(-DS)

Screw connection, wire entrance vertical to PCB, pottable



The 971-LH series PCB screw connector with a pitch of 5 mm is particularly suited for potting printed circuits. For such potting applications, the solder pin is sealed at the housing opening against seeping casting resin. This PCB screw connector is available in 2- to 12-pole design and can be mounted side-by-side without pole loss.

Wire protection in DS-design reliably prevents damage to stranded wires by the screw.

The wire entrance is located vertical to the PCB - the casting resin surface is also vertical to the wire entrance. Version 970-LH alternatively provides wire entrance parallel to the PCB.

Part Numbers

No. of poles	971-LH	971-LH-DS	Length	Pcs
2	15.873.402	25.873.402	10,00	100
3	15.873.403	25.873.403	15,00	100
4	15.873.404	25.873.404	20,00	100
5	15.873.405	25.873.405	25,00	100
6	15.873.406	25.873.406	30,00	100
7	15.873.407	25.873.407	35,00	100
8	15.873.408	25.873.408	40,00	100
9	15.873.409	25.873.409	45,00	50
10	15.873.410	25.873.410	50,00	50
11	15.873.411	25.873.411	55,00	50
12	15.873.412	25.873.412	60,00	50

General Information

Pitch	5 mm
No. of poles	2 - 12

Technical Data

Clamping Range	*solid / flexible / AWG*		
without wire protector	1 - 6 mm² / 1 - 2,5 mm² / 16 - 12 AWG		
with wire protector	0,75 - 4 mm² / 0,75 - 2,5 mm² / 18 - 12 AWG		
Rated Cross Section	2,5 mm²		
Wire Stripping Length	8 mm ± 0,5 mm		
Overvoltage Category	III	III	II
Pollution Severity Level	3	2	2
Rated Voltage	250 V	320 V	630 V
Rated Impulse Voltage	4 kV	4 kV	4 kV
Rated Insulation Voltage	250 V acc. to EN 60998-1		
Rated Current	24 A		
Hole in PCB	ø 1,3 mm		
Torque	0,5 Nm		

Material

Moulding	PA, grey, V-0
Comparative Tracking Index	CTI ≥ 600
Insulating Group	I
Temperature Range	-40°C up to 100°C
Terminal body	Tin plated brass
Screw	M3; zinc plated steel, blue passivated
Solder pin	ø 1 mm; tin plated brass
Wire protector	Tin plated tin bronze

Approvals

	Current	Voltage	Group	AWG	Nm
	20	300	B	22-12 [1]	0,51
	10	300	D	22-12 [1]	0,51
	20	300	B	26 - 12	0,51
	10	300	D, E	26 - 12	0,51
	Current	Voltage	mm²		
	24	400	2,5		

[1] Min No. 26 AWG for factory-wiring only

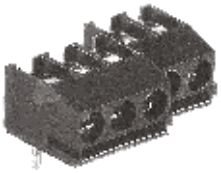
Options / Accessories

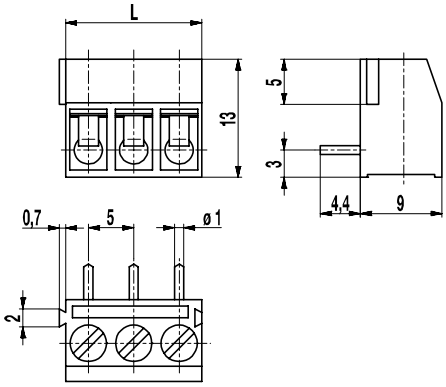
- Consecutive numbering
- Special marking according to drawing
- Self-adhesive marking strip BST-5,00
- Other P.C. pin lengths on request
- Version with extended wire entrance
- Version with larger clamping range
- Double wire protector as bridge

PCB connector

971-T(-DS)

Screw connection, wire entrance vertical to PCB, interlocking





The PCB screw connector 971-T with a pitch of 5 mm is available with 2 and 3 poles.

Wire protection in DS-design reliably prevents damage to stranded wires by the screw. The wire entrance is vertical to the PCB.

The screws are secured against self-loosening. For the connection to the grid, these PCB connectors are equipped with a M3 thread.

Lateral latching elements allow to link this type of screw connector to terminal strips of any length.

Part Numbers

No. of poles	971-T	971-T-DS	Length	Pcs
2	10.872.612	20.872.612	10,00	250
3	10.872.613	20.872.613	15,00	250

General Information

Pitch	5 mm
No. of poles	2 + 3

Technical Data

Clamping Range	*solid / flexible / AWG*		
without wire protector	1 - 6 mm² / 1 - 2,5 mm² / 16 - 12 AWG		
with wire protector	0,75 - 4 mm² / 0,75 - 2,5 mm² / 18 - 12 AWG		
Rated Cross Section	2,5 mm²		
Wire Stripping Length	5,5 mm ± 0,5 mm		
Overvoltage Category	III	III	II
Pollution Severity Level	3	2	2
Rated Voltage	250 V	320 V	630 V
Rated Impulse Voltage	4 kV	4 kV	4 kV
Rated Insulation Voltage	250 V acc. to EN 60998-1		
Rated Current	24 A		
Hole in PCB	ø 1,3 mm		
Torque	0,5 Nm		

Material

Moulding	PA, grey, V-0
Comparative Tracking Index	CTI ≥ 600
Insulating Group	I
Temperature Range	-40°C up to 100°C
Terminal body	Tin plated brass
Screw	M3; zinc plated steel, blue passivated
Solder pin	ø 1 mm; tin plated brass
Wire protector	Tin plated tin bronze

Approvals

	Current	Voltage	Group	AWG	Nm
	20	300	B	22-12 [1]	0,51
	10	300	D	22-12 [1]	0,51
	20	300	B	26 - 12	0,51
	10	300	D, E	26 - 12	0,51
	Current	Voltage	mm²		
	24	400	2,5		

[1] Min No. 26 AWG for factory-wiring only

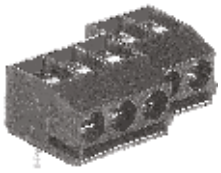
Options / Accessories

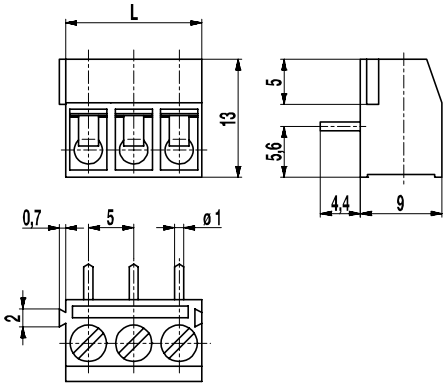
- Consecutive numbering
- Special marking according to drawing
- Self-adhesive marking strip BST-5,00
- Pitch of 10 mm for larger clearance and creepage distances
- Version with extended wire entrance
- Double wire protector as bridge
- With test holes, see 971-THM(-DS)

PCB connector

971-THG(-DS)

Screw connection, wire entrance vertical to PCB, interlocking, extended insertion length





The PCB screw connector 971-THG with a pitch of 5 mm is available with 2 and 3 poles. Welding the solder pin on top of the socket bore expands the insertion length to series 970 socket depth and allows to use extra-long solder pins.

Wire protection in DS-design reliably prevents damage to stranded wires by the screw. The wire entrance is vertical to the PCB.

Lateral latching elements allow to link this type of screw connector to terminal strips of any length.

Part Numbers

No. of poles	971-THG	971-THG-DS	Length	Pcs
2	10.872.502	20.872.502	10,00	250
3	10.872.503	20.872.503	15,00	250

General Information

Pitch	5 mm
No. of poles	2 + 3

Technical Data

Clamping Range	*solid / flexible / AWG*		
without wire protector	1 - 6 mm² / 1 - 2,5 mm² / 16 - 12 AWG		
with wire protector	0,75 - 4 mm² / 0,75 - 2,5 mm² / 18 - 12 AWG		
Rated Cross Section	2,5 mm²		
Wire Stripping Length	6,5 mm ± 0,5 mm		
Overvoltage Category	III	III	II
Pollution Severity Level	3	2	2
Rated Voltage	250 V	320 V	630 V
Rated Impulse Voltage	4 kV	4 kV	4 kV
Rated Insulation Voltage	250 V acc. to EN 60998-1		
Rated Current	24 A		
Hole in PCB	ø 1,3 mm		
Torque	0,5 Nm		

Material

Moulding	PA, grey, V-0
Comparative Tracking Index	CTI ≥ 600
Insulating Group	I
Temperature Range	-40°C up to 100°C
Terminal body	Tin plated brass
Screw	M3; zinc plated steel, blue passivated
Solder pin	ø 1 mm; tin plated copper
Wire protector	Tin plated tin bronze

Approvals

	Current	Voltage	Group	AWG	Nm
	20	300	B	22-12 [1]	0,51
	10	300	D	22-12 [1]	0,51
	20	300	B	26 - 12	0,51
	10	300	D, E	26 - 12	0,51
	Current	Voltage	mm²		
	24	400	2,5		

[1] Min No. 26 AWG for factory-wiring only

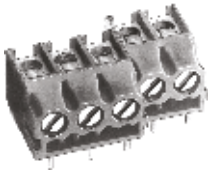
Options / Accessories

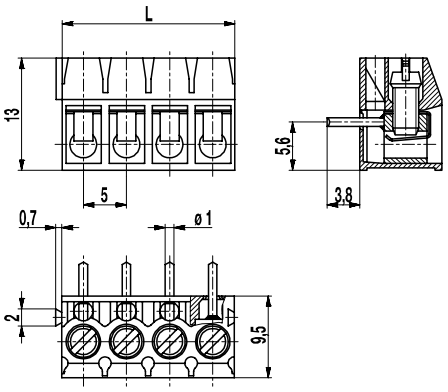
- Consecutive numbering
- Special marking according to drawing
- Self-adhesive marking strip BST-5,00
- Pitch of 10 mm for larger clearance and creepage distances
- Other P.C. pin lengths on request
- Version with extended wire entrance
- Version with larger clamping range
- Double wire protector as bridge
- With test holes, see 971-THM(-DS)

PCB connector

971-THM(-DS)

Screw connection, wire entrance vertical to PCB, interlocking, extended insertion length, with test holes





The PCB screw connector 971-THM with test hole, 5 mm pitch, is available with 2 and 3 poles. Welding the solder pin on top of the socket bore expands the insertion length to series 970 socket depth and allows to use extra-long solder pins.

Wire protection in DS-design reliably prevents damage to stranded wires by the screw. The wire entrance is vertical to the PCB.

The screws are secured against self-loosening. For the connection to the grid, these PCB connectors are equipped with a M3 thread.

Lateral locking elements allow to link this type of screw connector to terminal strips of any length.

Part Numbers

No. of poles	971-THM	971-THM-DS	Length	Pcs
2	10.872.282	20.872.282	10,00	250
3	10.872.283	20.872.283	15,00	250

General Information

Pitch	5 mm
No. of poles	2 + 3

Technical Data

Clamping Range	*solid / flexible / AWG*		
without wire protector	1 - 6 mm² / 1 - 2,5 mm² / 16 - 12 AWG		
with wire protector	0,75 - 4 mm² / 0,75 - 2,5 mm² / 18 - 12 AWG		
Rated Cross Section	2,5 mm²		
Wire Stripping Length	7 mm ± 0,5 mm		
Overvoltage Category	III	III	II
Pollution Severity Level	3	2	2
Rated Voltage	250 V	320 V	630 V
Rated Impulse Voltage	4 kV	4 kV	4 kV
Rated Insulation Voltage	250 V acc. to EN 60998-1		
Rated Current	24 A		
Hole in PCB	ø 1,3 mm		
Torque	0,5 Nm		

Material

Moulding	PA, grey, V-0
Comparative Tracking Index	CTI ≥ 600
Insulating Group	I
Temperature Range	-40°C up to 100°C
Terminal body	Tin plated brass
Screw	M3; zinc plated steel, blue passivated
Solder pin	ø 1 mm; tin plated copper
Wire protector	Tin plated tin bronze

Approvals

	Current	Voltage	Group	AWG	Nm
	20	300	B	22-12 [1]	0,51
	10	300	D	22-12 [1]	0,51
	20	300	B	26 - 12	0,51
	10	300	D, E	26 - 12	0,51
	Current	Voltage	mm²		
	24	400	2,5		

[1] Min No. 26 AWG for factory-wiring only

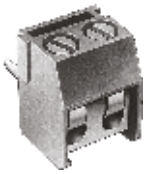
Options / Accessories

- Consecutive numbering
- Special marking according to drawing
- Self-adhesive marking strip BST-5,00
- Pitch of 10 mm for larger clearance and creepage distances
- Longer P.C. pins up to 75 mm
- Version with extended wire entrance
- Double wire protector as bridge

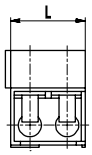
PCB connector

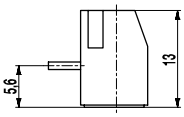
971-TX..(-DS)

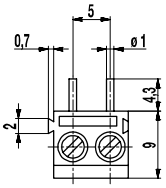
Screw connection, wire entrance vertical to PCB, 2 to 4 screw connections at only one pole, interlocking



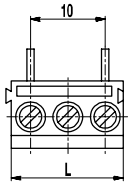
RoHS COMPLIANT



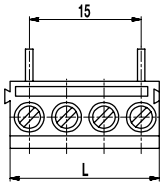




971-TX2-DS/01



971-TX3-DS/01



971-TX4-DS/01

The PCB screw connector 971-TX with a „pitch" of 5 mm has 2 to 4 screw connections at only one pole and can be used e.g. as potential distributors. This allows to loop through earth conductors easily.

Lateral latching elements allow to latch this type of screw connector to terminal strips of any length.
Wire protection in DS-design reliably prevents damage to stranded wires by the screw.
The wire entrance is vertical to the PCB.

A not latchable version with 2 to 12 screw connections at one pole is available as type 971-X..

NOTE:
The pole numbers indicated in the article number do not designate the actual number of poles but the number of screw connections instead!

Part Numbers

No. of poles	971-TX..	971-TX..-DS	Length	Pcs
2	10.872.692	20.872.692	10,00	250
3	10.872.693	20.872.693	15,00	250
4	10.872.694	20.872.694	20,00	200

General Information

Pitch	5 mm
No. of poles	1

Technical Data

Clamping Range	*solid / flexible / AWG*		
without wire protector	1 - 6 mm² / 1 - 2,5 mm² / 16 - 12 AWG		
with wire protector	0,75 - 4 mm² / 0,75 - 2,5 mm² / 18 - 12 AWG		
Rated Cross Section	2,5 mm²		
Wire Stripping Length	6,5 mm ± 0,5 mm		
Overvoltage Category	III	III	II
Pollution Severity Level	3	2	2
Rated Voltage	250 V	320 V	630 V
Rated Impulse Voltage	4 kV	4 kV	4 kV
Rated Insulation Voltage	250 V acc. to EN 60998-1		
Rated Current	24 A		
Hole in PCB	ø 1,3 mm		
Torque	0,5 Nm		

Material

Moulding	PA, grey, V-0
Comparative Tracking Index	CTI ≥ 600
Insulating Group	I
Temperature Range	-40°C up to 100°C
Terminal Body	Tin plated brass
Screw	M3; zinc plated steel, blue passivated
Solder pin	ø 1 mm; tin plated brass
Wire protector	Tin plated tin bronze

Approvals

	Current	Voltage	Group	AWG	Nm
	20	300	B	26 - 12	0,51
	10	300	D, E	26 - 12	0,51
	Current	Voltage	mm²		
	24	400	2,5		

Options / Accessories

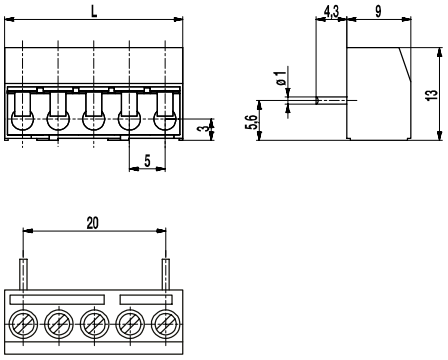
- Consecutive numbering
- Special marking according to drawing
- Self-adhesive marking strip BST-5,00
- Other P.C. pin lengths on request
- P.C. pins with different lengths between each other
- Other position of P.C. pins
- Version with extended wire entrance

PCB connector

971-X..(-DS)

Screw connection, wire entrance vertical to PCB, 2 to 12 screw connections at only one pole

RoHS COMPLIANT



The PCB screw connector 971-X with a "pitch" of 5 mm has 2 to 12 screw connections at only one pole and can be used e.g. as potential distributors. This allows to loop through earth conductors easily.

Wire protection in DS-design reliably prevents damage to stranded wires by the screw.
The wire entrance is vertical to the PCB.

A latchable version with 2 to 4 screw connections at one pole is available as type 971-TX..

NOTE:
The pole numbers indicated in the article number do not designate the actual number of poles but the number of screw connections instead!

Part Numbers

No. of poles	971-X..	971-X..-DS	Length	Pcs
5	10.872.555	20.872.555	25,00	100
6	10.872.556	20.872.556	30,00	100
7	10.872.557	20.872.557	35,00	100
8	10.872.558	20.872.558	40,00	100
9	10.872.559	20.872.559	45,00	100
10	10.872.560	20.872.560	50,00	100
11	10.872.561	20.872.561	55,00	100
12	10.872.562	20.872.562	60,00	100

further number of poles on request

General Information

Pitch	5 mm
No. of poles	1

Technical Data

Clamping Range	*solid / flexible / AWG*		
without wire protector	1 - 6 mm² / 1 - 2,5 mm² / 16 - 12 AWG		
with wire protector	0,75 - 4 mm² / 0,75 - 2,5 mm² / 18 - 12 AWG		
Rated Cross Section	2,5 mm²		
Wire Stripping Length	6,5 mm ± 0,5 mm		
Overvoltage Category	III	III	II
Pollution Severity Level	3	2	2
Rated Voltage	250 V	320 V	630 V
Rated Impulse Voltage	4 kV	4 kV	4 kV
Rated Insulation Voltage	250 V acc. to EN 60998-1		
Rated Current	24 A		
Hole in PCB	ø 1,3 mm		
Torque	0,5 Nm		

Material

Moulding	PA, grey, V-0
Comparative Tracking Index	CTI ≥ 600
Insulating Group	I
Temperature Range	-40°C up to 100°C
Terminal Body	Tin plated brass
Screw	M3; zinc plated steel, blue passivated
Solder pin	ø 1 mm; tin plated brass
Wire protector	Tin plated tin bronze

Approvals

	Current	Voltage	Group	AWG	Nm
	20	300	B	26 - 12	0,51
	10	300	D, E	26 - 12	0,51
	Current	Voltage	mm²		
	24	400	2,5		

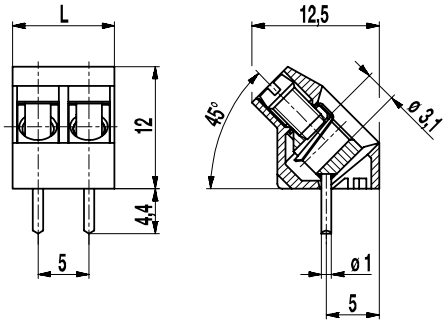
Options / Accessories

- Consecutive numbering
- Special marking according to drawing
- Self-adhesive marking strip BST-5,00
- Other P.C. pin lengths on request
- P.C. pins with different lengths between each other
- Other position of P.C. pins
- Version with extended wire entrance

PCB connector

974(-DS)

Screw connection 45°-angle to PCB



The PCB connector 974, inclined version with a pitch of 5 mm is available with 2 to 26 poles.

The wire entrance is in a 45° angle diagonal to the PC board. Therefore, this PCB connector is ideal for the assembly in the center of PCBs. The design of this PCB connector allows space-saving arrangement of consecutive rows of terminals.

Wire protection in DS-design reliably prevents damage to stranded wires by the screw.

Part Numbers

No. of poles	974	974-DS	Length	Pcs
2	10.874.002	20.874.002	10,00	250
3	10.874.003	20.874.003	15,00	250
4	10.874.004	20.874.004	20,00	200
5	10.874.005	20.874.005	25,00	100
6	10.874.006	20.874.006	30,00	100
7	10.874.007	20.874.007	35,00	100
8	10.874.008	20.874.008	40,00	100
9	10.874.009	20.874.009	45,00	100
10	10.874.010	20.874.010	50,00	100
11	10.874.011	20.874.011	55,00	100
12	10.874.012	20.874.012	60,00	100
13	10.874.013	20.874.013	65,00	100
14	10.874.014	20.874.014	70,00	50
15	10.874.015	20.874.015	75,00	50
16	10.874.016	20.874.016	80,00	50
17	10.874.017	20.874.017	85,00	50
18	10.874.018	20.874.018	90,00	50
19	10.874.019	20.874.019	95,00	50
20	10.874.020	20.874.020	100,00	50
21	10.874.021	20.874.021	105,00	50
22	10.874.022	20.874.022	110,00	50
23	10.874.023	20.874.023	115,00	50
24	10.874.024	20.874.024	120,00	50
25	10.874.025	20.874.025	125,00	50
26	10.874.026	20.874.026	130,00	50

General Information

Pitch	5 mm
No. of poles	2 - 26

Technical Data

Clamping Range	*solid / flexible / AWG*		
without wire protector	1 - 6 mm² / 1 - 2,5 mm² / 16 - 12 AWG		
with wire protector	0,75 - 4 mm² / 0,75 - 2,5 mm² / 18 - 12 AWG		
Rated Cross Section	2,5 mm²		
Wire Stripping Length	6,5 mm ± 0,5 mm		
Overvoltage Category	III	III	II
Pollution Severity Level	3	2	2
Rated Voltage	250 V	320 V	630 V
Rated Impulse Voltage	4 kV	4 kV	4 kV
Rated Insulation Voltage	250 V acc. to EN 60998-1		
Rated Current	24 A		
Hole in PCB	ø 1,3 mm		
Torque	0,5 Nm		

Material

Moulding	PA, grey, V-0
Comparative Tracking Index	CTI ≥ 600
Insulating Group	I
Temperature Range	-40°C up to 100°C
Terminal body	Tin plated brass
Screw	M3; zinc plated steel, clear passivated
Solder pin	ø 1 mm; tin plated copper
Wire protector	Tin plated tin bronze

Approvals

	Current	Voltage	Group	AWG	Nm
	20	300	B	22-12 [1]	0,51
	10	300	D	22-12 [1]	0,51
	20	300	B	26 - 12	0,51
	10	300	D, E	26 - 12	0,51
	Current	Voltage	mm²		
	24	250	2,5		

[1] Min No. 26 AWG for factory-wiring only

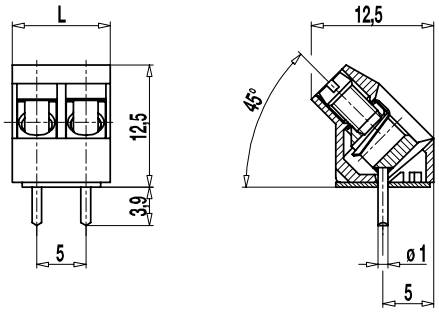
Options / Accessories

- Consecutive numbering
- Special marking according to drawing
- Self-adhesive marking strip BST-5,00
- Longer P.C. pins up to 95 mm
- Special wire protector for very thin conductors
- Version with raised foot of 1,6 mm
- With base plate, see 974-BP
- With extended screw guide (974-C)

PCB connector

974-BP(-DS)

Screw connection 45°-angle to PCB, with base plate



The PCB connector 974-BP, inclined version with base plate and a pitch of 5 mm is available with 2 to 12 poles. It was particularly designed for PCBs with encapsulated printed circuits.

The base plate, ultrasound-welded to the bottom of the standard series 974 PCB connector, offers extra protection against casting resin penetrating the solder pin area.

The wire entrance is in a 45° angle diagonal to the PC board. Therefore, this PCB connector is ideal for the assembly in the center of PCBs. The design of this PCB connector allows space-saving arrangement of consecutive rows of terminals.

Wire protection in DS-design reliably prevents damage to stranded wires by the screw.

Part Numbers

No. of poles	974-BP	974-BP-DS	Length	Pcs
2		97.874.002	10,00	250

further number of poles on request

General Information

Pitch	5 mm
No. of poles	2 - 12

Technical Data

Clamping Range	*solid / flexible / AWG*		
without wire protector	1 - 6 mm² / 1 - 2,5 mm² / 16 - 12 AWG		
with wire protector	0,75 - 4 mm² / 0,75 - 2,5 mm² / 18 - 12 AWG		
Rated Cross Section	2,5 mm²		
Wire Stripping Length	6,5 mm ± 0,5 mm		
Overvoltage Category	III	III	II
Pollution Severity Level	3	2	2
Rated Voltage	250 V	320 V	630 V
Rated Impulse Voltage	4 kV	4 kV	4 kV
Rated Insulation Voltage	250 V acc. to EN 60998-1		
Rated Current	15 A		
Hole in PCB	ø 1,3 mm		
Torque	0,5 Nm		

Material

Moulding	PA, grey, V-0
Comparative Tracking Index	CTI ≥ 600
Insulating Group	I
Temperature Range	-40°C up to 100°C
Terminal body	Tin plated brass
Screw	M3; zinc plated steel, clear passivated
Solder pin	ø 1 mm; tin plated copper
Wire protector	Tin plated tin bronze

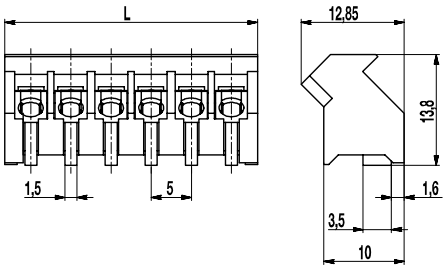
Approvals

	Current	Voltage	mm²
	24	250	2,5

Options / Accessories

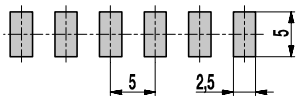
- Consecutive numbering
- Special marking according to drawing
- Self-adhesive marking strip BST-5,00

PCB connector for SMD
974-D-SMD-DS
Screw connection 45°-angle to PCB



L = pole length x pitch + 1,5 mm

PCB Layout



Solder pad thickness: 0,2 - 0,25 mm

By creating the 974-D-SMD-DS, WECO offers a PCB terminal for the reflow soldering process with a pitch of 5 mm in true surface mount technology.
The wire entry has a connection angle of 45° to the PCB. This offers the advantage that terminal rows can be located space savingly one behind the other.
The housing material consists of high temperature resistant plastic and is specially designed in order to assure a good hot-air circulation during the reflow soldering process in the convection oven. The wire entry side of the terminal has to be placed in flowing direction.

The screw connector 974-D-SMD-DS are standardly equipped with captive screws and wire protectors and initially available in 2 to 12 pole versions.
For the automatic assembling the connector has a flat roof design in order to create a flat surface for the vacuum pipette.

Part Numbers

No. of poles	974-D-SMD-DS	Length	Pcs
2	20.874.402	11,5	250
3	20.874.403	16,5	250
4	20.874.404	21,5	200
5	20.874.405	26,5	100
6	20.874.406	31,5	100
8	20.874.408	41,5	100
10	20.874.410	51,5	100
12	20.874.412	61,5	100

further number of poles on request

General Information

Pitch	5 mm
No. of poles	2 - 12

Technical Data

Clamping Range	*solid / flexible / AWG*		
	0,75 - 4 mm² / 0,75- 2,5 mm² / 18 - 12 AWG		
Rated Cross Section	2,5 mm²		
Wire Stripping Length	6 mm ± 0,5 mm		
Overvoltage Category	III	III	II
Pollution Severity Level	3	2	2
Rated Voltage	250 V	320 V	630 V
Rated Impulse Voltage	4 kV	4 kV	4 kV
Rated Insulation Voltage	250 V acc. to EN 60998-1		
Rated Current	24 A		
Torque	0,4 Nm		

Material

Moulding	PA HT, black, V-0
Comparative Tracking Index	CTI ≥ 600
Insulating Group	I
Temperature Range	-40°C up to 150°C; Reflow solder temperature (Peak) max. 260°C (15-30 s)
Terminal body	Tin plated brass
Screw	M3; zink plated steel, clear passivated
Wire protector	Tin plated tin bronze

Approvals

	Current	Voltage	Group	AWG	Nm
	20	300	B	18 - 12	0,4
	10	300	D	18 - 12	0,4
	20	300	B	18 - 12	0,4
	10	300	D	18 - 12	0,4

Options / Accessories

- Consecutive numbering
- Special marking according to drawing
- Self-adhesive marking strip BST-5,00 [1]

Part Numbers: Tape-on-Reel

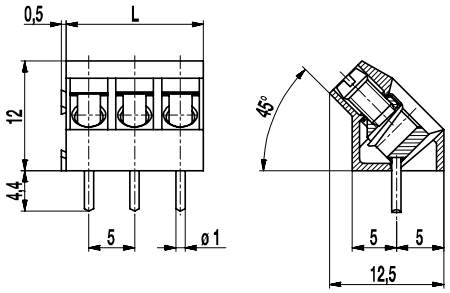
No. of poles	974-D-SMD-DS	Tape Width	Tape Height	Pcs
2	20.874.402.A00	56 mm	14,7 mm	250
3	20.874.403.A00	56 mm	14,7 mm	250
4	20.874.404.A00	56 mm	14,7 mm	250
5	20.874.405.A00	56 mm	14,7 mm	250
6	20.874.406.A00	56 mm	14,7 mm	250

[1] To be fitted after reflow soldering process

PCB connector

974-T(-DS)

Screw connection 45°-angle to PCB, interlocking



The PCB connector 974-T inclines version with a pitch of 5 mm is available in 2 and 3 poles.

The wire entrance is in a 45° angle diagonal to the PC board. Therefore, this PCB connector is ideal for the assembly in the center of PCBs. The design of this PCB connector allows space-saving arrangement of consecutive rows of terminals.

Wire protection in DS-design reliably prevents damage to stranded wires by the screw.

Lateral latching elements allow to link this type of screw connector to terminal strips of any length.

Part Numbers

No. of poles	974-T	974-T-DS	Length	Pcs
2	10.874.602	20.874.602	10,00	250
3	10.874.603	20.874.603	15,00	250

General Information

Pitch	5 mm
No. of poles	2 + 3

Technical Data

Clamping Range	*solid / flexible / AWG*		
without wire protector	1 - 6 mm² / 1 - 2,5 mm² / 16 - 12 AWG		
with wire protector	0,75 - 4 mm² / 0,75 - 2,5 mm² / 18 - 12 AWG		
Rated Cross Section	2,5 mm²		
Wire Stripping Length	6,5 mm ± 0,5 mm		
Overvoltage Category	III	III	II
Pollution Severity Level	3	2	2
Rated Voltage	250 V	320 V	630 V
Rated Impulse Voltage	4 kV	4 kV	4 kV
Rated Insulation Voltage	250 V acc. to EN 60998-1		
Rated Current	24 A		
Hole in PCB	ø 1,3 mm		
Torque	0,5 Nm		

Material

Moulding	PA, grey, V-0
Comparative Tracking Index	CTI ≥ 600
Insulating Group	I
Temperature Range	-40°C up to 100°C
Terminal body	Tin plated brass
Screw	M3; zinc plated steel, clear passivated
Solder pin	ø 1 mm; tin plated copper
Wire protector	Tin plated tin bronze

Approvals

	Current	Voltage	Group	AWG	Nm
	20	300	B	22-12 [1]	0,51
	10	300	D	22-12 [1]	0,51
	20	300	B	26 - 12	0,51
	10	300	D, E	26 - 12	0,51
	Current	Voltage	mm²		
	24	250	2,5		

[1] Min No. 26 AWG for factory-wiring only

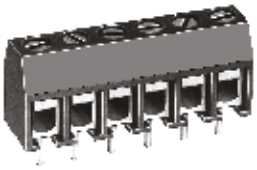
Options / Accessories

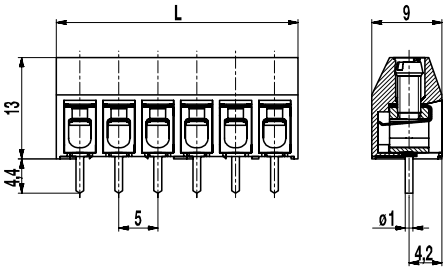
- Consecutive numbering
- Special marking according to drawing
- Self-adhesive marking strip BST-5,00
- Longer P.C. pins up to 75 mm
- Special wire protector for very thin conductors

PCB connector

978(-DS)

Screw connection, large conductor space





Part Numbers

No. of poles	978	978-DS	Length	Pcs
2	30.872.002	40.872.002	11,00	250
3	30.872.003	40.872.003	16,00	250
4	30.872.004	40.872.004	21,00	200
5	30.872.005	40.872.005	26,00	100
6	30.872.006	40.872.006	31,00	100
7	30.872.007	40.872.007	36,00	100
8	30.872.008	40.872.008	41,00	100
9	30.872.009	40.872.009	46,00	100
10	30.872.010	40.872.010	51,00	100
11	30.872.011	40.872.011	56,00	100
12	30.872.012	40.872.012	61,00	100
13	30.872.013	40.872.013	66,00	100
14	30.872.014	40.872.014	71,00	100
15	30.872.015	40.872.015	76,00	100
16	30.872.016	40.872.016	81,00	100
17	30.872.017	40.872.017	86,00	100
18	30.872.018	40.872.018	91,00	100
19	30.872.019	40.872.019	96,00	100
20	30.872.020	40.872.020	101,00	100
21	30.872.021	40.872.021	106,00	100
22	30.872.022	40.872.022	111,00	100
23	30.872.023	40.872.023	116,00	100
24	30.872.024	40.872.024	121,00	100
25	30.872.025	40.872.025	126,00	100
26	30.872.026	40.872.026	131,00	100
27	30.872.027	40.872.027	136,00	100
28	30.872.028	40.872.028	141,00	100
29	30.872.029	40.872.029	146,00	100
30	30.872.030	40.872.030	151,00	100
31	30.872.031	40.872.031	156,00	100
32	30.872.032	40.872.032	161,00	100

General Information

Pitch	5 mm
No. of poles	2 - 32

Technical Data

Clamping Range	*solid / flexible / AWG*		
without wire protector	0,75 - 6 mm² / 0,75 - 4 mm² / 18 - 10 AWG		
with wire protector	0,34 - 6 mm² / 0,34 - 4 mm² / 22 - 10 AWG		
Rated Cross Section	2,5 mm²		
Wire Stripping Length	6,5 mm ± 0,5 mm		
Overvoltage Category	III	III	II
Pollution Severity Level	3	2	2
Rated Voltage	250 V (200 V)	320 V (320 V)	630 V (400 V)
Rated Impulse Voltage	4 kV	4 kV	4 kV
Rated Insulation Voltage	250 V acc. to EN 60998-1		
Rated Current	24 A		
Hole in PCB	ø 1,3 mm		
Torque	0,5 Nm		
Other specifications	Voltage data in brackets are valid for 9-32 poles types. 2-8 poles types are "no-flame" acc. to glow-wire test.		

Material

Moulding	PA, grey, V-0
Comparative Tracking Index	2-8 poles: CTI ≥ 600; 9-32 poles: CTI 400
Insulating Group	2-8 poles: I; 9-32 poles: II
Temperature Range	-40°C up to 100°C
Terminal body	Tin plated brass
Screw	M3; zinc plated steel, blue passivated
Solder pin	ø 1 mm, tin plated copper
Wire protector	Tin plated tin bronze

Approvals

	Current	Voltage	Group	AWG	Nm
	20	300	B	22-12 [1]	0,51
	10	300	D	22-12 [1]	0,51
	20	300	B	26 - 12	0,51
	10	300	D, E	26 - 12	0,51
	Current	Voltage	mm²		
	24	400	4,0		

[1] Min No. 26 AWG for factory-wiring only

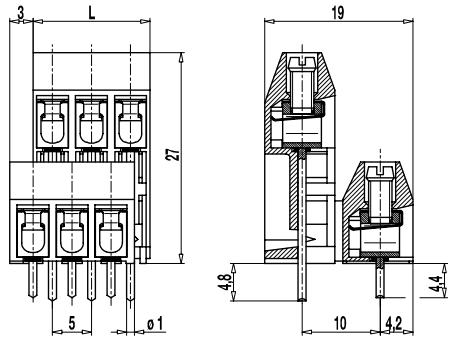
Options / Accessories

- Consecutive numbering
- Special marking according to drawing
- Self-adhesive marking strip BST-5,00
- Pitch of 10 mm for larger clearance and creepage distances
- Longer P.C. pins up to 95 mm
- Version with extended wire entrance
- With test holes, see 970-MP(-DS)

PCB connector

978-EN(-DS)

Screw connection, two-tier version, large conductor space



The PCB connector 978-EN, a two-tier version with larger terminal space and a pitch of 5 mm is available with 4 to 24 poles.
This connector is a combination of the 978-HEN with the 978 version. The rear latching hook on the 978 series locks both terminals to one unit. This configuration allows application-specific locking combinations.

Wire protection in DS-design reliably prevents damage to stranded wires by the screw.

Part Numbers

No. of poles	978-EN	978-EN-DS	Length	Pcs
4	30.872.962	40.872.962	10,00	100
6	30.872.963	40.872.963	15,00	50
8	30.872.964	40.872.964	20,00	50
10	30.872.965	40.872.965	25,00	50
12	30.872.966	40.872.966	30,00	50
14	30.872.967	40.872.967	35,00	25
16	30.872.968	40.872.968	40,00	25
18	30.872.969	40.872.969	45,00	25
20	30.872.970	40.872.970	50,00	25
22	30.872.971	40.872.971	55,00	25
24	30.872.972	40.872.972	60,00	25

General Information

Pitch	5 mm
No. of poles	4 - 24

Technical Data

Clamping Range	*solid / flexible / AWG*		
without wire protector	0,75 - 6 mm² / 0,75 - 4 mm² / 18 - 10 AWG		
with wire protector	0,34 - 6 mm² / 0,34 - 4 mm² / 22 - 10 AWG		
Rated Cross Section	2,5 mm²		
Wire Stripping Length	6,5 mm ± 0,5 mm		
Overvoltage Category	III	III	II
Pollution Severity Level	3	2	2
Rated Voltage	250 V	320 V	630 V
Rated Impulse Voltage	4 kV	4 kV	4 kV
Rated Insulation Voltage	250 V acc. to EN 60998-1		
Rated Current	24 A		
Hole in PCB	ø 1,3 mm		
Torque	0,5 Nm		

Material

Moulding	PA, grey, V-0
Comparative Tracking Index	CTI ≥ 600
Insulating Group	I
Temperature Range	-40°C up to 100°C
Terminal body	Tin plated brass
Screw	M3; zinc plated steel, blue passivated
Solder pin	ø 1 mm; tin plated copper
Wire protector	Tin plated tin bronze

Approvals

	Current	Voltage	Group	AWG	Nm
	20	300	B	22-12 [1]	0,51
	10	300	D	22-12 [1]	0,51
	20	300	B	26 - 12	0,51
	10	300	D, E	26 - 12	0,51
	Current	Voltage	mm²		
	24	250	4,0		

[1] Min No. 26 AWG for factory-wiring only

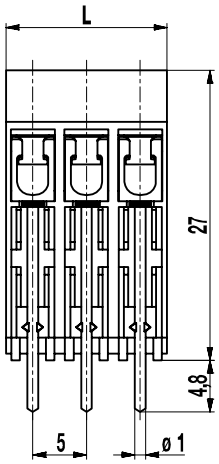
Options / Accessories

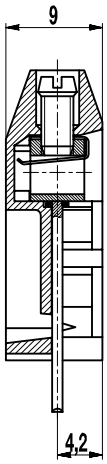
- Consecutive numbering
- Special marking according to drawing
- Self-adhesive marking strip BST-5,00
- Pitch of 10 mm for larger clearance and creepage distances
- Other P.C. pin lengths on request
- Double wire protector as bridge
- Cover for the solder pins for additional misplacing and contact protection
- Two-Tier version with the rear row offset to the left
- Special combination of the front and rear row of the two-tier version

PCB connector

978-HEN(-DS)

Screw connection, tall version, large conductor space





The PCB connector 978-HEN, a tall version with larger terminal space and a pitch of 5 mm is available with 2 to 12 poles.

This tall version is particularly designed for encapsulating PCBs whose mounting location shall provide connection outside the housing.

Wire protection in DS-design reliably prevents damage to stranded wires by the screw.

Connecting the two PCB connectors 978 and 978-EN yields the two-tier version 970-EN.

Part Numbers

No. of poles	978-HEN	978-HEN-DS	Length	Pcs
2	37.872.962	47.872.962	10,00	250
3	37.872.963	47.872.963	15,00	200
4	37.872.964	47.872.964	20,00	100
5	37.872.965	47.872.965	25,00	100
6	37.872.966	47.872.966	30,00	50
7	37.872.967	47.872.967	35,00	50
8	37.872.968	47.872.968	40,00	50
9	37.872.969	47.872.969	45,00	50
10	37.872.970	47.872.970	50,00	50
11	37.872.971	47.872.971	55,00	50
12	37.872.972	47.872.972	60,00	50

General Information

Pitch	5 mm
No. of poles	2 - 12

Technical Data

Clamping Range	*solid / flexible / AWG*		
without wire protector	0,75 - 6 mm² / 0,75 - 4 mm² / 18 - 10 AWG		
with wire protector	0,34 - 6 mm² / 0,34 - 4 mm² / 22 - 10 AWG		
Rated Cross Section	2,5 mm²		
Wire Stripping Length	6,5 mm ± 0,5 mm		
Overvoltage Category	III	III	II
Pollution Severity Level	3	3	2
Rated Voltage	250 V	320 V	630 V
Rated Impulse Voltage	4 kV	4 kV	4 kV
Rated Insulation Voltage	250 V acc. to EN 60998-1		
Rated Current	24 A		
Hole in PCB	ø 1,3 mm		
Torque	0,5 Nm		

Material

Moulding	PA, grey, V-0
Comparative Tracking Index	CTI ≥ 600
Insulating Group	I
Temperature Range	-40°C up to 100°C
Terminal body	Tin plated brass
Screw	M3; zinc plated steel, blue passivated
Solder pin	ø 1 mm; tin plated copper
Wire protector	Tin plated tin bronze

Approvals

	Current	Voltage	Group	AWG	Nm
	20	300	B	22-12 [1]	0,51
	10	300	D	22-12 [1]	0,51
	20	300	B	26 - 12	0,51
	10	300	D, E	26 - 12	0,51
	Current	Voltage	mm²		
	24	250	4,0		

[1] Min No. 26 AWG for factory-wiring only

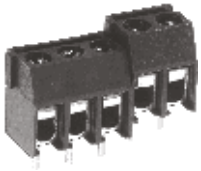
Options / Accessories

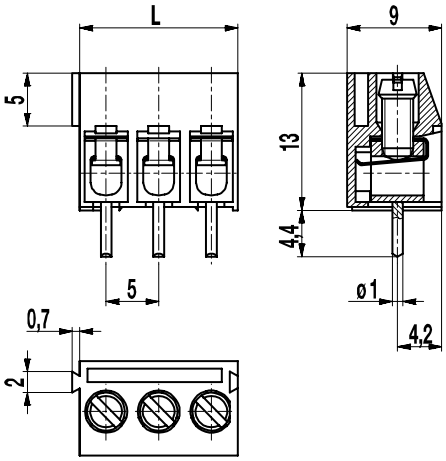
- Consecutive numbering
- Special marking according to drawing
- Self-adhesive marking strip BST-5,00
- Other P.C. pin lengths on request
- Double wire protector as bridge
- Cover for the solder pins for additional misplacing and contact protection

PCB connector

978-T(-DS)

Screw connection, interlocking, large conductor space





Part Numbers

No. of poles	978-T	978-T-DS	Length	Pcs
2	10.872.632	20.872.632	10,00	250
3	10.872.633	20.872.633	15,00	250

General Information

Pitch	5 mm
No. of poles	2 + 3

Technical Data

Clamping Range	*solid / flexible / AWG*		
without wire protector	0,75 - 6 mm² / 0,75 - 4 mm² / 18 - 10 AWG		
with wire protector	0,34 - 6 mm² / 0,34 - 4 mm² / 22 - 10 AWG		
Rated Cross Section	2,5 mm²		
Wire Stripping Length	6,5 mm ± 0,5 mm		
Overvoltage Category	III	III	II
Pollution Severity Level	3	2	2
Rated Voltage	250 V	320 V	630 V
Rated Impulse Voltage	4 kV	4 kV	4 kV
Rated Insulation Voltage	250 V acc. to EN 60998-1		
Rated Current	24 A		
Hole in PCB	ø 1,3 mm		
Torque	0,5 Nm		

Material

Moulding	PA, grey, V-0
Comparative Tracking Index	CTI ≥ 600
Insulating Group	I
Temperature Range	-40°C up to 100°C
Terminal body	Tin plated brass
Screw	M3; zinc plated steel, blue passivated
Solder pin	ø 1 mm; tin plated copper
Wire protector	Tin plated tin bronze

Approvals

	Current	Voltage	Group	AWG	Nm
	20	300	B	22-12 [1]	0,51
	10	300	D, E	22-12 [1]	0,51
	20	300	B	26 - 12	0,51
	10	300	D, E	26 - 12	0,51
	Current	Voltage	mm²		
	24	400	4,0		

[1] Min No. 26 AWG for factory-wiring only

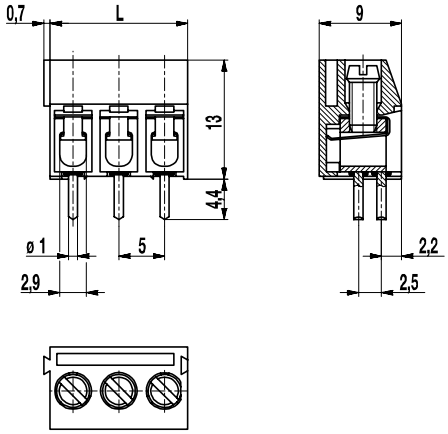
Options / Accessories

- Consecutive numbering
- Special marking according to drawing
- Self-adhesive marking strip BST-5,00
- Pitch of 10 mm for larger clearance and creepage distances
- Longer P.C. pins up to 95 mm
- 2 P.C. pins per pole, please see 978-TY
- Version with extended wire entrance
- Version with test hole, compare 970-MP, 970-TMP

PCB connector

978-TY(-DS)

Screw connection, 2 P.C. pins per pole, interlocking, large conductor space



Part Numbers

No. of poles	978-TY	978-TY-DS	Length	Pcs
2	30.872.622	40.872.622	10,00	250
3	30.872.623	40.872.623	15,00	250

General Information

Pitch	5 mm
No. of poles	2 + 3

Technical Data

Clamping Range	*solid / flexible / AWG*		
without wire protector	0,75 - 6 mm² / 0,75 - 4 mm² / 18 - 10 AWG		
with wire protector	0,34 - 6 mm² / 0,75 - 4 mm² / 22 - 10 AWG		
Rated Cross Section	2,5 mm²		
Wire Stripping Length	6,5 mm ± 0,5 mm		
Overvoltage Category	III	III	II
Pollution Severity Level	3	2	2
Rated Voltage	250 V	320 V	630 V
Rated Impulse Voltage	4 kV	4 kV	4 kV
Rated Insulation Voltage	250 V acc. to EN 60998-1		
Rated Current	24 A		
Hole in PCB	ø 1,3 mm		
Torque	0,5 Nm		

Material

Moulding	PA, grey, V-0
Comparative Tracking Index	CTI ≥ 600
Insulating Group	I
Temperature Range	-40°C up to 100°C
Terminal body	Tin plated brass
Screw	M3; zinc plated steel, blue passivated
Solder pin	ø 1 mm; tin plated copper
Wire protector	Tin plated tin bronze

Approvals

	Current	Voltage	Group	AWG	Nm
	20	300	B	22-12 [1]	0,51
	10	300	D	22-12 [1]	0,51
	20	300	B	26 - 12	0,51
	10	300	D, E	26 - 12	0,51
	Current	Voltage	mm²		
	24	400	4		

[1] Min No. 26 AWG for factory-wiring only

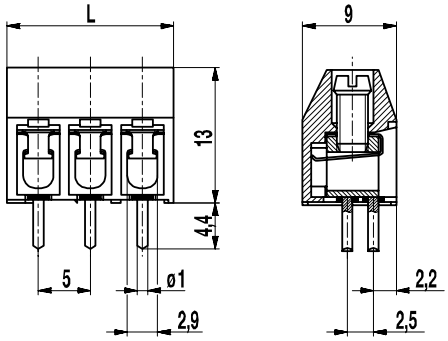
Options / Accessories

- Consecutive numbering
- Special marking according to drawing
- Self-adhesive marking strip BST-5,00
- Longer P.C. pins up to 95 mm
- Version with extended wire entrance
- Double wire protector as bridge

PCB connector

978-Y(-DS)

Screw connection, 2 P.C. pins per pole, large conductor space



Part Numbers

No. of poles	978-Y	978-Y-DS	Length	Pcs
2	30.872.802		11,00	250
4	30.872.804		21,00	200
5	30.872.805		26,00	100
6	30.872.806		31,00	100
7	30.872.807		36,00	100
8	30.872.808	39.872.808	41,00	100

further number of poles on request

General Information

Pitch	5 mm
No. of poles	2 - 32

Technical Data

Clamping Range	*solid / flexible / AWG*		
without wire protector	0,75 - 6 mm² / 0,75 - 4 mm² / 18 - 10 AWG		
with wire protector	0,34 - 6 mm² / 0,34 - 4 mm² / 22 - 10 AWG		
Rated Cross Section	2,5 mm²		
Wire Stripping Length	6,5 mm ± 0,5 mm		
Overvoltage Category	III	III	II
Pollution Severity Level	3	2	2
Rated Voltage	250 V (200 V)	320 V	630 V (400 V)
Rated Impulse Voltage	4 kV	4 kV	4 kV
Rated Insulation Voltage	250 V acc. to EN 60998-1		
Rated Current	24 A		
Hole in PCB	ø 1,3 mm		
Torque	0,5 Nm		
Other specifications	Voltage data in brackets are valid for 9-32 poles types. 2-8 poles types are "no-flame" acc. to glow-wire test.		

Material

Moulding	PA, grey, V-0
Comparative Tracking Index	2-8 poles: CTI ≥ 600; 9-2 poles: CTI 400
Insulating Group	2-8 poles: I; 9- 32 poles: II
Temperature Range	-40°C up to 100°C
Terminal body	Tin plated brass
Screw	M3; zinc plated steel, blue passivated
Solder pin	ø 1 mm; tin plated copper
Wire protector	Tin plated tin bronze

Approvals

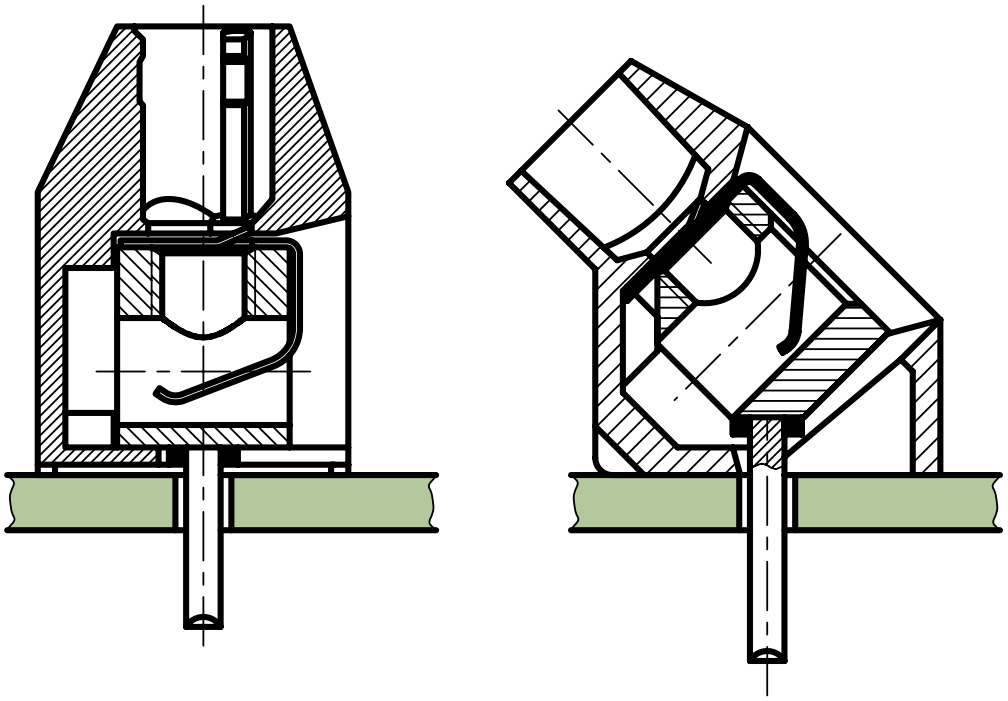
	Current	Voltage	Group	AWG	Nm
	20	300	B	22-12 [1]	0,51
	10	300	D	22-12 [1]	0,51
	20	300	B	26 - 12	0,51
	10	300	D, E	26 - 12	0,51
	Current	Voltage	mm²		
	24	400	2,5		

[1] Min No. 26 AWG for factory-wiring only

Options / Accessories

- Consecutive numbering
- Special marking according to drawing
- Self-adhesive marking strip BST-5,00
- Longer P.C. pins up to 95 mm
- Version with extended wire entrance
- Double wire protector as bridge
- With test holes, see 970-MP

Socket terminal strips

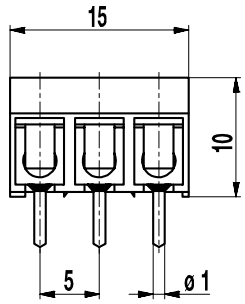


This section features the range of our socket terminal strips with a pitch of 5 mm. In combination with their mating plug connector strips, they are extremely reliable plug-in connections

For PCB assembly, socket terminal strip and plug connector systems offer a variety of benefits:
- decentralized component production,
- prevention of wiring errors,
- easy disconnection for service and maintenance purposes
- easy connection in confined space.

The contact pressure is achieved by means of a stainless steel spring with extra-long spring deflection.
Just like plug connectors, socket terminal strips can be mounted side-by-side.

Socket terminal strip
950-FB
Plug connection



The socket terminal strip 950-FB with a pitch of 5 mm is available in 2- to 32-pole design and can be mounted side-by-side without pole loss.
It is suitable to connect two PCBs using male pin strips of the series 971-SLR, -SLS oder -SLW. For this version, the plug direction for mating connectors is parallel to the PCB.

The contact pressure is achieved by means of a stainless steel spring with extra-long spring deflection.

For longer clearance and creepage distances, socket terminal strips are also available in a larger pitch.

General Information

Pitch	5 mm
No. of poles	2 - 32
Usable with	plug connector 951-SV

Technical Data

Overvoltage Category	III	III	II
Pollution Severity Level	3	2	2
Rated Voltage	160 V	160 V	320 V
Rated Impulse Voltage	2,5 kV	2,5 kV	2,5 kV
Rated Insulation Voltage	130 V acc. to EN 60998-1		
Rated Current	6 A		
Hole in PCB	ø 1,3 mm		
Other specifications	2-8 poles types are "no-flame" acc. to glow-wire test		

Material

Moulding	PA, grey, V-0
Comparative Tracking Index	2-8 poles: CTI ≥ 600; 9-32 poles: CTI 400
Insulating Group	2-8 poles: I; 9-32 poles: II
Temperature Range	-40°C up to 100°C
Terminal body	Tin plated brass
Solder pin	ø 1 mm; tin plated copper
Spring	Stainless strip steel

Approvals

	Current	Voltage	Group	AWG	Nm
	7	300	B		
	7	300	B		
	Current	Voltage	mm²		
	13,5	250			

Part Numbers

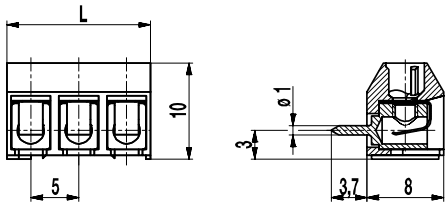
No. of poles	950-FB	Length	Pcs
2	80.871.006	10,00	250
3	80.871.053	15,00	250
4	80.871.054	20,00	100
5	80.871.055	25,00	100
6	80.871.056	30,00	100
7	80.871.001	35,00	100
8	80.871.008	40,00	100
9	80.871.009	45,00	100
10	80.871.010	50,00	100
11	80.871.011	55,00	100
12	80.871.062	60,00	100
13	80.871.063	65,00	100
14	80.871.064	70,00	100
15	80.871.065	75,00	100
16	80.871.066	80,00	100
17	80.871.067	85,00	100
18	80.871.068	90,00	100
19	80.871.069	95,00	100
20	80.871.070	100,00	100
21	80.871.071	105,00	100
22	80.871.072	110,00	100
23	80.871.073	115,00	100
24	80.871.074	120,00	100
25	80.871.075	125,00	100
26	80.871.076	130,00	100
27	80.871.077	135,00	100
28	80.871.078	140,00	100
29	80.871.079	145,00	100

further number of poles on request

Options / Accessories

- Consecutive numbering
- Special marking according to drawing
- Self-adhesive marking strip BST-5,00
- Pitch of 10 mm for larger clearance and creepage distances
- Longer P.C. pins up to 75 mm
- Version with lateral latching elements

Socket terminal strip
951-FB
Plug connection, plug-in direction vertical to PCB



The socket terminal strip 951-FB with a pitch of 5 mm is available in 2- to 32-pole design and can be mounted side-by-side without pole loss.
It is suitable to connect two PCBs using male pin strips of the series 971-SLR, -SLS oder -SLW. For this version, the plug direction for mating connectors is vertical to the PCB.

The contact pressure is achieved by means of a stainless steel spring with extra-long spring deflection.

For longer clearance and creepage distances, socket terminal strips are also available in a larger pitch.

Part Numbers

No. of poles	951-FB	Length	Pcs
2	85.871.012	10,00	250
3	85.871.083	15,00	250
4	85.871.084	20,00	200
5	85.871.085	25,00	100
6	85.871.086	30,00	100
7	85.871.022	35,00	100
8	85.871.018	40,00	100
9	85.871.019	45,00	100
10	85.871.020	50,00	100
11	85.871.021	55,00	100
12	85.871.082	60,00	100
13	85.871.023	65,00	100
14	85.871.024	70,00	100
15	85.871.025	75,00	100
16	85.871.026	80,00	100
17	85.871.027	85,00	100
18	85.871.028	90,00	100
19	85.871.029	95,00	100
20	85.871.030	100,00	100
21	85.871.031	105,00	100
22	85.871.032	110,00	100
23	85.871.039	115,00	100
24	85.871.040	120,00	100
25	85.871.041	125,00	100
26	85.871.042	130,00	100
27	85.871.037	135,00	100
28	85.871.088	140,00	100
29	85.871.089	145,00	100
30	85.871.090	150,00	100
31	85.871.091	155,00	100
32	85.871.092	160,00	100

General Information

Pitch	5 mm
No. of poles	2 - 32
Usable with	plug connector 951-SV

Technical Data

Overvoltage Category	III	III	II
Pollution Severity Level	3	2	2
Rated Voltage	160 V	160 V	320 V
Rated Impulse Voltage	2,5 kV	2,5 kV	2,5 kV
Rated Insulation Voltage	130 V acc. to EN 60998-1		
Rated Current	6 A		
Hole in PCB	ø 1,3 mm		
Other specifications	2-8 poles types are "no-flame" acc. to glow-wire test		

Material

Moulding	PA, grey, V-0
Comparative Tracking Index	2-8 poles: CTI ≥ 600; 9-32 poles: CTI 400
Insulating Group	2-8 poles: I; 9-32 poles: II
Temperature Range	-40°C up to 100°C
Terminal body	Tin plated brass
Solder pin	ø 1 mm; tin plated brass
Spring	Stainless strip steel

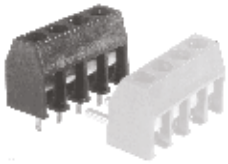
Approvals

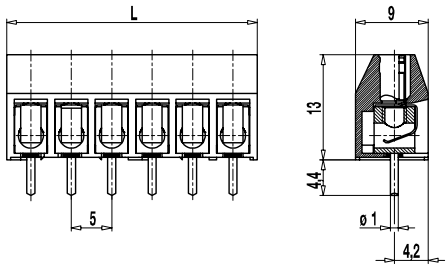
	Current	Voltage	Group	AWG	Nm
	7	300	B		
	7	300	B		
	Current	Voltage	mm²		
	13,5	250			

Options / Accessories

- Consecutive numbering
- Special marking according to drawing
- Self-adhesive marking strip BST-5,00
- Pitch of 10 mm for larger clearance and creepage distances
- Version with lateral latching elements

Socket terminal strip
970-FB
Plug connection





The socket terminal strip 970-FB with a pitch of 5 mm is available with 2 to 32 poles. In order to achieve higher housing strength, these socket terminal strips cannot be mounted side-by-side without pole loss.

It is suitable for a perpendicular connection of two PCBs when using male pin strips of the series 971-SLR, -SLS oder –SLW. For this version, the plug direction for mating connectors is parallel to the PCB.

The contact pressure is achieved by means of a stainless steel spring with extra-long spring deflection. Due to the high spring forces, it is advisable to select socket terminal strips with only up to 8 poles.
For longer clearance and creepage distances, socket terminal strips are also available in a larger pitch.

The socket terminal strip 970-FB only differs from the smaller 950-FB version by the M3 screws and longer clearance and creepage distances. It is fully compatible to versions 951-SV, 97..-FBW and -FBS.

Part Numbers

No. of poles	970-FB	Length	Pcs
2	80.872.052	11,00	250
3	80.872.053	16,00	250
4	80.872.054	21,00	200
5	80.872.055	26,00	100
6	80.872.056	31,00	100
7	80.872.057	36,00	100
8	80.872.058	41,00	100
9	80.872.059	46,00	100
10	80.872.060	51,00	100
11	80.872.061	56,00	100
12	80.872.062	61,00	100
13	80.872.063	66,00	100
14	80.872.064	71,00	100
15	80.872.065	76,00	100
16	80.872.066	81,00	100
17	80.872.067	86,00	100
18	80.872.068	91,00	100
20	80.872.070	101,00	100
22	80.872.072	111,00	100
24	80.872.074	121,00	100
26	80.872.076	131,00	100
28	80.872.078	141,00	100

further number of poles on request

General Information

Pitch	5 mm
No. of poles	2 - 32
Usable with	plug connector 971-SV

Technical Data

Overvoltage Category	III	III	II
Pollution Severity Level	3	2	2
Rated Voltage	250 V (200 V)	320 V	630 V (400 V)
Rated Impulse Voltage	4 kV	4 kV	4 kV
Rated Insulation Voltage	250 V acc. to EN 60998-1		
Rated Current	6 A		
Hole in PCB	ø 1,3 mm		
Other specifications	Voltage data in brackets are valid for 9-32 poles types. 2-8 poles types are "no-flame" acc. to glow-wire test.		

Material

Moulding	PA, grey, V-0
Comparative Tracking Index	2-8 poles: CTI ≥ 600; 9-32 poles: CTI 400
Insulating Group	2-8 poles: I; 9-32 poles: II
Temperature Range	-40°C up to 100°C
Terminal body	Tin plated brass
Solder pin	ø 1 mm; tin plated copper
Spring	Stainless strip steel

Approvals

	Current	Voltage	Group	AWG	Nm
	20 10	300 300	B D		
	20 10	300 300	B D, E		
	Current	Voltage	mm²		
	17,5	250			

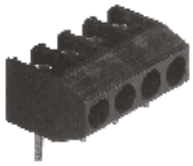
Options / Accessories

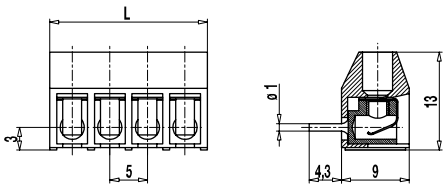
- Consecutive numbering
- Special marking according to drawing
- Self-adhesive marking strip BST-5,00
- Pitch of 10 mm for larger clearance and creepage distances
- Longer P.C. pins up to 95 mm
- Version with lateral latching elements

Socket terminal strip

971-FB

Plug connection, plug-in direction vertical to PCB





The socket terminal strip 971-FB with a pitch of 5 mm is available with 2 to 32 poles. In order to achieve a higher housing strength, these socket terminal strips cannot be mounted side-by-side without pole loss.

It is suitable for a parallel connection of two PCBs, when using male pin strips of the series 971-SLR, -SLS oder -SLW. For this version, the plug direction for mating connectors is vertical to the PCB.

The contact pressure is achieved by means of a stainless steel spring with extra-long spring deflection. Due to the high spring forces, it is advisable to select the socket terminal strip with only up to 8 poles.
For longer clearance and creepage distances, socket terminal strips are also available in a larger pitch.

The socket terminal strip 971-FB only differs from the smaller 951-FB version by the M3 screws and longer clearance and creepage distances. It is fully compatible to versions 951-SV, 97..-FBW and -FBS.

Part Numbers

No. of poles	971-FB	Length	Pcs
2	85.872.152	11,00	250
3	85.872.153	16,00	250
4	85.872.154	21,00	200
5	85.872.155	26,00	100
6	85.872.156	31,00	100
7	85.872.157	36,00	100
8	85.872.158	41,00	100
9	85.872.159	46,00	100
10	85.872.160	51,00	100
11	85.872.161	56,00	100
12	85.872.162	61,00	100
13	85.872.163	66,00	100
14	85.872.164	71,00	100
15	85.872.165	76,00	100
16	85.872.166	81,00	100
17	85.872.167	86,00	100
18	85.872.168	91,00	100
20	85.872.170	101,00	100
22	85.872.172	111,00	100
24	85.872.174	121,00	100
26	85.872.176	131,00	100
28	85.872.178	141,00	100

further number of poles on request

General Information

Pitch	5 mm
No. of poles	2 - 32
Usable with	plug connector 971-SV

Technical Data

Overvoltage Category	III	III	II
Pollution Severity Level	3	2	2
Rated Voltage	250 V	320 V	630 V (500 V)
Rated Impulse Voltage	4 kV	4 kV	4 kV
Rated Insulation Voltage	250 V acc. to EN 60998-1		
Rated Current	6 A		
Hole in PCB	ø 1,3 mm		
Other specifications	Voltage data in brackets are valid for 9-32 poles types. 2-8 poles types are "no-flame" acc. to glow-wire test.		

Material

Moulding	PA, grey, V-0
Comparative Tracking Index	2-8 poles: CTI ≥ 600; 9-32 poles: CTI 400
Insulating Group	2-8 poles: I; 9-32 poles: II
Temperature Range	-40°C up to 100°C
Terminal body	Tin plated brass
Solder pin	ø 1 mm; tin plated brass
Spring	Stainless strip steel

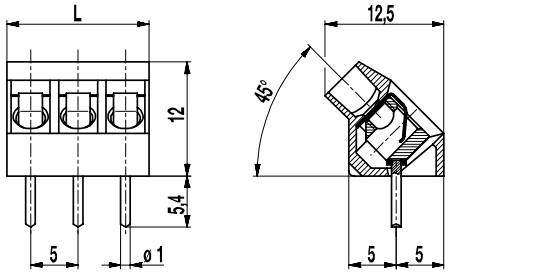
Approvals

	Current	Voltage	Group	AWG	Nm
	20 10	300 300	B D		
	20 10	300 300	B D, E		
	Current	Voltage	mm²		
	17,5	250			

Options / Accessories

- Consecutive numbering
- Special marking according to drawing
- Self-adhesive marking strip BST-5,00
- Pitch of 10 mm for larger clearance and creepage distances
- Other P.C. pin lengths on request
- Version with lateral latching elements

Socket terminal strip
974-FB
Plug connection 45°-angle to PCB



General Information

Pitch	5 mm
No. of poles	2 - 26
Usable with	plug connector 951-SV

Technical Data

Overvoltage Category	III	III	II
Pollution Severity Level	3	2	2
Rated Voltage	160 V	160 V	320 V
Rated Impulse Voltage	2,5 kV	2,5 kV	2,5 kV
Rated Insulation Voltage	130 V acc. to EN 60998-1		
Rated Current	6 A		
Hole in PCB	ø 1,3 mm		
Other specifications	Rated voltage adapted to counterpart 951-SV(-DS)		

Material

Moulding	PA, grey, V-0
Comparative Tracking Index	CTI ≥ 600
Insulating Group	I
Temperature Range	-40°C up to 100°C
Terminal body	Tin plated brass
Solder pin	ø 1 mm; tin plated copper
Spring	Stainless strip steel

Approvals

	Current	Voltage	Group	AWG	Nm
	20 10	300 300	B D		
	20 10	300 300	B D, E		
	Current	Voltage	mm²		
	13,5	250			

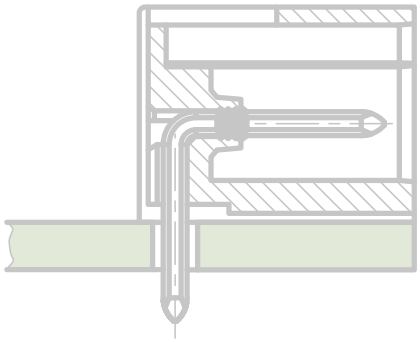
Part Numbers

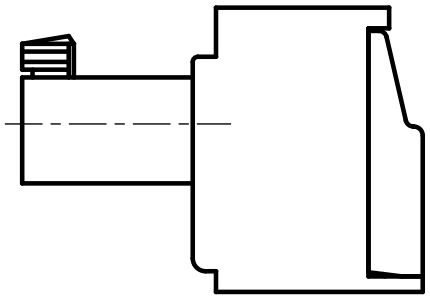
No. of poles	974-FB	Length	Pcs
2	90.874.032	10,00	250
3	90.874.033	15,00	250
4	90.874.034	20,00	200
5	90.874.035	25,00	100
6	90.874.036	30,00	100
7	90.874.037	35,00	100
8	90.874.038	40,00	100
9	90.874.039	45,00	100
10	90.874.040	50,00	100
11	90.874.041	55,00	100
12	90.874.042	60,00	100
13	90.874.043	65,00	100
14	90.874.044	70,00	50
15	90.874.045	75,00	50
16	90.874.046	80,00	50
17	90.874.047	85,00	50
18	90.874.048	90,00	50
19	90.874.049	95,00	50
20	90.874.050	100,00	50
21	90.874.051	105,00	50
22	90.874.052	110,00	50
23	90.874.053	115,00	50
24	90.874.054	120,00	50
25	90.874.055	125,00	50
26	90.874.056	130,00	50

Options / Accessories

- Consecutive numbering
- Special marking according to drawing
- Self-adhesive marking strip BST-5,00
- Pitch of 10 mm for larger clearance and creepage distances
- Other P.C. pin lengths on request
- Version with lateral latching elements
- With base plate, please see 974-BP

Plug connectors





This section lists our plug connectors with a pitch of 5 mm.

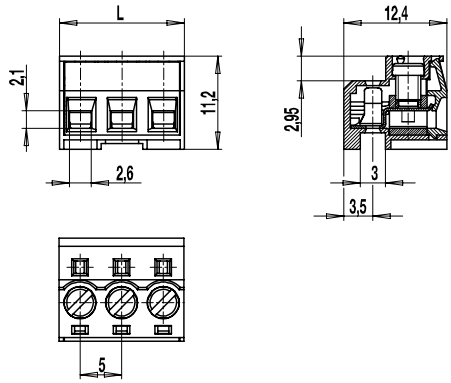
In combination with mating socket terminal strips and pin strips, plug connectors offer a variety of benefits:
- decentralized part/component assembly,
- prevention of wiring errors
- easy disconnection for service and maintenance purposes
- easy connection in confined space.

In addition to the screw version, the plug connector assortment also features solutions with tension spring technology.

The screws of these plug connectors are secured against self-loosening.
Our plug connectors can also be mounted side-by-side without pole loss.

Series 120 plug connectors (except for SMD- and THR-products) have standard grooves to accommodate coding keys. Plug connectors with such coded pin strips provide optimum protection against twisting and/or incorrect plugging.

Plug connector
115-F-111
Screw connection



This series was specially designed for space-critical applications and offers in spite of its small design a spacious clamping area. Equipped with screw clamps in elevator clamping style, this plug-in connector guarantees highest clamping security for many years.
The plug-in connector 115-F can be mounted in housing and a PCBoard can subsequently be inserted from above or below, when provided with a WECO pin strip.
Especially the possibility to insert pin strips displaced either from above and below, enables two PCBoards to be connected via one terminal block.
When using pin strips with overlong pins (available on request) in the direction of insertion, two plug connectors can be inserted one on top of the other (stacked) in order to produce a parallel circuit.

Part Numbers

No. of poles	115-F-111	Length	Pcs
2	10.816.002	10,00	250
3	10.816.003	15,00	250
4	10.816.004	20,00	250
5	10.816.005	25,00	100
6	10.816.006	30,00	100
8	10.816.008	40,00	100
10	10.816.010	50,00	50
12	10.816.012	60,00	50

further number of poles on request

General Information

Pitch	5 mm
No. of poles	2 - 12
Usable with	all ø 1,3 mm pin strips series 971-SLR, 971-SLR-THR, 971-SLR-SMD
Areas of application	Building and telecommunication technology, particularly for mass-production applications where space is limited.

Technical Data

Clamping Range	*solid / flexible / AWG*		
	0,14 - 2,5 mm² / 0,14 - 1,5 mm² / 26 - 14 AWG		
Rated Cross Section	1,5 mm²		
Wire Stripping Length	6 mm ± 0,5 mm		
Overvoltage Category	III	III	II
Pollution Severity Level	3	2	2
Rated Voltage	250 V	320 V	630 V
Rated Impulse Voltage	4 kV	4 kV	4 kV
Rated Insulation Voltage	250 V acc. to EN 60998-1		
Rated Current	10 A		
Torque	0,5 Nm		

Material

Moulding	PA, grey, V-0
Comparative Tracking Index	CTI ≥ 600
Insulating Group	I
Temperature Range	-40°C up to 100°C
Terminal body	Nickel plated brass
Pressure clamp	Copper alloy, tin plated
Screw	M3; zinc plated steel, blue passivated
Spring	Copper alloy, tin plated

Approvals

	Current	Voltage	Group	AWG	Nm
	12	300	B	26 - 14	0,23
	10	300	D	26 - 14	0,23
	12	300	B	26 - 14	0,22
	10	300	D, E	26 - 14	0,22

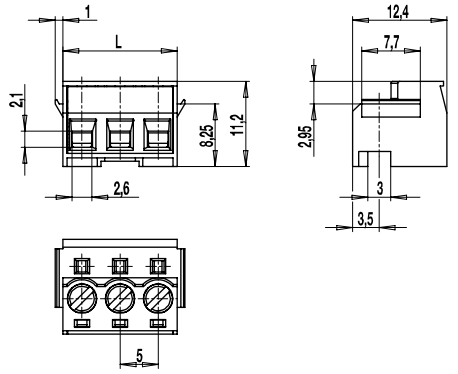
Options / Accessories

- Consecutive numbering
- Special marking according to drawing
- Self-adhesive marking strip BST-5,00

Plug connector

115-F-118

Screw connection, with lateral ribs



The plug connectors of this series were particularly designed for applications where space is limited. However, they offer generous terminal space despite their small dimensions. Equipped with lift-system screw terminals, this plug connector guarantees highest clamping safety over many years.

Series 115-F-118 features lateral ribs on both sides, which snap-in the housing's latching hook, thus ensuring optimum tight fit. PCBs are usually connected with the pin strips from above.

Application example - thermostat housing:
The plug connectors are snapped in the basic housing and their leads are wired externally. Subsequently, the control panel, equipped with corresponding pin strips, is connected from above.

Part Numbers

No. of poles	115-F-118	Length	Pcs
2	10.816.052	10,00	250
3	10.816.053	15,00	250
4	10.816.054	20,00	250
5	10.816.055	25,00	100
6	10.816.056	30,00	100
8	10.816.058	40,00	100
10	10.816.060	50,00	50
12	10.816.062	60,00	50

further number of poles on request

General Information

Pitch	5 mm
No. of poles	2 - 12
Usable with	all ø 1,3 mm pin strips series 971-SLR, 971-SLR-THR, 971-SLR-SMD
Areas of application	Building and telecommunication technology, particularly for mass-production applications where space is limited.

Technical Data

Clamping Range	*solid / flexible / AWG*		
	0,14 - 2,5 mm² / 0,14 - 1,5 mm² / 26 - 14 AWG		
Rated Cross Section	1,5 mm²		
Wire Stripping Length	6 mm ± 0,5 mm		
Overvoltage Category	III	III	II
Pollution Severity Level	3	2	2
Rated Voltage	250 V	320 V	630 V
Rated Impulse Voltage	4 kV	4 kV	4 kV
Rated Insulation Voltage	250 V acc. to EN 60998-1		
Rated Current	10 A		
Torque	0,5 Nm		

Material

Moulding	PA, grey, V-0
Comparative Tracking Index	CTI ≥ 600
Insulating Group	I
Temperature Range	-40°C up to 100°C
Terminal body	Nickel plated brass
Pressure clamp	Copper alloy, tin plated
Screw	M3; zinc plated steel, blue passivated
Spring	Copper alloy, tin plated

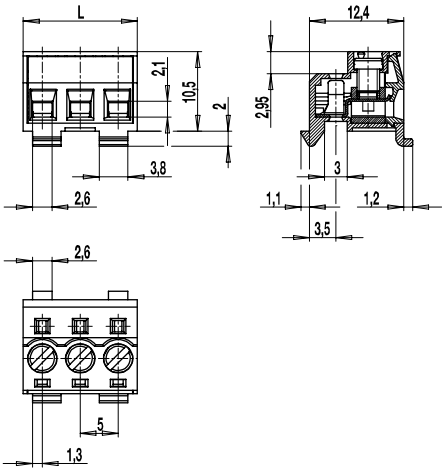
Approvals

	Current	Voltage	Group	AWG	Nm
	12	300	B	26 - 14	0,23
	10	300	D	26 - 14	0,23
	12	300	B	26 - 14	0,22
	10	300	D, E	26 - 14	0,22

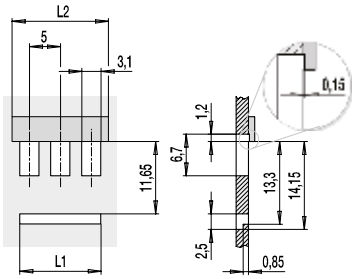
Options / Accessories

- Consecutive numbering
- Special marking according to drawing
- Self-adhesive marking strip BST-5,00

Plug connector
115-F-211
Screw connection, with snap-on foots



L1 = (Number of Poles x Pitch) - 1,9
L2 = (Number of Poles x Pitch) + 0,5



The plug connectors of this series were particularly designed for applications where space is limited. However, they offer generous terminal space despite their small dimensions. Equipped with lift-system screw terminals, this plug connector guarantees highest clamping safety over many years.

Plug connector version 115-F-211 has a snap-on foot and is designed for appropriately shaped base plates. PCBs are usually connected with the pin strips from above.

Part Numbers

No. of poles	115-F-211	Length	Pcs
2	10.816.026	10,00	250
3	10.816.027	15,00	250
4	10.816.028	20,00	250
5	10.816.029	25,00	100
6	10.816.030	30,00	100
8	10.816.032	40,00	100
10	10.816.034	50,00	50
12	10.816.036	60,00	50

further number of poles on request

General Information

Pitch	5 mm
No. of poles	2 - 12
Usable with	all ø 1,3 mm pin strips series 971-SLR, 971-SLR-THR, 971-SLR-SMD
Areas of application	Building and telecommunication technology, particularly for mass-production applications where space is limited.

Technical Data

Clamping Range	*solid / flexible / AWG*		
	0,14 - 2,5 mm² / 0,14 - 1,5 mm² / 26 - 14 AWG		
Rated Cross Section	1,5 mm²		
Wire Stripping Length	6 mm ± 0,5 mm		
Overvoltage Category	III	III	II
Pollution Severity Level	3	2	2
Rated Voltage	250 V	320 V	630 V
Rated Impulse Voltage	4 kV	4 kV	4 kV
Rated Insulation Voltage	250 V acc. to EN 60998-1		
Rated Current	10 A		
Torque	0,5 Nm		

Material

Moulding	PA, grey, V-0
Comparative Tracking Index	CTI ≥ 600
Insulating Group	I
Temperature Range	-40°C up to 100°C
Terminal body	Nickel plated brass
Pressure clamp	Copper alloy, tin plated
Screw	M3; zinc plated steel, blue passivated
Spring	Copper alloy, tin plated

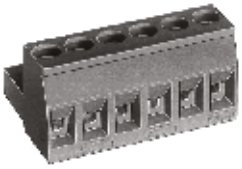
Approvals

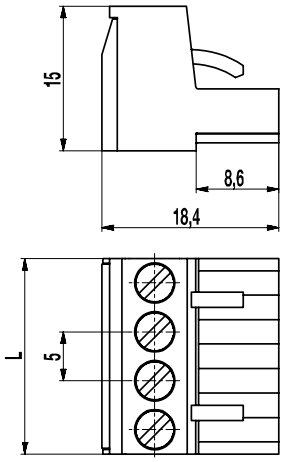
	Current	Voltage	Group	AWG	Nm
	12	300	B	26 - 14	0,23
	10	300	D	26 - 14	0,23
	12	300	B	26 - 14	0,22
	10	300	D, E	26 - 14	0,22

Options / Accessories

- Consecutive numbering
- Special marking according to drawing
- Self-adhesive marking strip BST-5,00

Plug connector
120-A-111
Screw connection





The plug connector 120-A-111, with a pitch of 5 mm, is available in 2- to 24-pole design and can be mounted side-by-side without pole loss.

For each pole the plug connector has one trapezoidal coding slot in which the coding elements 120-K can be inserted. The wire entrance is parallel to the plug direction.
The screws are captive.

Part Numbers

No. of poles	120-A-111	Length	Pcs
2	10.808.002	10,00	200
3	10.808.003	15,00	200
4	10.808.004	20,00	100
5	10.808.005	25,00	100
6	10.808.006	30,00	100
7	10.808.007	35,00	50
8	10.808.008	40,00	50
9	10.808.009	45,00	50
10	10.808.010	50,00	50
11	10.808.011	55,00	50
12	10.808.012	60,00	50
13	10.808.013	65,00	50
14	10.808.014	70,00	50
15	10.808.015	75,00	50
16	10.808.016	80,00	50
17	10.808.017	85,00	50
18	10.808.018	90,00	50
19	10.808.019	95,00	50
20	10.808.020	100,00	50
21	10.808.021	105,00	50
22	10.808.022	110,00	50
23	10.808.023	115,00	50
24	10.808.024	120,00	50

General Information

Pitch	5 mm
No. of poles	2 - 24
Usable with	all pin strips of series 120-M

Technical Data

Clamping Range	*solid / flexible / AWG*		
	0,2 - 4 mm² / 0,2 - 2,5 mm² / 26 - 12 AWG		
Rated Cross Section	2,5 mm²		
Wire Stripping Length	7 mm ± 0,5 mm		
Overvoltage Category	III	III	II
Pollution Severity Level	3	2	2
Rated Voltage	250 V	320 V	630 V
Rated Impulse Voltage	4 kV	4 kV	4 kV
Rated Insulation Voltage	250 V acc. to EN 60998-1		
Rated Current	12 A		
Torque	0,5 Nm		

Material

Moulding	PA, grey, V-0
Comparative Tracking Index	CTI ≥ 600
Insulating Group	I
Temperature Range	-40°C up to 100°C
Terminal body	Nickel plated brass
Pressure clamp	Tin plated tin bronze
Screw	M3; zinc plated steel, blue passivated
Spring	Tin plated tin bronze

Approvals

	Current	Voltage	Group	AWG	Nm
	15	300	B	26 - 12	0,51
	10	300	D	26 - 12	0,51
	15	300	B	26 - 12	0,51
	10	300	D, E	26 - 12	0,51

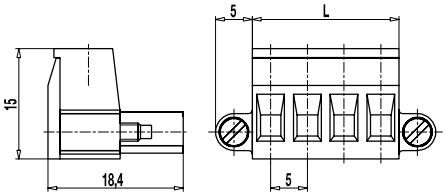
Options / Accessories

- Consecutive numbering
- Special marking according to drawing
- Self-adhesive marking strip BST-5,00
- Pitch of 10 mm for larger clearance and creepage distances
- Coding elements 120-K
- Connectors equipped with coding elements on request
- Version with extended wire entrance
- Strain relief

Plug connector

120-A-115

Screw connection, with connecting flanges



The plug connector 120-A-115, with connecting flanges and a pitch of 5 mm, is available in 2- to 24-pole design and can be mounted side-by-side.

For each pole the plug connector has one trapezoidal coding slot in which the coding elements 120-K can be inserted. The wire entrance is parallel to the plug direction.
The wire connection screws are captive.

Part Numbers

No. of poles	120-A-115	Length	Pcs
2	15.808.077	10,00	100
3	15.808.078	15,00	100
4	15.808.079	20,00	100
5	15.808.080	25,00	50
6	15.808.081	30,00	50
7	15.808.082	35,00	50
8	15.808.083	40,00	50
9	15.808.084	45,00	50
10	15.808.085	50,00	50
11	15.808.086	55,00	50
12	15.808.087	60,00	50
13	15.808.088	65,00	50
14	15.808.089	70,00	50
15	15.808.090	75,00	50
16	15.808.091	80,00	50
17	15.808.092	85,00	50
18	15.808.093	90,00	50
19	15.808.094	95,00	50
20	15.808.095	100,00	50
21	15.808.096	105,00	50
22	15.808.097	110,00	50

General Information

Pitch	5 mm
No. of poles	2 - 22
Usable with	all pin strips of series 120

Technical Data

Clamping Range	*solid / flexible / AWG*		
	0,2 - 4 mm² / 0,2 - 2,5 mm² / 26 - 12 AWG		
Rated Cross Section	2,5 mm²		
Wire Stripping Length	7 mm ± 0,5 mm		
Overvoltage Category	III	III	II
Pollution Severity Level	3	2	2
Rated Voltage	250 V	320 V	630 V
Rated Impulse Voltage	4 kV	4 kV	4 kV
Rated Insulation Voltage	250 V acc. to EN 60998-1		
Rated Current	12 A		
Torque	0,5 Nm		

Material

Moulding	PA, grey, V-0
Comparative Tracking Index	CTI ≥ 600
Insulating Group	I
Temperature Range	-40°C up to 100°C
Terminal body	Nickel plated brass
Pressure clamp	Tin plated tin bronze
Screw	M3; zinc plated steel, blue passivated
Spring	Tin plated tin bronze

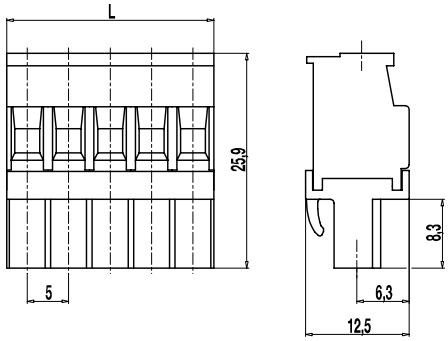
Approvals

	Current	Voltage	Group	AWG	Nm
	15	300	B	26 - 12	0,51
	10	300	D	26 - 12	0,51
	15	300	B	26 - 12	0,51
	10	300	D, E	26 - 12	0,51

Options / Accessories

- Consecutive numbering
- Special marking according to drawing
- Self-adhesive marking strip BST-5,00
- Pitch of 10 mm for larger clearance and creepage distances
- Coding elements 120-K
- Connectors equipped with coding elements on request
- Version with extended wire entrance

Plug connector
120-D-111
Screw connection, backside latching hooks



The plug connector 120-D-111, with a pitch of 5 mm, is available in 2- to 24-pole design and can be mounted side-by-side without pole loss.

On version 120-D-111, the wire entrance is located opposite to the latching hook side; on version 120-D-121, it is located on the same side. Plugging the plug connector on pin strips of series 120 therefore results in inverted plug-in configurations.

For each pole the plug connector has one trapezoidal coding slot in which the coding elements 120-K can be inserted. The wire entrance is vertical to the plug direction.
The screws are captive.

Part Numbers

No. of poles	120-D-111	Length	Pcs
2	10.808.402	10,00	100
3	10.808.403	15,00	100
4	10.808.404	20,00	100
5	10.808.405	25,00	100
6	10.808.406	30,00	100
7	10.808.407	35,00	50
8	10.808.408	40,00	50
9	10.808.409	45,00	50
10	10.808.410	50,00	50
11	10.808.411	55,00	50
12	10.808.412	60,00	100
13	10.808.413	65,00	50
14	10.808.414	70,00	50
15	10.808.415	75,00	50
16	10.808.416	80,00	50
17	10.808.417	85,00	50
18	10.808.418	90,00	50
19	10.808.419	95,00	50
20	10.808.420	100,00	50
21	10.808.421	105,00	50
22	10.808.422	110,00	50
23	10.808.423	115,00	50
24	10.808.424	120,00	50

General Information

Pitch	5 mm
No. of poles	2 - 24
Usable with	all pin strips of series 120

Technical Data

Clamping Range	*solid / flexible / AWG*		
	0,2 - 4 mm² / 0,2 - 2,5 mm² / 26 - 12 AWG		
Rated Cross Section	2,5 mm²		
Wire Stripping Length	7 mm ± 0,5 mm		
Overvoltage Category	III	III	II
Pollution Severity Level	3	2	2
Rated Voltage	250 V	320 V	630 V
Rated Impulse Voltage	4 kV	4 kV	4 kV
Rated Insulation Voltage	250 V acc. to EN 60998-1		
Rated Current	12 A		
Torque	0,5 Nm		

Material

Moulding	PA, grey, V-0
Comparative Tracking Index	CTI ≥ 600
Insulating Group	I
Temperature Range	-40°C up to 100°C
Terminal body	Nickel plated brass
Pressure clamp	Tin plated tin bronze
Screw	M3; zinc plated steel, blue passivated
Spring	Tin plated tin bronze

Approvals

	Current	Voltage	Group	AWG	Nm
	15	300	B	26 - 12	0,51
	10	300	D	26 - 12	0,51
	15	300	B	26 - 12	0,51
	10	300	D, E	26 - 12	0,51

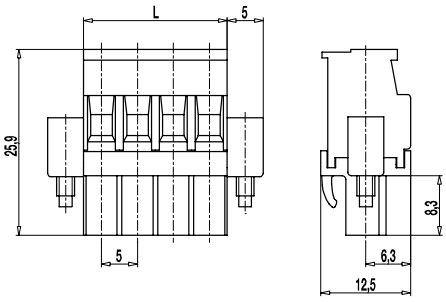
Options / Accessories

- Consecutive numbering
- Special marking according to drawing
- Self-adhesive marking strip BST-5,00
- Pitch of 10 mm for larger clearance and creepage distances
- Coding elements 120-K
- Connectors equipped with coding elements on request
- Strain relief

Plug connector

120-D-115

Screw connection, backside latching hooks, with connecting flanges



The plug connector 120-D-115, with connecting flanges and a pitch of 5 mm, is available in 2- to 22-pole design and can be mounted side-by-side.

The plug connector has connecting flanges on left and right side which are equipped with M2.5 screws. By means of those screws, the plug connector can be screwed together with mating pin strips of series 120.

On version 120-D-115, the wire entrance is located opposite to the latching hook side; on version 120-D-125, it is located on the same side. Plugging the plug connector on pin strips of series 120 therefore results in inverted plug-in configurations.

For each pole the plug connector has one trapezoidal coding slot in which the coding elements 120-K can be inserted. The wire entrance is vertical to the plug direction.
The wire connection screws are captive.

Part Numbers

No. of poles	120-D-115	Length	Pcs
2	15.808.402	10,00	100
3	15.808.403	15,00	100
4	15.808.404	20,00	100
5	15.808.405	25,00	100
6	15.808.406	30,00	50
7	15.808.407	35,00	50
8	15.808.408	40,00	50
9	15.808.409	45,00	50
10	15.808.410	50,00	50
11	15.808.411	55,00	50
12	15.808.412	60,00	50
13	15.808.413	65,00	50
14	15.808.414	70,00	50
15	15.808.415	75,00	50
16	15.808.416	80,00	50
17	15.808.417	85,00	50
18	15.808.418	90,00	50
19	15.808.419	95,00	50
20	15.808.420	100,00	50
21	15.808.421	105,00	50
22	15.808.422	110,00	50

General Information

Pitch	5 mm
No. of poles	2 - 22
Usable with	all pin strips of series 120

Technical Data

Clamping Range	*solid / flexible / AWG*		
	0,2 - 4 mm² / 0,2 - 2,5 mm² / 26 - 12 AWG		
Wire Stripping Length	7 mm ± 0,5 mm		
Overvoltage Category	III	III	II
Pollution Severity Level	3	2	2
Rated Voltage	250 V	320 V	630 V
Rated Impulse Voltage	4 kV	4 kV	4 kV
Rated Insulation Voltage	250 V acc. to EN 60998-1		
Rated Current	12 A		
Torque	0,5 Nm		

Material

Moulding	PA, grey, V-0
Comparative Tracking Index	CTI ≥ 600
Insulating Group	I
Temperature Range	-40°C up to 100°C
Terminal body	Nickel plated brass
Pressure clamp	Tin plated tin bronze
Screw	M3; zinc plated steel, blue passivated
Spring	Tin plated tin bronze

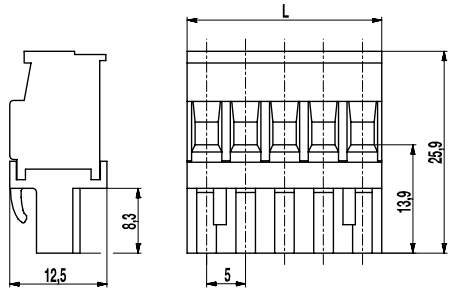
Approvals

	Current	Voltage	Group	AWG	Nm
	15	300	B	26 - 12	0,51
	10	300	D	26 - 12	0,51
	15	300	B	26 - 12	0,51
	10	300	D, E	26 - 12	0,51

Options / Accessories

- Consecutive numbering
- Special marking according to drawing
- Self-adhesive marking strip BST-5,00
- Pitch of 10 mm for larger clearance and creepage distances
- Coding elements 120-K
- Connectors equipped with coding elements on request
- Strain relief

Plug connector
120-D-121
Screw connection



The plug connector 120-D-121, with a pitch of 5 mm, is available in 2- to 24-pole design and can be mounted side-by-side without pole loss.

On version 120-D-111, the wire entrance is located opposite to the latching hook side; on version 120-D-121, it is located on the same side. Plugging the plug connector on pin strips of series 120 therefore results in inverted plug-in configurations.

For each pole the plug connector has one trapezoidal coding slot in which the coding elements 120-K can be inserted. The wire entrance is vertical to the plug direction.
The screws are captive.

Part Numbers

No. of poles	120-D-121	Length	Pcs
2	20.808.402	10,00	100
3	20.808.403	15,00	100
4	20.808.404	20,00	100
5	20.808.405	25,00	100
6	20.808.406	30,00	100
7	20.808.407	35,00	50
8	20.808.408	40,00	50
9	20.808.409	45,00	50
10	20.808.410	50,00	50
11	20.808.411	55,00	50
12	20.808.412	60,00	100
13	20.808.413	65,00	50
14	20.808.414	70,00	50
15	20.808.415	75,00	50
16	20.808.416	80,00	50
17	20.808.417	85,00	50
18	20.808.418	90,00	50
19	20.808.419	95,00	50
20	20.808.420	100,00	50
21	20.808.421	105,00	50
22	20.808.422	110,00	50
23	20.808.423	115,00	50
24	20.808.424	120,00	50

General Information

Pitch	5 mm
No. of poles	2 - 24
Usable with	all pin strips of series 120

Technical Data

Clamping Range	*solid / flexible / AWG*		
	0,2 - 4 mm² / 0,2 - 2,5 mm² / 26 - 12 AWG		
Wire Stripping Length	7 mm ± 0,5 mm		
Overvoltage Category	III	III	II
Pollution Severity Level	3	2	2
Rated Voltage	250 V	320 V	630 V
Rated Impulse Voltage	4 kV	4 kV	4 kV
Rated Insulation Voltage	250 V acc. to EN 60998-1		
Rated Current	12 A		
Torque	0,5 Nm		

Material

Moulding	PA, grey, V-0
Comparative Tracking Index	CTI ≥ 600
Insulating Group	I
Temperature Range	-40°C up to 100°C
Terminal body	Nickel plated brass
Pressure clamp	Tin plated tin bronze
Screw	M3; zinc plated steel, blue passivated
Spring	Tin plated tin bronze

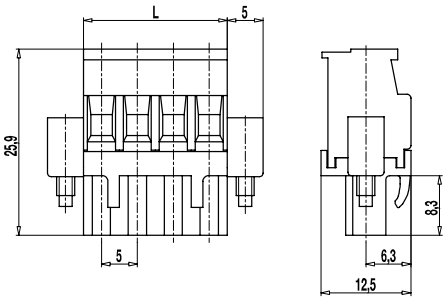
Approvals

	Current	Voltage	Group	AWG	Nm
	15	300	B	26 - 12	0,51
	10	300	D	26 - 12	0,51
	15	300	B	26 - 12	0,51
	10	300	D, E	26 - 12	0,51

Options / Accessories

- Consecutive numbering
- Special marking according to drawing
- Self-adhesive marking strip BST-5,00
- Pitch of 10 mm for larger clearance and creepage distances
- Coding elements 120-K
- Connectors equipped with coding elements on request
- Strain relief

Plug connector
120-D-125
Screw connection, with connecting flanges



The plug connector 120-D-125, with connecting flanges and a pitch of 5 mm, is available in 2- to 22-pole design and can be mounted side-by-side.

The plug connector has connecting flanges on left and right side which are equipped with M2.5 screws. By means of those screws, the plug connector can be screwed together with mating pin strips of series 120.

On version 120-D-115, the wire entrance is located opposite to the latching hook side; on version 120-D-125, it is located on the same side. Plugging the plug connector on pin strips of series 120 therefore results in inverted plug-in configurations.

For each pole the plug connector has one trapezoidal coding slot in which the coding elements 120-K can be inserted. The wire entrance is vertical to the plug direction.
The wire connection screws are captive.

Part Numbers

No. of poles	120-D-125	Length	Pcs
2	25.808.402	10,00	100
3	25.808.403	15,00	100
4	25.808.404	20,00	100
5	25.808.405	25,00	100
6	25.808.406	30,00	50
7	25.808.407	35,00	50
8	25.808.408	40,00	50
9	25.808.409	45,00	50
10	25.808.410	50,00	50
11	25.808.411	55,00	50
12	25.808.412	60,00	50
13	25.808.413	65,00	50
14	25.808.414	70,00	50
15	25.808.415	75,00	50
16	25.808.416	80,00	50
17	25.808.417	85,00	50
18	25.808.418	90,00	50
19	25.808.419	95,00	50
20	25.808.420	100,00	50
21	25.808.421	105,00	50
22	25.808.422	110,00	50

General Information

Pitch	5 mm
No. of poles	2 - 22
Usable with	all pin strips of series 120

Technical Data

Clamping Range	*solid / flexible / AWG*		
	0,2 - 4 mm² / 0,2 - 2,5 mm² / 26 - 12 AWG		
Rated Cross Section	2,5 mm²		
Wire Stripping Length	7 mm ± 0,5 mm		
Overvoltage Category	III	III	II
Pollution Severity Level	3	2	2
Rated Voltage	250 V	320 V	630 V
Rated Impulse Voltage	4 kV	4 kV	4 kV
Rated Insulation Voltage	250 V acc. to EN 60998-1		
Rated Current	12 A		
Torque	0,5 Nm		

Material

Moulding	PA, grey, V-0
Comparative Tracking Index	CTI ≥ 600
Insulating Group	I
Temperature Range	-40°C up to 100°C
Terminal body	Nickel plated brass
Pressure clamp	Tin plated tin bronze
Screw	M3; zinc plated steel, blue passivated
Spring	Tin plated tin bronze

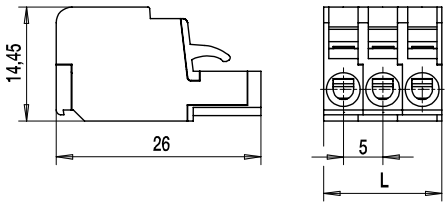
Approvals

	Current	Voltage	Group	AWG	Nm
	15	300	B	26 - 12	0,51
	10	300	D	26 - 12	0,51
	15	300	B	26 - 12	0,51
	10	300	D, E	26 - 12	0,51

Options / Accessories

- Consecutive numbering
- Special marking according to drawing
- Self-adhesive marking strip BST-5,00
- Pitch of 10 mm for larger clearance and creepage distances
- Coding elements 120-K
- Connectors equipped with coding elements on request
- Strain relief

Plug connector
120-F-111
Spring clamp connection



The plug connector 120-F series with screwless terminals complements our "CONECTA"-Series.
The rated cross-section of 2,5 mm² is geared towards screw-connector variants. This plug connector can be used with single-core copper conductors and fine-stranded wires (2,5 mm²), but also with pin cable sockets or crimped ferrules. For crimped ferrules, the cross-section must be reduced accordingly. All other rated data is identical with the screw-connector variants.

Test ports for ø 2 mm or ø 2,3 mm test plugs or for spring test pins are accessible from the upper side of the clamp. The plug connector consists of individual poles and can be manufactured to any required pole configuration at our factory.

For each pole the plug connector has one trapezoidal coding groove in which the coding elements 120-K can be inserted.

The plug connector can be operated by either a standard 3 mm blade screwdriver, terminal pliers or the built-in pusher, see 120-F-211.

Part Numbers

No. of poles	120-F-111	Length	Pcs
2	12.808.901	10,00	200
3	13.808.901	15,00	200
4	14.808.901	20,00	100
5	15.808.901	25,00	100
6	16.808.901	30,00	100
7	17.808.901	35,00	50
8	18.808.901	40,00	50
9	19.808.901	45,00	50
10	20.808.901	50,00	50
11	21.808.901	55,00	50
12	22.808.901	60,00	50

General Information

Pitch	5 mm
No. of poles	2 - 12
Usable with	all pin strips of series 120

Technical Data

Clamping Range	*solid / flexible / AWG*
	0,2 - 4 mm² / 0,2 - 2,5 mm² / 24 - 12 AWG
Rated Cross Section	2,5 mm²
Wire Stripping Length	8,5 mm ± 0,5 mm
Overvoltage Category	II
Pollution Severity Level	2
Rated Voltage	320 V
Rated Impulse Voltage	2,5 kV
Rated Insulation Voltage	250 V acc. to EN 60998-1
Rated Current	12 A

Material

Moulding	PA, grey, V-0
Comparative Tracking Index	CTI ≥ 600
Insulating Group	I
Temperature Range	-40°C up to 100°C
Pressure clamp	Copper alloy, tin plated
Tension spring	Stainless strip steel
Spring	Copper alloy, tin plated

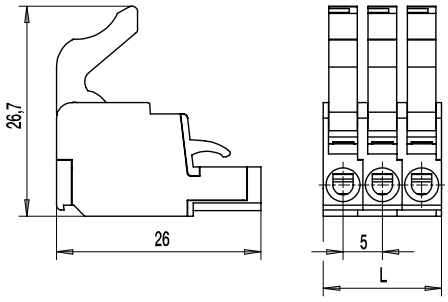
Options / Accessories

- Consecutive numbering
- Special marking according to drawing
- Self-adhesive marking strip BST-5,00
- Coding elements 120-K
- Connectors equipped with coding elements on request
- Strain relief
- Terminal pliers 120-F

Plug connector

120-F-211

Spring clamp connection, with pusher



The plug connector 120-F series with screwless terminals complements our "CONECTA"-Series.
The rated cross-section of 2,5 mm² is geared towards screw-connector variants. This plug connector can be used with single-core copper conductors and fine-stranded wires (2,5 mm²), but also with pin cable sockets or crimped ferrules. For crimped ferrules, the cross-section must be reduced accordingly. All other rated data is identical with the screw-connector variants.

Test ports for ø 2 mm or ø 2,3 mm test plugs or for spring test pins are accessible from the top of the clamp. The plug connector consists of individual poles and can be manufactured to any required pole configuration at our factory.

For each pole the plug connector has one trapezoidal coding groove in which the coding elements 120-K can be inserted.

The plug connector is operated by the built-in pusher.

Part Numbers

No. of poles	120-F-211	Length	Pcs
2	12.808.905	10,00	200
3	13.808.905	15,00	200
4	14.808.905	20,00	100
5	15.808.905	25,00	100
6	16.808.905	30,00	100
7	17.808.905	35,00	50
8	18.808.905	40,00	50
9	19.808.905	45,00	50
10	20.808.905	50,00	50
11	21.808.905	55,00	50
12	22.808.905	60,00	50

General Information

Pitch	5 mm
No. of poles	2 - 12
Usable with	all pin strips of series 120

Technical Data

Clamping Range	*solid / flexible / AWG*
	0,2 - 4 mm² / 0,2 - 2,5 mm² / 24 - 12 AWG
Rated Cross Section	2,5 mm²
Wire Stripping Length	8,5 mm ± 0,5 mm
Overvoltage Category	II
Pollution Severity Level	2
Rated Voltage	320 V
Rated Impulse Voltage	2,5 kV
Rated Insulation Voltage	250 V acc. to EN 60998-1
Rated Current	12 A

Material

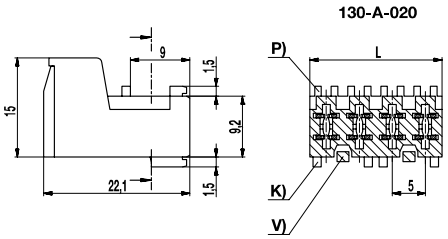
Moulding	PA, grey, V-0
Comparative Tracking Index	CTI ≥ 600
Insulating Group	I
Temperature Range	-40°C up to 100°C
Pressure clamp	Copper alloy, tin plated
Tension spring	Stainless strip steel
Spring	Copper alloy, tin plated

Options / Accessories

- Consecutive numbering
- Special marking according to drawing
- Self-adhesive marking strip BST-5,00
- Coding elements 120-K
- Connectors equipped with coding elements on request
- Strain relief

Plug connector
130-A
Screw connection

RoHS COMPLIANT



P) Positioning
K) Coding
V) Interlocking

This plug connector was developed according to "White Goods Standard RAST 5 (Plug-Connection-Technology with a pitch of 5 mm). Due to its diverse coding possiblities, it offers maximum safety against incorrect plugging.

For the coded version, a corresponding drawing or description of the desired positioning (P), coding (K) and interlocking (V) is to be provided by the customer.

The technical drawing shows an example of a 4-pole plug connector with all data on positioning, coding and interlocking location 1/2 and 3/4 .

The article numbers stated below refer to 2- to 12-pole plug connectors with exemplary coding design, which are further described on a supplementary data sheet.

Other coded versions (P,K,V) are available upon request.

Part Numbers

No. of poles	130-A	Length	Pcs
2	21.802.120	10,00	100
3	21.802.130	15,00	100
4	21.802.140	20,00	100
5	21.802.151	25,00	50
6	21.802.161	30,00	50
7	21.802.171	35,00	50
8	23.802.181	40,00	50
9	21.802.191	45,00	50
10	21.802.100	50,00	50
11	21.802.111	55,00	50
12	21.802.122	60,00	50

General Information

Pitch	5 mm
No. of poles	2 - 12
Usable with	Tab connectors 130-K, 900-SUN-5

Technical Data

Clamping Range	*solid / flexible / AWG*		
	0,2 - 4 mm² / 0,2 - 2,5 mm² / 26 - 14 AWG		
Rated Cross Section	2,5 mm²		
Wire Stripping Length	7 mm ± 0,5 mm		
Overvoltage Category	III	III	II
Pollution Severity Level	3	2	2
Rated Voltage	250 V	320 V	630 V
Rated Impulse Voltage	4 kV	4 kV	4 kV
Torque	0,5 Nm		

Material

Moulding	PA, grey, V-0
Comparative Tracking Index	CTI ≥ 600
Insulating Group	I
Temperature Range	-40°C up to 100°C
Terminal body	Nickel plated brass
Pressure clamp	Tin plated tin bronze
Screw	M3, zinc plated steel, blue passivated
Spring	Tin plated tin bronze

Approvals

	Current	Voltage	Group	AWG	Nm
	22	300	B	26 - 10	0,51
	10	300	D	26 - 10	0,51
	22	300	B	26 - 10	0,51
	10	300	D, E	26 - 10	0,51

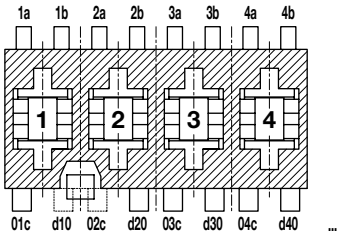
Options / Accessories

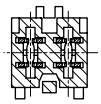
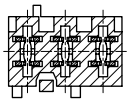
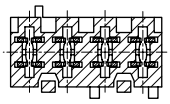
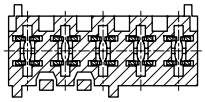
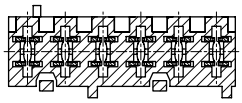
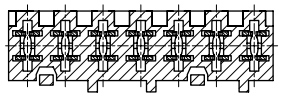
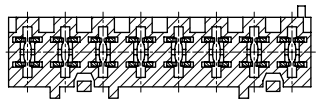
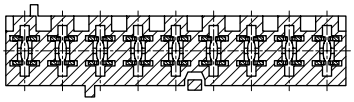
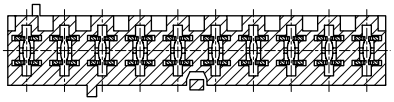
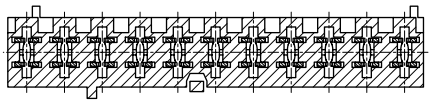
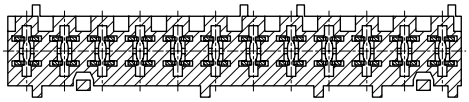
- Consecutive numbering
- Special marking according to drawing
- Self-adhesive marking strip BST-5,00
- Pitch of 10 mm for larger clearance and creepage distances
- Version with extended wire entrance

Plug connector

130-A

ADDITION: Overview coding versions

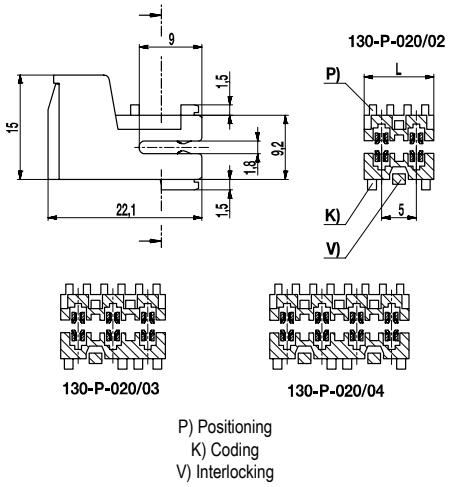


	Type / Part number	Positioning (P)	Coding (K)	Interlocking (V)
	130-A-021/02 21.802.120	1b, 2a	01c, d20	1/2
	130-A-021/03 21.802.130	1b	01c, d20	1/2
	130-A-021/04 21.802.140	1b	03c, d40	1/2, 3/4
	130-A-121/05 21.802.151	1a, 5b	01c, d30	1/2, 2/3
	130-A-121/06 21.802.161	1b	03c, d60	1/2, 4/5
	130-A-121/07 21.802.171	*none*	03c, d40, 07c	1/2, 5/6
	130-A-123/08 23.802.181	8b	02c, d30, 07c	2/3, 7/8
	130-A-121/09 21.802.191	1b	03c	5/6
	130-A-021/10 21.802.100	1b	03c	5/6
	130-A-121/11 21.802.111	1b, 11b	03c	5/6
	130-A-121/12 21.802.122	1b, 7a, 8b, 12b	d10, 06c, 09c, d100, d120	2/3, 11/12

Plug connector

130-P

Screw connection, direct contacting with the PCB



P) Positioning
K) Coding
V) Interlocking

This tab connector was developed according to "White Goods Standard RAST 5 (Plug-Connection-Technology with a pitch of 5 mm). Due to its diverse coding possiblities, it offers maximum safety against incorrect plugging.

The tab connector strips are manufactured specifically according to the respective coding application.
A corresponding drawing or description of the desired positioning (P), coding (K) and interlocking (V) is to be provided by the customer.

The technical drawing shows an example of a 4-pole version in three different views, and the coding of a 2- and 3-pole design with the corresponding article designations. The corresponding article numbers are listed below.

Other coded versions (P,K,V) are available upon request.

Part Numbers

No. of poles	130-P	Length	Pcs
2	20.802.220	10,00	100
3	20.802.230	15,00	100
4	20.802.240	20,00	100

further number of poles on request

General Information

Pitch	5 mm
No. of poles	2 - 12
Usable with	PC Boards

Technical Data

Clamping Range	*solid / flexible / AWG*		
	0,2 - 4 mm² / 0,2 - 2,5 mm² / 26 - 14 AWG		
Rated Cross Section	2,5 mm²		
Wire Stripping Length	7 mm ± 0,5 mm		
Overvoltage Category	III	III	II
Pollution Severity Level	3	2	2
Rated Voltage	200 V	320 V	500 V
Rated Impulse Voltage	4 kV	4 kV	4 kV
Rated Insulation Voltage	250 V acc. to EN 60998-1		
Rated Current	6 A		
PCB thickness	1,6 mm		
Torque	0,5 Nm		

Material

Moulding	PA, grey, V-0
Comparative Tracking Index	CTI ≥ 600
Insulating Group	I
Temperature Range	-40°C up to 100°C
Terminal body	Nickel plated brass
Pressure clamp	Tin plated tin bronze
Screw	M3; zinc plated steel, blue passivated
Spring	Tin plated tin bronze

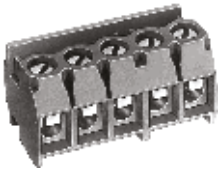
Approvals

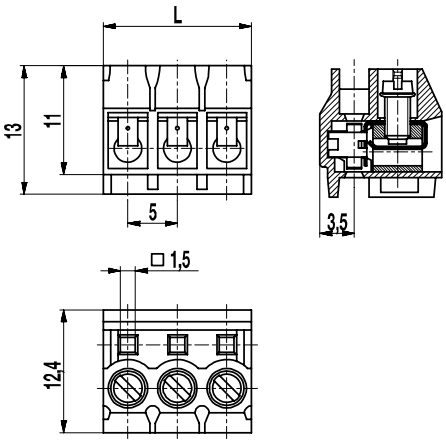
	Current	Voltage	Group	AWG	Nm
	16	300	B	26 - 12	0,51
	10	300	D	26 - 12	0,51
	15	300	B, D, E	26 - 14	0,51

Options / Accessories

- Consecutive numbering
- Special marking according to drawing
- Self-adhesive marking strip BST-5,00
- Pitch of 10 mm for larger clearance and creepage distances
- Closed side wall, on one or both sides
- Coding elements 130-CP
- Version with extended wire entrance

Plug connector
950-FL-DS
Screw connection





The plug connector 950-FL-DS is designed to be joined with pin strips of the series 971 from either the top or the bottom side. Through the use of oversized pins (available upon request) a parallel connection can be made with stacked connectors.
Among other things these plug connector, which produced with a nominal centre to centre spacing can be placed adjacently on pin strips without pole loss.
The use of these components provides also a number of other advantages such as ease of isolation for service, the decentralized production of components or the ease of connection in confined space.

Part Numbers

No. of poles	950-FL-DS	Length	Pcs
2	20.871.732	10,00	250
3	20.871.733	15,00	250
4	20.871.734	20,00	250
5	20.871.735	25,00	100
6	20.871.736	30,00	100
7	20.871.737	35,00	100
8	20.871.738	40,00	100
9	20.871.739	45,00	100
10	20.871.740	50,00	50
11	20.871.741	55,00	50
12	20.871.742	60,00	50
13	20.871.743	65,00	50
14	20.871.744	70,00	50
15	20.871.745	75,00	50
16	20.871.746	80,00	50
17	20.871.747	85,00	50
18	20.871.748	90,00	50
19	20.871.749	95,00	25
20	20.871.750	100,00	25
21	20.871.751	105,00	25
22	20.871.752	110,00	25
23	20.871.753	115,00	25
24	20.871.754	120,00	25

General Information

Pitch	5 mm
No. of poles	2 - 24
Usable with	pin strips of series 971

Technical Data

Clamping Range	*solid / flexible / AWG*		
	0,34 - 2,5 mm² / 0,34 - 1,5 mm² / 22 - 14 AWG		
Rated Cross Section	1,5 mm²		
Wire Stripping Length	6 mm ± 0,5 mm		
Overvoltage Category	III	III	II
Pollution Severity Level	3	2	2
Rated Voltage	320 V	320 V	630 V
Rated Impulse Voltage	4 kV	4 kV	4 kV
Rated Insulation Voltage	250 V acc. to EN 60998-1		
Rated Current	6 A		
Torque	0,4 Nm		
Other specifications	2-12 poles types are "no-flame" acc. to glow-wire test.		

Material

Moulding	PA, grey, V-0
Comparative Tracking Index	2-12 poles: CTI ≥ 600; 13-2 4 poles: CTI 400
Insulating Group	2-12 poles: I; 13-24 poles: II
Temperature Range	-40°C up to 100°C
Terminal body	Nickel plated brass
Screw	M2,6; zinc plated steel, blue passivated
Wire protector	Tin plated tin bronze
Spring	Tin plated tin bronze

Approvals

	Current	Voltage	Group	AWG	Nm
	10	300	B	26 - 14	0,4
	10	300	B	26 - 14	0,4

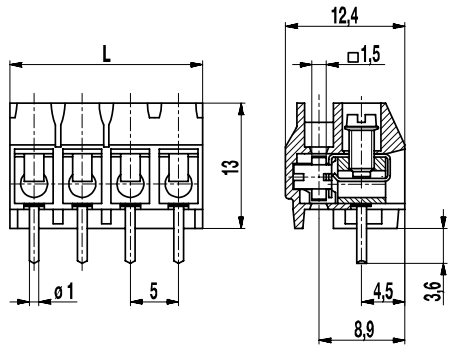
Options / Accessories

- Consecutive numbering
- Special marking according to drawing
- Self-adhesive marking strip BST-5,00
- Pitch of 10 mm for larger clearance and creepage distances

Plug connector

950-GFL-DS

Screw connection, with solder pin



Application example - thermostat housing:
The plug connectors are soldered in the basic housing and their leads are wired externally. Subsequently, the control panel, equipped with corresponding pin strips, is slotted in from above and then connected.

Part Numbers

No. of poles	950-GFL-DS	Length	Pcs
2	20.871.952	10,00	250
3	20.871.953	15,00	250
4	20.871.954	20,00	250
5	20.871.955	25,00	100
6	20.871.956	30,00	100
7	20.871.957	35,00	100
8	20.871.958	40,00	100
9	20.871.959	45,00	100
10	20.871.960	50,00	50
11	20.871.961	55,00	50
12	20.871.962	60,00	50
13	20.871.963	65,00	50
14	20.871.964	70,00	50
15	20.871.965	75,00	50
16	20.871.966	80,00	50
17	20.871.967	85,00	50
18	20.871.968	90,00	50
19	20.871.969	95,00	25
20	20.871.970	100,00	25
21	20.871.971	105,00	25
22	20.871.972	110,00	25
23	20.871.973	115,00	25
24	20.871.974	120,00	25

General Information

Pitch	5 mm
No. of poles	2 - 24
Usable with	pin strips of series 971

Technical Data

Clamping Range	*solid / flexible / AWG*		
	0,34 - 2,5 mm² / 0,34 - 2,5 mm² / 22 - 14 AWG		
Rated Cross Section	1,5 mm²		
Wire Stripping Length	6 mm ± 0,5 mm		
Overvoltage Category	III	III	II
Pollution Severity Level	3	2	2
Rated Voltage	250 V (200 V)	320 V	630 V (400 V)
Rated Impulse Voltage	4 kV	4 kV	4 kV
Rated Insulation Voltage	250 V acc. to EN 60998-1		
Rated Current	6 A		
Torque	0,4 Nm		
Other specifications	Voltage data in brackets are valid for 13-24 poles types. 2-12 pole types are "no-flame" acc. to glow-wire test.		

Material

Moulding	PA, grey, V-0
Comparative Tracking Index	2-12 poles: CTI ≥ 600; 13-24 poles: CTI 400
Insulating Group	2-12 poles: I; 13-24 poles: II
Temperature Range	-40°C up to 100°C
Terminal body	Nickel plated brass
Screw	M2,6; zinc plated steel, blue passivated
Wire protector	Tin plated tin bronze
Spring	Tin plated tin bronze

Approvals

	Current	Voltage	Group	AWG	Nm
	10	300	B	26 - 14	0,4
	10	300	B	26 - 14	0,4

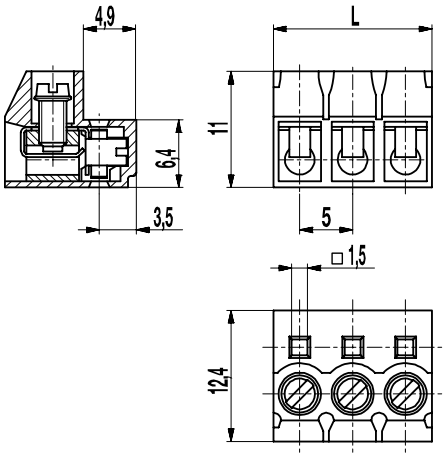
Options / Accessories

- Consecutive numbering
- Special marking according to drawing
- Self-adhesive marking strip BST-5,00
- Pitch of 10 mm for larger clearance and creepage distances

Plug connector

950-NAF-DS

Screw connection, low profile



General Information

Pitch	5 mm
No. of poles	2 - 12
Usable with	pin strips of series 971
Additonal Information	The screws are captive and secured against self-loosening.

Technical Data

Clamping Range	*solid / flexible / AWG*		
	0,34 - 2,5 mm² / 0,34 - 1,5 mm² / 22 - 14 AWG		
Rated Cross Section	1,5 mm²		
Wire Stripping Length	6 mm ± 0,5 mm		
Overvoltage Category	III	III	II
Pollution Severity Level	3	2	2
Rated Voltage	320 V	320 V	630 V
Rated Impulse Voltage	4 kV	4 kV	4 kV
Rated Insulation Voltage	250 V acc. to EN 60998-1		
Rated Current	6 A		
Torque	0,4 Nm		
Other specifications	By use with pins LST-1,3: III-3-160V-2,5 kV		

Part Numbers

No. of poles	950-NAF-DS	Length	Pcs
2	20.871.722	10,00	250
3	20.871.723	15,00	250
4	20.871.724	20,00	250
5	20.871.725	25,00	100
6	20.871.786	30,00	100
7	20.871.787	35,00	100
8	20.871.788	40,00	100
9	20.871.789	45,00	100
10	20.871.790	50,00	50
11	20.871.791	55,00	50
12	20.871.792	60,00	50

Material

Moulding	PA, grey, V-0
Comparative Tracking Index	CTI ≥ 600
Insulating Group	I
Temperature Range	-40°C up to 100°C
Terminal body	Nickel plated brass
Screw	M2,6; zinc plated steel, blue passivated
Wire protector	Tin plated tin bronze
Spring	Tin plated tin bronze

Approvals

	Current	Voltage	Group	AWG	Nm
	10	300	B	26 - 14	0,4
	10	300	B	26 - 14	0,4

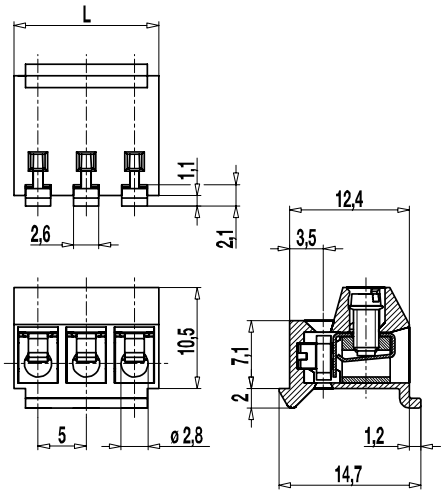
Options / Accessories

- Consecutive numbering
- Special marking according to drawing
- Self-adhesive marking strip BST-5,00
- Pitch of 10 mm for larger clearance and creepage distances

Plug connector

950-NLFL-DS

Screw connection, with locking foot



Application example - thermostat housing:
The plug connectors are snapped in the basic housing and their leads are wired externally. Subsequently, the control panel, equipped with corresponding pin strips, is connected from above.

Part Numbers

No. of poles	950-NLFL-DS	Length	Pcs
2	20.871.772	10,00	250
3	20.871.773	15,00	250
4	20.871.774	20,00	100
5	20.871.775	25,00	100
6	20.871.776	30,00	100
7	20.871.777	35,00	100
8	20.871.778	40,00	100
9	20.871.779	45,00	100
10	20.871.780	50,00	50
11	20.871.781	60,00	50
12	20.871.782	65,00	50

General Information

Pitch	5 mm
No. of poles	2 - 12
Usable with	pin strips of series 971

Technical Data

Clamping Range	*solid / flexible / AWG*		
	0,34 - 2,5 mm² / 0,34 - 1,5 mm² / 22 - 14 AWG		
Rated Cross Section	1,5 mm²		
Wire Stripping Length	6 mm ± 0,5 mm		
Overvoltage Category	III	III	II
Pollution Severity Level	3	2	2
Rated Voltage	320 V	320 V	630 V
Rated Impulse Voltage	4 kV	4 kV	4 kV
Rated Insulation Voltage	250 V acc. to EN 60998-1		
Rated Current	6 A		
Torque	0,4 Nm		
Other specifications	By use with pins LST-1,3: III-3-160V-2,5 kV		

Material

Moulding	PA, black, V-0
Comparative Tracking Index	CTI ≥ 600
Insulating Group	I
Temperature Range	-40°C up to 100°C
Terminal body	Nickel plated brass
Screw	M2,6; zinc plated steel, blue passivated
Wire protector	Tin plated tin bronze
Spring	Tin plated tin bronze

Approvals

	Current	Voltage	Group	AWG	Nm
	10	300	B	26 - 14	0,4
	10	300	B	26 - 14	0,4

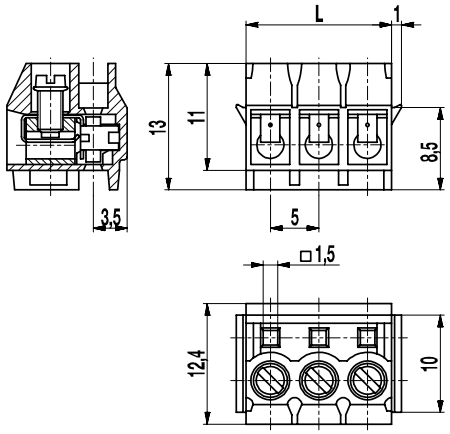
Options / Accessories

- Consecutive numbering
- Special marking according to drawing
- Self-adhesive marking strip BST-5,00
- Pitch of 10 mm for larger clearance and creepage distances

Plug connector

950-RFL-DS

Screw connection, with locking device on the sides



Application example - thermostat housing:
The plug connectors are snapped in the basic housing and their leads are wired externally. Subsequently, the control panel, equipped with corresponding pin strips, is connected from above.

Part Numbers

No. of poles	950-RFL-DS	Length	Pcs
2	20.871.760	10,00	250
3	20.871.758	15,00	250
4	20.871.762	20,00	250
5	20.871.763	25,00	100
6	20.871.756	30,00	100
7	20.871.759	35,00	100
8	20.871.755	40,00	300
9	20.871.761	45,00	50
10	20.871.757	50,00	50
11	20.871.764	55,00	50
12	20.871.765	60,00	50

General Information

Pitch	5 mm
No. of poles	2 - 12
Usable with	pin strips of series 971

Technical Data

Clamping Range	*solid / flexible / AWG*		
	0,34 - 2,5 mm² / 0,34 - 1,5 mm² / 22 - 14 AWG		
Rated Cross Section	1,5 mm²		
Wire Stripping Length	6 mm ± 0,5 mm		
Overvoltage Category	III	III	II
Pollution Severity Level	3	2	2
Rated Voltage	320 V	320 V	630 V
Rated Impulse Voltage	4 kV	4 kV	4 kV
Rated Insulation Voltage	250 V acc. to EN 60998-1		
Rated Current	6 A		
Torque	0,4 Nm		
Other specifications	By use with pins LST-1,3: III-3-160V-2,5 kV		

Material

Moulding	PA, grey, V-0
Comparative Tracking Index	CTI ≥ 600
Insulating Group	I
Temperature Range	-40°C up to 100°C
Terminal body	Nickel plated brass
Screw	M2,6; zinc plated steel, blue passivated
Wire protector	Tin plated tin bronze
Spring	Tin plated tin bronze

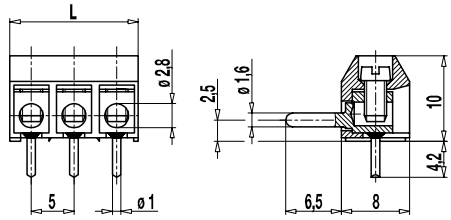
Approvals

	Current	Voltage	Group	AWG	Nm
	10	300	B	26 - 14	0,4
	10	300	B	26 - 14	0,4

Options / Accessories

- Consecutive numbering
- Special marking according to drawing
- Self-adhesive marking strip BST-5,00
- Pitch of 10 mm for larger clearance and creepage distances

Plug connector
950-SVG
Screw connection, with solder pin



Part Numbers

No. of poles	950-SVG	Length	Pcs
2	90.871.012	10,00	200
3	90.871.083	15,00	100
4	90.871.084	20,00	100
5	90.871.085	25,00	100
6	90.871.086	30,00	50
7	90.871.022	35,00	50
8	90.871.018	40,00	50
9	90.871.019	45,00	50
10	90.871.020	50,00	50
11	90.871.021	55,00	50
12	90.871.082	60,00	50
13	90.871.023	65,00	25
14	90.871.024	70,00	25
15	90.871.025	75,00	25
16	90.871.026	80,00	25
17	90.871.027	85,00	25
18	90.871.028	90,00	25
19	90.871.029	95,00	25
20	90.871.030	100,00	25
21	90.871.031	105,00	25
22	90.871.032	110,00	25
23	90.871.039	115,00	25
24	90.871.040	120,00	25
25	90.871.041	125,00	25
26	90.871.042	130,00	25
27	90.871.037	135,00	25
28	90.871.088	140,00	20
29	90.871.089	145,00	20
30	90.871.090	150,00	20
31	90.871.091	155,00	20
32	90.871.092	160,00	20

General Information

Pitch	5 mm
No. of poles	2 - 32
Usable with	plug connector 971-FBS
Additonal Information	Can be used as a three-way contact

Technical Data

Clamping Range	*solid / flexible / AWG*		
	0,75 - 4 mm² / 0,75 - 2,5 mm² / 18 - 12 AWG		
Rated Cross Section	1,5 mm²		
Wire Stripping Length	5 mm ± 0,5 mm		
Overvoltage Category	III	III	II
Pollution Severity Level	3	2	2
Rated Voltage	160 V	160 V	320 V
Rated Impulse Voltage	2,5 kV	2,5 kV	2,5 kV
Rated Insulation Voltage	130 V acc. to EN 60998-1		
Rated Current	6 A		
Hole in PCB	ø 1,3 mm		
Torque	0,4 Nm		
Other specifications	2-8 poles types are "no-flame" acc. to glow-wire test.		

Material

Moulding	PA, grey, V-0
Comparative Tracking Index	2-8 poles: CTI ≥ 600; 9-32 poles: CTI 400
Insulating Group	2-8 poles: I; 9-32 poles: II
Temperature Range	-40°C up to 100°C
Terminal body	Tin plated brass
Screw	M2,6; zinc plated steel, blue passivated
Solder pin	ø 1 mm; tin plated copper
Plug	ø 1,6 mm; tin plated brass

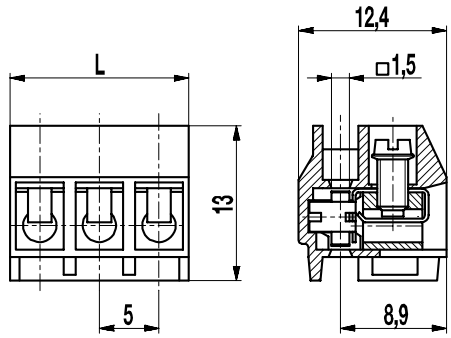
Approvals

	Current	Voltage	Group	AWG	Nm
	7	300	B	26 - 14	0,4
	7	300	B	26 - 14	0,4

Options / Accessories

- Consecutive numbering
- Special marking according to drawing
- Self-adhesive marking strip BST-5,00
- Pitch of 10 mm for larger clearance and creepage distances
- Longer P.C. pins up to 75 mm

Plug connector
950-TFL-DS
Screw connection, interlocking



Part Numbers

No. of poles	950-TFL-DS	Length	Pcs
2	20.871.702	10,00	250
3	20.871.703	15,00	250
8	20.871.708	40,00	100

General Information

Pitch	5 mm
No. of poles	2, 3, 8
Usable with	pin strips of series 971

Technical Data

Clamping Range	*solid / flexible / AWG*		
	0,34 - 2,5 mm² / 0,34 - 1,5 mm² / 22 - 14 AWG		
Rated Cross Section	1,5 mm²		
Wire Stripping Length	6 mm ± 0,5 mm		
Overvoltage Category	III	III	II
Pollution Severity Level	3	2	2
Rated Voltage	320 V	320 V	630 V
Rated Impulse Voltage	4 kV	4 kV	4 kV
Rated Insulation Voltage	250 V to EN 60998-1		
Rated Current	6 A		
Torque	0,4 Nm		
Other specifications	By use with pins LST-1,3: III-3-160V-2,5 kV		

Material

Moulding	PA, grey, V-0
Comparative Tracking Index	CTI ≥ 600
Insulating Group	I
Temperature Range	-40°C up to 100°C
Terminal body	Nickel plated brass
Screw	M2,6; zinc plated steel, blue passivated
Wire protector	Tin plated tin bronze
Spring	Tin plated tin bronze

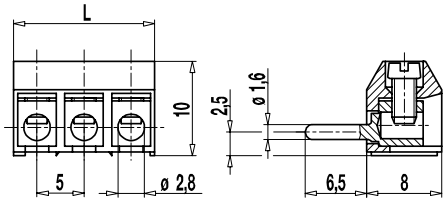
Approvals

	Current	Voltage	Group	AWG	Nm
	10	300	B	26 - 14	0,4
	10	300	B	26 - 14	0,4

Options / Accessories

- Consecutive numbering
- Special marking according to drawing
- Self-adhesive marking strip BST-5,00
- Pitch of 10 mm for larger clearance and creepage distances

Plug connector
951-SV(-DS)
Screw connection, pin ø 1,6 mm



General Information

Pitch	5 mm
No. of poles	2 - 32
Usable with	plug connectors 950-FS, 951-FB

Technical Data

Clamping Range	*solid / flexible / AWG*		
without wire protector	0,75 - 4 mm² / 0,75 - 2,5 mm² / 18 - 12 AWG		
with wire protector	0,34 - 2,5 mm² / 0,34 - 2,5 mm² / 22 - 14 AWG		
Rated Cross Section	1,5 mm²		
Wire Stripping Length	5 mm ± 0,5 mm		
Overvoltage Category	III	III	II
Pollution Severity Level	3	2	2
Rated Voltage	160 V	160 V	320 V
Rated Impulse Voltage	2,5 kV	2,5 kV	2,5 kV
Rated Insulation Voltage	130 V acc. to EN 60998-1		
Rated Current	6 A		
Torque	0,4 Nm		
Other specifications	2-8 poles types are "no-flame" acc. to glow-wire test.		

Material

Moulding	PA, grey, V-0
Comparative Tracking Index	2-8 poles: CTI ≥ 600; 9-32 poles: CTI 400
Insulating Group	2-8 poles: I; 9-32 poles: II
Temperature Range	-40°C up to 100°C
Terminal body	Tin plated brass
Screw	M2,6; zinc plated steel, blue passivated
Wire protector	Tin plated tin bronze
Plug	ø 1,6 mm; tin plated brass

Approvals

	Current	Voltage	Group	AWG	Nm
	7	300	B	26 - 14	0,4
	7	300	B	26 - 14	0,4
	Current	Voltage	mm²		
	13,5	250	1,5		

Part Numbers

No. of poles	951-SV	951-SV-DS	Length	Pcs
2	80.871.012	86.871.012	10,00	250
3	80.871.083	86.871.083	15,00	250
4	80.871.084	86.871.084	20,00	200
5	80.871.085	86.871.085	25,00	100
6	80.871.086	86.871.086	30,00	100
7	80.871.022	86.871.022	35,00	100
8	80.871.018	86.871.018	40,00	100
9	80.871.019	86.871.019	45,00	100
10	80.871.020	86.871.020	50,00	100
11	80.871.021	86.871.021	55,00	100
12	80.871.082	86.871.082	60,00	100
13	80.871.023	86.871.023	65,00	100
14	80.871.024	86.871.024	70,00	50
15	80.871.025	86.871.025	75,00	50
16	80.871.026	86.871.026	80,00	100
17	80.871.027	86.871.027	85,00	50
18	80.871.028	86.871.028	90,00	50
19	80.871.029	86.871.029	95,00	50
20	80.871.030	86.871.030	100,00	50
21	80.871.031	86.871.031	105,00	25
22	80.871.032	86.871.032	110,00	25
23	80.871.039	86.871.039	115,00	25
24	80.871.040	86.871.040	120,00	25
25	80.871.041	86.871.041	125,00	25
26	80.871.042	86.871.042	130,00	25
27	80.871.037	86.871.037	135,00	25
28	80.871.088	86.871.088	140,00	25
29	80.871.089	86.871.089	145,00	25
30	80.871.090	86.871.090	150,00	25
31	80.871.091	86.871.091	155,00	25
32	80.871.092	86.871.092	160,00	25

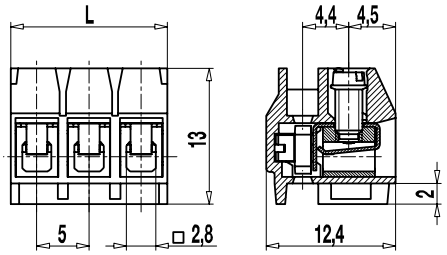
Options / Accessories

- Consecutive numbering
- Special marking according to drawing
- Self-adhesive marking strip BST-5,00
- Pitch of 10 mm for larger clearance and creepage distances
- Version with lateral latching elements

Plug connector

958-FL-DS

Screw connection, large conductor space



The PCB plug connector 958-FL-DS with a pitch of 5 mm is available in 2- to 8-pole design and can be plugged side-by-side on a pin strip without pole loss.
The terminal space is of rectangular design. The rectangular shape offers ample space for the wire insertion of stranded wires with a maximum cross-section of 2,5 mm². This special terminal body can be used for all versions of the comprehensive 950-F... series.

This plug connector is designed to plug on pin strips of series 971 both from the top and the bottom. When using pin strips with extra-long pins (available upon request), two plug connectors can be pushed one on top of the other (stacked) thus achieving a parallel connection.
The use of these plug connectors offer a great variety of other benefits, such as easy disconnection for service purposes, decentralized component production or simply easy connection in confined space.

Part Numbers

No. of poles	958-FL-DS	Length	Pcs
2	40.871.732	10,00	250
3	40.871.733	15,00	250
4	40.871.734	20,00	250
5	40.871.735	25,00	100
6	40.871.736	30,00	100
7	40.871.737	35,00	100
8	40.871.738	40,00	100

further number of poles on request

General Information

Pitch	5 mm
No. of poles	2 - 8
Usable with	pin strips of series 971

Technical Data

Clamping Range	*solid / flexible / AWG*		
	0,34 - 2,5 mm² / 0,34 - 2,5 mm² / 22 - 14 AWG		
Rated Cross Section	1,5 mm²		
Wire Stripping Length	6 mm ± 0,5 mm		
Overvoltage Category	III	III	II
Pollution Severity Level	3	3	2
Rated Voltage	320 V	320 V	630 V
Rated Impulse Voltage	4 kV	4 kV	4 kV
Rated Insulation Voltage	250 V acc. to EN 60998-1		
Rated Current	6 A		
Torque	0,4 Nm		
Other specifications	By use with pins LST-1,3: III-3-160V-2,5 kV		

Material

Moulding	PA, grey, V-0
Comparative Tracking Index	CTI ≥ 600
Insulating Group	I
Temperature Range	-40°C up to 100°C
Terminal body	Nickel plated brass
Screw	M2,6; zinc plated steel, blue passivated
Wire protector	Tin plated tin bronze
Spring	Tin plated tin bronze

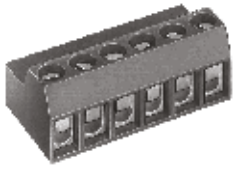
Approvals

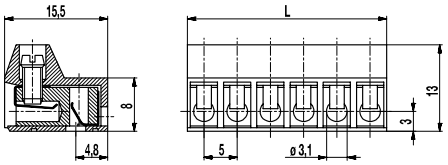
	Current	Voltage	Group	AWG	Nm
	10	300	B	26 - 14	0,4
	10	300	B	26 - 14	0,4

Options / Accessories

- Consecutive numbering
- Special marking according to drawing
- Self-adhesive marking strip BST-5,00

Plug connector
970-FBW(-DS)
Screw connection, plugable from the bottom





The PCB plug connector 970-FBW with a pitch of 5 mm is available in 2- to 24-pole design and can be mounted side-by-side without pole loss.

The connector can be plugged on pin strips, such as the 971-SLW series. The long ribs of the pin strip offer optimum supporting surface for the socket terminal strip.

The screws are secured against self-loosening.

Upon request, the 970-FBW series is also available with additional ribs on the wire entrance side, which increase clearance and creepage distances.

Part Numbers

No. of poles	970-FBW	970-FBW-DS	Length	Pcs
2	30.873.102	40.873.102	10,00	200
3	30.873.103	40.873.103	15,00	200
4	30.873.104	40.873.104	20,00	100
5	30.873.105	40.873.105	25,00	100
6	30.873.106	40.873.106	30,00	50
7	30.873.107	40.873.107	35,00	50
8	30.873.108	40.873.108	40,00	50
9	30.873.109	40.873.109	45,00	50
10	30.873.110	40.873.110	50,00	50
11	30.873.111	40.873.111	55,00	50
12	30.873.112	40.873.112	60,00	50
13	30.873.113	40.873.113	65,00	50
14	30.873.114	40.873.114	70,00	50
15	30.873.115	40.873.115	75,00	50
16	30.873.116	40.873.116	80,00	50
17	30.873.117	40.873.117	85,00	50
18	30.873.118	40.873.118	90,00	50
19	30.873.119	40.873.119	95,00	50
20	30.873.120	40.873.120	100,00	50
21	30.873.121	40.873.121	105,00	50
22	30.873.122	40.873.122	110,00	50
23	30.873.123	40.873.123	115,00	50
24	30.873.124	40.873.124	120,00	50

General Information

Pitch	5 mm
No. of poles	2 - 24
Usable with	pin strips 971-FBWP, 971-SLW, single pins LST-1,3-6,5

Technical Data

Clamping Range	*solid / flexible / AWG*
without wire protector	1 - 6 mm² / 1 - 4 mm² / 16 - 10 AWG
with wire protector	0,75 - 4 mm² / 0,75 - 2,5 mm² / 18 - 12 AWG
Rated Cross Section	2,5 mm²
Wire Stripping Length	5,5 mm
Overvoltage Category	III
Pollution Severity Level	3
Rated Voltage	250 V (200 V)
Rated Impulse Voltage	4 kV
Rated Current	6 A
Torque	0,5 Nm
Other specifications	Voltage data in brackets are valid for 13-24 poles types. 2-12 poles types are "no-flame" acc. to glow-wire test.

Material

Moulding	PA, grey, V-0
Comparative Tracking Index	2-12 poles: CTI ≥ 600; 13-24 poles: CTI 250
Insulating Group	2-12 poles: I; 13-24 poles: IIIa
Temperature Range	-40°C up to 100°C
Terminal body	Tin plated brass
Screw	M3; zinc plated steel, blue passivated
Wire protector	Tin plated tin bronze
Spring	Stainless strip steel

Approvals

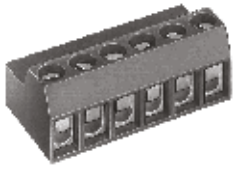
	Current	Voltage	Group	AWG	Nm
	20	300	B	22-12 [1]	0,51
	10	300	D	22-12 [1]	0,51
	20	300	B	26 - 12	0,51
	10	300	B, D	26 - 12	0,51
	Current	**Voltage**	**mm²**		
	13,5	250	2,5		

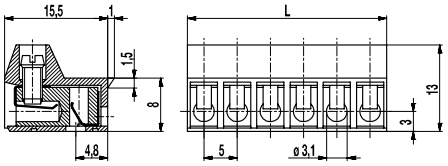
[1] Min No. 26 AWG for factory-wiring only

Options / Accessories

- Consecutive numbering
- Special marking according to drawing
- Self-adhesive marking strip BST-5,00
- Pitch of 10 mm for larger clearance and creepage distances
- Version with extended wire entrance
- Double wire protector as bridge
- Plug connector 971-RFBS(-DS) with ribs at wire entry and fitting locking plate

Plug connector
970-NFBW(-DS)
Screw connection, with latch nose





The PCB plug connector 970-NFBW with a pitch of 5 mm is available in 2- to 12-pole design and can be mounted side-by-side without pole loss.

The connector can be plugged on pin strips, such as the 971-SLW series. The long ribs of the pin strip offer optimum supporting surface for the socket terminal strip. The 970-NFBW series has an additional rear latch nose. Plugging the 970-NFBW series on the mating pin strip 971-FBWP provides a vibration-proof connection.

The screws are secured against self-loosening.

Part Numbers

No. of poles	970-NFBW	970-NFBW-DS	Length	Pcs
2	30.873.142	40.873.142	10,00	200
3	30.873.143	40.873.143	15,00	200
4	30.873.144	40.873.144	20,00	100
5	30.873.145	40.873.145	25,00	100
6	30.873.146	40.873.146	30,00	50
7	30.873.147	40.873.147	35,00	50
8	30.873.148	40.873.148	40,00	50
9	30.873.149	40.873.149	45,00	50
10	30.873.150	40.873.150	50,00	50
11	30.873.151	40.873.151	55,00	50
12	30.873.152	40.873.152	60,00	50

General Information

Pitch	5 mm
No. of poles	2 - 12
Usable with	pin strip 971-FBWP, 971-SLW, single pins LST-1,3x6,5

Technical Data

Clamping Range	*solid / flexible / AWG*
without wire protector	1 - 6 mm² / 1 - 4 mm² / 16 - 10 AWG
with wire protector	0,75 - 4 mm² / 0,75 - 2,5 mm² / 18 - 12 AWG
Rated Cross Section	2,5 mm²
Wire Stripping Length	5,5 mm
Overvoltage Category	III
Pollution Severity Level	3
Rated Voltage	250 V
Rated Impulse Voltage	4 kV
Rated Insulation Voltage	250 V acc. to EN 60998-1
Rated Current	6 A
Torque	0,5 Nm

Material

Moulding	PA, grey, V-0
Comparative Tracking Index	CTI ≥ 600
Insulating Group	I
Temperature Range	-40°C up to 100°C
Terminal body	Tin plated brass
Screw	M3; zinc plated steel, blue passivated
Wire protector	Tin plated tin bronze
Spring	Stainless strip steel

Approvals

	Current	Voltage	Group	AWG	Nm
	20	300	B	22-12 [1]	0,51
	10	300	D	22-12 [1]	0,51
	20	300	B	26 - 12	0,4
	10	300	D, E	26 - 12	0,4
	Current	Voltage	mm²		
	13,5	250	2,5		

[1] Min No. 26 AWG for factory-wiring only

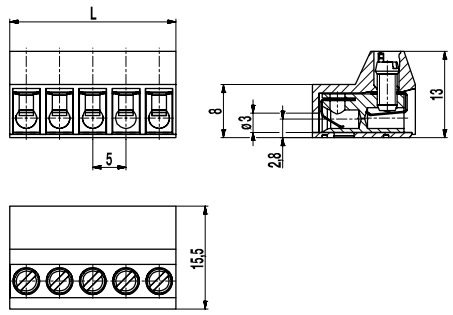
Options / Accessories

- Consecutive numbering
- Special marking according to drawing
- Self-adhesive marking strip BST-5,00
- Pitch of 10 mm for larger clearance and creepage distances
- Version with extended wire entrance
- Double wire protector as bridge

Plug connector

971-FBS(-DS)

Screw connection, plugable from backside



Part Numbers

No. of poles	971-FBS	971-FBS-DS	Length	Pcs
2	10.873.102	20.873.102	10,00	200
3	10.873.103	20.873.103	15,00	200
4	10.873.104	20.873.104	20,00	100
5	10.873.105	20.873.105	25,00	100
6	10.873.106	20.873.106	30,00	50
7	10.873.107	20.873.107	35,00	50
8	10.873.108	20.873.108	40,00	50
9	10.873.109	20.873.109	45,00	50
10	10.873.110	20.873.110	50,00	50
11	10.873.111	20.873.111	55,00	50
12	10.873.112	20.873.112	60,00	50
13	10.873.113	20.873.113	65,00	50
14	10.873.114	20.873.114	70,00	50
15	10.873.115	20.873.115	75,00	50
16	10.873.116	20.873.116	80,00	50
17	10.873.117	20.873.117	85,00	50
18	10.873.118	20.873.118	90,00	50
19	10.873.119	20.873.119	95,00	50
20	10.873.120	20.873.120	100,00	50
21	10.873.121	20.873.121	105,00	50
22	10.873.122	20.873.122	110,00	50
23	10.873.123	20.873.123	115,00	50
24	10.873.124	20.873.124	120,00	50

General Information

Pitch	5 mm
No. of poles	2 - 24
Usable with	plug connectors 950-SVG, 971-FBSP

Technical Data

Clamping Range	*solid / flexible / AWG*		
without wire protector	1 - 6 mm² / 1 - 4 mm² / 16 - 10 AWG		
with wire protector	0,75 - 4 mm² / 0,75 - 2,5 mm² / 18 - 12 AWG		
Rated Cross Section	2,5 mm²		
Wire Stripping Length	5,5 mm ± 0,5 mm		
Overvoltage Category	III	III	II
Pollution Severity Level	3	2	2
Rated Voltage	250 V (200 V)	320 V	630 V (320 V)
Rated Impulse Voltage	4 kV	4 kV	4 kV
Rated Insulation Voltage	250 V acc. to EN 60998-1		
Rated Current	6 A		
Torque	0,5 Nm		
Other specifications	Voltage data in brackets are valid for 13-24 poles types. 2-12 poles types are "no-flame" acc. to glow-wire test.		

Material

Moulding	PA, grey, V-0
Comparative Tracking Index	2-12 poles: CTI ≥ 600; 13-24 poles: CTI 250
Insulating Group	2-12 poles: I; 13-24 poles: IIIa
Temperature Range	-40°C up to 100°C
Terminal body	Tin plated brass
Screw	M3; zinc plated steel, blue passivated
Wire protector	Tin plated tin bronze
Spring	Stainless strip steel

Approvals

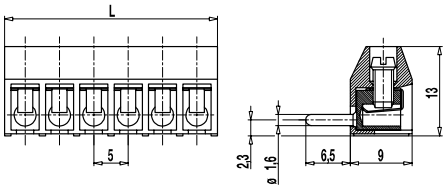
	Current	Voltage	Group	AWG	Nm
	20	300	B	22-12 [1]	0,51
	10	300	D	22-12 [1]	0,51
	20	300	B	26 - 12	0,4
	10	300	D, E	26 - 12	0,4
	Current	Voltage	mm²		
	13,5	250	2,5		

[1] Min No. 26 AWG for factory-wiring only

Options / Accessories

- Consecutive numbering
- Special marking according to drawing
- Self-adhesive marking strip BST-5,00
- Pitch of 10 mm for larger clearance and creepage distances
- Version with extended wire entrance
- Double wire protector as bridge

Plug connector
971-SV(-DS)
Screw connection, pin ø 1,6 mm



Part Numbers

No. of poles	971-SV	971-SV-DS	Length	Pcs
2	80.872.152	86.872.152	11,00	250
3	80.872.153	86.872.153	16,00	250
4	80.872.154	86.872.154	21,00	200
5	80.872.155	86.872.155	26,00	100
6	80.872.156	86.872.156	31,00	100
7	80.872.157	86.872.157	36,00	100
8	80.872.158	86.872.158	41,00	100
9	80.872.159	86.872.159	46,00	100
10	80.872.160	86.872.160	51,00	100
11	80.872.161	86.872.161	56,00	100
12	80.872.162	86.872.162	61,00	100
13	80.872.163	86.872.163	66,00	100
14	80.872.164	86.872.164	71,00	100
15	80.872.165	86.872.165	76,00	100
16	80.872.166	86.872.166	81,00	100
17	80.872.167	86.872.167	86,00	100
18	80.872.168	86.872.168	91,00	100
19	80.872.169	86.872.169	96,00	100
20	80.872.170	86.872.170	101,00	100
21	80.872.171	86.872.171	106,00	100
22	80.872.172	86.872.172	111,00	100
23	80.872.173	86.872.173	116,00	100
24	80.872.174	86.872.174	121,00	100
25	80.872.175	86.872.175	126,00	100
26	80.872.176	86.872.176	131,00	100
27	80.872.177	86.872.177	136,00	100
28	80.872.178	86.872.178	141,00	100
29	80.872.179	86.872.179	146,00	100
30	80.872.180	86.872.180	151,00	100
31	80.872.181	86.872.181	156,00	100
32	80.872.182	86.872.182	161,00	100

General Information

Pitch	5 mm
No. of poles	2 - 32
Usable with	socket terminal strips 970-FB, 971-FB

Technical Data

Clamping Range	*solid / flexible / AWG*		
without wire protector	1 - 6 mm² / 1 - 4 mm² / 16 - 10 AWG		
with wire protector	0,75 - 4 mm² / 0,75 - 2,5 mm² / 18 - 12 AWG		
Rated Cross Section	2,5 mm²		
Wire Stripping Length	5,5 mm ± 0,5 mm		
Overvoltage Category	III	III	II
Pollution Severity Level	3	2	2
Rated Voltage	250 V (200 V)	320 V	630 V (400 V)
Rated Impulse Voltage	4 kV	4 kV	4 kV
Rated Insulation Voltage	250 V acc. to EN 60998-1		
Rated Current	6 A		
Torque	0,5 Nm		
Other specifications	Voltage data in brackets are valid for 9-32 poles types. 2-8 poles types are "no-flame" acc. to glow-wire test.		

Material

Moulding	PA, grey , V-0
Comparative Tracking Index	2-8 poles: CTI ≥ 600; 9-32 poles: CTI 400
Insulating Group	2-8 poles: I; 9-32 poles: II
Temperature Range	-40°C up to 100°C
Terminal body	Tin plated brass
Screw	M3; zinc plated steel, blue passivated
Wire protector	Tin plated tin bronze
Plug	ø 1,6 mm; tin plated brass

Approvals

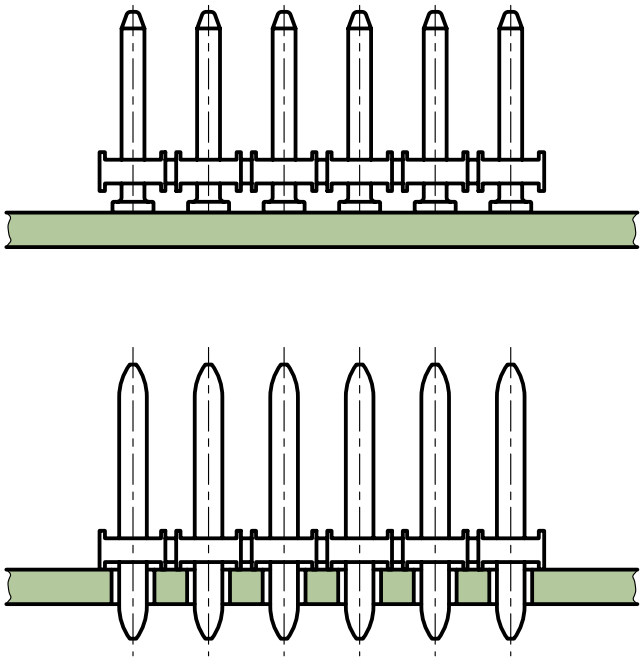
	Current	Voltage	Group	AWG	Nm
	20	300	B	22-12 [1]	0,51
	10	300	D	22-12 [1]	0,51
	20	300	B	26 - 12	0,51
	10	300	D, E	26 - 12	0,51
	Current	Voltage	mm²		
	17,5	250	2,5		

[1] Min No. 26 AWG for factory-wiring only

Options / Accessories

- Consecutive numbering
- Special marking according to drawing
- Self-adhesive marking strip BST-5,00
- Pitch of 10 mm for larger clearance and creepage distances
- Version with extended wire entrance
- Version with lateral latching elements
- Double wire protector as bridge

Pin strips



Here, you can find the male pin strips of series 120 for the female socket terminal strips.
Depending on their design, pin strips are available with 2 to 24 poles, as flange versions with 2 to 22 poles and as two-tier versions with 4 to 48 poles.

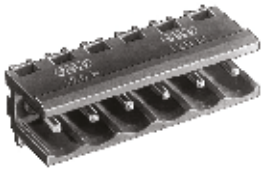
The user can choose from different designs with perpendicular, parallel or diagonal (45°) plug direction to the PC board.

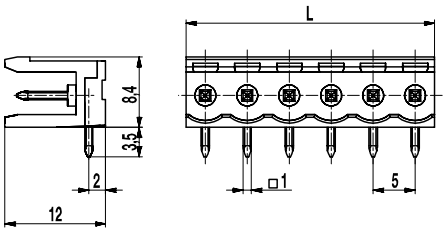
Series 120 pin strips as well as socket terminal strips feature grooves to accomodate coding elements. Laterally attached dovetail expansions on the housings reliably prevent offset plugging of the socket terminal strips.

Two-tier versions and versions with connecting flanges widen the range of applications considerably.

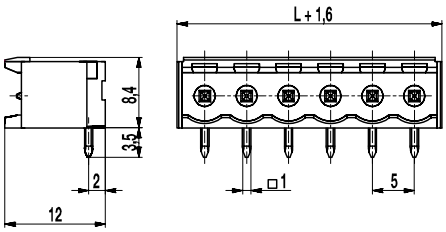
Male pin strips of series 971 without enclosing housing plug in female socket terminal strips of the 950-..-FL and 970/971-FB series. This comprehensive assortment of pin strips without housing is optimally suited for SMD- and THR-applications.

Pin strip
120-M-111/-211
Plug-in direction parallel to PCB





120-M-111



120-M-211

The pin strips 120-M-111 und 120-M-211 with a pitch of 5 mm are available in 2- to 24-pole design.

The ..-M-111 version is a pin strip without side wall and can be mounted side-by-side without pole loss. The ..-M-211 version is a pin strip with side wall. For both designs, the plug direction for mating plug connectors is parallel to the PCB.

For each pole, the pin strip has one trapezoidal coding slot in which the coding elements 120-K can be inserted.

Part Numbers

No. of poles	120-M-111	120-M-211	Length	Pcs
2	10.806.002	10.806.026	10,00	200
3	10.806.003	10.806.027	15,00	200
4	10.806.004	10.806.028	20,00	100
5	10.806.005	10.806.029	25,00	100
6	10.806.006	10.806.030	30,00	100
7	10.806.007	10.806.031	35,00	50
8	10.806.008	10.806.032	40,00	50
9	10.806.009	10.806.033	45,00	50
10	10.806.010	10.806.034	50,00	50
12	10.806.012	10.806.036	60,00	50
14	10.806.014	10.806.038	70,00	50
16	10.806.016	10.806.040	80,00	50
18	10.806.018	10.806.042	90,00	50
20	10.806.020	10.806.044	100,00	50
22	10.806.022	10.806.046	110,00	50
24	10.806.024	10.806.048	120,00	50

further number of poles on request

General Information

Pitch	5 mm
No. of poles	2 - 24
Usable with	all plug connectors of series 120
Additonal Information	Ordering information: ..-111: without side wall ..-211: with side wall, pottable

Technical Data

Overvoltage Category	III	III	II
Pollution Severity Level	3	2	2
Rated Voltage	250 V	320 V	630 V
Rated Impulse Voltage	4 kV	4 kV	4 kV
Rated Insulation Voltage	250 V acc. to EN 60998-1		
Rated Current	12 A		
Hole in PCB	ø 1,4 mm		

Material

Moulding	PA, grey, V-0
Comparative Tracking Index	CTI ≥ 600
Insulating Group	I
Temperature Range	-40°C up to 100°C
Solder pin	1,0 x 1,0 mm; tin plated brass

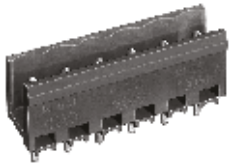
Approvals

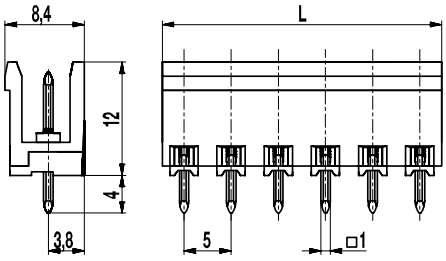
	Current	Voltage	Group	AWG	Nm
	15	300	B		
	10	300	D		
	15	300	B		
	10	300	D, E		

Options / Accessories

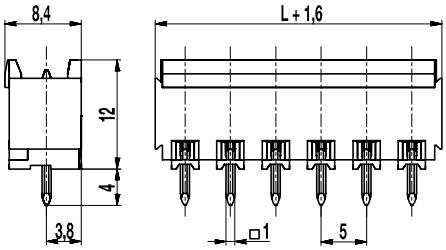
- Consecutive numbering
- Special marking according to drawing
- Self-adhesive marking strip BST-5,00
- Pitch of 10 mm for larger clearance and creepage distances
- Other P.C. pin lengths on request
- Coding elements 120-K
- Connectors equipped with coding elements on request
- Pin strips with fastening flanges, see 120-M-217
- Pin strips with connecting flanges, see 120-M-215

Pin strip
120-M-121/-221
Plug-In direction vertical to PCB





120-M-121



120-M-221

The pin strips 120-M-121 and 120-M-221 with a pitch of 5 mm are available in 2- to 24-pole design.

The ..-M-121 version is a pin strip without side walls. It can be mounted side-by-side without pole loss. The ..-M-221 version is a pin strip with side wall. For both versions, the plug direction for mating pin strips is vertical to the PCB.

For each pole, the pin strip has one trapezoidal coding slot in which the coding elements 120-K can be inserted.

Part Numbers

No. of poles	120-M-121	120-M-221	Length	Pcs
2	20.806.002	20.806.026	10,00	200
3	20.806.003	20.806.027	15,00	200
4	20.806.004	20.806.028	20,00	100
5	20.806.005	20.806.029	25,00	100
6	20.806.006	20.806.030	30,00	100
7	20.806.007	20.806.031	35,00	50
8	20.806.008	20.806.032	40,00	50
9	20.806.009	20.806.033	45,00	50
10	20.806.010	20.806.034	50,00	50
11	20.806.011	20.806.035	55,00	50
12	20.806.012	20.806.036	60,00	50
24	20.806.024	20.806.048	120,00	50

further number of poles on request

General Information

Pitch	5 mm
No. of poles	2 - 24
Usable with	all plug connectors of series 120
Additonal Information	Ordering information: ..-121: without side wall, not pottable ..-221: with side wall, pottable

Technical Data

Overvoltage Category	III	III	II
Pollution Severity Level	3	2	2
Rated Voltage	250 V	320 V	630 V
Rated Impulse Voltage	4 kV	4 kV	4 kV
Rated Insulation Voltage	250 V acc. to EN 60998-1		
Rated Current	12 A		
Hole in PCB	ø 1,4 mm		

Material

Moulding	PA, grey, V-0
Comparative Tracking Index	CTI ≥ 600
Insulating Group	I
Temperature Range	-40°C up to 100°C
Solder pin	1,0 x 1,0 mm; tin plated brass

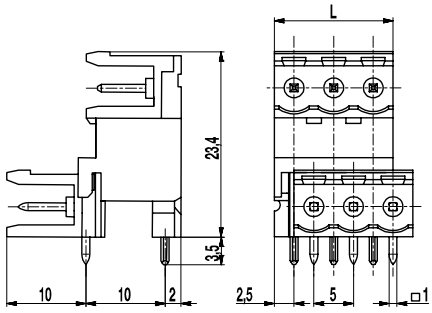
Approvals

	Current	Voltage	Group	AWG	Nm
	15	300	B		
	10	300	D		
	15	300	B		
	10	300	D, E		

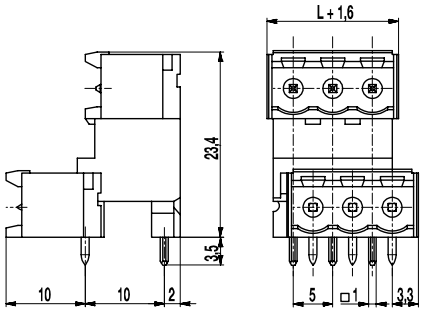
Options / Accessories

- Consecutive numbering
- Special marking according to drawing
- Self-adhesive marking strip BST-5,00
- Pitch of 10 mm for larger clearance and creepage distances
- Other P.C. pin lengths on request
- Coding elements 120-K
- Connectors equipped with coding elements on request
- Pin strips with fastening flanges, see 120-M-227
- Pin strips with connecting flanges, see 120-M-225

Pin strip
120-M-151/-251
Plug-in direction parallel to PCB, two-tier version



120-M-151



120-M-251

The pin strips 120-M-151 und 120-M-251, as two-tier version with a pitch of 5 mm are available in 4- to 48-pole design.

The ..-M-151 version is a pin strip without side walls. It can be mounted side-by-side without pole loss. The ..-M-251 version has pin strips with a side wall. For both versions, the plug direction for mating plug connectors is parallel to the PCB.

For each pole, the pin strip has one trapezoidal coding slot in which the coding elements 120-K can be inserted.

Part Numbers

No. of poles	120-M-151	120-M-251	Length	Pcs
4	10.806.052	10.806.076	20,00	100
6	10.806.053	10.806.077	30,00	100
8	10.806.054	10.806.078	40,00	50
10	10.806.055	10.806.079	50,00	50
12	10.806.056	10.806.080	60,00	50
14	10.806.057	10.806.081	70,00	50
16	10.806.058	10.806.082	80,00	25
18	10.806.059	10.806.083	90,00	25
20	10.806.060	10.806.084	100,00	25
22	10.806.061	10.806.085	110,00	25
24	10.806.062	10.806.086	120,00	25

further number of poles on request

General Information

Pitch	5 mm
No. of poles	4 - 48
Usable with	all plug connectors of series 120
Additonal Information	Ordering information: ..-111: without side wall ..-211: with side wall, pottable

Technical Data

Overvoltage Category	III	III	II
Pollution Severity Level	3	2	2
Rated Voltage	250 V	320 V	630 V
Rated Impulse Voltage	4 kV	4 kV	4 kV
Rated Insulation Voltage	250 V acc. to EN 60998-1		
Rated Current	12 A		
Hole in PCB	ø 1,4 mm		

Material

Moulding	PA, grey, V-0
Comparative Tracking Index	CTI ≥ 600
Insulating Group	I
Temperature Range	-40°C up to 100°C
Solder pin	1,0 x 1,0 mm; tin plated brass

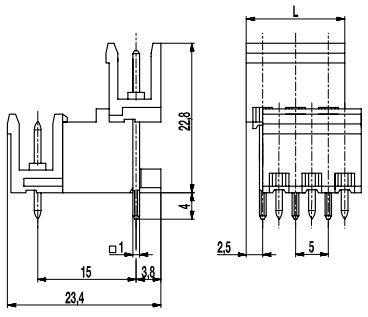
Approvals

	Current	Voltage	Group	AWG	Nm
	15	300	B		
	10	300	D		
	15	300	B		
	10	300	D, E		

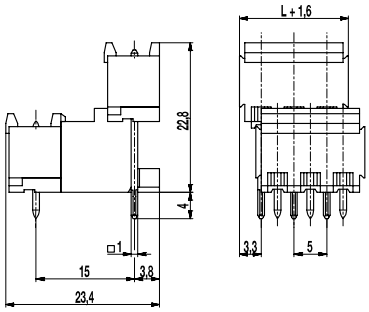
Options / Accessories

- Consecutive numbering
- Special marking according to drawing
- Self-adhesive marking strip BST-5,00
- Pitch of 10 mm for larger clearance and creepage distances
- Coding elements 120-K
- Connectors equipped with coding elements on request
- Two-tier version with front PCB connector offset to the left
- Special arrangements of front- and rear row of the floor version.

Pin strip
120-M-161/-261
Plug-in direction vertical to PCB, two-tier version



120-M-161



120-M-261

The pin strips 120-M-161 und 120-M-261, as two-tier versions with a pitch of 5 mm are available in 4- to 48-pole design.

The ..-M-161 versions is a pin strip without side walls. It can be mounted side-by-side without pole loss. The ..-M-261 version has pin strips with a side wall. For both versions, the plug direction for mating pin strips is vertical to the PCB.

For each pole, the pin strip has one trapezoidal coding slot in which the coding elements 120-K can be inserted.

Part Numbers

No. of poles	120-M-161	120-M-261	Length	Pcs
4	30.806.052	30.806.072	20,00	100
6	30.806.053	30.806.073	30,00	100
8	30.806.054	30.806.074	40,00	50
10	30.806.055	30.806.075	50,00	50
12	30.806.056	30.806.076	60,00	50
14	30.806.057	30.806.077	70,00	50
16	30.806.058	30.806.078	80,00	25
18	30.806.059	30.806.079	90,00	25
20	30.806.060	30.806.080	100,00	25
22	30.806.061	30.806.081	110,00	25
24	30.806.062	30.806.082	120,00	25

further number of poles on request

General Information

Pitch	5 mm
No. of poles	4 - 48
Usable with	all plug connectors of series 120
Additonal Information	Ordering information: ..-161: without side wall ..-261: with side wall, pottable

Technical Data

Overvoltage Category	III	III	II
Pollution Severity Level	3	2	2
Rated Voltage	250 V	320 V	630 V
Rated Impulse Voltage	4 kV	4 kV	4 kV
Rated Insulation Voltage	250 V acc. to EN 60998-1		
Rated Current	12 A		
Hole in PCB	ø 1,4 mm		

Material

Moulding	PA, grey, V-0
Comparative Tracking Index	CTI ≥ 600
Insulating Group	I
Temperature Range	-40°C up to 100°C
Solder pin	1,0 x 1,0 mm; tin plated brass

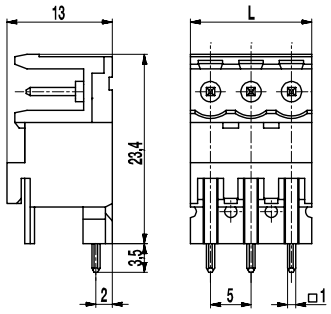
Approvals

	Current	Voltage	Group	AWG	Nm
	15	300	B		
	10	300	D		
	15	300	B		
	10	300	D, E		

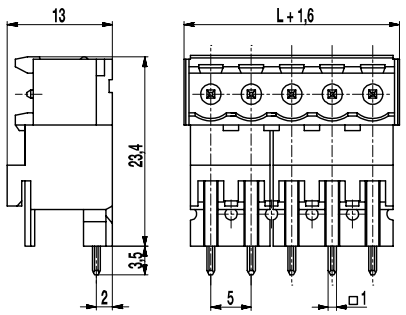
Options / Accessories

- Consecutive numbering
- Special marking according to drawing
- Self-adhesive marking strip BST-5,00
- Pitch of 10 mm for larger clearance and creepage distances
- Coding elements 120-K
- Connectors equipped with coding elements on request
- Two-tier version with front PCB connector offset to the left
- Special arrangements of front- and rear row of the floor version.

Pin strip
120-M-181/-281
Plug-in direction parallel to PCB, tall version



120-M-181



120-M-281

The pin strips 120-M-181 und 120-M-281, tall version with a pitch of 5 mm, are available in 2- to 24-pole design.

The ..-M-181 version is a pin strip without side walls. It can be mounted side-by-side without pole loss. The ..-M-281 version is a pin strip with side wall. For both versions, the plug direction for mating plug connectors is parallel to the PCB.

For each pole, the pin strip has one trapezoidal coding slot in which the coding elements 120-K can be inserted.

Part Numbers

No. of poles	120-M-181	120-M-281	Length	Pcs
2	25.806.052	25.806.076	10,00	200
3	25.806.053	25.806.077	15,00	100
4	25.806.054	25.806.078	20,00	100
5	25.806.055	25.806.079	25,00	100
6	25.806.056	25.806.080	30,00	100
7	25.806.057	25.806.081	35,00	50
8	25.806.058	25.806.082	40,00	50
9	25.806.059	25.806.083	45,00	50
10	25.806.060	25.806.084	50,00	50
11	25.806.061	25.806.085	55,00	50
12	25.806.062	25.806.086	60,00	50

further number of poles on request

General Information

Pitch	5 mm
No. of poles	2 - 24
Usable with	all plug connectors of series 120
Additonal Information	Ordering information: ..-181: without side wall ..-281: with side wall

Technical Data

Overvoltage Category	III	III	II
Pollution Severity Level	3	2	2
Rated Voltage	250 V	250 V	630 V
Rated Impulse Voltage	4 kV	4 kV	4 kV
Rated Insulation Voltage	250 V acc. to EN 60998-1		
Rated Current	12 A		
Hole in PCB	ø 1,4 mm		

Material

Moulding	PA, grey, V-0
Comparative Tracking Index	CTI ≥ 600
Insulating Group	I
Temperature Range	-40°C up to 100°C
Solder pin	1,0 x 1,0 mm; tin plated brass

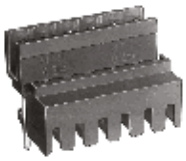
Approvals

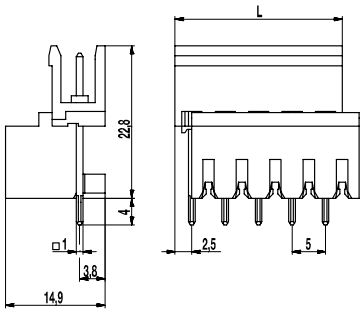
	Current	Voltage	Group	AWG	Nm
	15	300	B		
	10	300	D		
	15	300	B		
	10	300	D, E		

Options / Accessories

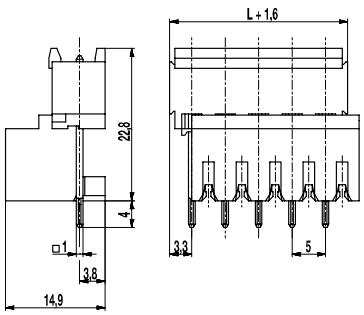
- Consecutive numbering
- Special marking according to drawing
- Self-adhesive marking strip BST-5,00
- Pitch of 10 mm for larger clearance and creepage distances
- Coding elements 120-K
- Connectors equipped with coding elements on request

Pin strip
120-M-191/-291
Plug-in direction vertical to PCB, tall version





120-M-191



120-M-291

The pin strips 120-M-191 und 120-M-291, tall version with a pitch of 5 mm are available in 2- to 24-pole design.

The ..-M-191 version is a pin strip without side walls. It can be mounted side-by-side without pole loss. The ..-M-291 version is a pin strip with side wall. For both versions, the plug direction for mating pin strips is vertical to the PCB.

For each pole, the pin strip has one trapezoidal coding slot in which the coding elements 120-K can be inserted.

Part Numbers

No. of poles	120-M-191	120-M-291	Length	Pcs
2	25.806.002	25.806.026	10,00	200
3	25.806.003	25.806.027	15,00	100
4	25.806.004	25.806.028	20,00	100
5	25.806.005	25.806.029	25,00	100
6	25.806.006	25.806.030	30,00	100
7	25.806.007	25.806.031	35,00	50
8	25.806.008	25.806.032	40,00	50
9	25.806.009	25.806.033	45,00	50
10	25.806.010	25.806.034	50,00	50
11	25.806.011	25.806.035	55,00	50
12	25.806.012	25.806.036	60,00	50

further number of poles on request

General Information

Pitch	5 mm
No. of poles	2 - 24
Usable with	all plug connectors of series 120
Additonal Information	Ordering information: ..-191: without side wall ..-291: with side wall

Technical Data

Overvoltage Category	III	III	II
Pollution Severity Level	3	2	2
Rated Voltage	250 V	320 V	630 V
Rated Impulse Voltage	4 kV	4 kV	4 kV
Rated Insulation Voltage	250 V acc. to EN 60998-1		
Rated Current	12 A		
Hole in PCB	ø 1,4 mm		

Material

Moulding	PA, grey, V-0
Comparative Tracking Index	CTI ≥ 600
Insulating Group	I
Temperature Range	-40°C up to 100°C
Solder pin	1,0 x 1,0 mm; tin plated brass

Approvals

	Current	Voltage	Group	AWG	Nm
	15	300	B		
	10	300	D		
	15	300	B		
	10	300	D, E		

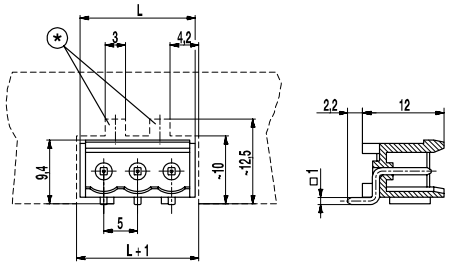
Options / Accessories

- Consecutive numbering
- Special marking according to drawing
- Self-adhesive marking strip BST-5,00
- Pitch of 10 mm for larger clearance and creepage distances
- Coding elements 120-K
- Connectors equipped with coding elements on request

Pin strip for SMD

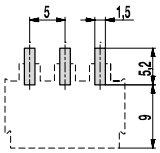
120-M-211-SMD

Plug-in direction parallel to PCB, with side walls



(*) Please plan for two gaps in the measures of 3 x 2.5 mm in the cut-out of the control panel for the snap-in device of the counterpart

PCB Layout



Solder paste thickness: 0,2 mm

L-shape exposed leads confer an extremely reliable retention force to PCB. This characteristics allows reliable soldering to PCB approaching zero defects for this characteristic and its effects. The top surface of the connector ensures automated Pick&Place-ability for both odd and even pole versions.
Material will handle reflow temperatures well without deforming or melting.
Product shall be mounted on PCB to expose connector entry in the cut-off window of the metal or plastic enclosure. This installation mode prevents vertical peel-off stress against the L-shape solder joints during plug-in installation test. Standoffs underneath the molding ensure that connector housing keeps its horizontal position relative to PCB plane.
Packed in magazines, this genuine SMD terminal is suitable for the automatic assembly.

General Information

Pitch	5 mm
No. of poles	2 - 12
Usable with	all plug connectors of series 120

Technical Data

Overvoltage Category	III	III	II
Pollution Severity Level	3	2	2
Rated Voltage	250 V	320 V	630 V
Rated Impulse Voltage	4 kV	4 kV	4 kV
Rated Insulation Voltage	250 V acc. to EN 60998-1		
Rated Current	12 A		
Soldering process	Reflow solder		

Material

Moulding	PA HT, black, V-0
Comparative Tracking Index	CTI ≥ 600
Insulating Group	I
Temperature Range	-40°C up to 150°C; reflow solder temperature (Peak) max. 260°C (15-30 s)
Solder pin	1,0 x 1,0 mm; tin plated brass

Approvals

	Current	Voltage	Group	AWG	Nm
	15	300	B		
	10	300	D, E		
	15	300	B		
	10	300	D, E		

Options / Accessories

- Consecutive numbering
- Special marking according to drawing
- Self-adhesive marking strip BST-5,00 [1]
- Tape-on-Reel on request

[1] To be fitted after reflow soldering process

Part Numbers

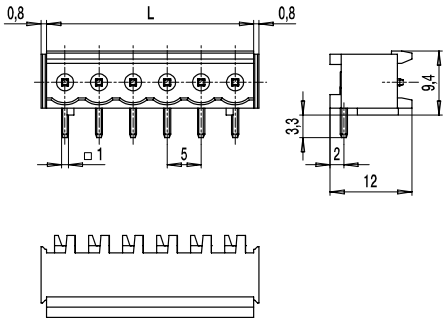
No. of poles	120-M-211-SMD	Length	Pcs
2	30.806.352	12,00	774
3	30.806.353	17,00	540
4	30.806.354	22,00	414
5	30.806.355	27,00	342
6	30.806.356	32,00	288
8	30.806.358	42,00	216

further number of poles on request

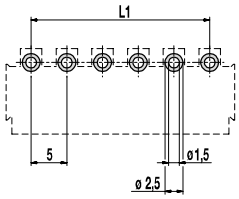
Pin strip for THR

120-M-211-THR

Plug-in direction parallel to PCB, with side walls



PCB Layout



L1 = (No. of poles - 1) x pitch
Solder paste thickness: 0,15 - 0,2 mm
Solder pad diameter: ø 2,5 mm

The products based on our established 120 series (Conecta) have been designed for the soldering process in Through-Hole-Reflow technology.
The soldering paste is applied to the plated through holes and the pins are placed in the circuit board and soldered by a reflow oven.
The terminal mouldings are made of heat-resistant material. The stand-offs on the base ensures there is enough room for the soldering paste and facilitates good heat circulation for optimum soldering and enables the soldering joint to be visually inspected.
The solder pin projects very slightly with a circuit board thickness of 1,6 mm, creates a solder point on both sides, and thus guarantees a secure mounting. The position of the solder pins enables an equally minimal allocation area on the circuit board as with wave soldering.

Part Numbers

No. of poles	120-M-211-THR	Length	Pcs
2	10.806.352	10,00	200
3	10.806.353	15,00	200
4	10.806.354	20,00	100
5	10.806.355	25,00	100
6	10.806.356	30,00	100
8	10.806.358	40,00	50
10	10.806.360	50,00	50
12	10.806.362	60,00	50

further number of poles on request

General Information

Pitch	5 mm
No. of poles	2 - 12
Usable with	all plug connectors of series 120
Additonal Information	The 120-M-THR headers are, like the conventional products, available with straight or angled soldering pins for vertical or parallel plugging of the mating parts, whereby all plugs of the Conecta series 120-A, -D, and -F can be used.

Technical Data

Overvoltage Category	III	III	II
Pollution Severity Level	3	2	2
Rated Voltage	250 V	320 V	630 V
Rated Impulse Voltage	4 kV	4 kV	4 kV
Rated Insulation Voltage	250 V acc. to EN 60998-1		
Rated Current	12 A		
Soldering process	Wave solder & reflow solder		
Hole in PCB	ø 1,5 mm		
PCB thickness	Wave solder max. 1,6 mm; reflow solder 1,6 - 3,2 mm		

Material

Moulding	PA HT, black, V-0
Comparative Tracking Index	CTI ≥ 600
Insulating Group	I
Temperature Range	-40°C up to 150°C; reflow solder temperature (Peak) max. 260°C (15-30 s)
Solder pin	1,0 x 1,0 mm; tin plated brass

Approvals

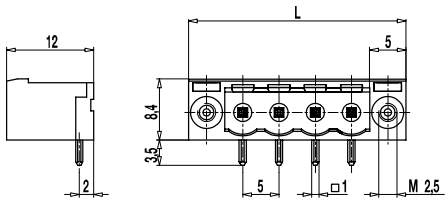
	Current	Voltage	Group	AWG	Nm
	15	300	B		
	10	300	D		
	15	300	B		
	10	300	D, E		

Options / Accessories

- Consecutive numbering
- Special marking according to drawing
- Self-adhesive marking strip BST-5,00 [1]
- Special packaging on request: Tape-on-Reel - Tray - Tube magazine

[1] To be fitted after reflow soldering process

Pin strip
120-M-215
Plug-in direction parallel to PCB, with connecting flanges



The pin strip 120-M-215, with connecting flanges and a pitch of 5 mm is available in 2- to 22-pole design and can be mounted side-by-side.

Thread insert in the connecting flanges allow to screw the pinstrips together with the plug connectors 120-A-115, 120-D-115 and 120-D-125. In addition, these connecting flanges can also be used to mount the pin strip to a housing wall. The plug direction for mating pin strips is parallel to the PCB.

For each pole, the pin strip has one trapezoidal coding slot in which the coding elements 120-K can be inserted.

Part Numbers

No. of poles	120-M-215	Length	Pcs
2	15.806.202	20,00	100
3	15.806.203	25,00	100
4	15.806.204	30,00	100
5	15.806.205	35,00	50
6	15.806.206	40,00	50
7	15.806.207	45,00	50
8	15.806.208	50,00	50
9	15.806.209	55,00	50
10	15.806.210	60,00	50
11	15.806.211	65,00	50
12	15.806.212	70,00	50
13	15.806.213	75,00	50
14	15.806.214	80,00	50
15	15.806.215	85,00	50
16	15.806.216	90,00	50
17	15.806.217	95,00	50
18	15.806.218	100,00	50
19	15.806.219	105,00	50
20	15.806.220	110,00	50
21	15.806.221	115,00	50
22	15.806.222	120,00	50

General Information

Pitch	5 mm
No. of poles	2 - 22
Usable with	all plug connectors of series 120

Technical Data

Overvoltage Category	III	III	II
Pollution Severity Level	3	2	2
Rated Voltage	250 V	320 V	630 V
Rated Impulse Voltage	4 kV	4 kV	4 kV
Rated Insulation Voltage	250 V acc. to EN 60998-1		
Rated Current	12 A		
Hole in PCB	ø 1,4 mm		

Material

Moulding	PA, grey, V-0
Comparative Tracking Index	CTI ≥ 600
Insulating Group	I
Temperature Range	-40°C up to 100°C
Solder pin	1,0 x 1,0 mm; tin plated brass

Approvals

	Current	Voltage	Group	AWG	Nm
	15	300	B		
	10	300	D		
	15	300	B		
	10	300	D, E		

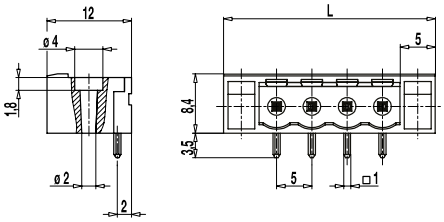
Options / Accessories

- Consecutive numbering
- Special marking according to drawing
- Self-adhesive marking strip BST-5,00
- Pitch of 10 mm for larger clearance and creepage distances
- Other P.C. pin lengths on request
- Coding elements 120-K
- Connectors equipped with coding elements on request

Pin strip

120-M-217

Plug-in direction parallel to PCB, with fastening flanges



The pin strip 120-M-217, with fastening flanges and a pitch of 5 mm, is available in 2- to 22-pole design and can be mounted side-by-side.

By means of the lh and rh fastening flanges, this pin strip can be mounted on a PCB with M2 x 10 and M2 nuts, self-tapping screws or rivets without any additional soldering. The plug direction for mating pin strips is parallel to the PCB.

For each pole, the pin strip has one trapezoidal coding slot in which the coding elements 120-K can be inserted.

Part Numbers

No. of poles	120-M-217	Length	Pcs
2	15.806.227	20,00	100
3	15.806.228	25,00	100
4	15.806.229	30,00	100
5	15.806.230	35,00	50
6	15.806.231	40,00	50
7	15.806.232	45,00	50
8	15.806.233	50,00	50
9	15.806.234	55,00	50
10	15.806.235	60,00	50
11	15.806.236	65,00	50
12	15.806.237	70,00	50
13	15.806.238	75,00	50
14	15.806.239	80,00	50
15	15.806.240	85,00	50
16	15.806.241	90,00	50
17	15.806.242	95,00	50
18	15.806.243	100,00	50
19	15.806.244	105,00	50
20	15.806.245	110,00	50
21	15.806.246	115,00	50
22	15.806.247	120,00	50

General Information

Pitch	5 mm
No. of poles	2 - 22
Usable with	all plug connectors of series 120

Technical Data

Overvoltage Category	III	III	II
Pollution Severity Level	3	2	2
Rated Voltage	250 V	320 V	630 V
Rated Impulse Voltage	4 kV	4 kV	4 kV
Rated Insulation Voltage	250 V acc. to EN 60998-1		
Rated Current	12 A		
Hole in PCB	ø 1,4 mm		

Material

Moulding	PA, grey, V-0
Comparative Tracking Index	CTI ≥ 600
Insulating Group	I
Temperature Range	-40°C up to 100°C
Solder pin	1,0 x 1,0 mm; tin plated brass

Approvals

	Current	Voltage	Group	AWG	Nm
	15	300	B		
	10	300	D		
	15	300	B		
	10	300	D, E		

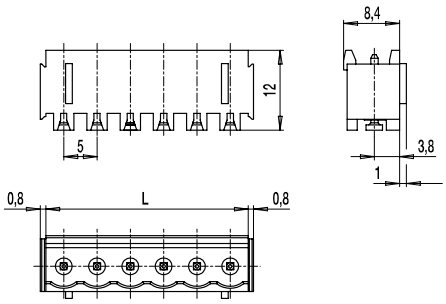
Options / Accessories

- Consecutive numbering
- Special marking according to drawing
- Self-adhesive marking strip BST-5,00
- Pitch of 10 mm for larger clearance and creepage distances
- Other P.C. pin lengths on request
- Coding elements 120-K
- Connectors equipped with coding elements on request
- M2x10 screw and M2 nut

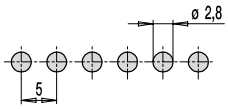
Pin strip for SMD

120-M-221-SMD

Plug-in direction vertical to PCB, with side walls



PCB Layout



Solder paste thickness: 0,15 - 0,2 mm
Solder pad diameter: ø 2,8 mm

The PCB terminals for surface mounting comprise several types for reflow-soldering processes.
Housings out of temperature resistant plastic material and solder pins in round shape with soldering foot form the pin strips of the series of 120-M-221-SMD.
The pins are movable in vertical direction and this ensures plane positioning of the soldering feet on the soldering pads. Thus, 100% coplanarity is guaranteed.
For the automatic assembling process, all pin strip versions are packed Tape-on-Reel and are equipped with high temperature resistant Pick Caps, which can comfortably be removed after the soldering process.

Part Numbers

No. of poles	120-M-221-SMD	Length	Pcs
2	40.806.352	10,00	200
3	40.806.353	15,00	200
4	40.806.354	20,00	100
5	40.806.355	25,00	100
6	40.806.356	30,00	100
8	40.806.358	40,00	50
10	40.806.360	50,00	50
12	40.806.362	60,00	50

further number of poles on request

General Information

Pitch	5 mm
No. of poles	2 - 12
Usable with	all plug connectors of series 120

Technical Data

Overvoltage Category	III	III	II
Pollution Severity Level	3	2	2
Rated Voltage	160 V	160 V	250 V
Rated Impulse Voltage	2,5 kV	2,5 kV	2,5 kV
Rated Insulation Voltage	130 V acc. to EN 60998-1		
Rated Current	12 A		
Soldering process	Reflow solder		

Material

Moulding	PA HT, black, V-0
Comparative Tracking Index	CTI 250
Insulating Group	IIIa
Temperature Range	-40°C up to 105°C; reflow solder temperature (Peak) max. 250°C (15-30 s)
Solder pin	ø 1,1 mm (plug-in area); tin plated brass

Approvals

	Current	Voltage	Group	AWG	Nm
	15	300	B		
	10	300	D		
	15	300	B		
	10	300	D, E		

Options / Accessories

- Consecutive numbering
- Special marking according to drawing
- Self-adhesive marking strip BST-5,00 [1]

Part Numbers: Tape-on-Reel

No. of poles	120-M-221-SMD	Tape Width	Tape Height	Pcs
2	40.806.352.A00	32 mm	17,4 mm	225
3	40.806.353.A00	32 mm	17,4 mm	225
4	40.806.354.A00	56 mm	17,4 mm	225
5	40.806.355.A00	56 mm	17,4 mm	225
6	40.806.356.A00	56 mm	17,4 mm	225
7	40.806.357.A00	56 mm	17,4 mm	225

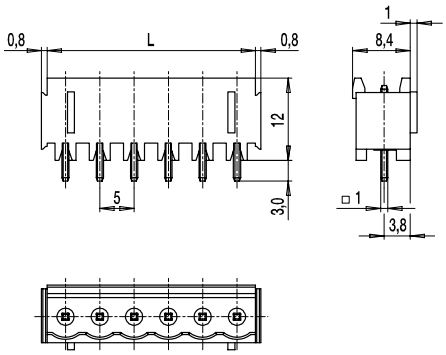
further number of poles on request

[1] To be fitted after reflow soldering process

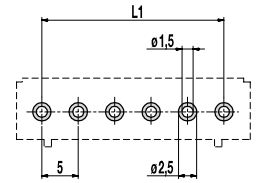
Pin strip for THR

120-M-221-THR

Plug-in direction vertical to PCB, with side walls



PCB Layout



L1 = (No. of poles - 1) x pitch
Solder paste thickness: 0,15 - 0,2 mm
Solder pad diameter: ø 2,5 mm

The products based on our established 120 series (Conecta) have been designed for the soldering process in Through-Hole-Reflow technology.
The soldering paste is applied to the plated through holes and the pins are placed in the circuit board and soldered by a reflow oven.
The terminal mouldings are made of heat-resistant material. The stand-offs on the base ensures there is enough room for the soldering paste and facilitates good heat circulation for optimum soldering and enables the soldering joint to be visually inspected.
The solder pin projects very slightly with a circuit board thickness of 1,6 mm, creates a solder point on both sides, and thus guarantees a secure mounting. The position of the solder pins enables an equally minimal allocation area on the circuit board as with wave soldering.
The 120-M-THR headers are, like the conventional products, available with straight or angled soldering pins for vertical or parallel plugging of the mating parts, whereby all plugs of the Conecta series 120-A, -D, and -F can be used.

Part Numbers

No. of poles	120-M-221-THR	Length	Pcs
2	20.806.352	10,00	200
3	20.806.353	15,00	200
4	20.806.354	20,00	100
6	20.806.356	30,00	100
8	20.806.358	40,00	50
10	20.806.360	50,00	50
12	20.806.362	60,00	50

further number of poles on request

General Information

Pitch	5 mm
No. of poles	2 - 12
Usable with	all plug connectors of series 120
Additonal Information	For the automatic assembling process, all pin strip versions are packed Tape-on-Reel and are equipped with high temperature resistant Pick Caps, which can comfortably be removed after the soldering process.

Technical Data

Overvoltage Category	III	III	II
Pollution Severity Level	3	2	2
Rated Voltage	250 V	320 V	630 V
Rated Impulse Voltage	4 kV	4 kV	4 kV
Rated Insulation Voltage	250 V acc. to EN 60998-1		
Rated Current	12 A		
Soldering process	Wave solder & reflow solder		
Hole in PCB	ø 1,5 mm		
PCB thickness	Wave solder max. 1,6 mm; reflow solder 1,6 - 3,2 mm		

Material

Moulding	PA HT, black, V-0
Comparative Tracking Index	CTI ≥ 600
Insulating Group	I
Temperature Range	-40°C up to 150°C; reflow solder temperature (Peak) max. 260°C (15-30 s)
Solder pin	1,0 x 1,0 mm; tin plated brass

Approvals

	Current	Voltage	Group	AWG	Nm
	15	300	B		
	10	300	D		
	15	300	B		
	10	300	D, E		

Options / Accessories

- Consecutive numbering
- Special marking according to drawing
- Self-adhesive marking strip BST-5,00 [1]

Part Numbers: Tape-on-Reel

No. of poles	120-M-221-THR	Tape Width	Tape Height	Pcs
2	20.806.352.A00	32 mm	17,4 mm	225
3	20.806.353.A00	32 mm	17,4 mm	225
4	20.806.354.A00	56 mm	17,4 mm	225
5	20.806.355.A00	56 mm	17,4 mm	225
6	20.806.356.A00	56 mm	17,4 mm	225
7	20.806.357.A00	56 mm	17,4 mm	225

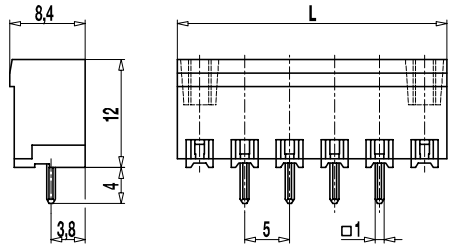
further number of poles on request

[1] To be fitted after reflow soldering process

Pin strip

120-M-225

Plug-in direction vertical to PCB, with connecting flanges



The pin strip 120-M-225, with connecting flanges and a pitch of 5 mm, is available in 2- to 22-pole design and can be mounted side-by-side.

Thread insert in the connecting flanges allow to screw the pin strips together with the plug connectors 120-A-115, 120-D-115 and 120-D-125. In addition, these connecting flanges can also be used to mount the pin strip to a housing panel. The plug direction for mating pin strips is vertical to the PCB.

For each pole, the pin strip has one trapezoidal coding slot in which the coding elements 120-K can be inserted.

Part Numbers

No. of poles	120-M-225	Length	Pcs
2	20.806.202	20,00	100
3	20.806.203	25,00	100
4	20.806.204	30,00	100
5	20.806.205	35,00	50
6	20.806.206	40,00	50
7	20.806.207	45,00	50
8	20.806.208	50,00	50
9	20.806.209	55,00	50
10	20.806.210	60,00	50
11	20.806.211	65,00	50
12	20.806.212	70,00	50
13	20.806.213	75,00	50
14	20.806.214	80,00	50
15	20.806.215	85,00	50
16	20.806.216	90,00	50
17	20.806.217	95,00	50
18	20.806.218	100,00	50
19	20.806.219	105,00	50
20	20.806.220	110,00	50
21	20.806.221	115,00	50
22	20.806.222	120,00	50

General Information

Pitch	5 mm
No. of poles	2 - 22
Usable with	all plug connectors of series 120
Additonal Information	In addition, the pin strip can be mounted to the PCB by means of self-tapping screws K 15x8.

Technical Data

Overvoltage Category	III	III	II
Pollution Severity Level	3	2	2
Rated Voltage	250 V	320 V	630 V
Rated Impulse Voltage	4 kV	4 kV	4 kV
Rated Insulation Voltage	250 V acc. to EN 60998-1		
Rated Current	12 A		
Hole in PCB	ø 1,4 mm		

Material

Moulding	PA, grey, V-0
Comparative Tracking Index	CTI ≥ 600
Insulating Group	I
Temperature Range	-40°C up to 100°C
Solder pin	1,0 x 1,0 mm; tin plated brass

Approvals

	Current	Voltage	Group	AWG	Nm
	15	300	B		
	10	300	D		
	15	300	B		
	10	300	D, E		

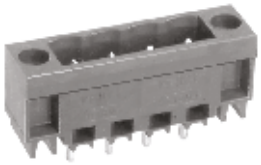
Options / Accessories

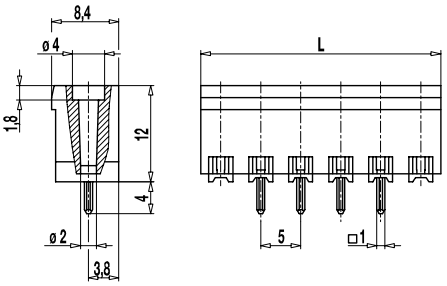
- Consecutive numbering
- Special marking according to drawing
- Self-adhesive marking strip BST-5,00
- Pitch of 10 mm for larger clearance and creepage distances
- Other P.C. pin lengths on request
- Coding elements 120-K
- Connectors equipped with coding elements on request

Pin strip

120-M-227

Plug-in direction vertical to PCB, with fastening flanges





The pin strip 120-M-227, with connecting flanges and a pitch of 5 mm, is available in 2- to 22-pole design and can be mounted side-by-side.

By means of the lh and rh connecting flanges, this pin strip can be mounted on a PCB with M2x14 and M2 nuts, self-tapping screws or rivets without any additional soldering. The plug direction for mating pin strips is parallel to the PCB.

For each pole, the pin strip has one trapezoidal coding slot in which the coding elements 120-K can be inserted.

Part Numbers

No. of poles	120-M-227	Length	Pcs
2	20.806.252	20,00	100
3	20.806.253	25,00	100
4	20.806.254	30,00	100
5	20.806.255	35,00	50
6	20.806.256	40,00	50
7	20.806.257	45,00	50
8	20.806.258	50,00	50
9	20.806.259	55,00	50
10	20.806.260	60,00	50
11	20.806.261	65,00	50
12	20.806.262	70,00	50
13	20.806.263	75,00	50
14	20.806.264	80,00	50
15	20.806.265	85,00	50
16	20.806.266	90,00	50
17	20.806.267	95,00	50
18	20.806.268	100,00	50
19	20.806.269	105,00	50
20	20.806.270	110,00	50
21	20.806.271	115,00	50
22	20.806.272	120,00	50

further number of poles on request

General Information

Pitch	5 mm
No. of poles	2 - 22
Usable with	all plug connectors of series 120

Technical Data

Overvoltage Category	III	III	II
Pollution Severity Level	3	2	2
Rated Voltage	250 V	320 V	630 V
Rated Impulse Voltage	4 kV	4 kV	4 kV
Rated Insulation Voltage	250 V acc. to EN 60998-1		
Rated Current	12 A		
Hole in PCB	ø 1,4 mm		

Material

Moulding	PA, grey, V-0
Comparative Tracking Index	CTI ≥ 600
Insulating Group	I
Temperature Range	-40°C up to 100°C
Solder pin	1,0 x 1,0 mm; tin plated brass

Approvals

	Current	Voltage	Group	AWG	Nm
	15	300	B		
	10	300	D		
	15	300	B		
	10	300	D, E		

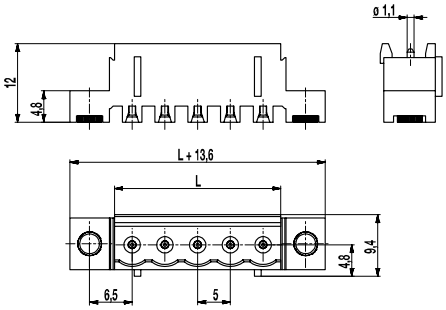
Options / Accessories

- Consecutive numbering
- Special marking according to drawing
- Self-adhesive marking strip BST-5,00
- Pitch of 10 mm for larger clearance and creepage distances
- Other P.C. pin lengths on request
- Coding elements 120-K
- Connectors equipped with coding elements on request
- M2x14 screw and M2 nut

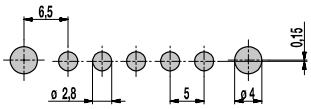
Pin strip for SMD

120-M-227-SMD

Plug-in direction vertical to PCB, with solder flanges



PCB Layout



Solder paste thickness: 0,15 - 0,2 mm

120-M-227-SMD is a pin strip with a pitch of 5 mm for surface mount technology and suitable for all plugs of the plug connector system of series of 120 and available in lengths from 2 to 22 poles.
The solder retention devices (SMT anchors) on either side of the terminal housing provide an exceptionally high retention force for the terminal block to the PCB.
The most significant benefit of this design is the protection it provides to the solder joints against stresses encountered in field-installations. The product eliminates completely CTE mismatch (Coefficient of thermal expansion) and provide total coplanarity by the position adapting pins.
For the automatic assembling process, all pin strip versions are packed Tape on Reel and are equipped with high temperature resistant pick caps, which can comfortably be removed after the soldering process.
Plug-In direction vertical to PCB and wire entrance parallel to PCB when plugged with 120-D-111, 120-D-121
Plug-In direction and wire entrance vertical to PCB when plugged with 120-A-111.

Part Numbers

No. of poles	120-M-227-SMD	Length	Pcs
2	27.498.104	10,00	100
5	50.494.001	25,00	100

further number of poles on request

General Information

Pitch	5 mm
No. of poles	2 - 22
Usable with	all plug connectors of series 120

Technical Data

	IIII	III	II
Overvoltage Category			
Pollution Severity Level	3	2	2
Rated Voltage	160 V	160 V	250 V
Rated Impulse Voltage	2,5 kV	2,5 kV	2,5 kV
Rated Insulation Voltage	130 V acc. to EN 60998-1		
Rated Current	12 A		
Soldering process	Reflow solder		

Material

Moulding	PA HT, grey, V-0
Comparative Tracking Index	CTI 250
Insulating Group	IIIa
Temperature Range	-40°C up to 105°C; reflow solder temperature (Peak) max. 250°C (15-30 s)
Solder pin	ø 1,1 mm (plug-in area); tin plated brass

Approvals

	Current	Voltage	Group	AWG	Nm
	15	300	B		
	10	300	D		
	15	300	B		
	10	300	D, E		

Options / Accessories

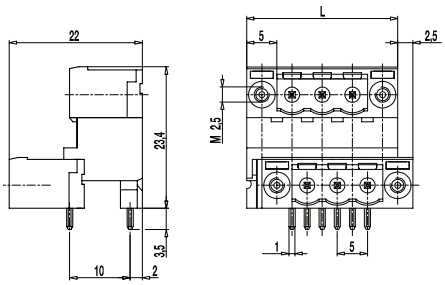
- Consecutive numbering
- Special marking according to drawing
- Self-adhesive marking strip BST-5,00 [1]
- Special packaging on request: Tape-on-Reel - Tray - Tube magazine

[1] To be fitted after reflow soldering process

Pin strip

120-M-255

Plug-in direction parallel to PCB, two-tier version, with connecting flanges



The pin strip 120-M-255, two-tier version with connecting flanges and a pitch of 5 mm, is available in 4- to 44-pole design and can be mounted side-by-side.

Thread insert in the connecting flanges allow to screw the pin strips together with the plug connectors 120-A-115, 120-D-115 and 120-D-125. The plug direction for mating pin strips is parallel to the PCB.

For each pole, the pin strip has one trapezoidal coding slot in which the coding elements 120-K can be inserted.

Part Numbers

No. of poles	120-M-255	Length	Pcs
4	15.806.652	20,00	50
6	15.806.653	25,00	50
8	15.806.654	30,00	50
10	15.806.655	35,00	50
12	15.806.656	40,00	25
14	15.806.657	45,00	25
16	15.806.658	50,00	25
18	15.806.659	55,00	25
20	15.806.660	60,00	25
22	15.806.661	65,00	25
24	15.806.662	70,00	25
26	15.806.663	75,00	25
28	15.806.664	80,00	25
30	15.806.665	85,00	25
32	15.806.666	90,00	25
34	15.806.667	95,00	25
36	15.806.668	100,00	25
38	15.806.669	105,00	25
40	15.806.670	110,00	10
42	15.806.671	115,00	10
44	15.806.672	120,00	10

General Information

Pitch	5 mm
No. of poles	4 - 44
Usable with	all plug connectors of series 120

Technical Data

Overvoltage Category	III	III	II
Pollution Severity Level	3	2	2
Rated Voltage	250 V	320 V	630 V
Rated Impulse Voltage	4 kV	4 kV	4 kV
Rated Insulation Voltage	250 V acc. to EN 60998-1		
Rated Current	12 A		
Hole in PCB	ø 1,4 mm		

Material

Moulding	PA, grey, V-0
Comparative Tracking Index	CTI ≥ 600
Insulating Group	I
Temperature Range	-40°C up to 100°C
Solder pin	1,0 x 1,0 mm; tin plated brass

Approvals

	Current	Voltage	Group	AWG	Nm
	15	300	B		
	10	300	D		
	15	300	B		
	10	300	D, E		

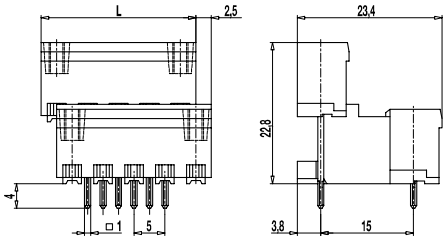
Options / Accessories

- Consecutive numbering
- Special marking according to drawing
- Self-adhesive marking strip BST-5,00
- Pitch of 10 mm for larger clearance and creepage distances
- Coding elements 120-K
- Connectors equipped with coding elements on request
- Two-tier version with front PCB connector offset to the left
- Special combinations of the front and rear row of the two-tier version.

Pin strip

120-M-265

Plug-in direction vertical to PCB, two-tier version, with connecting flanges



The pin strip 120-M-265, two-tier version with connecting flanges and a pitch of 5 mm, is available in 4- to 44-pole design and can be mounted side-by-side.

Thread insert in the connecting flanges allow to screw the pin strips together with the plug connectors 120-A-115, 120-D-115 and 120-D-125. The plug direction for mating pin strips is vertical to the PCB.

For each pole, the pin strip has one trapezoidal coding slot in which the coding elements 120-K can be inserted.

General Information

Pitch	5 mm
No. of poles	4 - 44
Usable with	all plug connectors of series 120

Technical Data

Overvoltage Category	III	III	II
Pollution Severity Level	3	2	2
Rated Voltage	250 V	320 V	630 V
Rated Impulse Voltage	4 kV	4 kV	4 kV
Rated Insulation Voltage	250 V acc. to EN 60998-1		
Rated Current	12 A		
Hole in PCB	ø 1,4 mm		

Material

Moulding	PA, grey, V-0
Comparative Tracking Index	CTI ≥ 600
Insulating Group	I
Temperature Range	-40°C up to 100°C
Solder pin	1,0 x 1,0 mm; tin plated brass

Approvals

	Current	Voltage	Group	AWG	Nm
	15	300	B		
	10	300	D		
	15	300	B		
	10	300	D, E		

Part Numbers

No. of poles	120-M-265	Length	Pcs
4	30.806.652	20,00	100
6	30.806.653	25,00	100
8	30.806.654	30,00	50
10	30.806.655	35,00	50
12	30.806.656	40,00	50
14	30.806.657	45,00	50
16	30.806.658	50,00	25
18	30.806.659	55,00	25
20	30.806.660	60,00	25
22	30.806.661	65,00	25
24	30.806.662	70,00	25
26	30.806.663	75,00	25
28	30.806.664	80,00	25
30	30.806.665	85,00	25
32	30.806.666	90,00	25
34	30.806.667	95,00	25
36	30.806.668	100,00	25
38	30.806.669	105,00	25
40	30.806.670	110,00	25
42	30.806.671	115,00	10
44	30.806.672	120,00	10

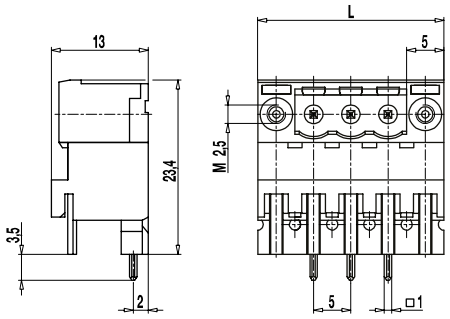
Options / Accessories

- Consecutive numbering
- Special marking according to drawing
- Self-adhesive marking strip BST-5,00
- Pitch of 10 mm for larger clearance and creepage distances
- Coding elements 120-K
- Connectors equipped with coding elements on request
- Two-tier version with front PCB connector offset to the left
- Special combinations of the front and rear row of the two-tier version.

Pin strip

120-M-285

Plug-in direction parallel to PCB, tall version, with connecting flanges



The pin strip 120-M-285, tall version with connecting flanges and a pitch of 5 mm, is available in 2- to 22-pole design and can be mounted side-by-side.

Thread insert in the connecting flanges allow to screw the pin strips together with the plug connectors 120-A-115, 120-D-115 and 120-D-125. The plug direction for mating pin strips is parallel to the PCB.

For each pole, the pin strip has one trapezoidal coding slot in which the coding elements 120-K can be inserted.

Part Numbers

No. of poles	120-M-285	Length	Pcs
2	25.806.652	20,00	100
3	25.806.653	25,00	100
4	25.806.654	30,00	100
5	25.806.655	35,00	50
6	25.806.656	40,00	50
7	25.806.657	45,00	50
8	25.806.658	50,00	50
9	25.806.659	55,00	50
10	25.806.660	60,00	50
11	25.806.661	65,00	50
12	25.806.662	70,00	25
13	25.806.663	75,00	25
14	25.806.664	80,00	25
15	25.806.665	85,00	25
16	25.806.666	90,00	25
17	25.806.667	95,00	25
18	25.806.668	100,00	25
19	25.806.669	105,00	25
20	25.806.670	110,00	25
21	25.806.671	115,00	25
22	25.806.672	120,00	25

General Information

Pitch	5 mm
No. of poles	2 - 22
Usable with	all plug connectors of series 120

Technical Data

Overvoltage Category	III	III	II
Pollution Severity Level	3	2	2
Rated Voltage	250 V	320 V	630 V
Rated Impulse Voltage	4 kV	4 kV	4 kV
Rated Insulation Voltage	250 V acc. to EN 60998-1		
Rated Current	12 A		
Hole in PCB	ø 1,4 mm		

Material

Moulding	PA, grey, V-0
Comparative Tracking Index	CTI ≥ 600
Insulating Group	I
Temperature Range	-40°C up to 100°C
Solder pin	1,0 x 1,0 mm; tin plated brass

Approvals

	Current	Voltage	Group	AWG	Nm
	15	300	B		
	10	300	D		
	15	300	B		
	10	300	D, E		

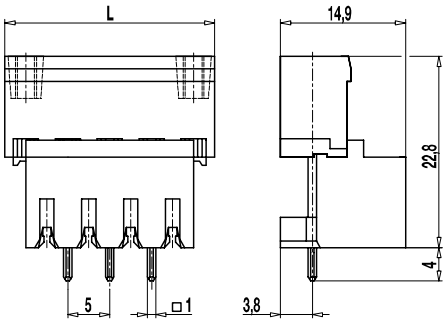
Options / Accessories

- Consecutive numbering
- Special marking according to drawing
- Self-adhesive marking strip BST-5,00
- Pitch of 10 mm for larger clearance and creepage distances
- Coding elements 120-K
- Connectors equipped with coding elements on request

Pin strip

120-M-295

Plug-in direction vertical to PCB, tall version, with connecting flanges



The pin strip 120-M-295, tall version with connecting flanges and a pitch of 5 mm, is available in 2- to 22-pole design and can be mounted side-by-side.

Thread insert in the connecting flanges allow to screw the pin strips together with the plug connectors 120-A-115, 120-D-115 and 120-D-125. The plug direction for mating pin strips is vertical to the PCB.

For each pole, the pin strip has one trapezoidal coding slot in which the coding elements 120-K can be inserted.

Part Numbers

No. of poles	120-M-295	Length	Pcs
2	25.806.202	20,00	100
3	25.806.203	25,00	100
4	25.806.204	30,00	100
5	25.806.205	35,00	50
6	25.806.206	40,00	50
7	25.806.207	45,00	50
8	25.806.208	50,00	50
9	25.806.209	55,00	50
10	25.806.210	60,00	50
11	25.806.211	65,00	50
12	25.806.212	70,00	25
13	25.806.213	75,00	25
14	25.806.214	80,00	25
15	25.806.215	85,00	25
16	25.806.216	90,00	25
17	25.806.217	95,00	25
18	25.806.218	100,00	25
19	25.806.219	105,00	25
20	25.806.220	110,00	25
21	25.806.221	115,00	25
22	25.806.222	120,00	25

General Information

Pitch	5 mm
No. of poles	2 - 22
Usable with	all plug connectors of series 120

Technical Data

Overvoltage Category	III	III	II
Pollution Severity Level	3	2	2
Rated Voltage	250 V	320 V	630 V
Rated Impulse Voltage	4 kV	4 kV	4 kV
Rated Insulation Voltage	250 V acc. to EN 60998-1		
Rated Current	12 A		
Hole in PCB	ø 1,4 mm		

Material

Moulding	PA, grey, V-0
Comparative Tracking Index	CTI ≥ 600
Insulating Group	I
Temperature Range	-40°C up to 100°C
Solder pin	1,0 x 1,0 mm; tin plated brass

Approvals

	Current	Voltage	Group	AWG	Nm
	15	300	B		
	10	300	D		
	15	300	B		
	10	300	D, E		

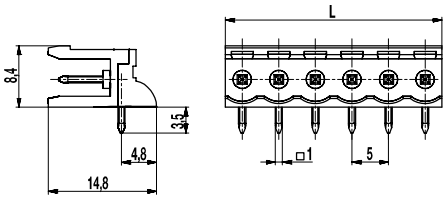
Options / Accessories

- Consecutive numbering
- Special marking according to drawing
- Self-adhesive marking strip BST-5,00
- Pitch of 10 mm for larger clearance and creepage distances
- Coding elements 120-K
- Connectors equipped with coding elements on request

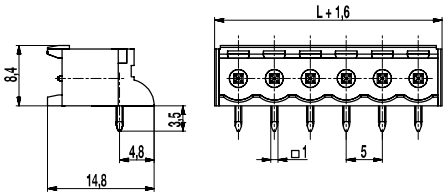
Pin strip

120-M-311/-411

Plug-in direction parallel to PCB, with support



120-M-311, without side walls



120-M-411, with side walls

The pin strips 120-M-311 and 120-M-411, with support and a pitch of 5 mm, is available in 2- to 22-pole design and can be mounted side-by-side.

The ..-M-311 version is a pin strip without side walls. It can be mounted side-by-side without pole loss. The ..-M-411 version is a pin strip with closed side wall. Both versions have a rear support. For both versions, the plug direction for mating plug connectors is parallel to the PCB.

For each pole, the pin strip has one trapezoidal coding slot in which the coding elements 120-K can be inserted.

Part Numbers

No. of poles	120-M-311	120-M-411	Length	Pcs
2	10.806.402	10.806.426	10,00	200
3	10.806.403	10.806.427	15,00	200
4	10.806.404	10.806.428	20,00	100
5	10.806.405	10.806.429	25,00	100
6	10.806.406	10.806.430	30,00	100
7	10.806.407	10.806.431	35,00	50
8	10.806.408	10.806.432	40,00	50
9	10.806.409	10.806.433	45,00	50
10	10.806.410	10.806.434	50,00	50
11	10.806.411	10.806.435	55,00	50
12	10.806.412	10.806.436	60,00	50

further number of poles on request

General Information

Pitch	5 mm
No. of poles	2 - 24
Usable with	all plug connectors of series 120
Additonal Information	Ordering information ..-311: With support and without side wall ..-411: With support and with side wall

Technical Data

Overvoltage Category	III	III	II
Pollution Severity Level	3	2	2
Rated Voltage	250 V	320 V	630 V
Rated Impulse Voltage	4 kV	4 kV	4 kV
Rated Insulation Voltage	250 V acc. to EN 60998-1		
Rated Current	12 A		
Hole in PCB	ø 1,4 mm		

Material

Moulding	PA, grey, V-0
Comparative Tracking Index	CTI ≥ 600
Insulating Group	I
Temperature Range	-40°C up to 100°C
Solder pin	1,0 x 1,0 mm; tin plated brass

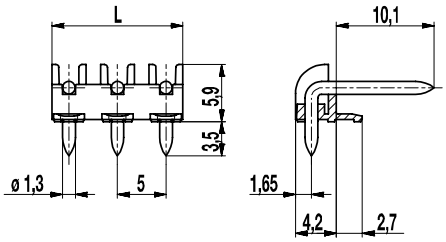
Approvals

	Current	Voltage	Group	AWG	Nm
	15	300	B		
	10	300	D		
	15	300	B		
	10	300	D, E		

Options / Accessories

- Consecutive numbering
- Special marking according to drawing
- Self-adhesive marking strip BST-5,00
- Pitch of 10 mm for larger clearance and creepage distances
- Other P.C. pin lengths on request
- Coding elements 120-K
- Connectors equipped with coding elements on request
- Pin strips with fastening flanges, see 120-M-217
- Pin strips with connecting flanges, see 120-M-215

Pin Strip
950-SLS
Plug-in direction parallel to PCB



Part Numbers

No. of poles	950-SLS	Length	Pcs
2	12.893.101	8,50	1000
3	13.893.101	13,50	500
4	14.893.101	18,50	250
5	15.893.101	23,50	250
6	16.893.101	28,50	250
7	17.893.101	33,50	250
8	18.893.101	38,50	100
9	19.893.101	43,50	100
10	20.893.101	48,50	100
11	21.893.101	53,50	100
12	22.893.101	58,50	100
13	23.893.101	63,50	100
14	24.893.101	68,50	100
15	25.893.101	73,50	100
16	26.893.101	78,50	100
17	27.893.101	83,50	100
18	28.893.101	88,50	100
19	29.893.101	93,50	100
20	30.893.101	98,50	100
21	31.893.101	103,50	100
22	32.893.101	108,50	100
23	33.893.101	113,50	100
24	34.893.101	118,50	100

General Information

Pitch	5 mm
No. of poles	2 - 24

Technical Data

Overvoltage Category	III	III	II
Pollution Severity Level	3	2	2
Rated Voltage	250 V	320 V	500 V
Rated Impulse Voltage	4 kV	4 kV	4 kV
Rated Insulation Voltage	250 V acc. to EN 60998-1		
Rated Current	6 A		
Hole in PCB	ø 1,6 mm		

Material

Moulding	PA, grey, V-0
Comparative Tracking Index	CTI 400
Insulating Group	II
Temperature Range	-40°C up to 100°C
Solder pin	ø 1,3 mm; tin plated brass

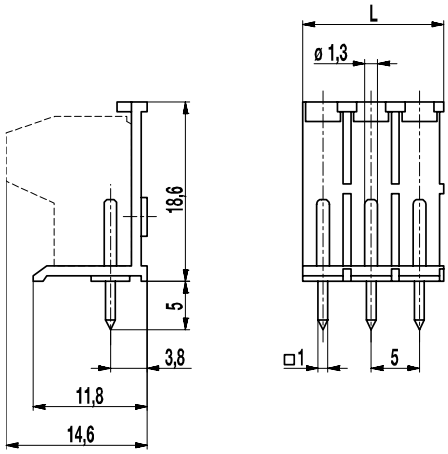
Approvals

	Current	Voltage	Group	AWG	Nm
	10	300	B		
	10	300	B		

Options / Accessories

- Pitch of 10 mm for larger clearance and creepage distances
- Other pin lengths on request
- Other pin surfaces on request

Pin strip
971-FBSP
Plug-in area ø 1,3 mm, with locking plate



General Information

Pitch	5 mm
No. of poles	2 - 12
Usable with	plug connector 971-FBS

Technical Data

Overvoltage Category	III	III	II
Pollution Severity Level	3	2	2
Rated Voltage	160 V	160 V	320 V
Rated Impulse Voltage	2,5 kV	2,5 kV	2,5 kV
Rated Insulation Voltage	130 V acc. to EN 60998-1		
Rated Current	6 A		
Hole in PCB	ø 1,5 mm		

Material

Moulding	PA, grey, V-0
Comparative Tracking Index	CTI ≥ 600
Insulating Group	I
Temperature Range	-40°C up to 100°C
Solder pin	ø 1,3 mm (plug-in area) / 1,0 x 1,0 mm (soldering area); tin plated brass

Part Numbers

No. of poles	971-FBSP	Length	Pcs
2	12.893.412	10,00	200
3	13.893.412	15,00	200
4	14.893.412	20,00	100
5	15.893.412	25,00	100
6	16.893.412	30,00	100
7	17.893.412	35,00	100
8	18.893.412	40,00	100
9	19.893.412	45,00	50
10	20.893.412	50,00	50
11	21.893.412	55,00	50
12	22.893.412	60,00	50

Approvals

	Current	Voltage	Group	AWG	Nm
	20	300	B		
	10	300	D		
	20	300	B		
	10	300	D, E		

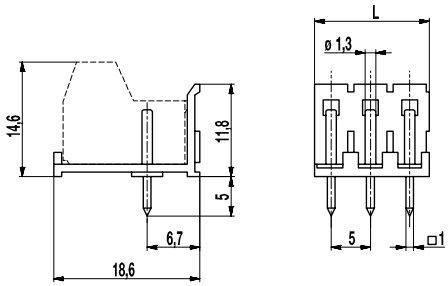
Options / Accessories

- Consecutive numbering
- Special marking according to drawing
- Self-adhesive marking strip BST-5,00
- Pitch of 10 mm for larger clearance and creepage distances

Pin strip

971-FBWP

Plug-in area ø 1,3 mm, with locking plate



Part Numbers

No. of poles	971-FBWP	Length	Pcs
2	32.893.412	10,00	200
3	33.893.412	15,00	200
4	34.893.412	20,00	100
5	35.893.412	25,00	100
6	36.893.412	30,00	100
7	37.893.412	35,00	100
8	38.893.412	40,00	100
9	39.893.412	45,00	50
10	40.893.412	50,00	50
11	41.893.412	55,00	50
12	42.893.412	60,00	50

General Information

Pitch	5 mm
No. of poles	2 - 12
Usable with	plug connector 970-NFBW

Technical Data

Overvoltage Category	III	III	II
Pollution Severity Level	3	2	2
Rated Voltage	160 V	160 V	320 V
Rated Impulse Voltage	2,5 kV	2,5 kV	2,5 kV
Rated Insulation Voltage	130 V acc. to EN 60998-1		
Rated Current	6 A		
Hole in PCB	ø 1,6 mm		

Material

Moulding	PA, grey, V-0
Comparative Tracking Index	CTI ≥ 600
Insulating Group	I
Temperature Range	-40°C up to 100°C
Solder pin	ø 1,3 mm (plug-in area) / 1,0 x 1,0 mm (soldering area); tin plated brass

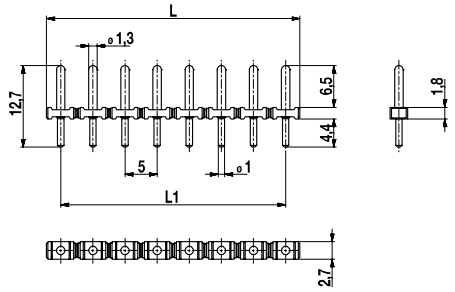
Approvals

	Current	Voltage	Group	AWG	Nm
	20	300	B		
	10	300	D		
	20	300	B		
	10	300	D, E		

Options / Accessories

- Pitch of 10 mm for larger clearance and creepage distances

Pin strip
971-SLR
Soldering area ø 1 mm; plug-in area ø 1,3 mm



L1 = (number of poles - 1) x pitch

Part Numbers

No. of poles	971-SLR	Length	Pcs
2	12.893.811	9,50	1.000
3	13.893.811	14,50	500
4	14.893.811	19,50	500
5	15.893.811	24,50	250
6	16.893.811	29,50	250
7	17.893.811	34,50	250
8	18.893.811	39,50	250
9	19.893.811	44,50	250
10	20.893.811	49,50	100
11	21.893.811	54,50	100
12	22.893.811	59,50	100

further number of poles on request

General Information

Pitch	5 mm
No. of poles	2 - 12
Usable with	plug connector of series 115-F, 950-FL-DS, 950-TFL-DS, 950-NAF-DS, 950-GFL-DS, 950-NLFL-DS, 950-RFL-DS
Additonal Information	Pin strip is suitable for reflow soldering

Technical Data

Overvoltage Category	III	III	II
Pollution Severity Level	3	2	2
Rated Voltage	250 V	320 V	630 V
Rated Impulse Voltage	4 kV	4 kV	4 kV
Rated Insulation Voltage	250 V acc. to EN 60998-1		
Rated Current	10 A		
Soldering process	Wave solder & reflow solder		
Hole in PCB	ø 1,3 mm		
PCB thickness	Wave solder max. 1,6 mm; reflow solder 1,6 - 3,2 mm		

Material

Moulding	PA HT, black, V-0
Comparative Tracking Index	CTI ≥ 600
Insulating Group	I
Temperature Range	-40°C up to 150°C; reflow solder temperature (Peak) max. 260°C (15-30 s)
Solder pin	ø 1,3 mm (plug-in area) / ø 1,0 mm (soldering area); tin plated brass

Approvals

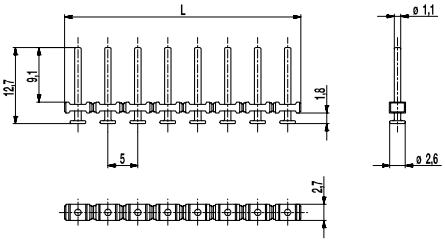
	Current	Voltage	Group	AWG	Nm
	10 [1]	300	B		
	10 [1]	300	B		

[1] By using 115-F current of 12 A possible

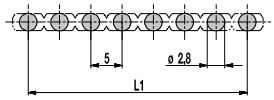
Options / Accessories

- Other plug pin lengths on request
- Other P.C. pin surfaces on request

Pin strip for SMD
971-SLR-SMD-1,1
Plug-in area ø 1,1 mm



PCB Layout



L1 = (No. of poles - 1) x pitch
Solder paste thickness: 0,15 - 0,2 mm

971-SLR-SMD is a pin strip with a pitch of 5 mm for the application in a reflow soldering process. In contrary to the well-known pin rows 971-SLR and 971-SLR-THR, for which holes in the PCB are necessary, the SMD types of WECO base on true surface assembly. Soldering expanses at the end of the pins guarantee optimal retention force on the printed circuit board.
The pin strip 971-SLR-SMD-1,1 comes with a constant pin ø of 1,1 mm at the plug-in area and is usable with WECO plug connectors (see general information); but not with the plug-in connectors of the series 115-F. Furthermore we recommend this pin strip for higher numbers of poles, in order to minimize the plug-in and withdrawal forces here.
Just like all THR versions of WECO also the housings of the SMD series are made out of high temperature resistant plastic material and exhibit a very high CTI value.
For the automatic assembling all pin strips of this series are packed in Tape-on-Reel and equipped with high temperature resistant Pick Caps, which can easily be removed after the soldering process.

Part Numbers

No. of poles	971-SLR-SMD-1,1	Length	Pcs
2	12.893.822	9,50	1.000
3	13.893.822	14,50	500
4	14.893.822	19,50	500
5	15.893.822	24,50	250
6	16.893.822	29,50	250
10	20.893.822	49,50	100
12	22.893.822	59,50	100

further number of poles on request

General Information

Pitch	5 mm
No. of poles	2 - 12
Usable with	plug connectors of series 950-FL-DS, 950-TFL-DS, 950-NAF-DS, 950-GFL-DS, 950-NLFL-DS, 950-RFL-DS
Additonal Information	Also, please take into consideration the pin strips 971-SLR for wave soldering and 971-SLR-THR for Through-Hole-Reflow.

Technical Data

Overvoltage Category	III	III	II
Pollution Severity Level	3	2	2
Rated Voltage	160 V	160 V	320 V
Rated Impulse Voltage	2,5 kV	2,5 kV	2,5 kV
Rated Insulation Voltage	130 V acc. to EN 60998-1		
Rated Current	10 A		
Soldering process	Reflow solder		

Material

Moulding	PA HT, black, V-0
Comparative Tracking Index	CTI ≥ 600
Insulating Group	I
Temperature Range	-40°C up to 150°C; reflow solder temperature (Peak) max. 260°C (15-30 s)
Solder pin	ø 1,1 mm (plug-in area); tin plated brass

Approvals

	Current	Voltage	Group	AWG	Nm
	10	300	B		
	10	300	B		

Options / Accessories

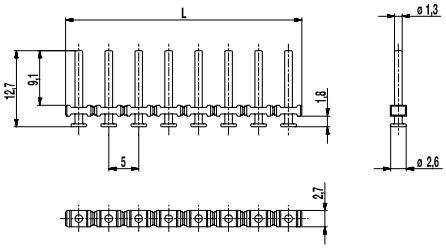
- Other plug pin lengths on request
- Other P.C. pin surfaces on request

Part Numbers: Tape-on-Reel

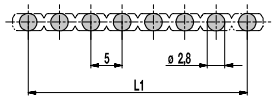
No. of poles	971-SLR-SMD-1,1	Tape Width	Tape Height	Pcs
2	12.893.822.A00	32 mm	15,9 mm	500
3	13.893.822.A00	32 mm	15,9 mm	500
4	14.893.822.A00	56 mm	15,9 mm	500
5	15.893.822.A00	56 mm	15,9 mm	500
6	16.893.822.A00	56 mm	15,9 mm	500
7	17.893.822.A00	56 mm	15,9 mm	500
8	18.893.822.A00	72 mm	14,9 mm	500
9	19.893.822.A00	72 mm	14,9 mm	500
10	20.893.822.A00	72 mm	14,9 mm	500
11	21.893.822.A00	88 mm	15,8 mm	500
12	22.893.822.A00	88 mm	15,8 mm	500

further number of poles on request

Pin strip for SMD
971-SLR-SMD-1,3
Plug-in area ø 1,3 mm



PCB Layout



L1 = (No. of poles - 1) x pitch
Solder paste thickness: 0,15 - 0,2 mm

971-SLR-SMD is a pin strip with a pitch of 5 mm for the application in a reflow soldering process. In contrary to the well-known pin rows 971-SLR and 971-SLR-THR, for which holes in the PCB are necessary, the SMD types of WECO base on true surface assembly. Soldering expanses at the end of the pins guarantee optimal retenion force on the printed circuit board.
The pin strip 971-SLR-SMD-1,3 with the pin diameter of 1,3 mm at the plug-in area, is rather suitable for the small numbers of poles of the plug connector (see general information). The obtained plug-in and pull-out forces are comfortable.
Just like all THR versions of WECO also the housings of the SMD series are made out of high temperature resistant plastic material and exhibit a very high CTI value.
For the automatic assembling all pin strips of this series are packed in Tape-on-Reel and equipped with high temperature resistant Pick Caps, which can easily be removed after the soldering process.

Part Numbers

No. of poles	971-SLR-SMD-1,3	Length	Pcs
2	12.893.821	9,50	1.000
3	13.893.821	14,50	500
4	14.893.821	19,50	500
5	15.893.821	24,50	250
6	16.893.821	29,50	250
10	20.893.821	49,50	100
12	22.893.821	59,50	100

further number of poles on request

General Information

Pitch	5 mm
No. of poles	2 - 12
Usable with	plug connectors of series 115-F, 950-FL-DS, 950-TFL-DS, 950-NAF-DS, 950-GFL-DS, 950-NLFL-DS, 950-RFL-DS
Additonal Information	Also, please take into consideration the pin strips 971-SLR for wave soldering and 971-SLR-THR for Through-Hole-Reflow.

Technical Data

Overvoltage Category	III	III	II
Pollution Severity Level	3	2	2
Rated Voltage	160 V	160 V	320 V
Rated Impulse Voltage	2,5 kV	2,5 kV	2,5 kV
Rated Insulation Voltage	130 V acc. to EN 60998-1		
Rated Current	10 A		
Soldering process	Reflow solder		

Material

Moulding	PA HT, black, V-0
Comparative Tracking Index	CTI ≥ 600
Insulating Group	I
Temperature Range	-40°C up to 150°C; reflow solder temperature (Peak) max. 260°C (15-30 s)
Solder pin	ø 1,3 mm (plug-in area); tin plated brass

Approvals

	Current	Voltage	Group	AWG	Nm
	10 [1]	300	B		
	10 [1]	300	B		

(1) By using 115-F current of 12 A possible

Options / Accessories

- Other plug pin lengths on request
- Other P.C. pin surfaces on request

Part Numbers: Tape-on-Reel

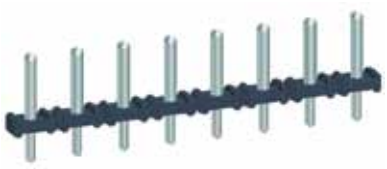
No. of poles	971-SLR-SMD-1,3	Tape Width	Tape Height	Pcs
2	12.893.821.A00	32 mm	15,9 mm	500
3	13.893.821.A00	32 mm	15,9 mm	500
4	14.893.821.A00	56 mm	15,9 mm	500
5	15.893.821.A00	56 mm	15,9 mm	500
6	16.893.821.A00	56 mm	15,9 mm	500
7	17.893.821.A00	56 mm	15,9 mm	500
8	18.893.821.A00	72 mm	14,9 mm	500
9	19.893.821.A00	72 mm	14,9 mm	500
10	20.893.821.A00	72 mm	14,9 mm	500

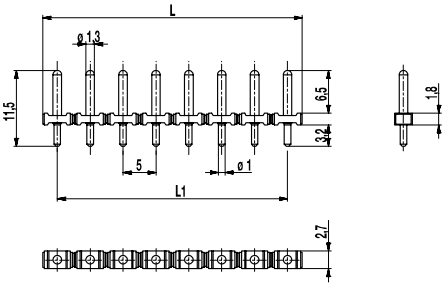
further number of poles on request

Pin strip for THR

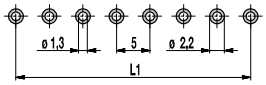
971-SLR-THR

Soldering area ø 1 mm; plug-in area ø 1,3 mm





PCB Layout



L1 = (No. of poles - 1) x pitch
Solder paste thickness: 0,15 - 0,2 mm
Solder pad diameter: ø 2,2 mm

971-SLR-THR is a pin strip with a pitch of 5 mm for the application in a reflow soldering process. The high temperature resistant plastic housing has a very high CTI value and is equipped with spacers, so-called "Stand-offs", which ensure a better hot-air circulation during the reflow soldering process in the convection oven. Beyond this, they assure an improved optical control of the solder joints.
The pin strips of the series 971-SLR-THR comes with a stepped pin, ø of 1,3 mm in the plug-in area and ø of 1,0 mm in the soldering area, and is usable with all WECO plug connectors (see general information). Furthermore we recommend this pin strip for small numbers of poles and for the series of 115-F for all numbers of poles. The obtained plug-in and pullout forces are comfortable. For the automatic assembling all pin strips of this series are packed in Tape-on-Reel and equipped with high temperature resistant Pick Caps, which can easily be removed after the soldering process.

Part Numbers

No. of poles	971-SLR-THR	Length	Pcs
2	12.893.801	9,50	1.000
3	13.893.801	14,50	500
4	14.893.801	19,50	500
5	15.893.801	24,50	250
6	16.893.801	29,50	250
8	18.893.801	39,50	250
10	20.893.801	49,50	100
12	22.893.801	59,50	100

further number of poles on request

General Information

Pitch	5 mm
No. of poles	2 - 12
Usable with	plug connectors of series 115-F, 950-FL-DS, 950-TFL-DS, 950-NAF-DS, 950-GFL-DS, 950-NLFL-DS, 950-RFL-DS
Additonal Information	Also, please take into consideration the pin strips 971-SLR for wave soldering and 971-SLR-SMD in genuine surface mount technology.

Technical Data

Overvoltage Category	III	III	II
Pollution Severity Level	3	2	2
Rated Voltage	250 V	320 V	630 V
Rated Impulse Voltage	4 kV	4 kV	4 kV
Rated Insulation Voltage	250 V acc. to EN 60998-1		
Rated Current	10 A		
Soldering process	Wave solder & reflow solder		
Hole in PCB	ø 1,3 mm		
PCB thickness	Wave solder max. 1,6 mm; reflow solder 1,6 - 3,2 mm		

Material

Moulding	PA HT, black, V-0
Comparative Tracking Index	CTI ≥ 600
Insulating Group	I
Temperature Range	-40°C up to 150°C; reflow solder temperature (Peak) max. 260°C (15-30 s)
Solder pin	ø 1,3 mm (plug-in area) / ø 1,0 mm (soldering area); tin plated brass

Approvals

	Current	Voltage	Group	AWG	Nm
	10 [1]	300	B		
	10 [1]	300	B		

[1] By using 115-F current of 12 A possible

Options / Accessories

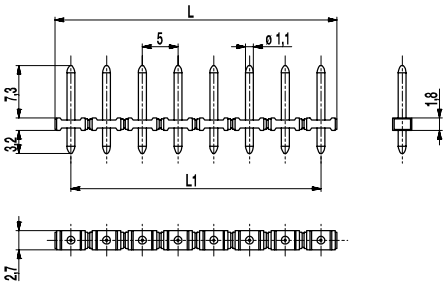
- Other plug pin lengths on request
- Other P.C. pin surfaces on request

Part Numbers: Tape-on-Reel

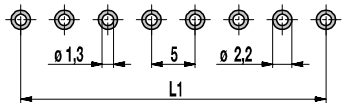
No. of poles	971-SLR-THR	Tape Width	Tape Height	Pcs
2	12.893.801.A00	32 mm	15,9 mm	500
3	13.893.801.A00	32 mm	15,9 mm	500
4	14.893.801.A00	56 mm	15,9 mm	500
6	16.893.801.A00	56 mm	15,9 mm	500
7	17.893.801.A00	56 mm	15,9 mm	500
8	18.893.801.A00	72 mm	14,9 mm	500
10	20.893.801.A00	72 mm	14,9 mm	500

further number of poles on request

Pin strip for THR
971-SLR-THR-1,1
Soldering/plug-in area ø 1,1 mm



PCB Layout



L1 = (number of poles - 1) x pitch
Solder paste thickness: 0,15 - 0,2 mm
Solder pad diameter: ø 2,2 mm

971-SLR-THR-1,1 is a pin strip with a pitch of 5 mm for the application in a reflow soldering process. The high temperature resistant plastic housing has a very high CTI value and is equipped with spacers, so-called "Stand-offs", which ensure a better hot-air circulation during the reflow soldering process in the convection oven. Beyond this, they assure an improved optical control of the solder joints.
The pin strip 971-SLR-THR-1,1 comes with a constant pin ø of 1,1 mm and is usable with all WECO plug connectors (see general information); but not with the plug-in connectors of the series 115-F. Furthermore we recommend this pin strip for higher numbers of poles, in order to minimize the plug-in and withdrawal forces here.
For the automatic assembling all pin strips of this series are packed in Tape-on-Reel and equipped with high temperature resistant Pick Caps, which can easily be removed after the soldering process.

Part Numbers

No. of poles	971-SLR-THR-1,1	Length	Pcs
2	12.893.802	9,50	1.000
3	13.893.802	14,50	500
4	14.893.802	19,50	500
6	16.893.802	29,50	250
8	18.893.802	39,50	250
12	22.893.802	59,50	100

further number of poles on request

General Information

Pitch	5 mm
No. of poles	2 - 12
Usable with	plug connectors 950-FL-DS, 950-TFL-DS, 950-NAF-DS, 950-GFL-DS, 950-NLFL-DS, 950-RFL-DS
Additonal Information	Also please consider the pin strips 971-SLR for wave soldering and 971-SLR-SMD in genuine surface mount technology.

Technical Data

Overvoltage Category	III	III	II
Pollution Severity Level	3	2	2
Rated Voltage	250 V	320 V	630 V
Rated Impulse Voltage	4 kV	4 kV	4 kV
Rated Insulation Voltage	250 V acc. to EN 60998-1		
Rated Current	10 A		
Soldering process	Wave solder & reflow solder		
Hole in PCB	ø 1,3 mm		
PCB thickness	Wave solder max. 1,6 mm; reflow solder 1,6 - 3,2 mm		

Material

Moulding	PA HT, black, V-0
Comparative Tracking Index	CTI ≥ 600
Insulating Group	I
Temperature Range	-40°C up to 150°C; reflow solder temperature (Peak) max. 260°C (15-30 s)
Solder pin	ø 1,1 mm; tin plated brass

Approvals

	Current	Voltage	Group	AWG	Nm
	10	300	B		
	10	300	B		

Options / Accessories

- Other plug pin lengths on request
- Other P.C. pin surfaces on request

Part Numbers: Tape-on-Reel

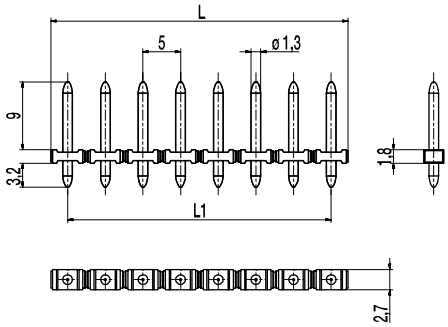
No. of poles	971-SLR-THR-1,1	Tape Width	Tape Height	Pcs
8	18.893.802.A00	72 mm	14,9 mm	500

further number of poles on request

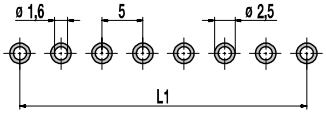
Pin strip for THR

971-SLR-THR-1,3

Soldering/plug-in area ø 1,3 mm



PCB Layout



L1 = (No. of poles - 1) x pitch
Solder paste thickness: 0,15 - 0,2 mm
Solder pad diameter: ø 2,5 mm

971-SLR-THR-1,3 is a pin strip with a pitch of 5 mm for the application in a reflow soldering process. The high temperature resistant plastic housing has a very high CTI value and is equipped with spacers, so-called "Stand-offs", which ensure a better hot-air circulation during the reflow soldering process in the convection oven. Beyond this, they assure an improved optical control of the solder joints.
The pin strips of the series 971-SLR-THR-1,3 comes with a constant pin ø of 1,3 mm and is usable with all WECO plug connectors (see general information). Furthermore we recommend this pin strip for small numbers of poles and for the series of 115-F for all numbers of poles. The obtained plug-in and pull-out forces are comfortable. For the automatic assembling all pin strips of this series are packed in Tape-on-Reel and equipped with high temperature resistant Pick Caps, which can easily be removed after the soldering process.

Part Numbers

No. of poles	971-SLR-THR-1,3	Length	Pcs
2	12.893.805	9,50	1.000
3	13.893.805	14,50	500
4	14.893.805	19,50	500
5	15.893.805	24,50	250
6	16.893.805	29,50	250
8	18.893.805	39,50	250
10	20.893.805	49,50	100
11	21.893.805	54,50	100
12	22.893.805	59,50	100

General Information

Pitch	5 mm
No. of poles	2 - 12
Usable with	plug connectors of series 115-F, 950-FL-DS, 950-TFL-DS, 950-NAF-DS, 950-GFL-DS, 950-NLFL-DS, 950-RFL-DS
Additonal Information	Also please consider the pin strips 971-SLR for wave soldering and 971-SLR-SMD in genuine surface mount technology.

Technical Data

Overvoltage Category	III	III	II
Pollution Severity Level	3	2	2
Rated Voltage	250 V	320 V	630 V
Rated Impulse Voltage	4 kV	4 kV	4 kV
Rated Insulation Voltage	250 V acc. to EN 60998-1		
Rated Current	10 A		
Soldering process	Wave solder & reflow solder		
Hole in PCB	ø 1,6 mm		
PCB thickness	Wave solder max. 1,6 mm; reflow solder 1,6 - 3,2 mm		

Material

Moulding	PA HT, black, V-0
Comparative Tracking Index	CTI ≥ 600
Insulating Group	I
Temperature Range	-40°C up to 150°C; reflow solder temperature (Peak) max. 260°C (15-30 s)
Solder pin	ø 1,3 mm; tin plated brass

Approvals

	Current	Voltage	Group	AWG	Nm
	10 [1]	300	B		
	10 [1]	300	B		

[1] By using 115-F current of 12 A possible

Options / Accessories

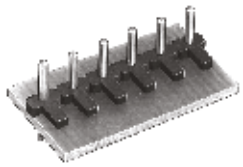
- Other plug pin lengths on request
- Other P.C. pin surfaces on request

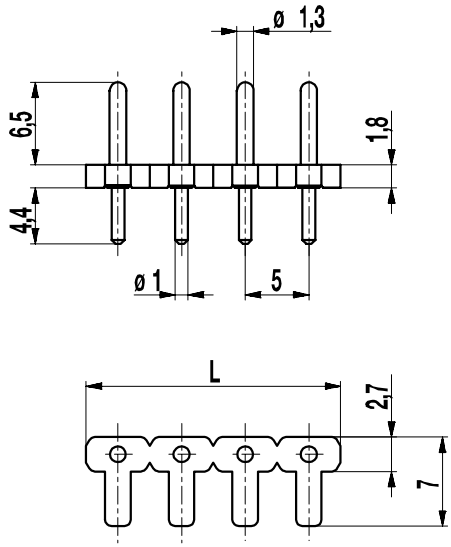
Part Numbers: Tape-on-Reel

No. of poles	971-SLR-THR-1,3	Tape Width	Tape Height	Pcs
2	12.893.805.A00	32 mm	15,9 mm	500
3	13.893.805.A00	32 mm	15,9 mm	500
4	14.893.805.A00	56 mm	15,9 mm	500
5	15.893.805.A00	56 mm	15,9 mm	500
6	16.893.805.A00	56 mm	15,9 mm	500
7	17.893.805.A00	56 mm	15,9 mm	500
10	20.893.805.A00	72 mm	15,9 mm	500
12	22.893.805.A00	88 mm	15,9 mm	500

further number of poles on request

Pin strip
971-SLS
Soldering area ø 1 mm; plug-in area ø 1,3 mm, with support





General Information

Pitch	5 mm
No. of poles	2 - 24
Usable with	all sockets and plugs of series 95-FB und 97-FB, 97-FBW, 97-FBS
Additonal Information	Application tip: In combination with 95-FB or 97-FB series socket connectors, printed circuit boards can be directly connected.

Technical Data

Overvoltage Category	III	III	II
Pollution Severity Level	3	2	2
Rated Voltage	200 V	320 V	320 V
Rated Impulse Voltage	4 kV	4 kV	4 kV
Rated Insulation Voltage	250 V acc. to EN 60998-1		
Rated Current	6 A		
Hole in PCB	ø 1,3 mm		

Material

Moulding	PBTP, black, V-0
Comparative Tracking Index	CTI 175
Insulating Group	IIIa
Temperature Range	-40°C up to 100°C
Solder pin	ø 1,3 mm (plug-in area) / ø 1,0 mm (soldering area); tin plated brass

Approvals

	Current	Voltage	Group	AWG	Nm
	10	300	B		
	10	300	B		

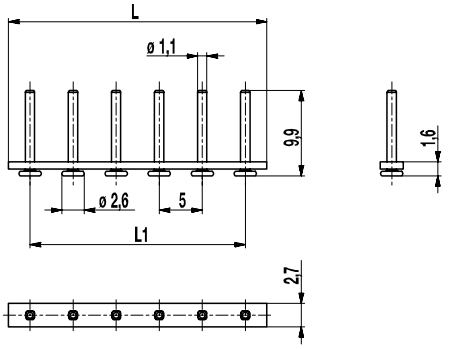
Options / Accessories

- Pitch of 10 mm for larger clearance and creepage distances
- Other pin lengths on request
- Other P.C. pin surfaces on request

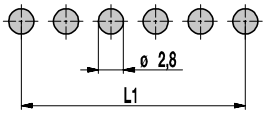
Part Numbers

No. of poles	971-SLS	Length	Pcs
2	12.893.602	10,00	500
3	13.893.602	15,00	500
4	14.893.602	20,00	250
5	15.893.602	25,00	250
6	16.893.602	30,00	250
7	17.893.602	35,00	250
8	18.893.602	40,00	100
9	19.893.602	45,00	100
10	20.893.602	50,00	100
11	21.893.602	55,00	100
12	22.893.602	60,00	100
13	23.893.602	65,00	100
14	24.893.602	70,00	100
15	25.893.602	75,00	100
16	26.893.602	80,00	100
17	27.893.602	85,00	100
18	28.893.602	90,00	100
19	29.893.602	95,00	100
20	30.893.602	100,00	100
21	31.893.602	105,00	100
22	32.893.602	110,00	100
23	33.893.602	115,00	100
24	34.893.602	120,00	100

Pin strip for SMD
971-SLT-SMD-1,1
Low profile



PCB Layout



L1 = (No. of poles - 1) x pitch
Solder paste thickness: 0,15 - 0,2 mm

971-SLT-SMD is a pin strip with a pitch of 5 mm for the application in a reflow soldering process with low profile for space critical applications. Contrary to the well-known pin strips of 971-SLR and 971-SLR-THR, for which holes in the PCB are necessary, the SMD types of WECO base on true surface assembly. Soldering expanses at the end of the pins guarantee optimal retention force on the printed circuit board.
The pin strip 971-SLT-SMD comes with a constant pin ø of 1,1 mm at the plug-in area. Plug-in direction perpendicular to PCB and wire entrance parallel to PCB when plugged with WECO plug connectors (see general information); but not with the plug-in connectors of the series 115-F. Furthermore, we recommend this pin strip for higher numbers of poles, in order to minimize the plug-in and withdrawal forces here.
Just like all THR versions of WECO, also the housings of the SMD series are made out of high temperature resistant plastic material.
For the automatic assembling all pin strips of this series are packed in Tape-on-Reel and equipped with high temperature resistant Pick Caps, which can easily be removed after the soldering process.

Part Numbers

No. of poles	971-SLT-SMD-1,1	Length	Pcs
2	12.893.656	10,00	1.000
6	16.893.656	30,00	250

further number of poles on request

General Information

Pitch	5 mm
No. of poles	2 - 12
Usable with	plug connectors of series 950-FL-DS, 950-TFL-DS, 950-NAF-DS, 950-GFL-DS, 950-NLFL-DS, 950-RFL-DS
Additonal Information	Also, please take into consideration the pin strips 971-SLR for wave soldering and 971-SLR-THR for Through-Hole-Reflow.

Technical Data

Overvoltage Category	III	III	II
Pollution Severity Level	3	2	2
Rated Voltage	160 V	160 V	250 V
Rated Impulse Voltage	2,5 kV	2,5 kV	2,5 kV
Rated Insulation Voltage	130 V acc. to EN 60998-1		
Rated Current	10 A		
Soldering process	Reflow solder		

Material

Moulding	PA HT, black, V-0
Comparative Tracking Index	CTI ≥ 250
Insulating Group	IIIa
Temperature Range	-40°C up to 105°C; reflow solder temperature (Peak) max. 250°C (15-30 s)
Solder pin	ø 1,1 mm (plug-in area); tin plated brass

Approvals

	Current	Voltage	Group	AWG	Nm
	10	300	B		

Options / Accessories

- Other plug pin lengths on request
- Other P.C. pin surfaces on request

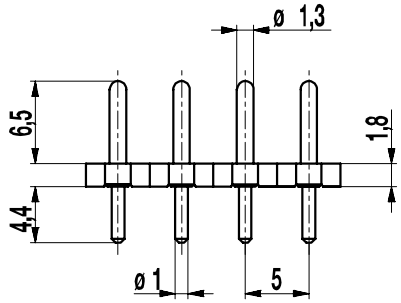
Part Numbers: Tape-on-Reel

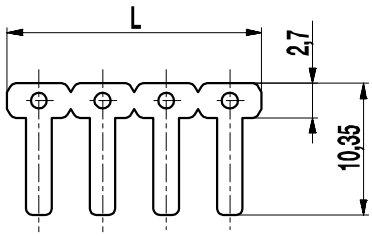
No. of poles	971-SLT-SMD-1,1	Tape Width	Tape Height	Pcs
2	12.893.656.A00	32 mm	16,1 mm	500
6	16.893.656.A00	44 mm	15,0 mm	500

further number of poles on request

Pin strip
971-SLW
Soldering area ø 1 mm; plug-in area ø 1,3 mm, with long support

RoHS COMPLIANT





General Information

Pitch	5 mm
No. of poles	2 - 24
Usable with	all sockets and plugs of series 95-FB und 97-FB, 97-FBW, 97-FBS
Additonal Information	Application tip: In combination with 95-FB or 97-FB series socket connectors, printed circuit boards can be directly connected.

Technical Data

Overvoltage Category	III	III	II
Pollution Severity Level	3	2	2
Rated Voltage	200 V	320 V	320 V
Rated Impulse Voltage	4 kV	4 kV	4 kV
Rated Insulation Voltage	250 V acc. to EN 60998-1		
Rated Current	6 A		
Hole in PCB	ø 1,3 mm		

Material

Moulding	PBTP, black , V-0
Comparative Tracking Index	CTI 175
Insulating Group	IIIa
Temperature Range	-40°C up to 100°C
Solder pin	ø 1,3 mm (plug-in area) / ø 1,0 mm (soldering area); tin plated brass

Approvals

	Current	Voltage	Group	AWG	Nm
	10	300	B		
	10	300	B		

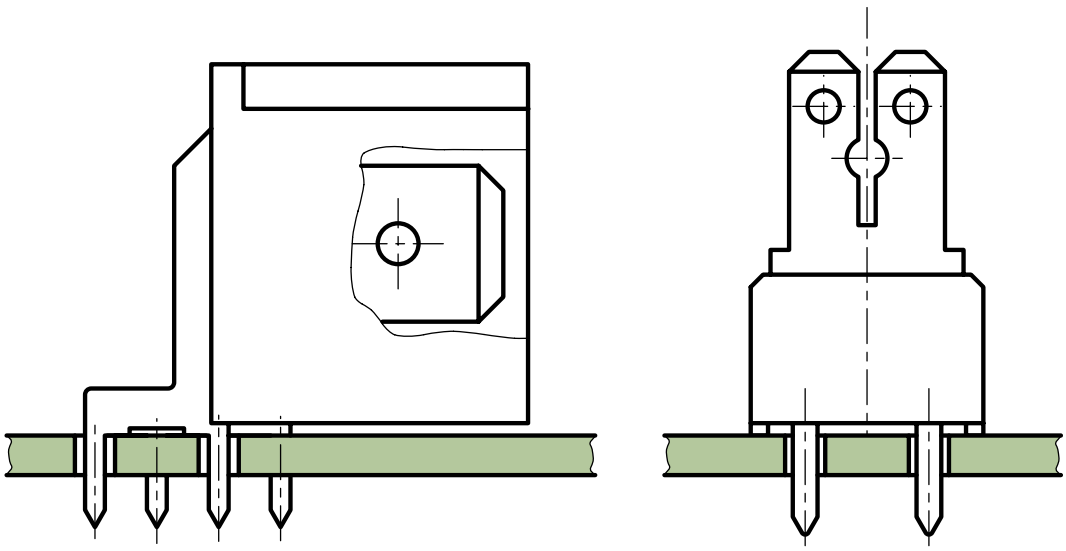
Part Numbers

No. of poles	971-SLW	Length	Pcs
2	12.893.603	10,00	1000
3	13.893.603	15,00	500
4	14.893.603	20,00	250
5	15.893.603	25,00	250
6	16.893.603	30,00	250
7	17.893.603	35,00	250
8	18.893.603	40,00	100
9	19.893.603	45,00	100
10	20.893.603	50,00	100
11	21.893.603	55,00	100
12	22.893.603	60,00	100
13	23.893.603	65,00	100
14	24.893.603	70,00	100
15	25.893.603	75,00	100
16	26.893.603	80,00	100
17	27.893.603	85,00	100
18	28.893.603	90,00	100
19	29.893.603	95,00	100
20	30.893.603	100,00	100
21	31.893.603	105,00	100
22	32.893.603	110,00	100
23	33.893.603	115,00	100
24	34.893.603	120,00	100

Options / Accessories

- Pitch of 10 mm for larger clearance and creepage distances
- Other pin lengths on request
- Other P.C. pin surfaces on request

Tab connectors



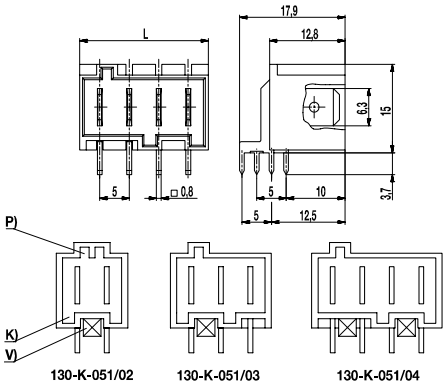
On the following pages you can find our range of tab connectors.

The Series 900 of our tab connector assortment can be flexibly used on various pitches. The tab connectors with double solder termination are designed for 2,8 mm, 4,8 mm, 6,3 mm tab receptacles.

Depending on the respective application, the series 900-W-5 allows to plug on bare, partially or fully insulated tab receptacles according to DIN 46247.

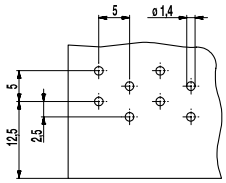
For the insulation of tab receptacles, insulating sleeves ISO-110 for 2.8 mm and ISO-25 for 6.3 mm or 2x2.8 can be used (see accessories). When using double-spring contacts for 6.3 mm tab connectors, our insulating socket ISO-900 is best suitable.

Tab connector
130-K



P) Positioning
K) Coding
V) Interlocking

PCB Layout



This plug connector was developed according to "White Goods Standard RAST 5 (Plug-Connection-Technology with a pitch of 5 mm). Due to its diverse coding possiblities, it offers maximum safety against incorrect plugging.

The tab connector strips are manufactured specifically according to the respective coding application.
A corresponding drawing or description of the desired positioning (P), coding (K) and interlocking (V) is to be provided by the customer.

The technical drawing shows an example of a 4-pole version in three different views, and the coding of a 2- and 3-pole design with the corresponding article designations. The corresponding article numbers are listed below.

Other coded versions (P,K,V) are available upon request.

Part Numbers

No. of poles	130-K	Length	Pcs
2	51.803.320	12,00	100
3	51.803.330	17,00	100
4	51.803.340	22,00	100

further number of poles on request

General Information

Pitch	5 mm
No. of poles	2 - 12
Usable with	Plug connectors 130-A, 130-P

Technical Data

Overvoltage Category	III
Pollution Severity Level	3
Rated Voltage	250 V
Rated Impulse Voltage	4 kV
Rated Insulation Voltage	250 V acc. to EN 60998-1
Rated Current	12 A
Hole in PCB	ø 1,4 mm

Material

Moulding	PBT, natural, V-0
Comparative Tracking Index	CTI ≥ 275
Insulating Group	IIIa
Temperature Range	-40°C up to 130°C
Solder pin	0,8 x 0,8 mm, Tin plated brass
Tab	6,3 x 0,8 mm, Tin plated brass

Approvals

	Current	Voltage	Group	AWG	Nm
	22	300	B		
	10	300	D		
	22	300	B		
	10	300	D, E		

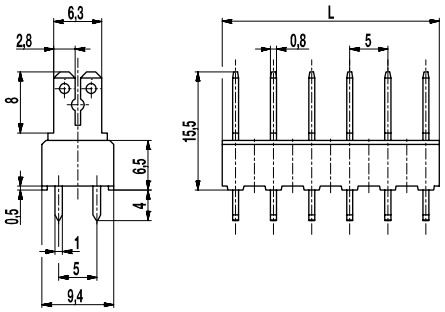
Options / Accessories

- Pitch of 10 mm for larger clearance and creepage distances
- Tab for solder brige

Tab connector

900-F-S-5

Tab 2x 2,8 mm / 1x 6,3 mm, with pegs



The tab connector 900-F-S-5 with a pitch of 5 mm is a raised 900-S-5 version and designed for tab receptacles of 1x 2.8 mm or 1x 6.3 mm.

The tab connector housing of series 900-F was raised for this special variant. The enormous variety of different tab connector designs and their mixed mounting increase the versatility of this series. When potting the tab connector moulding, the casting resin can penetrate between the raised feet from below without affecting the blade connection area.

Depending on the respective application, the series 900-F allows to plug in bare, partially or fully insulated tab receptacles according to DIN 46247. Also non-insulated 2.8 mm or 6.3 mm tab receptacles can be plugged on these tab connectors. Insulating sleeve ISO-25 (see also ISO product data sheet) can be used to insulate 2.8 mm or 6.3 mm tab receptacles.
Insulating sockets are available for 6.3 mm tab connectors with double-spring contacts (see also ISO-900 product data sheet).

Part Numbers

No. of poles	900-F-S-5	Length	Pcs
5	50.870.710	23,50	100

further number of poles on request

General Information

Pitch	5 mm
No. of poles	2 - 25

Technical Data

Overvoltage Category	III	III	II
Pollution Severity Level	3	2	2
Rated Voltage	320 V	320 V	630 V
Rated Impulse Voltage	4 kV	4 kV	4 kV
Rated Insulation Voltage	450 V acc. to EN 60998-1		
Rated Current	6 A: with receptacles 2,8; wire 1 mm² (16 AWG) 16 A: with receptacles 6,3; wire 2,5 mm² (14 AWG)		
Hole in PCB	ø 1,6 mm		
Other specifications	Rated voltage with insulated receptacles		

Material

Moulding	PA, grey, V-0
Comparative Tracking Index	CTI ≥ 600
Insulating Group	I
Temperature Range	-40°C up to 100°C
Solder pin	1,0 x 0,8 mm; tin plated brass
Tab	2,8 x 0,8 mm; 6,3 x 0,8 mm: tin plated brass

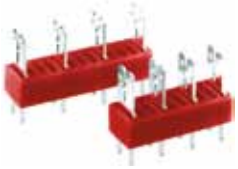
Options / Accessories

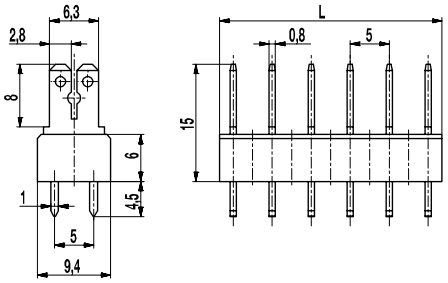
- Consecutive numbering
- Special marking according to drawing
- Self-adhesive marking strip BST-5,00
- Insulation sleeves ISO
- Insulation sockets ISO-900
- Change of pitch
- Component mix of tab connector versions
- Tab connectors are also individually available (see single tabs GST-900)

Tab connector

900-S-5

Tab 2x 2,8 mm / 1x 6,3 mm





The tab connector 900-S-5 with double solder termination and a pitch of 5 mm is designed for 1x 2.8 mm or 1x 6.3 mm tab connector receptacles.

Depending on the respective application, the series 900-F allows to plug in bare, partially or fully insulated tab receptacles according to DIN 46247. Also non-insulated 2.8 mm or 6.3 mm tab receptacles can be plugged on these tab connectors. Insulating sleeves ISO-25 (see also ISO product data sheet) can be used to insulate 2.8 mm or 6.3 mm tab receptacles.
Insulating sockets are available for 6.3 mm tab connectors with double-spring contacts (see also ISO-900 product data sheet).

Part Numbers

No. of poles	900-S-5	Length	Pcs
2	50.870.902	8,50	250
3	50.870.903	13,50	250
4	50.870.904	18,50	200
5	50.870.905	23,50	100
6	50.870.906	28,50	100
7	50.870.907	33,50	100
8	50.870.908	38,50	100
9	50.870.909	43,50	100
10	50.870.910	48,50	100
11	50.870.911	53,50	100
12	50.870.912	58,50	100
13	50.870.913	63,50	100
14	50.870.914	68,50	100
15	50.870.915	73,50	100
16	50.870.916	78,50	100
17	50.870.917	83,50	100
18	50.870.918	88,50	100
19	50.870.919	93,50	100
20	50.870.920	98,50	100
21	50.870.921	103,50	100
22	50.870.922	108,50	100
23	50.870.923	113,50	100
24	50.870.924	118,50	50
25	50.870.925	123,50	50

further number of poles on request

General Information

Pitch	5 mm
No. of poles	2 - 25

Technical Data

Overvoltage Category	III	III	II
Pollution Severity Level	3	2	2
Rated Voltage	320 V	320 V	630 V
Rated Impulse Voltage	4 kV	4 kV	4 kV
Rated Insulation Voltage	450 V acc. to EN 60998-1		
Rated Current	6 A: with receptacles 2,8; wire 1 mm² (16 AWG) 16 A: with receptacles 6,3; wire 2,5 mm² (14 AWG)		
Hole in PCB	ø 1,6 mm		
Other specifications	Rated voltage with insulated receptacles		

Material

Moulding	PA, red, V-0
Comparative Tracking Index	CTI ≥ 600
Insulating Group	I
Temperature Range	-40°C up to 100°C
Solder pin	1,0 x 0,8 mm; tin plated brass
Tab	2,8 x 0,8 mm; 6,3 x 0,8 mm: tin plated brass

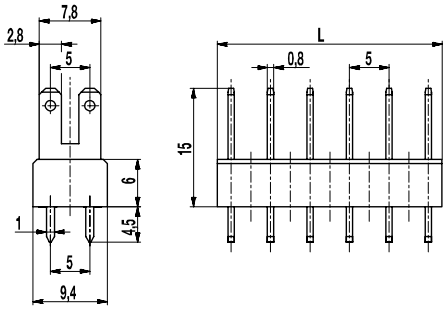
Approvals

	Current	Voltage	Group	AWG	Nm
	15	125	B		
	15	300	B		
	10	300	D, E		

Options / Accessories

- Consecutive numbering
- Special marking according to drawing
- Self-adhesive marking strip BST-5,00
- Insulation sleeves ISO
- Insulation sockets IS0-900
- Change of pitch
- Component mix of tab connector versions
- Tab connectors are also individually available (see single tabs GST-900)

Tab connector
900-SH-5
Tab 2x 2,8 mm



The tab connector 900-SH-5 with double solder termination and a pitch of 5 mm is designed for 2x 2.8 mm tab connector receptacles.

Depending on the respective application, the series 900-F allows to plug in bare, partially or fully insulated tab receptacles according to DIN 46247. On tab connectors of this series, two non-insulated 2.8 mm tab receptacles can be plugged in parallel. Insulating sleeves ISO-110 (see also ISO product data sheet) can be used to insulate 2.8 mm tab receptacles.

Part Numbers

No. of poles	900-SH-5	Length	Pcs
2	35.870.902	8,50	250
3	35.870.903	13,50	250
4	35.870.904	18,50	200
5	35.870.905	23,50	100
6	35.870.906	28,50	100
7	35.870.907	33,50	100
8	35.870.908	38,50	100
9	35.870.909	43,50	100
10	35.870.910	48,50	100
11	35.870.911	53,50	100
12	35.870.912	58,50	100
13	35.870.913	63,50	100
14	35.870.914	68,50	100
15	35.870.915	73,50	100
16	35.870.916	78,50	100
17	35.870.917	83,50	100
18	35.870.918	88,50	100
19	35.870.919	93,50	100
20	35.870.920	98,50	100
21	35.870.921	103,50	100
22	35.870.922	108,50	100
23	35.870.923	113,50	100
24	35.870.924	118,50	50
25	35.870.925	123,50	50

further number of poles on request

General Information

Pitch	5 mm
No. of poles	2 - 25

Technical Data

Overvoltage Category	III	III	II
Pollution Severity Level	3	2	2
Rated Voltage	320 V	320 V	630 V
Rated Impulse Voltage	4 kV	4 kV	4 kV
Rated Insulation Voltage	450 V acc. to EN 60998-1		
Rated Current	6 A: with receptacles 2,8; wire 1 mm² (16 AWG)		
Hole in PCB	ø 1,6 mm		
Other specifications	Rated voltage with insulated receptacles		

Material

Moulding	PA, red, V-0
Comparative Tracking Index	CTI ≥ 600
Insulating Group	I
Temperature Range	-40°C up to 100°C
Solder pin	1,0 x 0,8 mm; tin plated brass
Tab	2,8 x 0,8 mm: tin plated brass

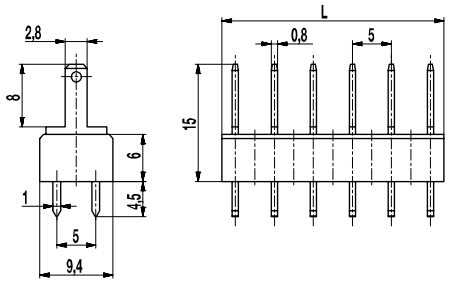
Approvals

	Current	Voltage	Group	AWG	Nm
	15	125	B		
	15	300	B		
	10	300	D, E		

Options / Accessories

- Consecutive numbering
- Special marking according to drawing
- Self-adhesive marking strip BST-5,00
- Insulation sleeves ISO
- Change of pitch
- Component mix of tab connector versions
- Tab connectors are also individually available (see single tabs GST-900)

Tab connector
900-SUB-5
Tab 2,8 mm



The tab connector 900-SUB-5 with double solder termination and a pitch of 5 mm is designed for 2.8 mm tab connector receptacles.

Depending on the respective application, the series 900-SUB-5 allows to plug in bare, partially or fully insulated tab receptacles according to DIN 46247. Insulating sleeves ISO-110 (see also ISO product data sheet) can be used to insulate 2.8 mm tab receptacles.
Insulating sockets are available for 6.3 mm tab connectors with double-spring contacts (see also ISO-900 product data sheet).

Part Numbers

No. of poles	900-SUB-5	Length	Pcs
2	11.870.902	8,50	250
3	11.870.903	13,50	250
4	11.870.904	18,50	200
5	11.870.905	23,50	100
6	11.870.906	28,50	100
7	11.870.907	33,50	100
8	11.870.908	38,50	100
9	11.870.909	43,50	100
10	11.870.910	48,50	100
11	11.870.911	53,50	100
12	11.870.912	58,50	100
13	11.870.913	63,50	100
14	11.870.914	68,50	100
15	11.870.915	73,50	100
16	11.870.916	78,50	100
17	11.870.917	83,50	100
18	11.870.918	88,50	100
19	11.870.919	93,50	100
20	11.870.920	98,50	100
21	11.870.921	103,50	100
22	11.870.922	108,50	100
23	11.870.923	113,50	100
24	11.870.924	118,50	50
25	11.870.925	123,50	50

further number of poles on request

General Information

Pitch	5 mm
No. of poles	2 - 25

Technical Data

Overvoltage Category	III	III	II
Pollution Severity Level	3	2	2
Rated Voltage	320 V	320 V	630 V
Rated Impulse Voltage	4 kV	4 kV	4 kV
Rated Insulation Voltage	450 V acc. to EN 60998-1		
Rated Current	6 A: with receptacles 2,8; wire 1 mm² (16 AWG)		
Hole in PCB	ø 1,6 mm		
Other specifications	Rated voltage with insulated receptacles		

Material

Moulding	PA, red, V-0
Comparative Tracking Index	CTI ≥ 600
Insulating Group	I
Temperature Range	-40°C up to 100°C
Solder pin	1,0 x 0,8 mm; tin plated brass
Tab	2,8 x 0,8 mm: tin plated brass

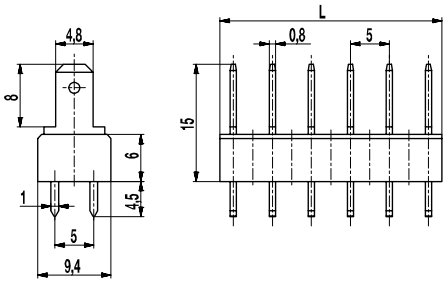
Approvals

	Current	Voltage	Group	AWG	Nm
	15	125	B		
	6	300	B, D, E		

Options / Accessories

- Consecutive numbering
- Special marking according to drawing
- Self-adhesive marking strip BST-5,00
- Insulation sleeves ISO
- Insulation sockets ISO-900
- Change of pitch
- Component mix of tab connector versions
- Tab connectors are also individually available (see single tabs GST-900)

Tab connector
900-SUC-5
Tab 4,8 mm



The tab connector 900-SUC-5 with double solder termination and a pitch of 5 mm is designed for 4.8 mm tab connector receptacles.

Depending on the respective application, the series 900-SUC-5 allows to plug in bare, partially or fully insulated tab receptacles according to DIN 46247. Insulating sleeves ISO-187 (see also ISO product data sheet) can be used to insulate 4.8 mm tab receptacles.
Insulating sockets are available for 6.3 mm tab connectors with double-spring contacts (see also ISO-900 product data sheet).

Part Numbers

No. of poles	900-SUC-5	Length	Pcs
2	15.870.902	8,50	250
3	15.870.903	13,50	250
4	15.870.904	18,50	200
5	15.870.905	23,50	100
6	15.870.906	28,50	100
7	15.870.907	33,50	100
8	15.870.908	38,50	100
9	15.870.909	43,50	100
10	15.870.910	48,50	100
11	15.870.911	53,50	100
12	15.870.912	58,50	100
13	15.870.913	63,50	100
14	15.870.914	68,50	100
15	15.870.915	73,50	100
16	15.870.916	78,50	100
17	15.870.917	83,50	100
18	15.870.918	88,50	100
19	15.870.919	93,50	100
20	15.870.920	98,50	100
21	15.870.921	103,50	100
22	15.870.922	108,50	100
23	15.87.923	113,50	100
24	15.870.924	118,50	50
25	15.870.925	123,50	50

further number of poles on request

General Information

Pitch	5 mm
No. of poles	2 - 25

Technical Data

Overvoltage Category	III	III	II
Pollution Severity Level	3	2	2
Rated Voltage	320 V	320 V	630 V
Rated Impulse Voltage	4 kV	4 kV	4 kV
Rated Insulation Voltage	450 V acc. to EN 60998-1		
Rated Current	16 A: with receptacles 4,8; wire 2,5 mm² (14 AWG)		
Hole in PCB	ø 1,6 mm		
Other specifications	Rated voltage with insulated receptacles		

Material

Moulding	PA, red, V-0
Comparative Tracking Index	CTI ≥ 600
Insulating Group	I
Temperature Range	-40°C up to 100°C
Solder pin	1,0 x 0,8 mm; tin plated brass
Tab	4,8 x 0,8 mm: tin plated brass

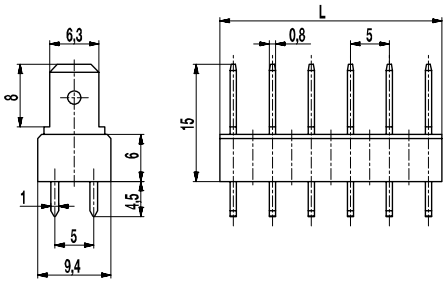
Approvals

	Current	Voltage	Group	AWG	Nm
	15	125	B		
	15	300	B		
	10	300	D, E		

Options / Accessories

- Consecutive numbering
- Special marking according to drawing
- Self-adhesive marking strip BST-5,00
- Insulation sleeves ISO
- Insulation sockets IS0-900
- Change of pitch
- Component mix of tab connector versions
- Tab connectors are also individually available (see single tabs GST-900)

Tab connector
900-SUN-5
Tab 6,3 mm



The tab connector 900-SUN-5 with double solder termination and a pitch of 5 mm is designed for 6.3 mm tab connector receptacles.

Depending on the respective application, the series 900-SUN-5 allows to plug in bare, partially or fully insulated tab receptacles according to DIN 46247. Insulating sleeves ISO-25 and ISO-250 (see also ISO product data sheet) can be used to insulate 6.3 mm tab receptacles.
Insulating sockets are available for 6.3 mm tab connectors with double-spring contacts (see also ISO-900 product data sheet).

Part Numbers

No. of poles	900-SUN-5	Length	Pcs
2	45.870.902	8,50	250
3	45.870.903	13,50	250
4	45.870.904	18,50	200
5	45.870.905	23,50	100
6	45.870.906	28,50	100
7	45.870.907	33,50	100
8	45.870.908	38,50	100
9	45.870.909	43,50	100
10	45.870.910	48,50	100
11	45.870.911	53,50	100
12	45.870.912	58,50	100
13	45.870.913	63,50	100
14	45.870.914	68,50	100
15	45.870.915	73,50	100
16	45.870.916	78,50	100
17	45.870.917	83,50	100
18	45.870.918	88,50	100
19	45.870.919	93,50	100
20	45.870.920	98,50	100
21	45.870.921	103,50	100
22	45.870.922	108,50	100
23	45.87.923	113,50	100
24	45.870.924	118,50	50
25	45.870.925	123,50	50

further number of poles on request

General Information

Pitch	5 mm
No. of poles	2 - 25

Technical Data

Overvoltage Category	III	III	II
Pollution Severity Level	3	2	2
Rated Voltage	320 V	320 V	630 V
Rated Impulse Voltage	4 kV	4 kV	4 kV
Rated Insulation Voltage	450 V acc. to EN 60998-1		
Rated Current	16 A: with receptacles 6,3; wire 2,5 mm² (14 AWG)		
Hole in PCB	ø 1,6 mm		
Other specifications	Rated voltage with insulated receptacles		

Material

Moulding	PA, red, V-0
Comparative Tracking Index	CTI ≥ 600
Insulating Group	I
Temperature Range	-40°C up to 100°C
Solder pin	1,0 x 0,8 mm; tin plated brass
Tab	6,3 x 0,8 mm: tin plated brass

Approvals

	Current	Voltage	Group	AWG	Nm
	15	125	B		
	15	300	B		
	10	300	D, E		

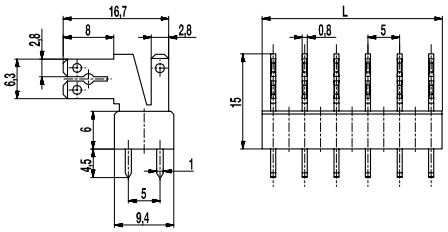
Options / Accessories

- Consecutive numbering
- Special marking according to drawing
- Self-adhesive marking strip BST-5,00
- Insulation sleeves ISO
- Insulation sockets IS0-900
- Change of pitch
- Component mix of tab connector versions
- Tab connectors are also individually available (see single tabs GST-900)

Tab connector

900-W-5

Tabs with 90° angle



The tab connector 900-W-5 with double solder termination and a pitch of 5 mm is designed for 1x 2.8 mm and 1x 2.8 mm/1x 6.3 mm tab connector receptacles.

Depending on the respective application, the series 900-W-5 allows to plug in bare, partially or fully insulated tab receptacles according to DIN 46247. A non-insulated 2.8 mm or a 6.3 mm (optionally also insulated) tab connector receptacle can be plugged in the angled plug-in area of the tab connector. To the vertical tab connector, a non-insulated 2.8 mm tab connector receptacle can be also be connected. Insulating sleeves ISO-25 and ISO-250 (see also ISO product data sheet) can be used to insulate 6.3 mm tab receptacles.

Part Numbers

No. of poles	900-W-5	Length	Pcs
2	25.870.902	8,50	250
3	25.870.903	13,50	250
4	25.870.904	18,50	200
5	25.870.905	23,50	100
6	25.870.906	28,50	100
7	25.870.907	33,50	100
8	25.870.908	38,50	100
9	25.870.909	43,50	100
10	25.870.910	48,50	100
11	25.870.911	53,50	100
12	25.870.912	58,50	100
13	25.870.913	63,50	100
14	25.870.914	68,50	50
15	25.870.915	73,50	50
16	25.870.916	78,50	50
17	25.870.917	83,50	50
18	25.870.918	88,50	50
19	25.870.919	93,50	50
20	25.870.920	98,50	50
21	25.870.921	103,50	50
22	25.870.922	108,50	50
23	25.87.923	113,50	50
24	25.870.924	118,50	50
25	25.870.925	123,50	50

further number of poles on request

General Information

Pitch	5 mm
No. of poles	2 - 25

Technical Data

Overvoltage Category	III	III	II
Pollution Severity Level	3	2	2
Rated Voltage	320 V	320 V	630 V
Rated Impulse Voltage	4 kV	4 kV	4 kV
Rated Insulation Voltage	450 V acc. to EN 60998-1		
Rated Current	6 A: with receptacles 2,8; wire 1 mm² (16 AWG) 16 A: with receptacles 6,3; wire 2,5 mm² (14 AWG)		
Hole in PCB	ø 1,6 mm		
Other specifications	Rated voltage with insulated receptacles		

Material

Moulding	PA, red, V-0
Comparative Tracking Index	CTI ≥ 600
Insulating Group	I
Temperature Range	-40°C up to 100°C
Solder pin	1,0 x 0,8 mm; tin plated brass
Tab	2,8 x 0,8 mm; 6,3 x 0,8 mm: tin plated brass

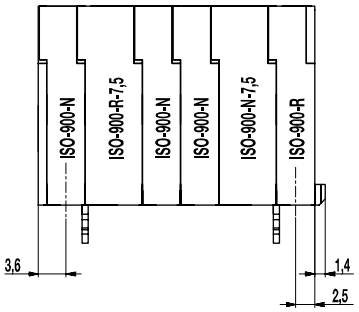
Approvals

	Current	Voltage	Group	AWG	Nm
	15	125	B		
	15	300	B		
	10	300	D, E		

Options / Accessories

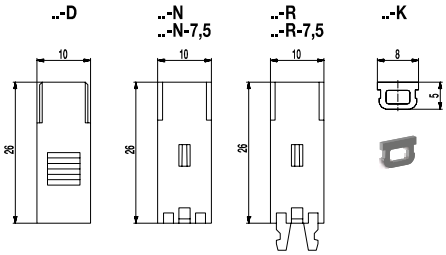
- Consecutive numbering
- Special marking according to drawing
- Self-adhesive marking strip BST-5,00
- Insulation sleeves ISO
- Change of pitch
- Component mix of tab connector versions
- Tab connectors are also individually available (see single tabs GST-900)

Insulating sockets
ISO-900
Accessories



Mounting example

Versions



Version D: Cover
Version N: Standard Insulation housing
Version R: Insulation housing with snap-fits
Version K: Coding keys to block empty chambers

ISO-900 insulating sockets are used to insulate double spring contacts.
They are single pole and can be mounted side-by-side in 5 mm and 7.5 mm pitch.
Apart from the standard insulating sockets ISO-900-N und ISO-900-N-7.5, type ISO-900-R and ISO-900-R-7.5 with a latching hook are available to provide additional locking strength against accidental withdrawal. These latching hooks snap in the empty receptacles of tab connectors 900-S and 900-SUN.
The cover ISO-900-D is used as contact protection for the last pole.
Insulating sockets with latching hooks and ISO-900-K coding keys allow contacting the sockets. They are inserted into the empty slots of the tab connector, in which no insulating socket with latching hook is allocated, thus preventing incorrect connections.

General Information

Pitch	5 mm / 7,5 mm
Usable with	Tab connectors 900-S, 900-SUN and 900-SUC
Additonal Information	When accurately positioned in the socket, the double-spring contacts audibly snap into place. These metal parts are not part of our product range. They can be used e.g. for TYCO timer contacts (no. 925598-1).

Material

Moulding	PA, red, V-0
Comparative Tracking Index	CTI ≥ 600
Insulating Group	I
Temperature Range	-40°C up to 100°C

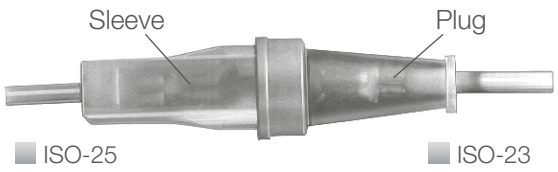
Options / Accessories

- Special marking according to drawing
- ISO-900 insulation housings can be provided as multipole combinations. Please enclose a drawing.
- Spacer 2,5 mm (ISO-900-Z)

Part Numbers

Type	Part Numbers	Length	Pcs
ISO-900-D	25.838.106		1000
ISO-900-N	10.838.104		1000
ISO-900-N-7,5	10.838.105		1000
ISO-900-R	20.838.107		1000
ISO-900-R-7,5	10.838.108		1000
ISO-900-K	10.496.021		1000

Insulating sleeves
ISO
Accessories



Mounting example

Depending of their scope of application, insulating sleeves are made of either polyethylene (..-PE) or polypropylene V-0 (..-PPV0) and are available in various colours and sizes. Tab receptables according to DIN 46 247 are fully insulated (including the crimped point) with insulating sleeves. Prior to crimping, they are pushed onto the wire end, and are therefore captive. They can also be used to insulate crimped plug-in receptacles and cable sockets.

General Information

Additional Information	By means of using both ISO-23 (tab connector side) and ISO-25 insulating sleeves, a 6.3 mm cross-section cable connection can be completely insulated (see figure).

Material

Moulding	PE = Polyethylene (see table for colours) PP = Polypropylene, nature, V-0
Comparative Tracking Index	CTI ≥ 600
Temperature Range	PE: ca. 70 up to 80°C, short-time ca. 90°C PP: up to 80°C, short-time ca. 140°C

Options / Accessories

- Insulation sleeves in other colours

Part numbers

Part numbers	Type	Colour	Nom. size	Cross-section	Length x width x height	Pcs
10.838.001	ISO-110-PEN	natural	2,8	up to 1 mm² (16 AWG)	19,5 x 5,5 x 3,5 mm	10.000
10.838.031	ISO-110-PEG	yellow	2,8	up to 1 mm² (16 AWG)	19,5 x 5,5 x 3,5 mm	10.000
10.838.034	ISO-110-PER	red	2,8	up to 1 mm² (16 AWG)	19,5 x 5,5 x 3,5 mm	10.000
10.838.021	ISO-110-PES	black	2,8	up to 1 mm² (16 AWG)	19,5 x 5,5 x 3,5 mm	10.000
10.838.032	ISO-110-PPV0	nature	2,8	up to 1 mm² (16 AWG)	19,5 x 5,5 x 3,5 mm	10.000
10.838.011	ISO-187-PEN	natural	4,8	up to 1,5 mm² (16 AWG)	21 x 8 x 4,5 mm	10.000
10.838.005	ISO-187-PEG	yellow	4,8	up to 1,5 mm² (16 AWG)	21 x 8 x 4,5 mm	10.000
10.838.035	ISO-187-PER	red	4,8	up to 1,5 mm² (16 AWG)	21 x 8 x 4,5 mm	10.000
10.838.036	ISO-187-PES	black	4,8	up to 1,5 mm² (16 AWG)	21 x 8 x 4,5 mm	10.000
10.838.044	ISO-187-PPV0	nature	4,8	up to 1,5 mm² (16 AWG)	21 x 8 x 4,5 mm	10.000
10.838.006	ISO-23-PEN	natural	6,3	up to 2,5 mm² (14 AWG)	23 x 12,5 x 8,5 mm	10.000
10.838.007	ISO-23-PEG	yellow	6,3	up to 2,5 mm² (14 AWG)	23 x 12,5 x 8,5 mm	10.000
10.838.017	ISO-23-PES	black	6,3	up to 2,5 mm² (14 AWG)	23 x 12,5 x 8,5 mm	10.000
10.838.046	ISO-23-PPV0	nature	6,3	up to 2,5 mm² (14 AWG)	23 x 12,5 x 8,5 mm	10.000
10.838.013	ISO-25-PEN	natural	6,3	up to 2,5 mm² (14 AWG)	25 x 9,5 x 5 mm	10.000
10.838.014	ISO-25-PEG	yellow	6,3	up to 2,5 mm² (14 AWG)	25 x 9,5 x 5 mm	10.000
10.838.016	ISO-25-PES	black	6,3	up to 2,5 mm² (14 AWG)	25 x 9,5 x 5 mm	10.000
10.838.045	ISO-25-PPV0	nature	6,3	up to 2,5 mm² (14 AWG)	25 x 9,5 x 5 mm	10.000
10.838.009	ISO-250-PEN	natural	6,3	up to 4 mm² (12 AWG)	25 x 9,5 x 6 mm	10.000
10.838.010	ISO-250-PEG	yellow	6,3	up to 4 mm² (12 AWG)	25 x 9,5 x 6 mm	10.000
10.838.018	ISO-250-PES	black	6,3	up to 4 mm² (12 AWG)	25 x 9,5 x 6 mm	10.000
10.838.048	ISO-250-PPV0	nature	6,3	up to 4 mm² (12 AWG)	25 x 9,5 x 6 mm	10.000

* Since cable diameters vary, cross-sections are only reference values.

Single Tabs
GST-900
Accessories

This tabs for printed circuits with a thickness of 0,8 mm are used to connect tab receptacles, size 2.8. 4.8 and 6.3 according to DIN 46 247.
Depending on their scope of application they are available with vertical and/or parallel outgoing wires.
Tabs can be insulated with our ISO-insulating sleeves.

Technical Data

Rated Current	Tab 2,8:	6 A
	Tab 4,8:	16 A
	Tab 6,3:	25 A
	please see DIN 46 249	

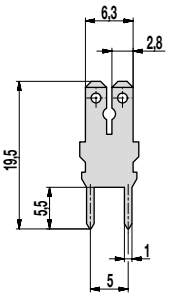
Material

Tab	Tin plated brass, thickness 0,8 mm

Options / Accessories

- Tab GST-900-S with press-fit pins

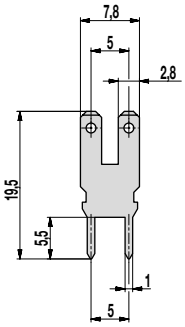
Versions



GST-900-S

Tab width
1x 6,3 mm / 2x 2,8 mm

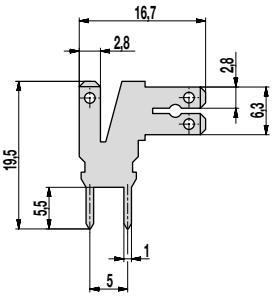
For a non-insulated
2.8 mm or an
insulated 6.3 mm
tab receptacle



GST-900-SH

Tab width
2x 2,8 mm

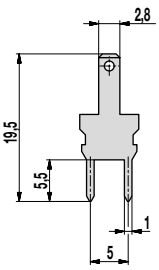
2 non-insulated
2.8 mm tab
receptacles fit next
to each other



GST-900-W

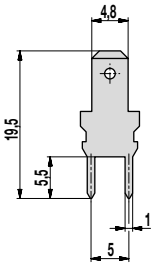
Tab width
1x 2,8 mm
1x 6,3 mm / 2x 2,8 mm

For a non-insulated
2.8 mm or an
insulated 6.3 mm
tab receptacle



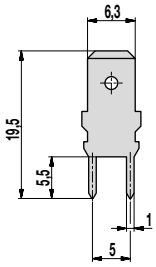
GST-900-SUB

Tab width
2,8 mm



GST-900-SUC-4,8

Tab width
4,8 mm



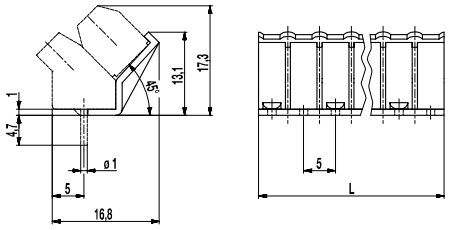
GST-900-SUN

Tab width
6,3 mm

Part numbers

Type	Part number	Pcs
GST-900-S	10.351.107	1.000
GST-900-SH	10.351.111	1.000
GST-900-SUB	10.371.106	1.000
GST-900-SUC-4,8	10.361.108	1.000
GST-900-SUN	10.351.113	1.000
GST-900-W	10.351.109	1.000

Locking plate
974-P



General Information

Pitch	5 mm
No. of poles	2 - 12
Usable with	socket terminal strip 974-FB + plug connector 951-SV

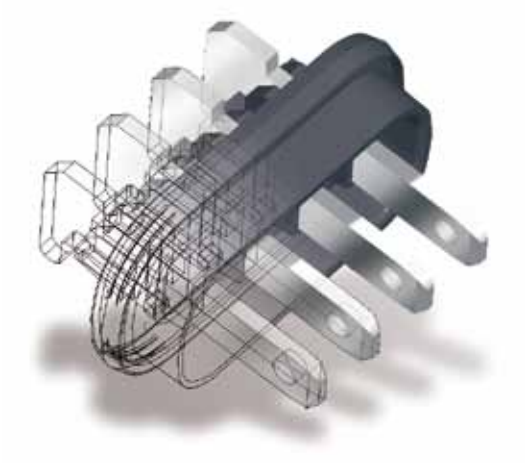
Material

Moulding	PA, grey, V-2
Comparative Tracking Index	CTI ≥ 600
Insulating Group	I
Temperature Range	-40°C up to 100°C

Part Numbers

No. of poles	974-P	Length	Pcs
2	12.893.142	10,00	500
3	13.893.142	15,00	500
4	14.893.142	20,00	500
5	15.893.142	25,00	500
6	16.893.142	30,00	250
7	17.893.142	35,00	250
8	18.893.142	40,00	250
9	19.893.142	45,00	250
10	20.893.142	50,00	250
11	21.893.142	55,00	250
12	22.893.142	60,00	250

Looking for a Customer Designed Solution?



„Sealed“

With a pitch of 3.5 mm, this insert with four tabs 2.8 x 0.8 mm was designed to seal the contacts, for an application which required the protection class IP54.

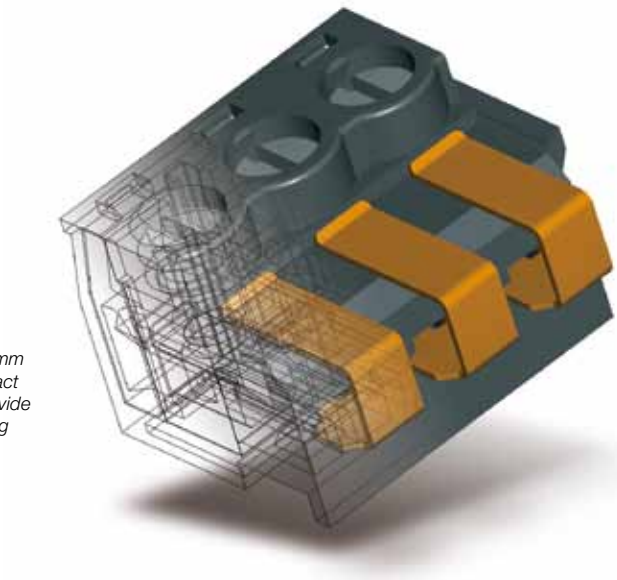
„Top“

Version of a terminal our series 970 in 5 mm pitch.
In order to achieve a distance of 100 mm from the PCB, a housing was constructed, which not only does protect the pins but also positions them in a special arrangement. In the terminal area are also placed elongated ribs.

Our Product Information Centre will assist you with every technical inquiry.

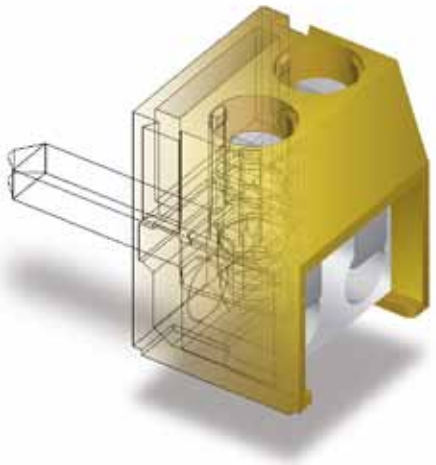
- Please, call us under +49 6181 105-151.
- Contact us via e-mail at products@wecogroup.com.
- You want us to pay you a visit? We are pleased to arrange an appointment.
- You would prefer a visit in Hanau?
  Of course, you are welcomed anytime.

We are looking forward to your call.



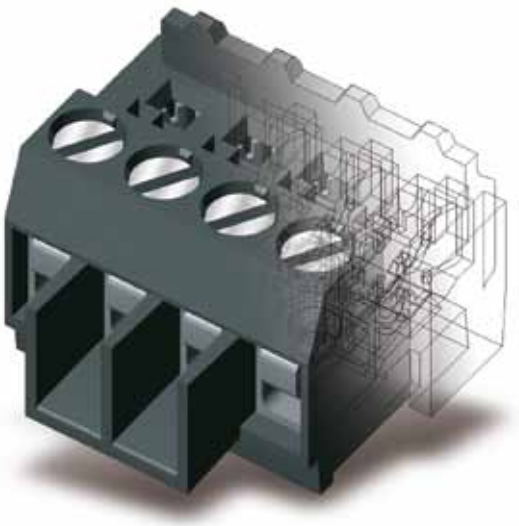
„Well Contacted“

This plug connector with the pitch of 5 mm is designed with outer gold-plated contact surfaces. Additionally, the side walls provide ribs for receiving a corresponding locking hook.



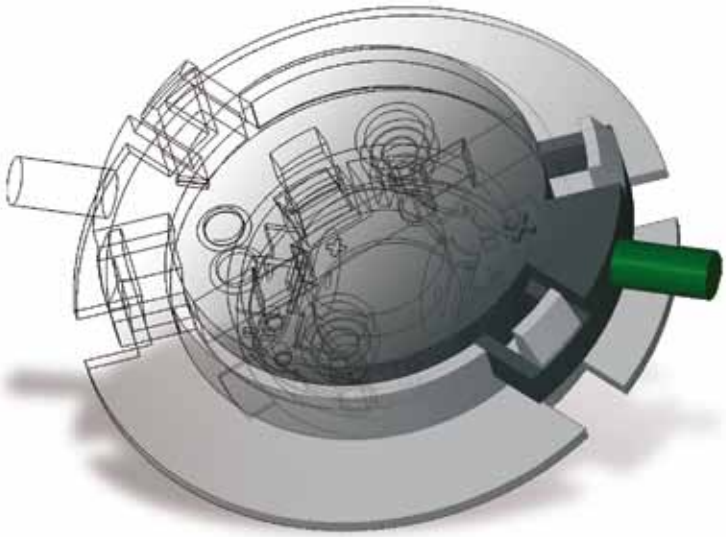
„Stable bridged“

Terminal connector in 5 mm pitch with one potential but two screw connections and a plug connector at the back. This allows a connection to other terminals.
For the customer the housing was made with buttercup yellow material (similar to RAL 1021).



„Long-ribbed“

A plug connector with a pitch of 3.5 mm, with a anti-twist peg and two extra-long guiding ribs.
In the plug connection area, tabs and round plug pins could be contacted.

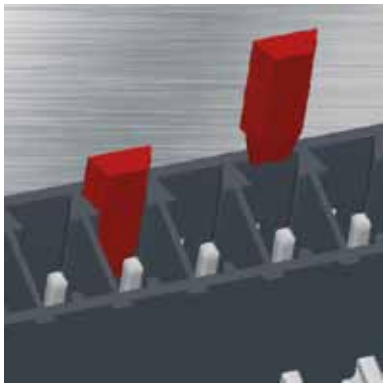


„Solar“

Draft for a photovoltaic-module connection.

Accessories / Options

Coding Elements



This coding element is applicable for the Conecta Series of 110, 120, 121 and 122.
For coding, all pin strips and plug connectors of this series are equipped with a trapezoidal slot per pole into which the coding elements can easily be inserted.
With this, simple solution error free plugging is ensured.
In the standard version the coding elements have a bright red colour, making them clearly visible in mated condition. Alternatively, they are also available in light grey. 12 of each coding element are related to a strip.
The coding elements are not reflow solderable and for SMD & THR products they can only be used after the soldering process.
The coding elements 130-CP are anthracite and loose in a bag.

Part number	Type	Pcs
20.496.025	120-K/12 KODIEREL.	120
17.496.025	120-K/12 KODIEREL. LIGHTGREY	120
10.496.030	130-CP KODIERPLAETTCHEN	100

Marking Strips

These marking strips are made of polyester with black print on a silver background. They have a scratch resistant mylar surface.
Numbering begins with 1, the specified pole number is the last digit respectively.
The marking strips withstand printed circuit board cleaning agents containing water and soap, freon, fluorinated or chlorinated ingredients; they are not suitable for reflow soldering procedures.
They are supplied on adhesive cards each containing ten strips.

Part number	Type	Pitch	Length (L)	Width (a)	Pcs
24.499.009	BST-5,00/12	5,00	60	3,5	100
24.499.010	BST-5,00/32	5,00	160	3,5	100

Marking

Alternatively to the self-adhesive marking strips, we offer a special marking to meet almost any special and individual marking requirement. The printing is carried out on pre-designed marking areas.
Depending upon the housing colour, the numbers are imprinted in white or in black.
Other printing colours are possible on request.

Accessories / Options

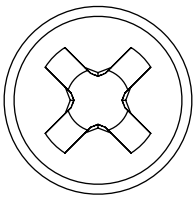
Colours

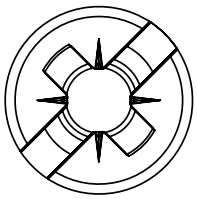
WECO offers a wide range of housing colours.
Besides our standard housing colours, you can choose between many other colours.
Please contact us for further information.

Screws

Our standard products are fitted with slotted screws.
On enquiry and customer‘s request, we also offer screws with Philips/Pozidrive or +/- screw heads.

Further materials:
Standard screws are made of steel; also screws out of various materials, e.g. brass, are available on request.





Packaging: Card board boxes, Tape-on-Reel, Magazines

According to standard, we pack our products in pollution free folding boxes from card board and from corrugated board. Besides, we offer transfer tubes (magazines) as packing for the use with feeders and dispensers for automated insertion machinery. Transfer tubes offer the advantage of a better transportation facility and a simple withdrawal over the cardboards.

Our SMD and THR products are packed in “Tape-on-Reel” for the automated assembly process in pick and place machines. Please find data sheet information about products packed on Tape-on-Reel on our website.

Technical Information

Rating of Clearance and Creepage Distances according to DIN EN 60664-1 (VDE 0110-1)

The rating of clearance and creepage distances depends on the expected electrical surge, the characteristic values of the electronic protection measures as well as the contamination at the place of installation.
Clearanece distances are dimensioned in accordance with the rated impulse voltage table F.1, which results out of the overvoltage category and phase-to-earth voltage.
The minimum clearance in air is stated at altitudes of less than 2000 m above sea level and ascertained in accordance with the impulse voltage and the contamination level, table 2.
Creepage distances are measured by the operating voltage, the characteristic of the insulants (CTI value), the expected contamination level as well as the preventive measures against contamination.
Basis of the creepage distance is the rated voltage derived from the operating and / or system voltage.
The minimum creepage distance (depending on the respective degree of contamination) are assigned to the rated voltage, see table F.4.

Overvoltage categories
Overvoltage category IV:
Electrical equipments for the use at the connection point of the installation e.g. electricity meter and primary over-current protection devices.

Overvoltage category III:
Electrical equipment in firm installations and for such cases in which special demands are made against the reliability and the availability of the electrical equipment, e.g. switches in firm installations and devices for industrial use with continuing connection to the firm installation.

Overvoltage category II:
Energy using electrical equipment, which is energised by a firm installation e.g. household appliances, portable tools and other domestic appliances as well as similar devices.

Overvoltage category I:
Electrical equipment for the connection to electric circuits, in which measures are taken for the delimitation of the transient overvoltages to a suitable low value, e.g. devices with electronic circuits and appropriate protection level.

F.2 DIN EN 60664-1 (VDE 0110-1), table F.2 (extract)
Clearance for transient overvoltages

Required impulse withstand voltage [1] [5]	Mimimum clearence in air up to 2 000 m above sea level		
	Case A Inhomogeneous field (see 3.15)		
	Pollution degree		
	1	2	3
kV	mm	mm	mm
1,2	0,25	0,25	0,8 [4]
1,5 [2]	0,5	0,5	
2,0	1,0	1,0	1,0
2,5 [2]	1,5	1,5	1,5
3,0	2,0	2,0	2,0
4,0 [2]	3,0	3,0	3,0
5,0	4,0	4,0	4,0
6,0 [2]	5,5	5,5	5,5
8,0 [2]	8,0	8,0	8,0

[1] This voltage is
- for functional insulation, the maximum impulse voltage expected to occur accross the clearence (see 5.1.5),
- for basic insulation directly exposed to or significantly influenced by transient overvoltages from the low-voltage mains (see 4.3.3.3, 4.3.3.4.1 and 5.1.6), the rated impulse voltage of the equipment,
- for other basic insulation (see 4.3.3.4.2), the highest impulse voltage that can occur in the circuit.

[2] Prefered values as specified in 4.2.3.
[4] The minimum clearences given for pollution degrees 2 and 3 are based on the reduced withstand characteristics of the associated creepage distance under humidity conditions (see IEC 60664-5).
[5] For parts or circuits within equipment subject to impulse voltages according to 4.3.3.4.2, interpolation of values is allowed. However, standardization is achieved by using the preferred series of impulse voltage values in 4.2.3.

F.4 DIN EN 60664-1 (VDE 0110-1), table F.4 (extract)
Creepage distance for the avoidance of the failure by tracking

Voltage r.m.s. [1]	Minimum creepage distances								
	Printed wiring material								
	Pollution degree								
	1	2	1	2			3		
	All material groups	All material groups except IIIb	All material groups	Material group I	Material group II	Material group III	Material group I	Material group II	Material group III [2]
V	mm	mm	mm	mm	mm	mm	mm	mm	mm
25	0,025	0,040	0,125	0,500	0,500	0,500	1,250	1,250	1,250
32	0,025	0,040	0,14	0,53	0,53	0,53	1,30	1,30	1,30
40	0,025	0,040	0,16	0,56	0,80	1,10	1,40	1,60	1,80
50	0,025	0,040	0,18	0,60	0,85	1,20	1,50	1,70	1,90
63	0,040	0,063	0,20	0,63	0,90	1,25	1,60	1,80	2,00
80	0,063	0,100	0,22	0,67	0,95	1,30	1,70	1,90	2,10
100	0,100	0,160	0,25	0,71	1,00	1,40	1,80	2,00	2,20
125	0,160	0,250	0,28	0,75	1,05	1,50	1,90	2,10	2,40
160	0,250	0,400	0,32	0,80	1,10	1,60	2,00	2,20	2,50
200	0,400	0,630	0,42	1,00	1,40	2,00	2,50	2,80	3,20
250	0,560	1,000	0,56	1,25	1,80	2,50	3,20	3,60	4,00
320	0,75	1,60	0,75	1,60	2,20	3,20	4,00	4,50	5,00
400	1,0	2,0	1,0	2,0	2,8	4,0	5,0	5,6	6,3
500	1,3	2,5	1,3	2,5	3,6	5,0	6,3	7,1	8,0
630	1,8	3,2	1,8	3,2	4,5	6,3	8,0	9,0	10,0
800	2,4	4,0	2,4	4,0	5,6	8,0	10,0	11,0	12,5
1000	3,2	5,0	3,2	5,0	7,1	10,0	12,5	14,0	16,0

[1] This voltage is
- for functional insulation, the working voltage,
- for basic and supplementary insulation of the circuit energized directly from the supply mains (see 4.3.2.2.1), the voltage rationalized through Table F.3a or Table F.3b, based on the rated voltage of the equipment, or the rated insulation voltage,
- for basic and supplementary insulation of systems, equipment and internal circuits not energized directly from the mains (see 4.3.2.2.2), the highest r.m.s. voltage which can occur in the system, equipment or internal circuit when supplied at rated voltage and under the most onerous combination of conditions of operation within equipment rating.

[2] Material group IIIb is no not recommended for application in pollution degree 3 above 630 V.

Degree of contamination
The micro environment determines the influence of the contamination on the isolation.
However the macro environment must be considered with the view of the micro environment.
Resources to achieve a reduction of the contamination on the regarded isolation can be planned by the effective employment of casings (housings), encapsulations or hermetic sealings.
The influence of the contamination is considered with the calculation of air and creepage distances by degrees of pollution.

F.1 DIN EN 60664-1 (VDE 0110-1), table F.1 (extract)
Rated impulse voltages for electrical equipments, which are energised directly by a low-voltage system

Nominal voltage of the supply system [1] based on IEC 60038 [3]		Rated impulse voltage [2]			
		Overvoltage catagory [4]			
Three phase	Single phase	I	II	III	IV
V	V	V	V	V	V
	120-240	800	1 500	2 500	4 000
230/400 277/480		1 500	2 500	4 000	6 000
400/690		2 500	4 000	6 000	8 000
1 000		4 000	6 000	8 000	12 000

[1] See Annex B for application to existing different low-voltage mains and their nominal voltages.
[2] Equipment with these rated impulse voltages can be used in installations in accordance with IEC 60364-4-44.
[3] The / mark indicates a four-wire three-phase distribution system. The lower value is the voltage line-to-neutral, while the higher value is the voltage line-to-line. Where only one value is indicated, it refers to three-wire, three-phase systems and specifies the value line-to-line.
[4] See 4.3.3.2.2 for an explanation of the overvoltage catagories.

Technical Information

Four degrees of contamination levels are defined for the micro environment:

Contamination level 1
No contamination or only dry, non-conductive contamination occurs. The contamination has no influence.

Contamination level 2
Only non-conductive contamination occurs. However, occasional temporary conductivity must be expected as a result of moisture condensation.

Contamination level 3
Conductive contamination occurs; dry, non-conductive contamination which becomes conductive as a result of moisture condensation may also occur.

Contamination level 4
Impurities in the form of conductive dust, rain or humidity result in permanent conductivity.

Insulant
DIN EN 60664-1 (VDE 0110-1) divides the insulants according to their CTI values in four groups. These are:

Insulant I:	600 = CTI
Insulant II:	400 = CTI < 600
Insulant IIIa:	175 = CTI < 400
Insulant IIIb:	100 = CTI < 175

The check numbers of the tracking must be determined according to IEC 60112 at an examination body using test solution A. The check number of the tracking is used as a proof of the creepage characteristics of insulants.

Rated cross section

The current carrying capacity depends not only on the terminal design, but also on the application of the terminals. The appropriate specifications for the devices, e.g. DIN EN 60335-1 (VDE 0700-1), should be taken into account.
According to DIN EN 60999-1/VDE 0609 part 1, the current cross section and respectively the rated connection ability of a connection referres to the wire cross section indicated by the manufacturer, to which determined thermal, mechanical and electrical requirements apply to.
The relationship between rated connection abilities and diameters of the wires is represented in table 1.
If nothing else is specified in the product standard, each connection point must be able to take up not only its rated cross section (rated connection ability) but also the next two lower cross sections.
Connecting points must be able to take up unprepared wires.
Regarded as unprepared wires are all cables stripped at their ends, whose form is adjusted before insertion or whose wires are twisted for the purpose of the solidification.

T1 DIN EN 60999-1, table 1 (extract)
Relation between rated connection abilities and wires

Rated cross section	Theoretical diameter of the largest conductor						
	metric			AWG			
	solid		flexible	solid			flexible
	single wire	multi-stranded wire			b) single wire	b) Class B multi-stranded wire	c) Class I, K, M multi-stranded wire
mm²	mm	mm	mm	No.	mm	mm	mm
0,2	0,51	0,53	0,61	24	0,54	0,61	0,64
0,34	0,63	0,66	0,8	22	0,68	0,71	0,80
0,5	0,9	1,1	1,1	20	0,85	0,97	1,02
0,75	1,0	1,2	1,3	18	1,07	1,23	1,28
1,0	1,2	1,4	1,5	–	–	–	–
1,5	1,5	1,7	1,8	16	1,35	1,55	1,60
2,5	1,9	2,2	2,3 a)	14	1,71	1,95	2,08
4,0	2,4	2,7	2,9 a)	12	2,15	2,45	2,70
6,0	2,9	3,3	3,9 a)	10	2,72	3,09	3,36
10,0	3,7	4,2	5,1	8	3,34	3,89	4,32
16,0	4,6	5,3	6,3	6	4,32	4,91	5,73
25,0	–	6,6	7,8	4	5,45	6,18	7,26
35	–	7,9	9,2	2	6,87	7,78	9,02

NOTE The diameter of the largest solid and flexible wire is based on Table 1 according to IEC 60228A and IEC 60344 and for AWG conductors on ASTM B 172-71 [4], ICEA-Publication S-19-81 [5], ICEA-Publication S-66-524 [6] and ICEA-Publication S-66-516 [7].

a) Information only for flexible wires in class 5 of IEC 60228A.
b) Nominal + 5 %.
c) Largest diameter for each of the three classes I, K, M + 5 %.

In the USA and Canada an identification is used by leader sizes (AWG) instead of the cross section indicated in mm².

Current carrying capacity

Current carrying capacity In the technical data a current carrying capacity is shown, with which no thermal damage and no disturbance of the function arise under consideration of the rated cross section and the ambient temperature.
testing currents according to DIN EN 60998-1 (VDE 0613 part 1) are assigned to the rated cross sections in table 2.
With the testing currents the heating up of energized parts of the connecting point may not exceed 45 K.
The permitted carrying capacity not only depends on the terminal construction, but also on the use of the terminal.
The appropriate technical regulations for devices, e.g. DIN EN 60335-1 (VDE 0700-1) should be taken into consideration.

T2 DIN EN 60998-1, table 2 (extract)
Relation between rated connection abilities and testing current

Rated Cross-section	Load capacity
mm²	A
0,2	4
0,34	5
0,5	6
0,75	9
1	13,5
1,5	17,5
2,5	24
4	32
6	41
10	57
16	76
25	101
35	125

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120-D-125	84
120-F-111	85
120-F-211	86
120-K	152
120-M-111/-211	104
120-M-121/-221	105
120-M-151/-251	106
120-M-161/-261	107
120-M-181/-281	108
120-M-191/-291	109
120-M-211-SMD	110
120-M-211-THR	111
120-M-215	112
120-M-217	113
120-M-221-SMD	114
120-M-221-THR	115
120-M-225	116
120-M-227	117
120-M-227-SMD	118
120-M-255	119
120-M-265	120
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140-B-111	10
140-B-151/-153	11
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140-E-111	13
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950-RFL-DS	94
950-SLS	124
950-SVG	95
950-T	31
950-TFL-DS	96
950-THR	32
951	33
951-FB	71
951-HG	34
951-LH	35
951-SV	97
951-T	36
951-THG	37
958-FL-DS	98
970	38
970-EN	39
970-FB	72
970-FBW	99
970-HEN	40
970-LH	41
970-MP	42
970-NFBW	100
970-T	43
970-THR	44
970-TMP	45
970-TX..	46
970-X..	47/48
971	49
971-DOPG	50
971-FB	73
971-FBS	101
971-FBSP	125
971-FBWP	126
971-HG	51
971-HM	52
971-LH	53
971-SLR	127
971-SLR-SMD-1,3	129
971-SLR-SMD-1,1	128
971-SLR-THR	130
971-SLR-THR-1,1	131
971-SLR-THR-1,3	132
971-SLS	133
971-SLT-SMD	134
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Catalogue overview

Electronic

1: Pitch 3,5 mm
2: Pitch 5 mm
3: Pitch 5,08 mm
4: Pitch 7,5 mm
5: Pitch >10 mm
6: SMD & THR

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Art.-No.: 44 955 102
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Connection Technology for Printed Circuit Boards Pitch 5,08 mm

WECO - making contact

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Electronic

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940-T

121-C-111

121-M-251

Symbols on data sheets

These symbols can be found on our data sheets on the right side of the product image.

RoHS COMPLIANT	These articles comply with the RoHS regulations.
pottable	Through its geometry, this product is specially suitable for potting.
„no flame“ after glow-wire test according to household appliance standard DIN EN/IEC 60335-1	The materials used for enclosures are VDE-tested and approved according to the glow-wire tests specified in DIN EN/IEC 60335-1. It is conform with the requirements of the increased household appliance standard.

We reserve the right to make technical as well as changes to measurements, colours and formats after print. Only the values given in our written confirmations will be binding for us. Please take notice that it is not allowed to use our photos, drawings or catalogue pages for your own applications without having our written agreement.

Overview

Connectors for printed circuit boards

WECO PCB connectors always offer a good solution for almost any connection problem by its big variety of types. The screw connections are available in socket terminal style, in elevator clamping style or as head contact terminals. The plug connectors are especially designed for the connection of components or peripheral devices. Tab connectors and screwless types complete the product program.

Plug-In connector systems

The series of conecta are plug-in connector systems consisting of plug connectors with screw and their corresponding pin strips.
Due to four different pitch sizes, lateral flange executions, tier versions and different plug directions, this product serie suit almost every application on the PCB. All connectors offer coding possibilities to avoid incorrect plugging.

SMD & THR

“SMarTconn” covers terminals and plug connectors for surface mount and reflow soldering technique. Apart from the proven Through-Hole-Technology (THR) we focus on genuine SMD - Surface Mount Devices – in this product serie. With their reliable adhesive forces and their good reflow soldering capabilities, we offer products, which are a worthy replacement for the conventional soldering technique. All products of this series are packed in tape-on-reel or tube magazines for the automatic assembling with a pick & place machine.

Terminal strips

This group contains socket terminals, plug-in connectors, screwless types and additionally the combination of screw and solder tag for the wire-to-wire connection. All types are available for different cross sections, with and without wire protectors. The used Polyamide plastic material pass the ball pressure test with 125°C according to VDE 0470, which is demanded in many IEC and VDE regulations for insulants.

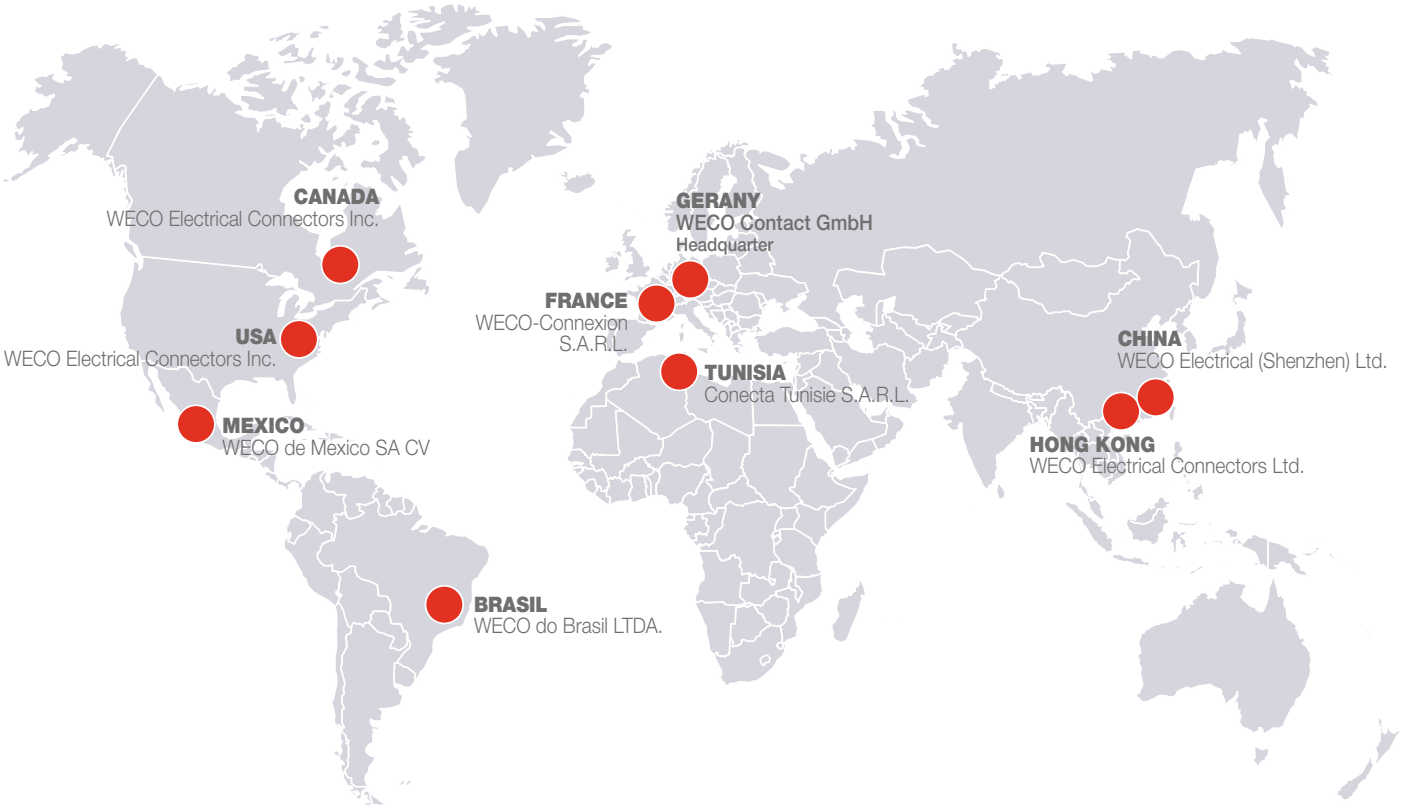
Tab connectors

These connectors are equipped with receptacles in different sizes and styles. Mixed arrangements per terminal block as well as per pole (Multi-Point Tab Connectors) are possible. Combinations of tab / solder connectors, flat plug couplers and space saving tier versions increase the density of connections. The tab connectors offer a wide spectrum of possible combinations, whereby many connection problems can be solved.

Ceramic terminal blocks

This group covers mantle terminals, ceramic terminal strips and terminals for explosion and firedamp-hazard areas. Various sizes and designs permit them to be used for wire cross sections up to 120 mm² and including applications in furnace construction and ship building, for engines and intrinsically safe electrical equipment. The terminal blocks with ceramic insulator can be used at increased temperatures.

The WECO Group



We, WECO Contact GmbH, are a German manufacturer of high reputation in the field of electronics and electrical engineering. Our headquarter is located in Hanau and has own assembly and sales companies in USA, Canada, Brazil, France, China, Hong Kong and Mexico. With over 450 employees and a worldwide distribution network in 56 countries, we speak the language of our customers.

Our extensive product range includes nearly 17,000 different articles.

We are well known for innovation which is particularly evident in the patented SMD series for the genuine surface mounting technology. Hereby, the user experiences real cost savings in the manufacturing process, especially if the terminal is the last component of the customer to be soldered on the board.

Another strength are the customer-specific developments and a fast and flexible project implementation with which we respond to the increasing engineering demands of the middle class customers.

The entire WECO Group is a reliable partner for our customers, and the customers' satisfaction is one of our main goals to achieve.

www.wecogroup.com

Household Appliance Standard DIN EN/IEC 60335-1

What is the household appliance standard all about?

The Household Appliance Standard DIN EN/IEC 60335-1:2007-02 standardizes the safety features of electrical appliances for household use and similar purposes.

The standard requires testing of glow wire resistance for non-metallic materials used in appliances operated with >0,2 A and applies for non-metallic materials which hold active components in position.

These fire protection requirements shall prevent self-ignition of unattended appliances thus significantly increasing fire safety.

For which appliances does this standard apply?

The standard is applicable for electric and electronic components in unattended household appliances with rated currents of >0,2 A, such as

terminals and switches, e.g. in:

- Dishwashers, washing machines, refrigerators
- Kitchen stoves, microwaves
- Small household appliances, such as mixers, coffee machines

Unattended equipment used in small and medium-sized enterprises is also affected, namely:

- Pump components
- Illuminant components
- Industrial and commercial cleaning equipment
- Hair salon equipment etc.

WECO products are compliant with the glow-wire tests according to the household appliance standard!

For the white goods market segment, WECO Contact GmbH offers an extensive range of products meeting the requirements of the Household Appliance Standard DIN EN/IEC 60335-1. Even before the transition period expired in July 2007, many WECO products had already been compliant with the tightened household appliance standard, providing WECO Contact with an enormous edge over competitors, particularly over those in Asia.

The materials used for enclosures are VDE-tested and approved according to the glow-wire tests specified in DIN EN/IEC 60335-1. This applies for all standard WECO colours!

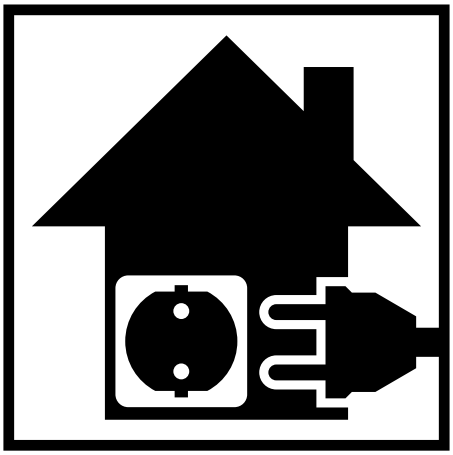
PRODUCTS:

- All products of the connections for printed circuit boards with the exception of large-pole articles of the series 95.., 96.. and 97.. as well as SMD and THR products.
- Series 326 and 327
- Other products: Producibility must verified for each product

We designate products compliant with this tightened household appliance standard, if a specific variant compatible to the household appliance standard is available:

- PART NUMBER:
  The existing 8-digit article number will be continued and supplemented by „EN6“.

- DESIGNATION:
  The existing designation will be continued. A „6“ will be placed before „GP“ resulting in „6GP“.



Are you affected?

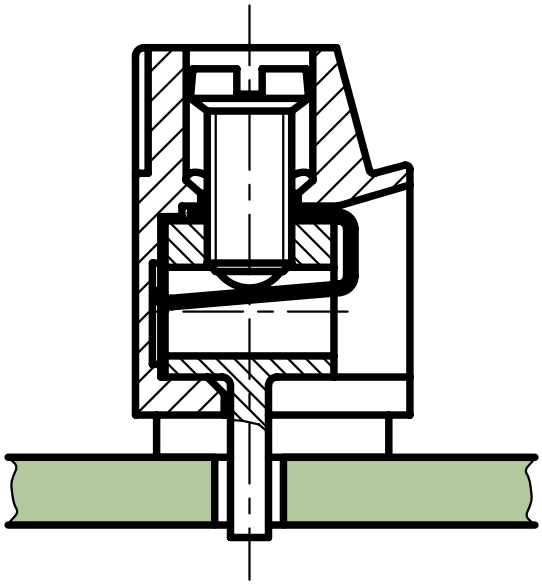
Even today, long after the tightened Household Appliance Standard DIN EN/IEC 60335-1 entered into force, many questions still arise and need clarification.

Even equipment manufacturers affected by this household appliance standard often are unaware of the standard's requirements and only find out that they ARE AFFECTED, when they submit their products at VDE and are denied approval because products do not meet the currently valid standards.

We at WECO Contact take technical support and service for our customers seriously. Therefore, we have compiled on our website a list of all manufacturer products affected by the household appliance standard. At a glance, our customers can now gather information on whether their appliances are affected or not.

The list is also a valuable tool for both sales staff and field reps, helping them to resolve possible unclear issues in project meetings, and enabling them to optimally support the customer.

PCB connectors



Thanks to their versatile design, WECO Contact PCB connectors offers a solution for every connection application. Here, you can find all 5.08 mm pitch connector systems available for printed circuits.

Depending on the respective series, PCB connectors are available with the standard pole numbers 2 to 12 or 2 to 24 poles. "..-T"-versions are only available with 2 and 3 poles. With their lateral latching elements they can be locked to terminal strips of any pole number. That way, maintaining accuracy and correctness of the pitch is always guaranteed.

The screw terminals are built on the principle of the socket terminal, either as a lift system or as a head contact terminal.

Damage to flexible conductors can be prevented through the use of our products with wire protection (indicated by the name "-DS" in the product) reliably prevented. An enlarged clamping space with nearly square shape offered in the versions of our product of the series 968. In the version with wire protection also fine-stranded conductors up to 4 mm² can be connected.

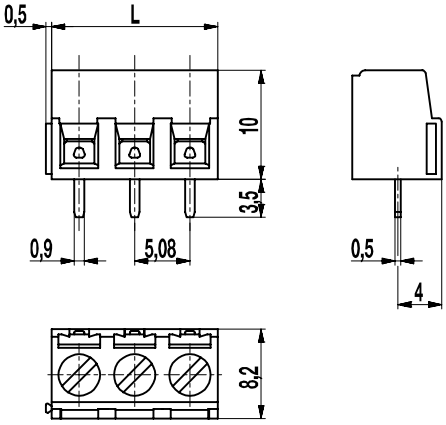
All versions are equipped with captive screws which also allow over-head assembly.

As standard, our terminals are delivered unmarked. Upon request, they can also be printed, e.g. with consecutive numbering or individual marking according to customer requirement.

PCB connector

141-A-111

Screw connection, interlocking



The PCB connector 141-A-111 with lift system is designed as one-tier basic version with a pitch of 5,08 mm and available in 2 and 3 pole design.

Lateral latching elements on the housing allow to latch the PCB connector to longer terminal rows without pole loss. The wire entrance is parallel to the PCB. The screws are captive.

Part Numbers

No. of poles	141-A-111	Length	Pcs
2	10.801.302	10,16	250
3	10.801.303	15,24	250

General Information

Pitch	5,08 mm
No. of poles	2 + 3

Technical Data

Clamping Range	*solid / flexible / AWG*		
	0,14 - 2,5 mm² / 0,14 - 1,5 mm² / 26 - 14 AWG		
Rated Cross Section	1,5 mm²		
Wire Stripping Length	6 mm ± 0,5 mm		
Overvoltage Category	III	III	II
Pollution Severity Level	3	2	2
Rated Voltage	200 V	320 V	500 V
Rated Impulse Voltage	4 kV	4 kV	4 kV
Rated Insulation Voltage	250 V acc. to EN 60998-1		
Rated Current	16 A		
Hole in PCB	ø 1,2 mm		
Torque	0,5 Nm		

Material

Moulding	PA, grey, V-0
Comparative Tracking Index	CTI ≥ 600
Insulating Group	I
Temperature Range	-40°C up to 100°C
Terminal body	Nickel plated brass
Pressure clamp	Tin plated tin bronze
Screw	M3; zinc plated steel, blue passivated
Solder pin	0,9 x 0,5 mm; tin plated tin bronze

Approvals

	Current	Voltage	Group	AWG	Nm
	10 [1]	300	B, D	30 - 14	0,51
	15	300	B	30 - 14	0,51

[1] 20 A max for factory-wiring applications only

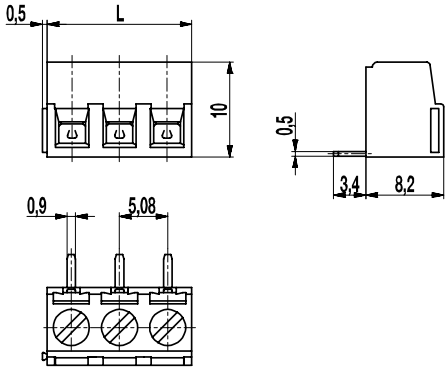
Options / Accessories

- Consecutive numbering
- Special marking according to drawing
- Self-adhesive marking strip BST-5,08
- Pitch of 10,16 mm for larger clearance and creepage distances

PCB connector

141-A-121

Screw connection, wire entrance vertical to PCB, interlocking



The PCB connector 141-A-121 with lift system is the horizontal version of 141-A-111 with a pitch of 5,08 mm and available in 2 and 3 pole design.

Lateral latching elements on the housing allow to lock the PCB connector to longer terminal rows without pole loss. The wire entrance is vertical to the PCB.
The screws are captive.

Part Numbers

No. of poles	141-A-121	Length	Pcs
2	20.801.302	10,16	250
3	20.801.303	15,24	250

General Information

Pitch	5,08 mm
No. of poles	2 + 3

Technical Data

Clamping Range	*solid / flexible / AWG*		
	0,14 - 2,5 mm² / 0,14 - 1,5 mm² / 26 - 14 AWG		
Rated Cross Section	1,5 mm²		
Wire Stripping Length	6 mm ± 0,5 mm		
Overvoltage Category	III	III	II
Pollution Severity Level	3	2	2
Rated Voltage	200 V	320 V	500 V
Rated Impulse Voltage	4 kV	4 kV	4 kV
Rated Insulation Voltage	250 V acc. to EN 60998-1		
Rated Current	16 A		
Hole in PCB	ø 1,2 mm		
Torque	0,5 Nm		

Material

Moulding	PA, grey, V-0
Comparative Tracking Index	CTI ≥ 600
Insulating Group	I
Temperature Range	-40°C up to 100°C
Terminal body	Nickel plated brass
Pressure clamp	Tin plated tin bronze
Screw	M3; zinc plated steel, blue passivated
Solder pin	0,9 x 0,5 mm; tin plated tin bronze

Approvals

	Current	Voltage	Group	AWG	Nm
	10 [1]	300	B, D	30 - 14	0,51
	15	300	B	30 - 14	0,51

[1] 20 A max for factory-wiring applications only

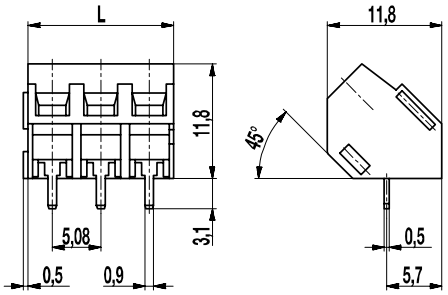
Options / Accessories

- Consecutive numbering
- Special marking according to drawing
- Self-adhesive marking strip BST-5,08
- Pitch of 10,16 mm for larger clearance and creepage distances

PCB connector

141-C-111

Screw connection diagonal 45° to PCB, interlocking



The PCB connector 141-C-111 is the inclined version with lift system with a pitch of 5,08 mm and available in 2 and 3 pole design.

The wire entrance is diagonal, i.e. in a 45° angle to the PC board. Therefore, this PCB connector is ideal for the assembly in the center of PCBs. The design of this PCB connector allows space-saving arrangement of consecutive rows of terminals.

Lateral latching elements on the housing allow to lock the PCB connector to longer terminal rows without pole loss.
The screws are captive.

Part Numbers

No. of poles	141-C-111	Length	Pcs
2	10.801.552	10,16	250
3	10.801.553	15,24	250

General Information

Pitch	5,08 mm
No. of poles	2 + 3

Technical Data

Clamping Range	*solid / flexible / AWG*
	0,14 - 2,5 mm² / 0,14 - 1,5 mm² / 26 - 16 AWG
Rated Cross Section	1,5 mm²
Wire Stripping Length	6 mm
Overvoltage Category	III
Pollution Severity Level	3
Rated Voltage	200 V
Rated Impulse Voltage	4 kV
Rated Insulation Voltage	250 V acc. to EN 60998-1
Rated Current	16 A
Hole in PCB	ø 1,2 mm
Torque	0,5 Nm

Material

Moulding	PA, grey, V-0
Comparative Tracking Index	CTI ≥ 600
Insulating Group	I
Temperature Range	-40°C up to 100°C
Terminal body	Nickel plated brass
Pressure clamp	Tin plated tin bronze
Screw	M3; zinc plated steel, blue passivated
Solder pin	0,9 x 0,5 mm; tin plated tin bronze

Approvals

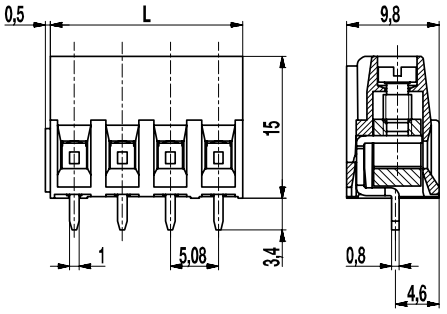
	Current	Voltage	Group	AWG	Nm
	10 [1]	300	B, D	30 - 14	0,51
	15	300	B	30 - 14	0,51

[1] 20 A max for factory-wiring applications only

Options / Accessories

- Consecutive numbering
- Special marking according to drawing
- Self-adhesive marking strip BST-5,08
- Pitch of 10,16 mm for larger clearance and creepage distances
- Connected to larger number of poles

PCB connector
146-A-111
Screw connection, interlocking



The PCB connector 146-A-111 with lift system is designed as one-tier version with a pitch of 5,08 mm and available with 2 to 24 poles.

Lateral latching elements on the housing allow to latch the PCB connector to longer terminal rows without pole loss. The wire entrance is parallel to the PCB. The screws are captive.

Part Numbers

No. of poles	146-A-111	Length	Pcs
2	10.805.302	10,16	250
3	10.805.303	15,24	250
4	10.805.304	20,32	200
5	10.805.305	25,40	100
6	10.805.306	30,48	100
7	10.805.307	35,56	100
8	10.805.308	40,64	100
9	10.805.309	45,72	100
10	10.805.310	50,80	100
11	10.805.311	55,88	100
12	10.805.312	60,96	100
13	10.805.313	66,04	100
14	10.805.314	71,12	100
15	10.805.315	76,20	100
16	10.805.316	81,28	100
17	10.805.317	86,36	100
18	10.805.318	91,44	100
19	10.805.319	96,52	100
20	10.805.320	101,60	100
21	10.805.321	106,68	100
22	10.805.322	111,76	100
23	10.805.323	116,84	100
24	10.805.324	121,92	100

General Information

Pitch	5,08 mm
No. of poles	2 - 24

Technical Data

Clamping Range	*solid / flexible / AWG*		
	0,14 - 4 mm² / 0,14 - 2,5 mm² / 26 - 14 AWG		
Rated Cross Section	2,5 mm²		
Wire Stripping Length	7 mm ± 0,5 mm		
Overvoltage Category	III	III	II
Pollution Severity Level	3	2	2
Rated Voltage	250 V	320 V	630 V
Rated Impulse Voltage	4 kV	4 kV	4 kV
Rated Insulation Voltage	250 V acc. to EN 60998-1		
Rated Current	24 A		
Hole in PCB	ø 1,4 mm		
Torque	0,5 Nm		

Material

Moulding	PA, grey, V-0
Comparative Tracking Index	CTI ≥ 600
Insulating Group	I
Temperature Range	-40°C up to 100°C
Terminal body	Nickel plated brass
Pressure clamp	Copper alloy, tin plated
Screw	M3; zinc plated steel, blue passivated
Solder pin	1,0 x 0,8 mm; copper alloy, tin plated

Approvals

	Current	Voltage	Group	AWG	Nm
	20	300	B	26 - 12	0,51
	10	300	D	26 - 12	0,51
	20	300	B	26 - 12	0,51
	10	300	D, E	26 - 12	0,51

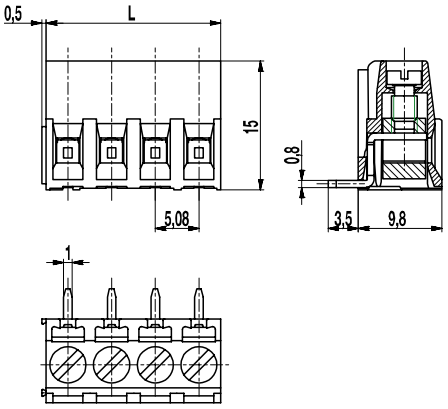
Options / Accessories

- Consecutive numbering
- Special marking according to drawing
- Self-adhesive marking strip BST-5,08
- Pitch of 10,16 mm for larger clearance and creepage distances

PCB connector

146-A-121

Screw connection, wire entrance vertical to PCB, interlocking



The PCB connector 146-A-121 with lift system is the horizontal version of 146-A-111 with a pitch of 5,08 mm and available with 2 to 24 poles.

Lateral latching elements on the housing allow to latch the PCB connector to longer terminal rows without pole loss.
The wire entrance is vertical to the PCB.
The screws are captive.

Part Numbers

No. of poles	146-A-121	Length	Pcs
2	20.805.302	10,16	250
3	20.805.303	15,24	250
4	20.805.304	20,32	200
5	20.805.305	25,40	100
6	20.805.306	30,48	100
7	20.805.307	36,56	100
8	20.805.308	40,64	100
9	20.805.309	45,72	100
10	20.805.310	50,80	100
11	20.805.311	55,88	100
12	20.805.312	60,96	100
13	20.805.313	66,04	100
14	20.805.314	71,12	100
15	20.805.315	76,20	100
16	20.805.316	81,28	100
17	20.805.317	86,36	100
18	20.805.318	91,44	100
19	20.805.319	96,52	100
20	20.805.320	101,60	100
21	20.805.321	106,68	100
22	20.805.322	111,76	100
23	20.805.323	116,84	100
24	20.805.324	121,92	100

General Information

Pitch	5,08 mm
No. of poles	2 - 24

Technical Data

Clamping Range	*solid / flexible / AWG*		
	0,14 - 4 mm² / 0,14 - 2,5 mm² / 26 - 14 AWG		
Rated Cross Section	2,5 mm²		
Wire Stripping Length	7 mm ± 0,5 mm		
Overvoltage Category	III	III	II
Pollution Severity Level	3	2	2
Rated Voltage	250 V	320 V	630 V
Rated Impulse Voltage	4 kV	4 kV	4 kV
Rated Insulation Voltage	250 V acc. to EN 60998-1		
Rated Current	24 A		
Hole in PCB	ø 1,4 mm		
Torque	0,5 Nm		

Material

Moulding	PA, grey, V-0
Comparative Tracking Index	CTI ≥ 600
Insulating Group	I
Temperature Range	-40°C up to 100°C
Terminal body	Nickel plated brass
Pressure clamp	Copper alloy, tin plated
Screw	M3; zinc plated steel, blue passivated
Solder pin	1,0 x 0,8 mm; copper alloy, tin plated

Approvals

	Current	Voltage	Group	AWG	Nm
	20	300	B	26 - 12	0,51
	10	300	D	26 - 12	0,51
	20	300	B	26 - 12	0,51
	10	300	D, E	26 - 12	0,51

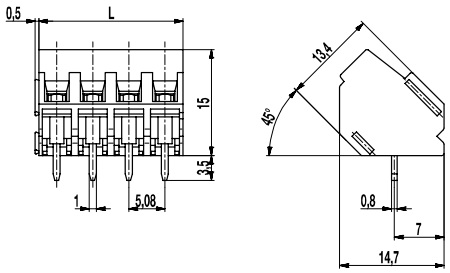
Options / Accessories

- Consecutive numbering
- Special marking according to drawing
- Self-adhesive marking strip BST-5,08
- Pitch of 10,16 mm for larger clearance and creepage distances

PCB connector

146-C-111

Screw connection diagonal 45° to PCB, interlocking



The PCB connector 146-C-111 is the inclined version with lift system with a pitch of 5,08 mm and available with 2 to 24 poles.

The wire entrance is located in a 45° angle to the PC board. Therefore, this PCB connector is ideal for the assembly in the center of PCBs. The design of this PCB connector allows space-saving arrangement of consecutive rows of terminals.

Lateral latching elements on the housing allow to connect the PCB connector to longer terminal strips without pole loss.
The screws are captive.

This PCB connector has test holes for ø 2.3 mm test plugs.

Part Numbers

No. of poles	146-C-111	Length	Pcs
2	10.805.552	10,16	250
3	10.805.553	15,24	250
4	10.805.554	20,32	200
5	10.805.555	25,40	100
6	10.805.556	30,48	100
7	10.805.557	36,56	100
8	10.805.558	40,64	100
9	10.805.559	45,72	100
10	10.805.560	50,80	100
11	10.805.561	55,88	100
12	10.805.562	60,96	50
13	10.805.563	66,04	100
14	10.805.564	71,12	100
15	10.805.565	76,20	100
16	10.805.566	81,28	100
17	10.805.567	86,36	100
18	10.805.568	91,44	50
19	10.805.569	96,52	100
20	10.805.570	101,60	100
21	10.805.571	106,68	100
22	10.805.572	111,76	100
23	10.805.573	116,84	100
24	10.805.574	121,92	50

General Information

Pitch	5,08 mm
No. of poles	2 - 24

Technical Data

Clamping Range	*solid / flexible / AWG*		
	0,14 - 4 mm² / 0,14- 2,5 mm² / 26 - 12 AWG		
Rated Cross Section	2,5 mm²		
Wire Stripping Length	7 mm ± 0,5 mm		
Overvoltage Category	III	III	II
Pollution Severity Level	3	2	2
Rated Voltage	250 V	320 V	630 V
Rated Impulse Voltage	4 kV	4 kV	4 kV
Rated Insulation Voltage	250 V acc. to EN 60998-1		
Rated Current	24 A		
Hole in PCB	ø 1,4 mm		
Torque	0,5 Nm		

Material

Moulding	PA, grey, V-0
Comparative Tracking Index	CTI ≥ 600
Insulating Group	I
Temperature Range	-40°C up to 100°C
Terminal body	Nickel plated brass
Pressure clamp	Copper alloy, tin plated
Screw	M3; zinc plated steel, blue passivated
Solder pin	1,0 x 0,8 mm; copper alloy, tin plated

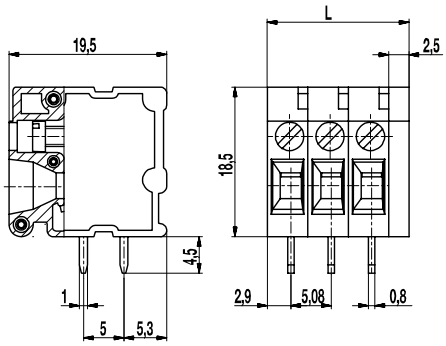
Approvals

	Current	Voltage	Group	AWG	Nm
	20	300	B	26 - 12	0,51
	10	300	D	26 - 12	0,51
	20	300	B	26 - 12	0,51
	10	300	D, E	26 - 12	0,51

Options / Accessories

- Consecutive numbering
- Special marking according to drawing
- Self-adhesive marking strip BST-5,08
- Pitch of 10,16 mm for larger clearance and creepage distances

PCB connector
181-A-111
Screw connection



The PCB connector 181-A-111 features parallel entry for both conductor and screwdriver. It can also be used as printed circuit board termination with front panel penetration.

These PCB connectors are available in 5.08 mm pitch with up to 12 poles, but they can also be plugged together as longer terminal strips.
Each pole has a double solder termination with 5 mm pin spacing.
The wire entrance is parallel to the PCB.

Part Numbers

No. of poles	181-A-111	Length	Pcs
1	11.819.052	7,58	500
2	12.819.052	12,66	250
3	13.819.052	17,74	250
4	14.819.052	22,82	100
5	15.819.052	27,90	50
6	16.819.052	32,98	50
7	17.819.052	38,06	50
8	18.819.052	43,14	50
9	19.819.052	48,22	50
10	20.819.052	53,30	25
11	21.819.052	58,38	25
12	22.819.052	63,46	25

further number of poles on request

General Information

Pitch	5,08 mm
No. of poles	1 - 12
Areas of application	Particularly suitable for confined mounting space or only single-sided access.

Technical Data

Clamping Range	*solid / flexible / AWG*		
	0,14 - 4 mm² / 0,14 - 2,5 mm² / 26 - 12 AWG		
Rated Cross Section	2,5 mm²		
Wire Stripping Length	9 mm ± 0,5 mm		
Overvoltage Category	III	III	II
Pollution Severity Level	3	2	2
Rated Voltage	320 V	320 V	630 V
Rated Impulse Voltage	4 kV	4 kV	4 kV
Rated Insulation Voltage	450 V acc. to EN 60998-1		
Rated Current	24 A		
Hole in PCB	ø 1,4 mm		
Torque	0,4 Nm		

Material

Moulding	PA, grey, V-0
Comparative Tracking Index	CTI ≥ 600
Temperature Range	-40°C up to 100°C
Pressure clamp	Tin plated copper
Screw	M2,5; zinc plated steel, blue passivated
Solder pin	1,0 x 0,8 mm; tin plated copper
Terminal body	Zinc plated steel, blue passivated
Pressure plate	Brass, bright

Approvals

	Current	Voltage	Group	AWG	Nm
	20	300	B	24 - 12	0,4
	10	300	D	24 - 12	0,4
	20	300	B	24 - 12	0,4
	10	300	D, E	24 - 12	0,4

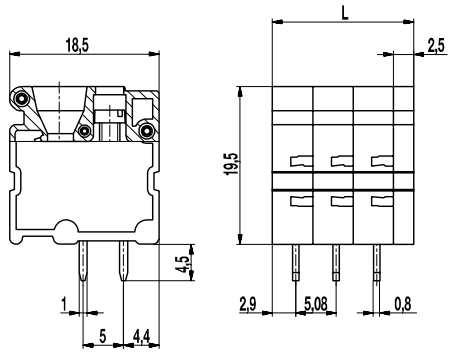
Options / Accessories

- Consecutive numbering
- Special marking according to drawing
- Self-adhesive marking strip BST-5,08
- Connected to larger number of poles

PCB connector

181-A-121

Screw connection, wire entrance vertical to PCB



The PCB connector 181-A-121 features parallel entry for both conductor and screwdriver. It can also be used as printed circuit board termination with front panel penetration.

These PCB connectors are available in 5.08 mm pitch with up to 12 poles, but they can also be plugged together as longer terminal strips.
Each pole has a double solder termination with 5 mm pin spacing.
The wire entrance is vertical to the PCB.

Part Numbers

No. of poles	181-A-121	Length	Pcs
1	11.819.051	7,58	500
2	12.819.051	12,66	250
3	13.819.051	17,74	250
4	14.819.051	22,82	100
5	15.819.051	27,90	50
6	16.819.051	32,98	50
7	17.819.051	38,06	50
8	18.819.051	43,14	50
9	19.819.051	48,22	50
10	20.819.051	53,30	25
11	21.819.051	58,38	25
12	22.819.051	63,46	25

further number of poles on request

General Information

Pitch	5,08 mm
No. of poles	1 - 12
Areas of application	Particularly suitable for confined mounting space or only single-sided access.

Technical Data

Clamping Range	*solid / flexible / AWG*		
	0,14 - 4 mm² / 0,14 - 2,5 mm² / 26 - 12 AWG		
Rated Cross Section	2,5 mm²		
Wire Stripping Length	9 mm ± 0,5 mm		
Overvoltage Category	III	III	II
Pollution Severity Level	3	2	2
Rated Voltage	320 V	320 V	630 V
Rated Impulse Voltage	4 kV	4 kV	4 kV
Rated Insulation Voltage	450 V acc. to EN 60998-1		
Rated Current	24 A		
Hole in PCB	ø 1,4 mm		
Torque	0,4 Nm		

Material

Moulding	PA, grey, V-0
Comparative Tracking Index	CTI ≥ 600
Temperature Range	-40°C up to 100°C
Pressure clamp	Tin plated copper
Screw	M2,5; zinc plated steel, blue passivated
Solder pin	1,0 x 0,8 mm; tin plated copper
Terminal body	Zinc plated steel, blue passivated
Pressure plate	Brass, bright

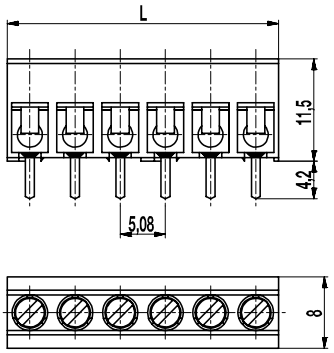
Approvals

	Current	Voltage	Group	AWG	Nm
	20	300	B	24 - 12	0,4
	10	300	D	24 - 12	0,4
	20	300	B	24 - 12	0,4
	10	300	D, E	24 - 12	0,4

Options / Accessories

- Consecutive numbering
- Special marking according to drawing
- Self-adhesive marking strip BST-5,08
- Connected to larger number of poles

PCB connector
940(-DS)
Screw connection



PCB connectors 940 with a pitch of 5,08 mm are available in 2- to 32-pole design and can be mounted side-by-side without pole loss.

Wire protection in DS-design reliably prevents damage to stranded wires by the screw.
The screws are secured against self-loosening.

Part Numbers

No. of poles	940	940-DS	Length	Pcs
2	10.877.002	20.877.002	10,16	250
3	10.877.003	20.877.003	15,24	250
4	10.877.004	20.877.004	20,32	200
5	10.877.005	20.877.005	25,40	100
6	10.877.006	20.877.006	30,48	100
7	10.877.007	20.877.007	35,56	100
8	10.877.008	20.877.008	40,64	100
9	10.877.009	20.877.009	45,72	100
10	10.877.010	20.877.010	50,80	100
11	10.877.011	20.877.011	55,88	100
12	10.877.012	20.877.012	60,96	100
13	10.877.013	20.877.013	66,04	100
14	10.877.014	20.877.014	71,12	100
15	10.877.015	20.877.015	76,20	100
16	10.877.016	20.877.016	81,28	100
17	10.877.017	20.877.017	86,36	100
18	10.877.018	20.877.018	91,44	100
19	10.877.019	20.877.019	96,52	100
20	10.877.020	20.877.020	101,60	100
21	10.877.021	20.877.021	106,68	100
22	10.877.022	20.877.022	111,76	100
23	10.877.023	20.877.023	116,84	100
24	10.877.024	20.877.024	121,94	100

further number of poles on request

General Information

Pitch	5,08 mm
No. of poles	2 - 32

Technical Data

Clamping Range	*solid / flexible / AWG*		
without wire protector	0,75 - 4 mm² / 0,75 - 2,5 mm² / 18 - 12 AWG		
with wire protector	0,34 - 2,5 mm² / 0,34 - 2,5 mm² / 22 - 14 AWG		
Rated Cross Section	1,5 mm²		
Wire Stripping Length	6 mm ± 0,5 mm		
Overvoltage Category	III	III	II
Pollution Severity Level	3	2	2
Rated Voltage	160 V	160 V	320 V
Rated Impulse Voltage	2,5 kV	2,5 kV	2,5 kV
Rated Insulation Voltage	130 V acc. to EN 60998-1		
Rated Current	17,5 A		
Hole in PCB	ø 1,3 mm		
Torque	0,4 Nm		
Other specifications	2-8 poles types: "no-flame" acc. to glow-wire test		

Material

Moulding	PA, grey, V-0
Comparative Tracking Index	2-8 poles: CTI ≥ 600; 9-32 poles: CTI 400
Insulating Group	2-8 poles: I; 9-32 poles: II
Temperature Range	-40°C up to 100°C
Terminal body	Tin plated brass
Screw	M2,6; zinc plated steel, blue passivated
Solder pin	ø 1 mm; tin plated copper
Wire protector	Tin plated tin bronze

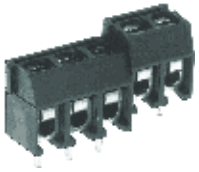
Approvals

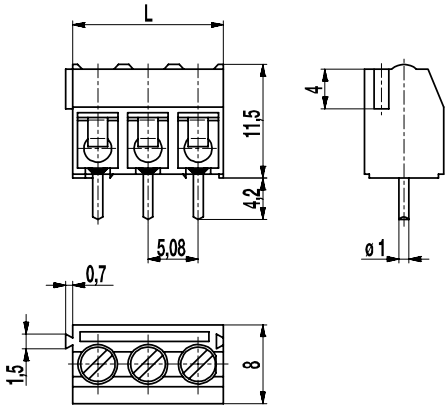
	Current	Voltage	Group	AWG	Nm
	15	300	B	26 - 14	0,4
	15	300	B	26 - 14	0,4
	Current	Voltage	mm²		
	17,5	250	1,5		

Options / Accessories

- Consecutive numbering
- Special marking according to drawing
- Self-adhesive marking strip BST-5,08
- Longer P.C. pins up to 75 mm

PCB connector
940-T(-DS)
Screw connection, interlocking





The PCB connector 940-T with a pitch of 5,08 mm is available with 2 and 3 poles and can be mounted side-by-side without pole loss.

Lateral latching elements on the housing allow to latch the PCB connector to longer terminal strips without pole loss.

Wire protection in DS-design reliably prevents damage to stranded wires by the screw.
The screws are secured against self-loosening.

Part Numbers

No. of poles	940-T	940-T-DS	Length	Pcs
2	10.877.602	20.877.602	10,16	250
3	10.877.603	20.877.603	15,24	250

General Information

Pitch	5,08 mm
No. of poles	2 + 3

Technical Data

Clamping Range	*solid / flexible / AWG*		
without wire protector	0,75 - 4 mm² / 0,75 - 2,5 mm² / 18 - 12 AWG		
with wire protector	0,34 - 2,5 mm² / 0,34 - 2,5 mm² / 22 - 14 AWG		
Rated Cross Section	1,5 mm²		
Wire Stripping Length	6 mm ± 0,5 mm		
Overvoltage Category	III	III	II
Pollution Severity Level	3	2	2
Rated Voltage	160 V	160 V	320 V
Rated Impulse Voltage	2,5 kV	2,5 kV	2,5 kV
Rated Insulation Voltage	130 V acc. to EN 60998-1		
Rated Current	17,5 A		
Hole in PCB	ø 1,3 mm		
Torque	0,4 Nm		

Material

Moulding	PA, grey, V-0
Comparative Tracking Index	CTI ≥ 600
Insulating Group	I
Temperature Range	-40°C up to 100°C
Terminal body	Tin plated brass
Screw	M 2,6; zinc plated steel, blue passivated
Solder pin	ø 1 mm; tin plated copper
Wire protector	Tin plated tin bronze

Approvals

	Current	Voltage	Group	AWG	Nm
	15	300	B	26 - 14	0,4
	15	300	B	26 - 14	0,4
	Current	Voltage	mm²		
	10	250	1,5		

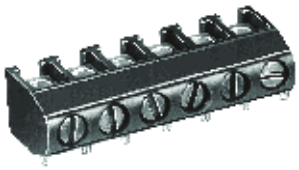
Options / Accessories

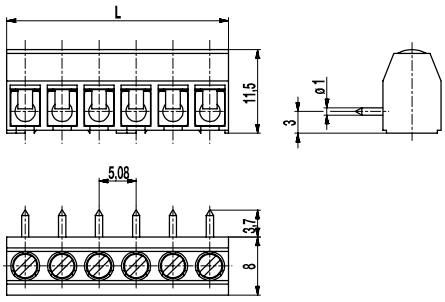
- Consecutive numbering
- Special marking according to drawing
- Self-adhesive marking strip BST-5,08
- Longer P.C. pins up to 75 mm
- Version up to 8 poles

PCB connector

941(-DS)

Screw connection, wire entrance vertical to PCB





The PCB connector 941 is the horizontal version of 940 with a pitch of 5,08 mm and available in 2- to 32-pole design. It can be mounted side-by-side without pole loss.
The wire entrance is vertical to the PCB.

Wire protection in DS-design reliably prevents damage to stranded wires by the screw.
The screws are secured against self-loosening.

Part Numbers

No. of poles	941	941-DS	Length	Pcs
2	10.877.102	20.877.102	10,16	250
3	10.877.103	20.877.103	15,24	250
4	10.877.104	20.877.104	20,32	200
5	10.877.105	20.877.105	25,40	100
6	10.877.106	20.877.106	30,48	100
7	10.877.107	20.877.107	35,56	100
8	10.877.108	20.877.108	40,64	100
9	10.877.109	20.877.109	45,72	100
10	10.877.110	20.877.110	50,80	100
11	10.877.111	20.877.111	55,88	100
12	10.877.112	20.877.112	60,96	100
13	10.877.113	20.877.113	66,04	100
14	10.877.114	20.877.114	71,12	100
15	10.877.115	20.877.115	76,20	100
16	10.877.116	20.877.116	81,28	100
17	10.877.117	20.877.117	86,36	100
18	10.877.118	20.877.118	91,44	100
19	10.877.119	20.877.119	96,52	100
20	10.877.120	20.877.120	101,60	100
21	10.877.121	20.877.121	106,68	100
22	10.877.122	20.877.122	111,76	100
23	10.877.123	20.877.123	116,84	100
24	10.877.124	20.877.124	121,92	100

further number of poles on request

General Information

Pitch	5,08 mm
No. of poles	2 - 32

Technical Data

Clamping Range	*solid / flexible / AWG*		
without wire protector	0,75 - 4 mm² / 0,75 - 2,5 mm² / 18 - 12 AWG		
with wire protector	0,34 - 2,5 mm² / 0,34 - 2,5 mm² / 22 - 14 AWG		
Rated Cross Section	1,5 mm²		
Wire Stripping Length	5 mm ± 0,5 mm		
Overvoltage Category	III	III	II
Pollution Severity Level	3	2	2
Rated Voltage	160 V	160 V	320 V (250 V)
Rated Impulse Voltage	2,5 kV	2,5 kV	2,5 kV
Rated Insulation Voltage	130 V acc. to EN 60998-1		
Rated Current	17,5 A		
Hole in PCB	ø 1,3 mm		
Torque	0,4 Nm		
Other specifications	Voltage data in brackets are valid for 9-32 poles types. 2-8 poles types: "no-flame" acc. to glow-wire test.		

Material

Moulding	PA, grey, V-0
Comparative Tracking Index	2-8 poles: CTI ≥ 600; 9-32 poles: CTI 250
Insulating Group	2-8 poles: I; 9-32 poles: IIIa
Temperature Range	-40°C up to 100°C
Terminal body	Tin plated brass
Screw	M2,6; zinc plated steel, blue passivated
Solder pin	ø 1 mm; tin plated brass
Wire protector	Tin plated tin bronze

Approvals

	Current	Voltage	Group	AWG	Nm
	15	300	B	26 - 14	0,4
	15	300	B	26 - 14	0,4
	Current	Voltage	mm²		
	17,5	250	1,5		

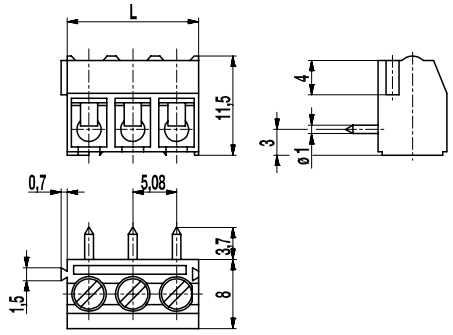
Options / Accessories

- Consecutive numbering
- Special marking according to drawing
- Self-adhesive marking strip BST-5,08

PCB connector

941-T(-DS)

Screw connection, wire entrance vertical to PCB, interlocking



The PCB connector 941-T is the horizontal version of 940-T with a pitch of 5,08 mm and available in 2 and 3 poles. It can be mounted side-by-side without pole loss.

Lateral latching elements on the housing allow to latch the PCB connector to longer terminal strips without pole loss.
The wire entrance is vertical to the PCB.

Wire protection in DS-design reliably prevents damage to stranded wires by the screw.
The screws are secured against self-loosening.

Part Numbers

No. of poles	941-T	941-T-DS	Length	Pcs
2	10.877.612	20.877.612	10,16	250
3	10.877.613	20.877.613	15,24	250

General Information

Pitch	5,08 mm
No. of poles	2 + 3

Technical Data

Clamping Range	*solid / flexible / AWG*		
without wire protector	0,75 - 4 mm² / 0,75 - 2,5 mm² / 18 - 12 AWG		
with wire protector	0,34 - 2,5 mm² / 0,34 - 2,5 mm² / 22 - 14 AWG		
Rated Cross Section	1,5 mm²		
Wire Stripping Length	5 mm ± 0,5 mm		
Overvoltage Category	III	III	II
Pollution Severity Level	3	2	2
Rated Voltage	160 V	160 V	320 V
Rated Impulse Voltage	2,5 kV	2,5 kV	2,5 kV
Rated Insulation Voltage	130 V acc. to EN 60998-1		
Rated Current	17,5 A		
Hole in PCB	ø 1,3 mm		
Torque	0,4 Nm		

Material

Moulding	PA, grey, V-0
Comparative Tracking Index	CTI ≥ 600
Insulating Group	I
Temperature Range	-40°C up to 100°C
Terminal body	Tin plated brass
Screw	M2,6; zinc plated steel, blue passivated
Solder pin	ø 1 mm; tin plated brass
Wire protector	Tin plated tin bronze

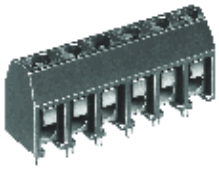
Approvals

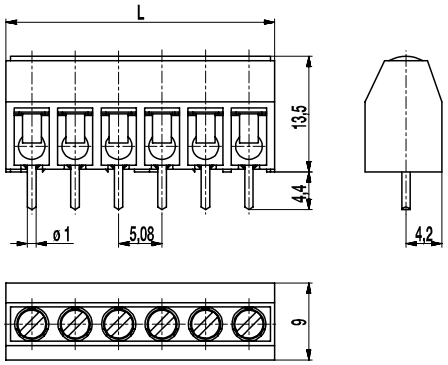
	Current	Voltage	Group	AWG	Nm
	15	300	B	26 - 14	0,4
	15	300	B	26 - 14	0,4
	Current	Voltage	mm²		
	10	250	1,5		

Options / Accessories

- Consecutive numbering
- Special marking according to drawing
- Self-adhesive marking strip BST-5,08
- Version up to 8 poles

PCB connector
960(-DS)
Screw connection





The PCB connector 960 with a pitch of 5,08 mm is available in 2- to 32-pole design and can be mounted side-by-side without pole loss.
Compared to the smaller PCB connector 940, it has a larger clamping range and larger clearance and creepage distances.

Wire protection in DS-design reliably prevents damage to stranded wires by the screw.
The screws are secured against self-loosening.
For the grid connection, these PCB connectors are equipped with a M3 thread.

Part Numbers

No. of poles	960	960-DS	Length	Pcs
2	10.878.002	20.878.002	11,16	250
3	10.878.003	20.878.003	16,24	250
4	10.878.004	20.878.004	21,32	200
5	10.878.005	20.878.005	26,40	100
6	10.878.006	20.878.006	31,48	100
7	10.878.007	20.878.007	36,56	100
8	10.878.008	20.878.008	41,64	100
9	10.878.009	20.878.009	46,72	100
10	10.878.010	20.878.010	51,80	100
11	10.878.011	20.878.011	56,88	100
12	10.878.012	20.878.012	61,96	100
13	10.878.013	20.878.013	67,04	100
14	10.878.014	20.878.014	72,12	100
15	10.878.015	20.878.015	77,20	100
16	10.878.016	20.878.016	82,28	100
17	10.878.017	20.878.017	87,36	100
18	10.878.018	20.878.018	92,44	100
19	10.878.019	20.878.019	97,52	100
20	10.878.020	20.878.020	102,60	100
21	10.878.021	20.878.021	107,68	100
22	10.878.022	20.878.022	112,76	100
23	10.878.023	20.878.023	117,84	100
24	10.878.024	20.878.024	122,92	100
26	10.878.026	20.878.026	133,09	100
28	10.878.028	20.878.028	143,24	100
30	10.878.030	20.878.030	153,40	100
32	10.878.032	20.878.032	163,56	100

further number of poles on request

General Information

Pitch	5,08 mm
No. of poles	2 - 32

Technical Data

Clamping Range	*solid / flexible / AWG*		
without wire protector	1 - 6 mm² / 1 - 2,5 mm² / 16 - 12 AWG		
with wire protector	0,75 - 4 mm² / 0,75 - 2,5 mm² / 18 - 12 AWG		
Rated Cross Section	2,5 mm²		
Wire Stripping Length	6,5 mm ± 0,5 mm		
Overvoltage Category	III	III	II
Pollution Severity Level	3	2	2
Rated Voltage	250 V (200 V)	320 V	630 V (400 V)
Rated Impulse Voltage	4 kV	4 kV	4 kV
Rated Insulation Voltage	250 V acc. to EN 60998-1		
Rated Current	24 A		
Hole in PCB	ø 1,3 mm		
Torque	0,5 Nm		
Other specifications	Voltage data in brackets are valid for 9-32 poles types. 2-8 poles types: "no-flame" acc. to glow-wire test.		

Material

Moulding	PA, grey, V-0
Comparative Tracking Index	2-8 poles: CTI ≥ 600; 9-32 poles: CTI 400
Insulating Group	2-8 poles: I; 9-32 poles: II
Temperature Range	-40°C up to 100°C
Terminal body	Tin plated brass
Screw	M3; zinc plated steel, blue passivated
Solder pin	ø 1 mm; tin plated copper
Wire protector	Tin plated tin bronze

Approvals

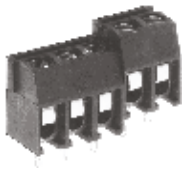
	Current	Voltage	Group	AWG	Nm
	20	300	B	22-12 [1]	0,51
	10	300	D	22-12 [1]	0,51
	20	300	B	26 - 12	0,51
	10	300	D, E	26 - 12	0,51
	Current	Voltage	mm²		
	24	400	2,5		

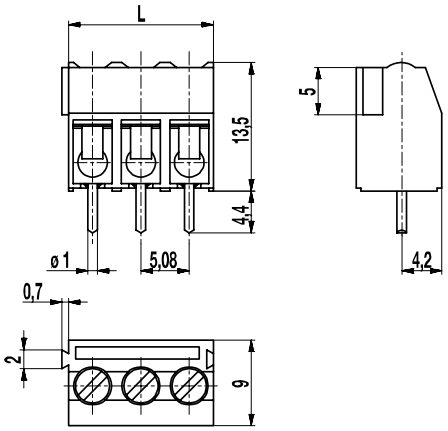
[1] No. 26 AWG min for factory-wiring only

Options / Accessories

- Consecutive numbering
- Special marking according to drawing
- Self-adhesive marking strip BST-5,08
- Longer P.C. pins up to 95 mm
- Version with extended wire entrance
- Double wire protector as bridge

PCB connector
960-T(-DS)
Screw connection, interlocking





The PCB connector 960-T with a pitch of 5,08 mm is available in 2 and 3 poles and can be mounted side-by-side without pole loss.
Compared to the smaller PCB connector 940-T, it has a larger clamping range and larger clearance and creepage distances.

Lateral latching elements on the housing allow to latch the PCB connector to longer terminal strips without pole loss.

Wire protection in DS-design reliably prevents damage to stranded wires by the screw.
The screws are secured against self-loosening.
For the grid connection, these PCB connectors are equipped with a M3 thread.

Part Numbers

No. of poles	960-T	960-T-DS	Length	Pcs
2	10.878.602	20.878.602	11,16	250
3	10.878.603	20.878.603	16,24	250

General Information

Pitch	5,08 mm
No. of poles	2 + 3

Technical Data

Clamping Range	*solid / flexible / AWG*		
without wire protector	1 - 6 mm² / 1 - 2,5 mm² / 16 - 12 AWG		
with wire protector	0,75 - 4 mm² / 0,75 - 2,5 mm² / 18 - 12 AWG		
Rated Cross Section	2,5 mm²		
Wire Stripping Length	6,5 mm ± 0,5 mm		
Overvoltage Category	III	III	II
Pollution Severity Level	3	2	2
Rated Voltage	250 V	320 V	630 V
Rated Impulse Voltage	4 kV	4 kV	4 kV
Rated Insulation Voltage	250 V acc. to EN 60998-1		
Rated Current	24 A		
Hole in PCB	ø 1,3 mm		
Torque	0,5 Nm		

Material

Moulding	PA, grey, V-0
Comparative Tracking Index	CTI ≥ 600
Insulating Group	I
Temperature Range	-40°C up to 100°C
Terminal body	Tin plated brass
Screw	M3; zinc plated steel, blue passivated
Solder pin	ø 1 mm; tin plated copper
Wire protector	Tin plated tin bronze

Approvals

	Current	Voltage	Group	AWG	Nm
	20	300	B	22-12 [1]	0,51
	10	300	D	22-12 [1]	0,51
	20	300	B	26 - 12	0,51
	10	300	D, E	26 - 12	0,51
	Current	Voltage	mm²		
	24	400	2,5		

[1] No. 26 AWG min for factory-wiring only

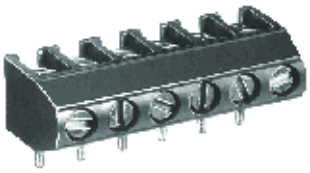
Options / Accessories

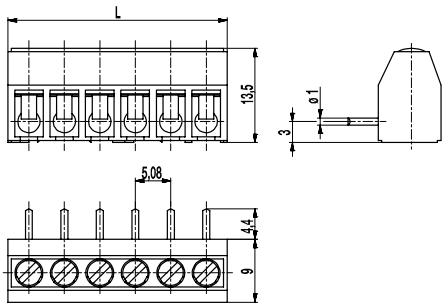
- Consecutive numbering
- Special marking according to drawing
- Self-adhesive marking strip BST-5,08
- Longer P.C. pins up to 95 mm
- Version with extended wire entrance
- Double wire protector as bridge

PCB connector

961(-DS)

Screw connection, wire entrance vertical to PCB





The PCB connector 961 is the horizontal version of 960 with a pitch of 5,08 mm and available in 2- to 32-pole design. It can be mounted side-by-side without pole loss.
The wire entrance is vertical to the PCB.
Compared to the smaller PCB connector 941, it has a larger clamping range and larger clearance and creepage distances.

Wire protection in DS-design reliably prevents damage to stranded wires by the screw.
The screws are secured against self-loosening.
For the grid connection, these PCB connectors are equipped with a M3 thread.

Part Numbers

No. of poles	961	961-DS	Length	Pcs
2	10.878.102	20.878.102	11,16	250
3	10.878.103	20.878.103	16,24	250
4	10.878.104	20.878.104	21,32	200
5	10.878.105	20.878.105	26,40	100
6	10.878.106	20.878.106	31,48	100
7	10.878.107	20.878.107	36,56	100
8	10.878.108	20.878.108	41,64	100
9	10.878.109	20.878.109	46,72	100
10	10.878.110	20.878.110	51,80	100
11	10.878.111	20.878.111	56,88	100
12	10.878.112	20.878.112	61,96	100
13	10.878.113	20.878.113	67,04	100
14	10.878.114	20.878.114	72,12	100
15	10.878.115	20.878.115	77,20	100
16	10.878.116	20.878.116	82,28	100
17	10.878.117	20.878.117	87,36	100
18	10.878.118	20.878.118	92,44	100
19	10.878.119	20.878.119	97,52	100
20	10.878.120	20.878.120	102,60	100
21	10.878.121	20.878.121	107,68	100
22	10.878.122	20.878.122	112,76	100
23	10.878.123	20.878.123	117,84	100
24	10.878.124	20.878.124	122,92	100
26	10.878.126	20.878.126	133,09	100
28	10.878.128	20.878.128	143,24	100
30	10.878.130	20.878.130	153,40	100
32	10.878.132	20.878.132	163,56	100

further number of poles on request

General Information

Pitch	5,08 mm
No. of poles	2 - 32

Technical Data

Clamping Range	*solid / flexible / AWG*		
without wire protector	1 - 6 mm² / 1 - 2,5 mm² / 16 - 12 AWG		
with wire protector	0,75 - 4 mm² / 0,75 - 2,5 mm² / 18 - 12 AWG		
Rated Cross Section	2,5 mm²		
Wire Stripping Length	5,5 mm ± 0,5 mm		
Overvoltage Category	III	III	II
Pollution Severity Level	3	2	2
Rated Voltage	250 V	320 V	630 V (500 V)
Rated Impulse Voltage	4 kV	4 kV	4 kV
Rated Insulation Voltage	250 V acc. to EN 60998-1		
Rated Current	24 A		
Hole in PCB	ø 1,3 mm		
Torque	0,5 Nm		
Other specifications	Voltage data in brackets are valid for 9-32 poles types. 2-8 poles types: "no-flame" acc. to glow-wire test.		

Material

Moulding	PA, grey, V-0
Comparative Tracking Index	2-8 poles: CTI ≥ 600; 9-32 poles: CTI 400
Insulating Group	2-8 poles: I; 9-32 poles: II
Temperature Range	-40°C up to 100°C
Terminal body	Tin plated brass
Screw	M3; zinc plated steel, blue passivated
Solder pin	ø 1 mm; tin plated brass
Wire protector	Tin plated tin bronze

Approvals

	Current	Voltage	Group	AWG	Nm
	20	300	B	22-12 [1]	0,51
	10	300	D	22-12 [1]	0,51
	20	300	B	26 - 12	0,51
	10	300	D, E	26 - 12	0,51
	Current	Voltage	mm²		
	24	400	2,5		

[1] Min No. 26 AWG for factory-wiring only

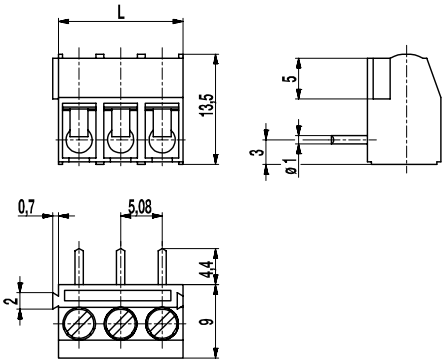
Options / Accessories

- Consecutive numbering
- Special marking according to drawing
- Self-adhesive marking strip BST-5,08
- Version with extended wire entrance
- Double wire protector as bridge

PCB connector

961-T(-DS)

Screw connection, wire entrance vertical to PCB, interlocking



The PCB connector 961-T is the horizontal version of 960-T with a pitch of 5,08 mm and available in 2 and 3 poles. It can be mounted side-by-side without pole loss.
Compared to the smaller PCB connector 941-T, it has a larger clamping range and larger clearance and creepage distances.

Lateral latching elements on the housing allow to latch the PCB connector to longer terminal strips without pole loss.
The wire entrance is vertical to the PCB.

Wire protection in DS-design reliably prevents damage to stranded wires by the screw.
The screws are secured against self-loosening.
For the grid connection, these PCB connectors are equipped with a M3 thread.

Part Numbers

No. of poles	961-T	961-T-DS	Length	Pcs
2	10.878.612	20.878.612	11,16	250
3	10.878.613	20.878.613	16,24	250

General Information

Pitch	5,08 mm
No. of poles	2 + 3

Technical Data

Clamping Range	*solid / flexible / AWG*		
without wire protector	1 - 6 mm² / 1 - 2,5 mm² / 16 - 12 AWG		
with wire protector	0,75 - 4 mm² / 0,75 - 2,5 mm² / 18 - 12 AWG		
Rated Cross Section	2,5 mm²		
Wire Stripping Length	5,5 mm ± 0,5 mm		
Overvoltage Category	III	III	II
Pollution Severity Level	3	2	2
Rated Voltage	250 V	320 V	630 V
Rated Impulse Voltage	4 kV	4 V	4 kV
Rated Insulation Voltage	250 V acc. to EN 60998-1		
Rated Current	24 A		
Hole in PCB	ø 1,3 mm		
Torque	0,5 Nm		

Material

Moulding	PA, grey, V-0
Comparative Tracking Index	CTI ≥ 600
Insulating Group	I
Temperature Range	-40°C up to 100°C
Terminal body	Tin plated brass
Screw	M3; zinc plated steel, blue passivated
Solder pin	ø 1 mm; tin plated brass
Wire protector	Tin plated tin bronze

Approvals

	Current	Voltage	Group	AWG	Nm
	20	300	B	22-12 [1]	0,51
	10	300	D	22-12 [1]	0,51
	20	300	B	26 - 12	0,51
	10	300	D, E	26 - 12	0,51
	Current	Voltage	mm²		
	24	400	2,5		

[1] Min No. 26 AWG for factory-wiring only

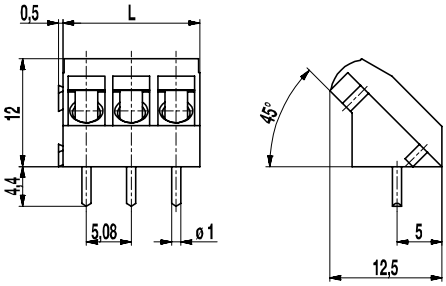
Options / Accessories

- Consecutive numbering
- Special marking according to drawing
- Self-adhesive marking strip BST-5,08
- Longer P.C. pins up to 75 mm
- Version with extended wire entrance
- Double wire protector as bridge

PCB connector

964-T(-DS)

Screw connection diagonal 45° to PCB, interlocking



The PCB connector 964-T is the inclined version with a pitch of 5,08 mm and available in 2- and 3 poles. It can be mounted side-by-side without pole loss.

Lateral latching elements on the housing allow to latch the PCB connector to longer terminal strips without pole loss.
The wire entrance is diagonal, i.e. in a 45° angle to the PC board. Therefore, this PCB connector is ideal for the assembly in the center of PCBs. The design of this PCB connector allows space-saving arrangement of consecutive rows of terminals.

Wire protection in DS-design reliably prevents damage to stranded wires by the screw.
The screws are secured against self-loosening.
For the grid connection, these PCB connectors are equipped with a M3 thread.

Part Numbers

No. of poles	964-T	964-T-DS	Length	Pcs
2	10.874.612	20.874.612	10,16	250
3	10.874.613	20.874.613	15,24	250

General Information

Pitch	5,08 mm
No. of poles	2 + 3

Technical Data

Clamping Range	*solid / flexible / AWG*		
without wire protector	1 - 6 mm² / 1 - 4 mm² / 16 - 12 AWG		
with wire protector	0,75 - 4 mm² / 0,75 - 4 mm² / 18 - 12 AWG		
Rated Cross Section	2,5 mm²		
Wire Stripping Length	6,5 mm		
Overvoltage Category	III	III	II
Pollution Severity Level	3	2	2
Rated Voltage	250 V	320 V	630 V
Rated Impulse Voltage	4 kV	4 kV	4 kV
Rated Insulation Voltage	250 V acc. to EN 60998-1		
Rated Current	24 A		
Hole in PCB	ø 1,3 mm		
Torque	0,5 Nm		

Material

Moulding	PA, grey, V-0
Comparative Tracking Index	CTI ≥ 600
Insulating Group	I
Temperature Range	-40°C up to 100°C
Terminal body	Tin plated brass
Screw	M3; zinc plated steel, clear passivated
Solder pin	ø 1 mm; tin plated copper
Wire protector	Tin plated tin bronze

Approvals

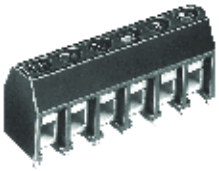
	Current	Voltage	Group	AWG	Nm
	20	300	B	22-12 [1]	0,51
	10	300	D	22-12 [1]	0,51
	20	300	B	26 - 12	0,51
	10	300	D, E	26 - 12	0,51

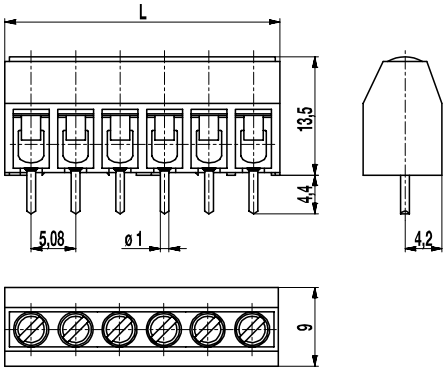
[1] Min No. 26 AWG for factory-wiring only

Options / Accessories

- Consecutive numbering
- Special marking according to drawing
- Self-adhesive marking strip BST-5,08
- Longer P.C. pins up to 95 mm
- Special wire protector for very thin conductors

PCB connector
968(-DS)
Screw connection, large conductor space





The PCB connector 968 with a pitch of 5,08 mm is available in 2- to 32-pole design and can be mounted side-by-side without pole loss.
Compared to the PCB connector 960, it has a larger conductor space for wires up to 6 mm².

Wire protection in DS-design reliably prevents damage to stranded wires by the screw.
The screws are secured against self-loosening.
For the grid connection, these PCB connectors are equipped with a M3 thread.

Part Numbers

No. of poles	968	968-DS	Length	Pcs
2	30.878.002	40.878.002	11,16	250
3	30.878.003	40.878.003	16,24	250
4	30.878.004	40.878.004	21,32	200
5	30.878.005	40.878.005	26,40	100
6	30.878.006	40.878.006	31,48	100
7	30.878.007	40.878.007	36,56	100
8	30.878.008	40.878.008	41,64	100
9	30.878.009	40.878.009	46,72	100
10	30.878.010	40.878.010	51,80	100
11	30.878.011	40.878.011	56,88	100
12	30.878.012	40.878.012	61,96	100
13	30.878.013	40.878.013	67,04	100
14	30.878.014	40.878.014	72,12	100
15	30.878.015	40.878.015	77,20	100
16	30.878.016	40.878.016	82,28	100
17	30.878.017	40.878.017	87,36	100
18	30.878.018	40.878.018	92,44	100
19	30.878.019	40.878.019	97,52	100
20	30.878.020	40.878.020	102,60	100
21	30.878.021	40.878.021	107,68	100
22	30.878.022	40.878.022	112,76	100
23	30.878.023	40.878.023	117,84	100
24	30.878.024	40.878.024	122,92	100
26	30.878.026	40.878.026	133,09	100
28	30.878.028	40.878.028	143,24	100
30	30.878.030	40.878.030	153,40	100
32	30.878.032	40.878.032	163,56	100

further number of poles on request

General Information

Pitch	5,08 mm
No. of poles	2 - 32

Technical Data

Clamping Range	*solid / flexible / AWG*		
without wire protector	0,75 - 6 mm² / 0,75 - 4 mm² / 18 - 10 AWG		
with wire protector	0,34 - 6 mm² / 0,34 - 4 mm² / 22 - 10 AWG		
Rated Cross Section	2,5 mm²		
Wire Stripping Length	6,5 mm ± 0,5 mm		
Overvoltage Category	III	III	II
Pollution Severity Level	3	2	2
Rated Voltage	250 V (200 V)	320 V	630 V (400 V)
Rated Impulse Voltage	4 kV	4 kV	4 kV
Rated Insulation Voltage	250 V acc. to EN 60998-1		
Rated Current	24 A		
Hole in PCB	ø 1,3 mm		
Torque	0,5 Nm		
Other specifications	Voltage data in brackets are valid for 9-32 poles types. 2-8 poles types: "no-flame" acc. to glow-wire test.		

Material

Moulding	PA, grey, V-0
Comparative Tracking Index	2-8 poles: CTI ≥ 600; 9-32 poles: CTI 400
Insulating Group	2-8 poles: I; 9-32 poles: II
Temperature Range	-40°C up to 100°C
Terminal body	Tin plated brass
Screw	M3; zinc plated steel, blue passivated
Solder pin	ø 1 mm; tin plated copper
Wire protector	Tin plated tin bronze

Approvals

	Current	Voltage	Group	AWG	Nm
	20	300	B	22-12 [1]	0,51
	10	300	D	22-12 [1]	0,51
	20	300	B	26 - 12	0,51
	10	300	D, E	26 - 12	0,51
	Current	Voltage	mm²		
	24	400	4,0		

[1] Min No. 26 AWG for factory-wiring only

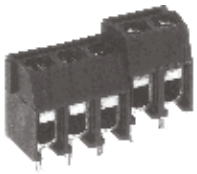
Options / Accessories

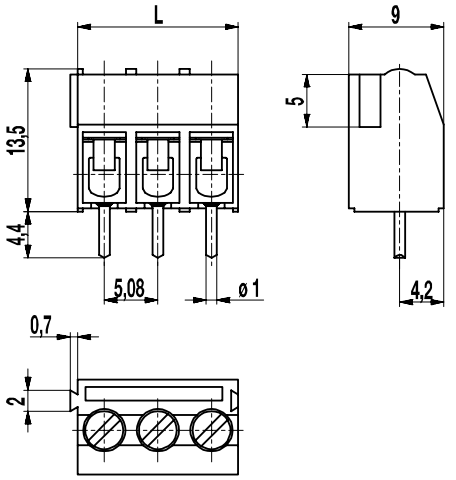
- Consecutive numbering
- Special marking according to drawing
- Self-adhesive marking strip BST-5,08
- Longer P.C. pins up to 95 mm
- 2 P.C. pins per pole, please see 978-TY
- Version with extended wire entrance

PCB connector

968-T(-DS)

Screw connection, large conductor space, interlocking





The PCB connector 968-T with a pitch of 5,08 mm is available in 2- and 3 poles and can be mounted side-by-side without pole loss.
Compared to the PCB connector 960-T, it has a larger conductor space for wires up to 6 mm².

Lateral latching elements on the housing allow to latch the PCB connector to longer terminal strips without pole loss.

Wire protection in DS-design reliably prevents damage to stranded wires by the screw.
The screws are secured against self-loosening.
For the grid connection, these PCB connectors are equipped with a M3 thread.

Part Numbers

No. of poles	968-T	968-T-DS	Length	Pcs
2	30.878.602	40.878.602	10,16	250
3	30.878.603	40.878.603	15,24	250

General Information

Pitch	5,08 mm
No. of poles	2 + 3

Technical Data

Clamping Range	*solid / flexible / AWG*		
without wire protector	0,75 - 6 mm² / 0,75 - 4 mm² / 18 - 10 AWG		
with wire protector	0,34 - 6 mm² / 0,34 - 4 mm² / 22 - 10 AWG		
Rated Cross Section	2,5 mm²		
Wire Stripping Length	6,5 mm ± 0,5 mm		
Overvoltage Category	III	III	II
Pollution Severity Level	3	2	2
Rated Voltage	250 V	320 V	630 V
Rated Impulse Voltage	4 kV	4 kV	4 kV
Rated Insulation Voltage	250 V acc. to EN 60998-1		
Rated Current	24 A		
Hole in PCB	ø 1,3 mm		
Torque	0,5 Nm		

Material

Moulding	PA, grey, V-0
Comparative Tracking Index	CTI ≥ 600
Insulating Group	I
Temperature Range	-40°C up to 100°C
Terminal body	Tin plated brass
Screw	M3; zinc plated steel, blue passivated
Solder pin	ø 1 mm; tin plated copper
Wire protector	Tin plated tin bronze

Approvals

	Current	Voltage	Group	AWG	Nm
	20	300	B	22-12 [1]	0,51
	10	300	D	22-12 [1]	0,51
	20	300	B	26 - 12	0,51
	10	300	D, E	26 - 12	0,51
	Current	Voltage	mm²		
	24	400	4,0		

[1] Min No. 26 AWG for factory-wiring only

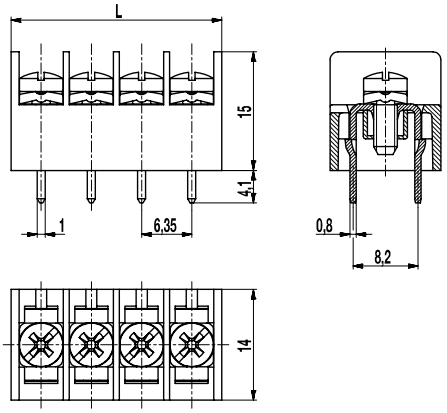
Options / Accessories

- Consecutive numbering
- Special marking according to drawing
- Self-adhesive marking strip BST-5,08
- Longer P.C. pins up to 95 mm
- 2 P.C. pins per pole, please see 978-TY
- Version with extended wire entrance

PCB connector

980-D

Screw connection, 2 P.C. pins per pole



The PCB screw connector 980-D in 6.35 mm pitch is available with 2 to 32 poles. In spite of its small dimensions, it features large clearance and creepage distances.
This version is equipped with two solder pins per pole.

The conductor terminal is of head contact design, whereby the screws and square washers are movably connected.
For easier connection, the non-rotably mounted square washers are automatically lifted when the screw is loosened.

Part Numbers

No. of poles	980-D	Length	Pcs
2	20.873.602	14,00	200
3	20.873.603	20,30	100
4	20.873.604	26,60	100
5	20.873.605	33,00	100
6	20.873.606	39,30	100
7	20.873.607	45,70	50
8	20.873.608	52,00	50
9	20.873.609	58,40	50
10	20.873.610	64,70	50
11	20.873.611	71,10	50
12	20.873.612	77,50	50
13	20.873.613	83,80	50
14	20.873.614	90,10	25
15	20.873.615	96,50	40
16	20.873.616	102,80	25
17	20.873.617	109,20	25
18	20.873.618	115,50	25
19	20.873.619	121,90	25
20	20.873.620	128,20	25
22	20.873.622	141,00	25
24	20.873.624	153,60	25
26	20.873.626	166,30	20
28	20.873.628	179,00	20
30	20.873.630	191,70	20
32	20.873.632	204,30	20

further number of poles on request

General Information

Pitch	6,35 mm
No. of poles	2 - 32

Technical Data

Clamping Range	*solid / flexible / AWG*
	0,25 - 1,5 mm² / 0,25 - 1 mm² / 22 - 18 AWG
Rated Cross Section	1 mm²
Wire Stripping Length	6 mm
Overvoltage Category	III
Pollution Severity Level	3
Rated Voltage	320 V
Rated Impulse Voltage	4 kV
Rated Insulation Voltage	250 V acc. to EN 60998-1
Rated Current	13,5 A
Hole in PCB	ø 1,6 mm
Torque	0,5 Nm
Other specifications	Two wires with same cross section can be connected per pole.

Material

Moulding	PA, grey, V-0
Comparative Tracking Index	CTI ≥ 600
Insulating Group	I
Temperature Range	-40°C up to 100°C
Pressure clamp	Tin plated brass
Screw	M3; zinc plated steel, blue passivated
Solder pin	0,8 x 1,0 mm; tin plated brass

Approvals

	Current	Voltage	Group	AWG	Nm
	7	300	B	22 - 18	0,51
	7	150	C	22 - 18	0,51
	7	300	B, D, E	22 - 18	0,51

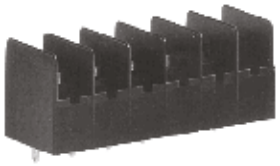
Options / Accessories

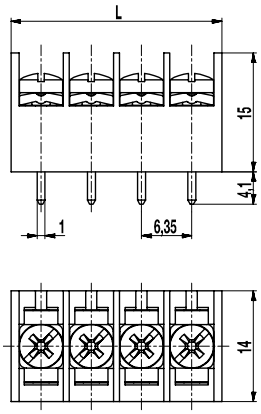
- Consecutive numbering
- Special marking according to drawing
- Crosshead screws
- Cover cap 980-A
- Securing pins BEF-980

PCB connector

980-S

Screw connection, 1 P.C. pin per pole





The PCB screw connector 980-S in 6.35 mm pitch is available with 2 to 32 poles.
In spite of its small dimensions, it features large clearance and creepage distances.
This version is equipped with one solder pin per pole.

The conductor terminal is of head contact design, whereby the screws and square washers are movably connected.
For easier connection, the non-rotably mounted square washers are automatically lifted when the screw is loosened.

Part Numbers

No. of poles	980-S	Length	Pcs
2	10.873.602	14,00	200
3	10.873.603	20,30	100
4	10.873.604	26,60	100
5	10.873.605	33,00	100
6	10.873.606	39,30	100
7	10.873.607	45,70	50
8	10.873.608	52,00	50
9	10.873.609	58,40	50
10	10.873.610	64,70	50
11	10.873.611	71,10	50
12	10.873.612	77,50	50
13	10.873.613	83,80	50
14	10.873.614	90,10	25
15	10.873.615	96,50	40
16	10.873.616	102,80	25
17	10.873.617	109,20	25
18	10.873.618	115,50	25
19	10.873.619	121,90	25
20	10.873.620	128,20	25
22	10.873.622	141,00	25
24	10.873.624	153,60	25
26	10.873.626	166,30	20
28	10.873.628	179,00	20
30	10.873.630	191,70	20
32	10.873.632	204,30	20

further number of poles on request

General Information

Pitch	6,35 mm
No. of poles	2 - 32

Technical Data

Clamping Range	*solid / flexible / AWG*
	0,25 - 1,5 mm² / 0,25 - 1 mm² / 22 - 18 AWG
Rated Cross Section	1 mm²
Wire Stripping Length	6 mm
Overvoltage Category	III
Pollution Severity Level	3
Rated Voltage	320 V
Rated Impulse Voltage	4 kV
Rated Insulation Voltage	250 V acc. to EN 60998-1
Rated Current	13,5 A
Hole in PCB	ø 1,6 mm
Torque	0,5 Nm
Other specifications	Two wires with same cross section can be connected per pole.

Material

Moulding	PA, grey, V-0
Comparative Tracking Index	CTI ≥ 600
Insulating Group	I
Temperature Range	-40°C up to 100°C
Pressure clamp	Tin plated brass
Screw	M3; zinc plated steel, blue passivated
Solder pin	0,8 x 1,0 mm; tin plated brass

Approvals

	Current	Voltage	Group	AWG	Nm
	7	300	B	22 - 18	0,51
	7	150	C	22 - 18	0,51
	7	300	B, D, E	22 - 18	0,51

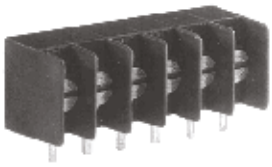
Options / Accessories

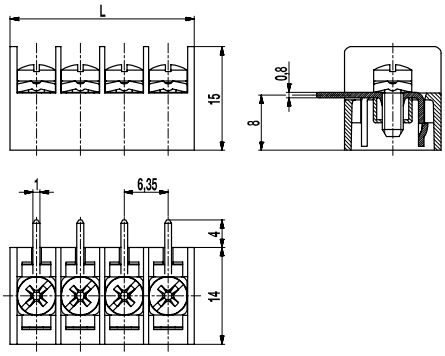
- Consecutive numbering
- Special marking according to drawing
- Crosshead screws
- Cover cap 980-A
- Securing pins BEF-980

PCB connector

980-W

Screw connection, wire entrance vertical to PCB





The PCB screw connector 980-W in 6.35 mm pitch is available with 2 to 32 poles. In spite of its small dimensions, it features large clearance and creepage distances.
This version is equipped with one solder pin per pole.

The conductor terminal, located vertical to the PCB, is of head contact design, whereby the screws and square washers are movably connected.
For easier connection, the non-rotably mounted square washers are automatically lifted when the screw is loosened.

Part Numbers

No. of poles	980-W	Length	Pcs
2	30.873.602	14,00	200
3	30.873.603	20,30	100
4	30.873.604	26,60	100
5	30.873.605	33,00	100
6	30.873.606	39,30	100
7	30.873.607	45,70	50
8	30.873.608	52,00	50
9	30.873.609	58,40	50
10	30.873.610	64,70	50
11	30.873.611	71,10	50
12	30.873.612	77,50	50
13	30.873.613	83,80	50
14	30.873.614	90,10	25
15	30.873.615	96,50	40
16	30.873.616	102,80	25
17	30.873.617	109,20	25
18	30.873.618	115,50	25
19	30.873.619	121,90	25
20	30.873.620	128,20	25
21	30.873.621	134,60	25
22	30.873.622	141,00	25
23	30.873.623	147,30	25
24	30.873.624	153,60	25
26	30.873.626	166,30	20
28	30.873.628	179,00	20
30	30.873.630	191,70	20
32	30.873.632	204,30	20

further number of poles on request

General Information

Pitch	6,35 mm
No. of poles	2 - 32

Technical Data

Clamping Range	*solid / flexible / AWG*
	0,25 - 1,5 mm² / 0,25 - 1 mm² / 22 - 18 AWG
Rated Cross Section	1 mm²
Wire Stripping Length	6 mm
Overvoltage Category	III
Pollution Severity Level	3
Rated Voltage	320 V
Rated Impulse Voltage	4 kV
Rated Insulation Voltage	250 V acc. to EN 60998-1
Rated Current	13,5 A
Hole in PCB	ø 1,6 mm
Torque	0,5 Nm
Other specifications	Two wires with same cross section can be connected per pole.

Material

Moulding	PA, grey, V-0
Comparative Tracking Index	CTI ≥ 600
Insulating Group	I
Temperature Range	-40°C up to 100°C
Pressure clamp	Tin plated brass
Screw	M3; zinc plated steel, blue passivated
Solder pin	0,8 x 1,0 mm; tin plated brass

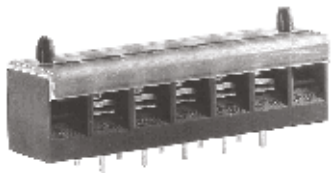
Approvals

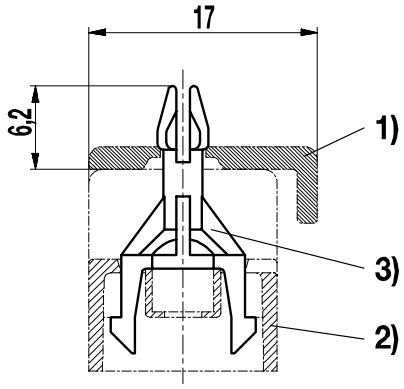
	Current	Voltage	Group	AWG	Nm
	7	300	B	22 - 18	0,51
	7	150	C	22 - 18	0,51
	7	300	B, D, E	22 - 18	0,51

Options / Accessories

- Consecutive numbering
- Special marking according to drawing
- Crosshead screws
- Cover cap 980-A
- Securing pins BEF-980

Cover cap
980-A





1) Cover cap
2) PCB connector
3) Securing pin

The 980-A cover cap is used as shock protection for series 980 PCB connectors. All cover caps have two ø 3 mm fastening holes.
They are fastened after wiring the strips with two securing pins BEF-980, which are pressed into the first and the last empty pole compartment of the PCB connector.

When ordering series 980 PCB connectors, the two empty pole compartments on the far left and the far right must be specified because terminal pole numbers are only allocated to connected pole compartments.

The number of poles and the cover cap sizes stated herein are already configured according to the number of empty pole compartments, i.e. a 3-pole cover cap is suitable for a 3-pole PCB connector equipped with two additional empty pole compartments.

General Information

No. of poles	1 - 30
Usable with	PCB connectors series 980

Material

Moulding	ABS, transparent
Temperature Range	-30°C up to 80°C

Options / Accessories

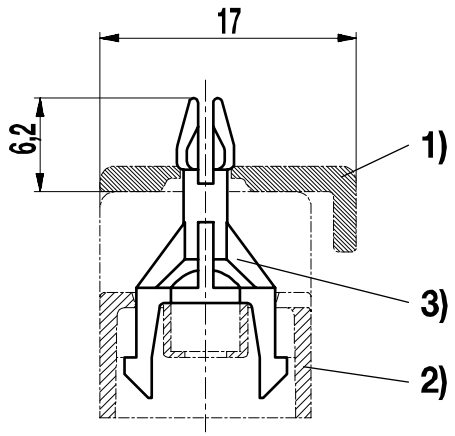
- Fixing holes at different places
- Securing pin BEF-980

Part Numbers

No. of poles	980-A	Length	Pcs
1	13.891.201	20,30	200
2	14.891.201	26,60	200
3	15.891.201	33,00	200
4	16.891.201	39,30	100
5	17.891.201	45,70	100
6	18.891.201	52,00	100
7	19.891.201	58,40	100
8	20.891.201	64,70	100
9	21.891.201	71,70	100
10	22.891.201	77,40	100
11	23.891.201	83,80	100
12	24.891.201	90,10	100
13	25.891.201	96,50	100
14	26.891.201	102,80	100
15	27.891.201	109,20	100
16	28.891.201	115,50	100
17	29.891.201	121,90	100
18	30.891.201	128,20	100
19	31.891.201	134,60	100
20	32.891.201	140,90	100

further number of poles on request

Securing pin
BEF-980



1) Cover cap
2) PCB connector
3) Securing pin

The securing pins BEF-980 are used to attach the cover caps onto series 980 PCB connectors.
Both pins are pressed into the far end empty pole compartments of the series 980 PCB connectors.

Part Numbers

No. of poles	BEF-980	Length	Pcs
1	10.476.007		1.000

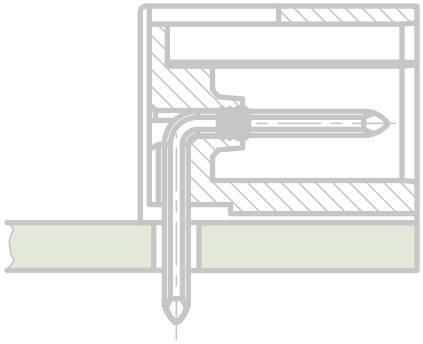
General Information

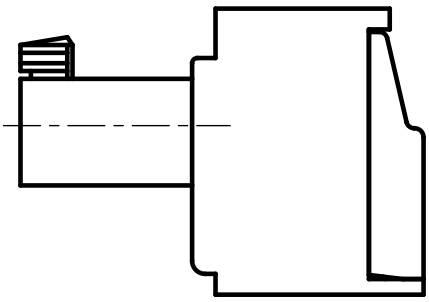
Usable with	PCB connectors series 980, cover cap 980-A

Material

Moulding	PA, grey
Temperature Range	-40°C up to 80°C

Plug connectors





This section lists our plug connectors with a pitch of 5,08 mm.

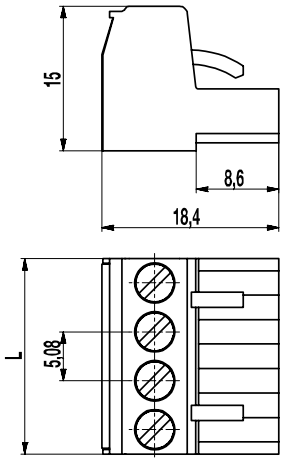
In combination with mating socket terminal strips and pin strips, plug connectors offer a variety of benefits:

- decentralized part/component assembly,
- prevention of wiring errors
- easy disconnection for service and maintenance purposes
- easy connection in confined space.

In addition to the screw version, the plug connector assortment also features solutions with tension spring technology. The screws of these plug connectors are secured against self-loosening.
Our plug connectors can also be mounted side-by-side without pole loss.

Series 121 plug connectors have standard grooves to accommodate coding keys. Plug connectors with such coded pin strips provide optimum protection against twisting and/or incorrect plugging.

Plug connector
121-A-111
Screw connection



The plug connector 121-A-111, with a pitch of 5,08 mm, is available in 2- to 24-pole design and can be mounted side-by-side without pole loss.

For each pole the plug connector has one trapezoidal coding slot in which the coding elements 120-K can be inserted. The wire entrance is parallel to the plug direction.
The screws are captive.

Part Numbers

No. of poles	121-A-111	Length	Pcs
2	10.808.102	10,16	200
3	10.808.103	15,24	200
4	10.808.104	20,32	100
5	10.808.105	25,40	100
6	10.808.106	30,48	100
7	10.808.107	35,56	50
8	10.808.108	40,64	50
9	10.808.109	45,72	50
10	10.808.110	50,80	50
11	10.808.111	55,88	50
12	10.808.112	60,96	50
13	10.808.113	66,04	50
14	10.808.114	71,12	50
15	10.808.115	76,20	50
16	10.808.116	81,28	50
17	10.808.117	86,36	50
18	10.808.118	91,44	50
19	10.808.119	96,52	50
20	10.808.120	101,60	50
21	10.808.121	106,68	50
22	10.808.122	111,76	50
23	10.808.123	116,84	50
24	10.808.124	121,92	50

General Information

Pitch	5,08 mm
No. of poles	2 - 24
Usable with	all pin strips of series 121

Technical Data

Clamping Range	*solid / flexible / AWG*		
	0,2 - 4 mm² / 0,2 - 2,5 mm² / 26 - 12 AWG		
Rated Cross Section	2,5 mm²		
Wire Stripping Length	7 mm ± 0,5 mm		
Overvoltage Category	III	III	II
Pollution Severity Level	3	2	2
Rated Voltage	250 V	320 V	630 V
Rated Impulse Voltage	4 kV	4 kV	4 kV
Rated Insulation Voltage	250 V acc. to EN 60998-1		
Rated Current	12 A		
Torque	0,5 Nm		

Material

Moulding	PA, grey, V-0
Comparative Tracking Index	CTI ≥ 600
Insulating Group	I
Temperature Range	-40°C up to 100°C
Terminal body	Nickel plated brass
Pressure clamp	Tin plated tin bronze
Screw	M3; zinc plated steel, blue passivated
Spring	Tin plated tin bronze

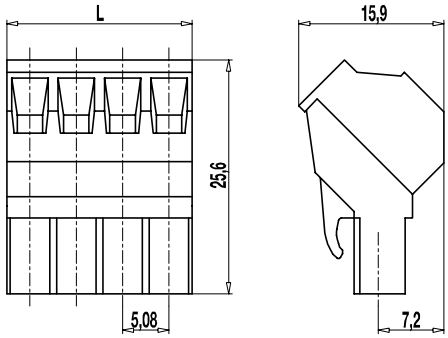
Approvals

	Current	Voltage	Group	AWG	Nm
	15	300	B	26 - 12	0,51
	10	300	D	26 - 12	0,51
	15	300	B	26 - 12	0,51
	10	300	D, E	26 - 12	0,51

Options / Accessories

- Consecutive numbering
- Special marking according to drawing
- Self-adhesive marking strip BST-5,08
- Pitch of 10,16 mm for larger clearance and creepage distances
- Coding elements 120-K
- Connectors equipped with coding elements on request
- Strain relief

Plug connector
121-C-111
Screw connection diagonal 45° to PCB



The plug connector 121-C-111 in a inclined version, with a pitch of 5,08 mm, is available in 2- to 24-pole design and can be mounted side-by-side without pole loss.

For each pole the plug connector has one trapezoidal coding slot in which the coding elements 120-K can be inserted.
The wire entrance is diagonal, i.e. in a 45° angle to the PC board. Therefore, this Plug connector is ideal for the assembly in the center of PCBs. The design of this Plug connector allows space-saving arrangement of consecutive rows of terminals.
The screws are captive.

Part Numbers

No. of poles	121-C-111	Length	Pcs
2	10.808.302	10,16	100
3	10.808.303	15,24	100
4	10.808.304	20,32	100
5	10.808.305	25,40	100
6	10.808.306	30,48	100
7	10.808.307	35,56	50
8	10.808.308	40,64	50
9	10.808.309	45,72	50
10	10.808.310	50,80	50
11	10.808.311	55,88	50
12	10.808.312	60,96	50
13	10.808.313	66,04	50
14	10.808.314	71,12	50
15	10.808.315	76,20	50
16	10.808.316	81,28	50
17	10.808.317	86,36	50
18	10.808.318	91,44	50
19	10.808.319	96,52	50
20	10.808.320	101,60	50
21	10.808.321	106,68	50
22	10.808.322	111,76	50
23	10.808.323	116,84	50
24	10.808.324	121,92	50

General Information

Pitch	5,08 mm
No. of poles	2 - 24
Usable with	all pin strips of series 121

Technical Data

Clamping Range	*solid / flexible / AWG*		
	0,2 - 4 mm² / 0,2 - 2,5 mm² / 26 - 12 AWG		
Rated Cross Section	2,5 mm²		
Wire Stripping Length	7 mm ± 0,5 mm		
Overvoltage Category	III	III	II
Pollution Severity Level	3	2	2
Rated Voltage	250 V	320 V	630 V
Rated Impulse Voltage	4 kV	4 kV	4 kV
Rated Insulation Voltage	250 V acc. to EN 60998-1		
Rated Current	12 A		
Torque	0,5 Nm		

Material

Moulding	PA, grey, V-0
Comparative Tracking Index	CTI ≥ 600
Insulating Group	I
Temperature Range	-40°C up to 100°C
Terminal body	Nickel plated brass
Pressure clamp	Tin plated tin bronze
Screw	M3; zinc plated steel, blue passivated
Spring	Tin plated tin bronze

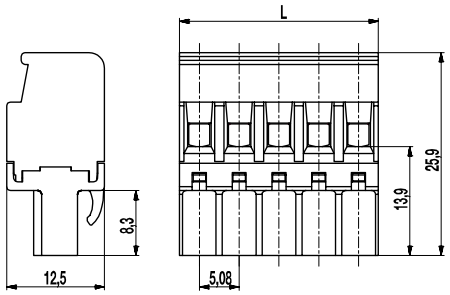
Approvals

	Current	Voltage	Group	AWG	Nm
	15	300	B	26 - 12	0,51
	10	300	D	26 - 12	0,51
	15	300	B	26 - 12	0,51
	10	300	D, E	26 - 12	0,51

Options / Accessories

- Consecutive numbering
- Special marking according to drawing
- Self-adhesive marking strip BST-5,08
- Pitch of 10,16 mm for larger clearance and creepage distances
- Coding elements 120-K
- Connectors equipped with coding elements on request
- Strain relief

Plug connector
121-D-111
Screw connection, backside latching hooks



The plug connector 121-D-111, with a pitch of 5,08 mm, is available in 2- to 24-pole design and can be mounted side-by-side without pole loss.

On version 121-D-111, the wire entrance is located opposite to the latching hook side; on version 121-D-121, it is located on the same side. Plugging the plug connector on pin strips of series 121 therefore results in inverted plug-in configurations.

For each pole the plug connector has one trapezoidal coding slot in which the coding elements 120-K can be inserted. The wire entrance is vertical to the plug direction.
The screws are captive.

Part Numbers

No. of poles	121-D-111	Length	Pcs
2	10.808.602	10,16	100
3	10.808.603	15,24	100
4	10.808.604	20,32	100
5	10.808.605	25,40	100
6	10.808.606	30,48	100
7	10.808.607	35,56	50
8	10.808.608	40,64	50
9	10.808.609	45,72	50
10	10.808.610	50,80	50
11	10.808.611	55,88	50
12	10.808.612	60,96	100
13	10.808.613	66,04	50
14	10.808.614	71,12	50
15	10.808.615	76,20	50
16	10.808.616	81,28	50
17	10.808.617	86,36	50
18	10.808.618	91,44	50
19	10.808.619	96,52	50
20	10.808.620	101,60	50
21	10.808.621	106,68	50
22	10.808.622	111,76	50
23	10.808.623	116,84	50
24	10.808.624	121,92	50

General Information

Pitch	5,08 mm
No. of poles	2 - 24
Usable with	all pin strips of series 121

Technical Data

Clamping Range	*solid / flexible / AWG*		
	0,2 - 4 mm² / 0,2 - 2,5 mm² / 26 - 12 AWG		
Rated Cross Section	2,5 mm²		
Wire Stripping Length	7 mm ± 0,5 mm		
Overvoltage Category	III	III	II
Pollution Severity Level	3	2	2
Rated Voltage	250 V	320 V	630 V
Rated Impulse Voltage	4 kV	4 kV	4 kV
Rated Insulation Voltage	250 V acc. to EN 60998-1		
Rated Current	12 A		
Torque	0,5 Nm		

Material

Moulding	PA, grey, V-0
Comparative Tracking Index	CTI ≥ 600
Insulating Group	I
Temperature Range	-40°C up to 100°C
Terminal body	Nickel plated brass
Pressure clamp	Tin plated tin bronze
Screw	M3; zinc plated steel, blue passivated
Spring	Tin plated tin bronze

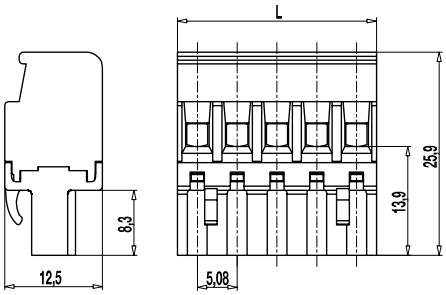
Approvals

	Current	Voltage	Group	AWG	Nm
	15	300	B	26 - 12	0,51
	10	300	D	26 - 12	0,51
	15	300	B	26 - 12	0,51
	10	300	D, E	26 - 12	0,51

Options / Accessories

- Consecutive numbering
- Special marking according to drawing
- Self-adhesive marking strip BST-5,08
- Pitch of 10,16 mm for larger clearance and creepage distances
- Coding elements 120-K
- Connectors equipped with coding elements on request
- Strain relief

Plug connector
121-D-121
Screw connection



The plug connector 121-D-121, with a pitch of 5,08 mm, is available in 2- to 24-pole design and can be mounted side-by-side without pole loss.

On version 121-D-111, the wire entrance is located opposite to the latching hook side; on version 121-D-121, it is located on the same side. Plugging the plug connector on pin strips of series 121 therefore results in inverted plug-in configurations.

For each pole the plug connector has one trapezoidal coding slot in which the coding elements 120-K can be inserted. The wire entrance is vertical to the plug direction.
The screws are captive.

Part Numbers

No. of poles	121-D-121	Length	Pcs
2	20.808.602	10,16	100
3	20.808.603	15,24	100
4	20.808.604	20,32	100
5	20.808.605	25,40	100
6	20.808.606	30,48	100
7	20.808.607	35,56	50
8	20.808.608	40,64	50
9	20.808.609	45,72	50
10	20.808.610	50,80	50
11	20.808.611	55,88	50
12	20.808.612	60,96	100
13	20.808.613	66,04	50
14	20.808.614	71,12	50
15	20.808.615	76,20	50
16	20.808.616	81,28	50
17	20.808.617	86,36	50
18	20.808.618	91,44	50
19	20.808.619	96,52	50
20	20.808.620	101,60	50
21	20.808.621	106,68	50
22	20.808.622	111,76	50
23	20.808.623	116,84	50
24	20.808.624	121,92	50

General Information

Pitch	5,08 mm
No. of poles	2 - 24
Usable with	all pin strips of series 121

Technical Data

Clamping Range	*solid / flexible / AWG*		
	0,2 - 4 mm² / 0,2 - 2,5 mm² / 26 - 12 AWG		
Rated Cross Section	2,5 mm²		
Wire Stripping Length	7 mm ± 0,5 mm		
Overvoltage Category	III	III	II
Pollution Severity Level	3	2	2
Rated Voltage	250 V	320 V	630 V
Rated Impulse Voltage	4 kV	4 kV	4 kV
Rated Insulation Voltage	250 V acc. to EN 60998-1		
Rated Current	12 A		
Torque	0,5 Nm		

Material

Moulding	PA, grey, V-0
Comparative Tracking Index	CTI ≥ 600
Insulating Group	I
Temperature Range	-40°C up to 100°C
Terminal body	Nickel plated brass
Pressure clamp	Tin plated tin bronze
Screw	M3; zinc plated steel, blue passivated
Spring	Tin plated tin bronze

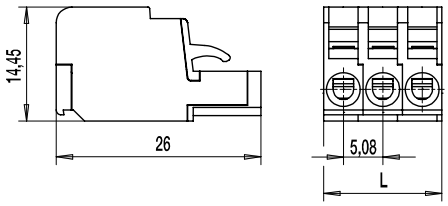
Approvals

	Current	Voltage	Group	AWG	Nm
	15	300	B	26 - 12	0,51
	10	300	D	26 - 12	0,51
	15	300	B	26 - 12	0,51
	10	300	D, E	26 - 12	0,51

Options / Accessories

- Consecutive numbering
- Special marking according to drawing
- Self-adhesive marking strip BST-5,08
- Pitch of 10,16 mm for larger clearance and creepage distances
- Coding elements 120-K
- Connectors equipped with coding elements on request
- Strain relief

Plug connector
121-F-111
Spring clamp connection



The plug connector 121-F-111 series with screwless terminals complements our "CONECTA"-Series.
The rated cross-section of 2,5 mm² is geared towards screw-connector variants. This plug connector can be used with single-core copper conductors and fine-stranded wires (2,5 mm²), but also with pin cable sockets or crimped ferrules. For crimped ferrules, the cross-section must be reduced accordingly. All other rated data is identical with the screw-connector variants.

Test ports for ø 2 mm or ø 2,3 mm test plugs or for spring test pins are accessible from the upper side of the clamp. The plug connector consists of individual poles and can be manufactured to any required pole configuration at our factory.

For each pole the plug connector has one trapezoidal coding groove in which the coding elements 120-K can be inserted.

The plug connector can be operated by either a standard 3 mm blade screwdriver, terminal pliers or the built-in pusher, see 121-F-211.

Part Numbers

No. of poles	121-F-111	Length	Pcs
2	12.808.952	10,16	200
3	13.808.952	15,24	200
4	14.808.952	20,32	100
5	15.808.952	25,40	100
6	16.808.952	30,48	100
7	17.808.952	35,56	50
8	18.808.952	40,64	50
9	19.808.952	45,72	50
10	20.808.952	50,08	50
11	21.808.952	55,88	50
12	22.808.952	60,69	50

General Information

Pitch	5,08 mm
No. of poles	2 - 12
Usable with	all pin strips of series 121

Technical Data

Clamping Range	*solid / flexible / AWG*
	0,2 - 4 mm² / 0,2 - 2,5 mm² / 24 - 12 AWG
Rated Cross Section	2,5 mm²
Wire Stripping Length	8,5 mm ± 0,5 mm
Overvoltage Category	II
Pollution Severity Level	2
Rated Voltage	320 V
Rated Impulse Voltage	2,5 kV
Rated Insulation Voltage	250 V acc. to EN 60998-1
Rated Current	12 A

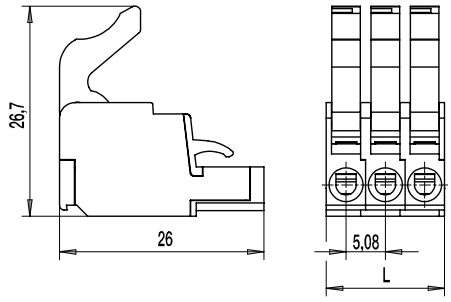
Material

Moulding	PA, grey, V-0
Comparative Tracking Index	CTI ≥ 600
Insulating Group	I
Temperature Range	-40°C up to 100°C
Pressure clamp	Copper alloy, tin plated
Tension spring	Stainless strip steel
Spring	Copper alloy, tin plated

Options / Accessories

- Consecutive numbering
- Special marking according to drawing
- Self-adhesive marking strip BST-5,08
- Coding elements 120-K
- Connectors equipped with coding elements on request
- Strain relief
- Terminal pliers 120-F

Plug connector
121-F-211
Spring clamp connection, with pusher



The plug connector 121-F-211 series with screwless terminals complements our "CONECTA"-Series.
The rated cross-section of 2,5 mm² is geared towards screw-connector variants. This plug connector can be used with single-core copper conductors and fine-stranded wires (2,5 mm²), but also with pin cable sockets or crimped ferrules. For crimped ferrules, the cross-section must be reduced accordingly. All other rated data is identical with the screw-connector variants.

Test ports for ø 2 mm or ø 2,3 mm test plugs or for spring test pins are accessible from the upper side of the clamp. The plug connector consists of individual poles and can be manufactured to any required pole configuration at our factory.

For each pole the plug connector has one trapezoidal coding groove in which the coding elements 120-K can be inserted.

The plug connector is operated by the built-in pusher.

Part Numbers

No. of poles	121-F-211	Length	Pcs
2	12.808.955	10,16	200
3	13.808.955	15,24	200
4	14.808.955	20,32	100
5	15.808.955	25,40	100
6	16.808.955	30,48	100
7	17.808.955	35,56	50
8	18.808.955	40,64	50
9	19.808.955	45,72	50
10	20.808.955	50,08	50
11	21.808.955	55,88	50
12	22.808.955	60,69	50

General Information

Pitch	5,08 mm
No. of poles	2 - 12
Usable with	all pin strips series 121

Technical Data

Clamping Range	*solid / flexible / AWG* 0,2 - 4 mm² / 0,2 - 2,5 mm² / 24 - 12 AWG
Rated Cross Section	2,5 mm²
Wire Stripping Length	8,5 mm ± 0,5 mm
Overvoltage Category	II
Pollution Severity Level	2
Rated Voltage	320 V
Rated Impulse Voltage	2,5 kV
Rated Insulation Voltage	250 V acc. to EN 60998-1
Rated Current	12 A

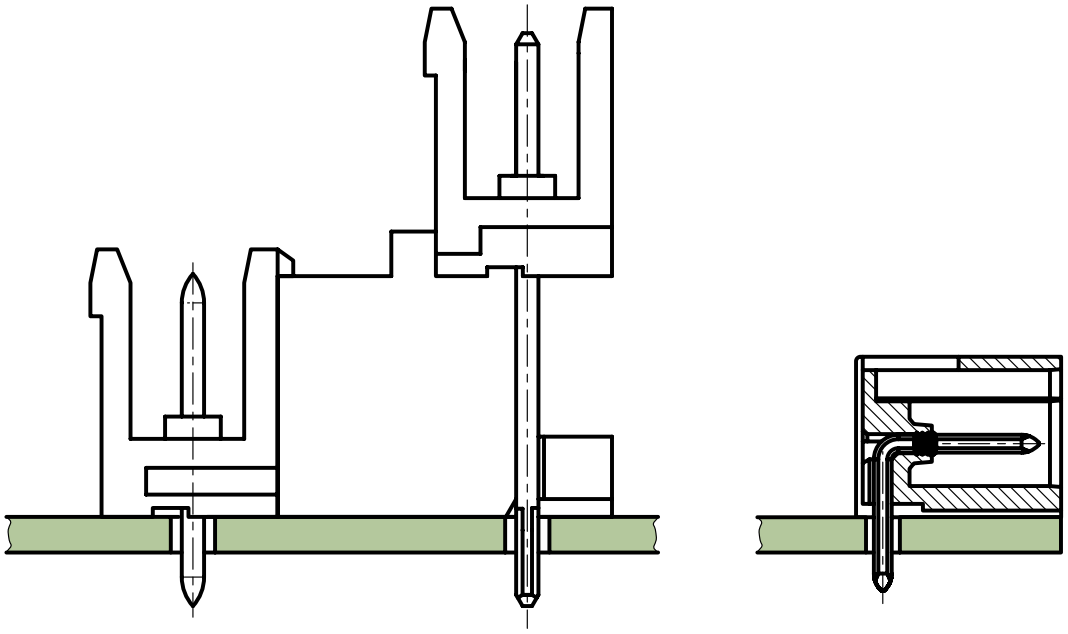
Material

Moulding	PA, grey, V-0
Comparative Tracking Index	CTI ≥ 600
Insulating Group	I
Temperature Range	-40°C up to 100°C
Pressure clamp	Copper alloy, tin plated
Tension spring	Stainless strip steel
Spring	Copper alloy, tin plated

Options / Accessories

- Consecutive numbering
- Special marking according to drawing
- Self-adhesive marking strip BST-5,08
- Coding elements 120-K
- Connectors equipped with coding elements on request
- Strain relief

Pin strips



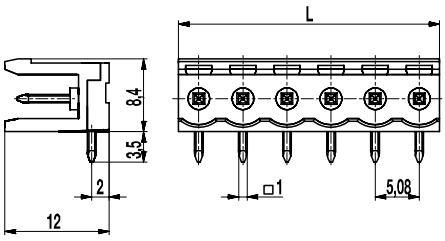
Here, you can find the male pin strips of series 121 for the female socket terminal strips.
Depending on their design, pin strips are available with 2 to 24 poles, as flange versions with 2 to 22 poles and as two-tier versions with 4 to 48 poles.

The user can choose from different designs with perpendicular or parallel plug direction to the PC board.

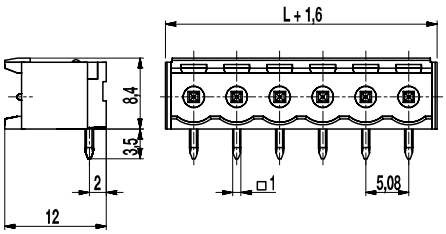
Series 121 pin strips as well as socket terminal strips feature grooves to accomodate coding elements. Laterally attached dovetail expansions on the housings reliably prevent offset plugging of the socket terminal strips.

Two-tier versions widen the range of applications considerably.

Pin strip
121-M-111/-211
Plug-in direction parallel to PCB



121-M-111



121-M-211

The pin strips 121-M-111 und 121-M-211 with a pitch of 5,08 mm are available in 2- to 24-pole design.

The ..-M-111 version is a pin strip without side walls and can be mounted side-by-side without pole loss. The ..-M-211 version is a pin strip with side walls. For both versions, the plug direction for mating plug connectors is parallel to the PCB.

For each pole, the pin strip has one trapezoidal coding slot in which the coding elements 120-K can be inserted.

General Information

Pitch	5,08 mm
No. of poles	2 - 24
Usable with	all plug connectors of series 121
Additonal Information	Ordering information: ..-111: without side wall ..-211: with side wall, pottable

Technical Data

Overvoltage Category	III	III	II
Pollution Severity Level	3	2	2
Rated Voltage	250 V	320 V	630 V
Rated Impulse Voltage	4 kV	4 kV	4 kV
Rated Insulation Voltage	250 V acc. to EN 60998-1		
Rated Current	12 A		
Hole in PCB	ø 1,4 mm		

Material

Moulding	PA, grey, V-0
Comparative Tracking Index	CTI ≥ 600
Insulating Group	I
Temperature Range	-40°C up to 100°C
Solder pin	1,0 x 1,0 mm; tin plated brass

Approvals

	Current	Voltage	Group	AWG	Nm
	15	300	B		
	10	300	D		
	15	300	B		
	10	300	D, E		

Part Numbers

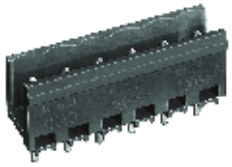
No. of poles	121-M-111	121-M-211	Length	Pcs
2	10.806.102	10.806.126	10,16	200
3	10.806.103	10.806.127	15,24	200
4	10.806.104	10.806.128	20,32	100
5	10.806.105	10.806.129	25,40	100
6	10.806.106	10.806.130	30,48	100
7	10.806.107	10.806.131	35,56	50
8	10.806.108	10.806.132	40,64	50
9	10.806.109	10.806.133	45,72	50
10	10.806.110	10.806.134	50,80	50
11	10.806.111	10.806.135	55,88	50
12	10.806.112	10.806.136	60,96	50

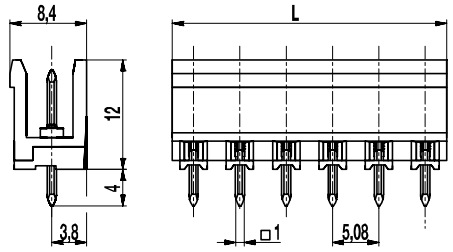
further number of poles on request

Options / Accessories

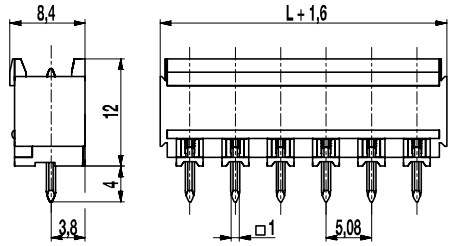
- Consecutive numbering
- Special marking according to drawing
- Self-adhesive marking strip BST-5,08
- Pitch of 10,16 mm for larger clearance and creepage distances
- Other P.C. pin lengths
- Coding elements 120-K
- Connectors equipped with coding elements on request

Pin strip
121-M-121/-221
Plug-in direction vertical to PCB





121-M-121



121-M-221

The pin strips 121-M-121 and 121-M-221 with a pitch of 5,08 mm are available in 2- to 24-pole design.

The ..-M-121 version is a pin strip without side walls and can be mounted side-by-side without pole loss. The ..-M-221 version is a pin strip with side walls. For both versions, the plug direction for mating plug connectors is vertical to the PCB.

For each pole, the pin strip has one trapezoidal coding slot in which the coding elements 120-K can be inserted.

Part Numbers

No. of poles	121-M-121	121-M-221	Length	Pcs
2	20.806.102	20.806.126	10,16	200
3	20.806.103	20.806.127	15,24	200
4	20.806.104	20.806.128	20,32	100
5	20.806.105	20.806.129	25,40	100
6	20.806.106	20.806.130	30,48	100
7	20.806.107	20.806.131	35,56	50
8	20.806.108	20.806.132	40,64	50
9	20.806.109	20.806.133	45,72	50
10	20.806.110	20.806.134	50,80	50
11	20.806.111	20.806.135	55,88	50
12	20.806.112	20.806.136	60,96	50

further number of poles on request

General Information

Pitch	5,08 mm
No. of poles	2 - 24
Usable with	all plug connectors of series 121
Additonal Information	Ordering information: ..-121: without side wall ..-221: with side wall, pottable

Technical Data

Overvoltage Category	III	III	II
Pollution Severity Level	3	2	2
Rated Voltage	250 V	320 V	630 V
Rated Impulse Voltage	4 kV	4 kV	4 kV
Rated Insulation Voltage	250 V acc. to EN 60998-1		
Rated Current	12 A		
Hole in PCB	ø 1,4 mm		

Material

Moulding	PA, grey, V-0
Comparative Tracking Index	CTI ≥ 600
Insulating Group	I
Temperature Range	-40°C up to 100°C
Solder pin	1,0 x 1,0 mm; tin plated brass

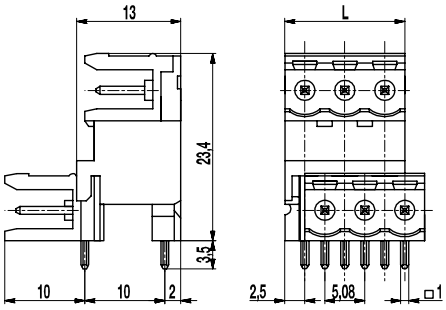
Approvals

	Current	Voltage	Group	AWG	Nm
	15	300	B		
	10	300	D		
	15	300	B		
	10	300	D, E		

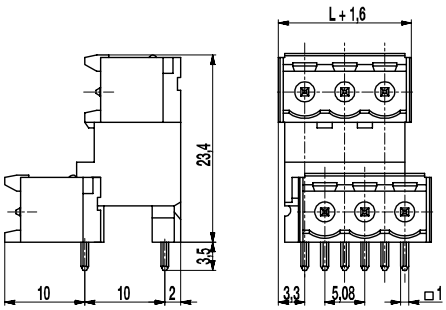
Options / Accessories

- Consecutive numbering
- Special marking according to drawing
- Self-adhesive marking strip BST-5,08
- Pitch of 10,16 mm for larger clearance and creepage distances
- Other P.C. pin lengths
- Coding elements 120-K
- Connectors equipped with coding elements on request

Pin strip
121-M-151/-251
Plug-in direction parallel to PCB, two-tier version



121-M-151



121-M-251

The pin strips 121-M-151 und 121-M-251, as two-tier version with a pitch of 5,08 mm are available in 4- to 48-pole design.

The ..-M-151 version is a pin strip without side walls and can be mounted side-by-side without pole loss. The ..-M-251 version is a pin strip with side walls. For both versions, the plug direction for mating plug connectors is parallel to the PCB.

For each pole, the pin strip has one trapezoidal coding slot in which the coding elements 120-K can be inserted.

Part Numbers

No. of poles	121-M-151	121-M-251	Length	Pcs
4	10.806.152	10.806.176	20,32	100
6	10.806.153	10.806.177	30,48	100
8	10.806.154	10.806.178	40,64	50
10	10.806.155	10.806.179	50,80	50
12	10.806.156	10.806.180	60,96	50
14	10.806.157	10.806.181	71,12	50
16	10.806.158	10.806.182	81,28	25
18	10.806.159	10.806.183	91,44	25
20	10.806.160	10.806.184	101,60	25
22	10.806.161	10.806.185	111,76	25
24	10.806.162	10.806.186	121,92	25

further number of poles on request

General Information

Pitch	5,08 mm
No. of poles	4 - 48
Usable with	all plug connectors of series 121
Additonal Information	Ordering information: ..-151: without side wall ..-251: with side wall

Technical Data

Overvoltage Category	III	III	II
Pollution Severity Level	3	2	2
Rated Voltage	250 V	320 V	630 V
Rated Impulse Voltage	4 kV	4 kV	4 kV
Rated Insulation Voltage	250 V acc. to EN 60998-1		
Rated Current	12 A		
Hole in PCB	ø 1,4 mm		

Material

Moulding	PA, grey, V-0
Comparative Tracking Index	CTI ≥ 600
Insulating Group	I
Temperature Range	-40°C up to 100°C
Solder pin	1,0 x 1,0 mm; tin plated brass

Approvals

	Current	Voltage	Group	AWG	Nm
	15	300	B		
	10	300	D		
	15	300	B		
	10	300	D, E		

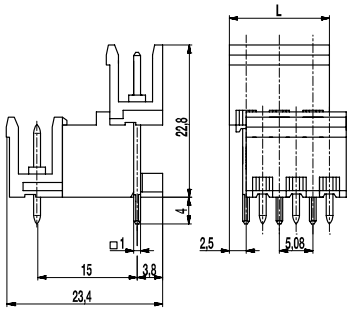
Options / Accessories

- Consecutive numbering
- Special marking according to drawing
- Self-adhesive marking strip BST-5,08
- Pitch of 10,16 mm for larger clearance and creepage distances
- Coding elements 120-K
- Connectors equipped with coding elements on request
- Two-tier version with front pin strip offset to the left
- Special arrangements of front- and rear row of the floor version

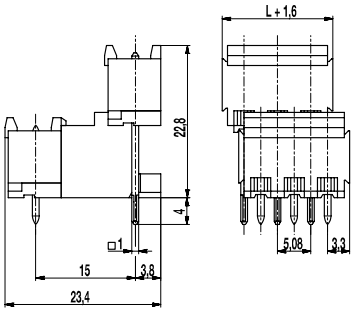
Pin strip
121-M-161/-261
Plug-in direction vertical to PCB, two-tier version

conecta®

RoHS COMPLIANT



121-M-161



121-M-261

The pin strips 121-M-161 und 121-M-261, as two-tier versions with a pitch of 5,08 mm are available in 4- to 48-pole design.

The ..-M-161 version is a pin strip without side walls and can be mounted side-by-side without pole loss. The ..-M-261 version is a pin strip with side walls. For both versions, the plug direction for mating plug connectors is vertical to the PCB.

For each pole, the pin strip has one trapezoidal coding slot in which the coding elements 120-K can be inserted.

Part Numbers

No. of poles	121-M-161	121-M-261	Length	Pcs
4	30.806.152	30.806.176	20,32	100
6	30.806.153	30.806.177	30,48	100
8	30.806.154	30.806.178	40,64	50
10	30.806.155	30.806.179	50,80	50
12	30.806.156	30.806.180	60,96	50
14	30.806.157	30.806.181	71,12	50
16	30.806.158	30.806.182	81,28	25
18	30.806.159	30.806.183	91,44	25
20	30.806.160	30.806.184	101,60	25
22	30.806.161	30.806.185	111,76	25
24	30.806.162	30.806.186	121,92	25

further number of poles on request

General Information

Pitch	5,08 mm
No. of poles	4 - 48
Usable with	all plug connectors of series 121
Additonal Information	Ordering information: ..-161: without side wall ..-261: with side wall, pottable

Technical Data

Overvoltage Category	III	III	II
Pollution Severity Level	3	2	2
Rated Voltage	250 V	320 V	630 V
Rated Impulse Voltage	4 kV	4 kV	4 kV
Rated Insulation Voltage	250 V acc. to EN 60998-1		
Rated Current	12 A		
Hole in PCB	ø 1,4 mm		

Material

Moulding	PA, grey, V-0
Comparative Tracking Index	CTI ≥ 600
Insulating Group	I
Temperature Range	-40°C up to 100°C
Solder pin	1,0 x 1,0 mm; tin plated brass

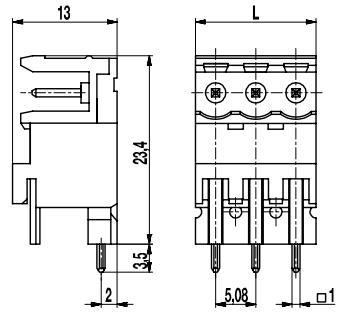
Approvals

	Current	Voltage	Group	AWG	Nm
	15	300	B		
	10	300	D		
	15	300	B		
	10	300	D, E		

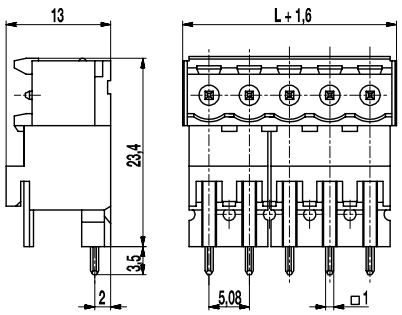
Options / Accessories

- Consecutive numbering
- Special marking according to drawing
- Self-adhesive marking strip BST-5,08
- Pitch of 10,16 mm for larger clearance and creepage distances
- Coding elements 120-K
- Connectors equipped with coding elements on request
- Two-tier version with front pin strip offset to the left
- Special arrangements of front- and rear row of the floor version

Pin strip
121-M-181/-281
Plug-in direction parallel to PCB, tall version



121-M-181



121-M-281

The pin strips 121-M-181 und 121-M-281, tall version with a pitch of 5,08 mm are available in 2- to 24-pole design.

The ..-M-181 version is a pin strip without side walls and can be mounted side-by-side without pole loss. The ..-M-281 version is a pin strip with side walls. For both versions, the plug direction for mating plug connectors is parallel to the PCB.

For each pole, the pin strip has one trapezoidal coding slot in which the coding elements 120-K can be inserted.

Part Numbers

No. of poles	121-M-181	121-M-281	Length	Pcs
2	25.806.152	25.806.176	10,16	200
3	25.806.153	25.806.177	15,24	100
4	25.806.154	25.806.178	20,32	100
5	25.806.155	25.806.179	25,40	100
6	25.806.156	25.806.180	30,48	100
7	25.806.157	25.806.181	35,56	50
8	25.806.158	25.806.182	40,64	50
9	25.806.159	25.806.183	45,72	50
10	25.806.160	25.806.184	50,80	50
11	25.806.161	25.806.185	55,88	50
12	25.806.162	25.806.186	60,96	50

further number of poles on request

General Information

Pitch	5,08 mm
No. of poles	2 - 24
Usable with	all plug connectors of series 121
Additonal Information	Ordering information: ..-181: without side wall ..-281: with side wall

Technical Data

Overvoltage Category	III	III	II
Pollution Severity Level	3	2	2
Rated Voltage	250 V	320 V	630 V
Rated Impulse Voltage	4 kV	4 kV	4 kV
Rated Insulation Voltage	250 V acc. to EN 60998-1		
Rated Current	12 A		
Hole in PCB	ø 1,4 mm		

Material

Moulding	PA, grey, V-0
Comparative Tracking Index	CTI ≥ 600
Insulating Group	I
Temperature Range	-40°C up to 100°C
Solder pin	1,0 x 1,0 mm; tin plated brass

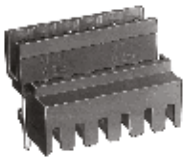
Approvals

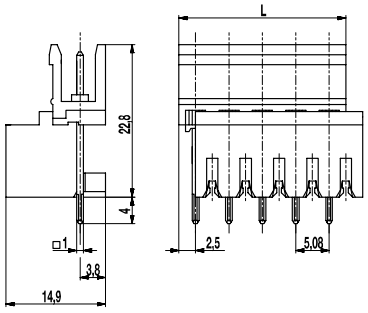
	Current	Voltage	Group	AWG	Nm
	15	300	B		
	10	300	D		
	15	300	B		
	10	300	D, E		

Options / Accessories

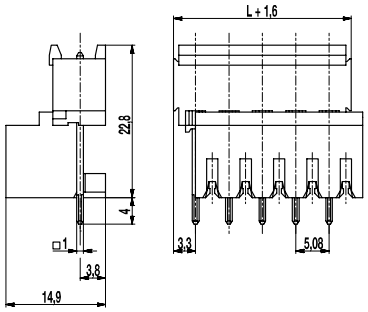
- Consecutive numbering
- Special marking according to drawing
- Self-adhesive marking strip BST-5,08
- Pitch of 10,16 mm for larger clearance and creepage distances
- Coding elements 120-K
- Connectors equipped with coding elements on request

Pin strip
121-M-191/-291
Plug-in direction vertical to PCB, tall version





121-M-191



121-M-291

The pin strips 121-M-191 und 121-M-291 as tall version with a pitch of 5,08 mm are available in 2- to 24-pole design.

The ..-M-191 version is a pin strip without side walls and can be mounted side-by-side without pole loss. The ..-M-291 version is a pin strip with side walls. For both versions, the plug direction for mating plug connectors is vertical to the PCB.

For each pole, the pin strip has one trapezoidal coding slot in which the coding elements 120-K can be inserted.

Part Numbers

No. of poles	121-M-191	120-M-291	Length	Pcs
2	25.806.102	25.806.126	10,16	200
3	25.806.103	25.806.127	15,24	100
4	25.806.104	25.806.128	20,32	100
5	25.806.105	25.806.129	25,40	100
6	25.806.106	25.806.130	30,48	100
7	25.806.107	25.806.131	35,56	50
8	25.806.108	25.806.132	40,64	50
9	25.806.109	25.806.133	45,72	50
10	25.806.110	25.806.134	50,80	50
11	25.806.111	25.806.135	55,88	50
12	25.806.112	25.806.136	60,96	50

further number of poles on request

General Information

Pitch	5,08 mm
No. of poles	2 - 24
Usable with	all plug connectors of series 121
Additonal Information	Ordering information: ..-191: without side wall ..-291: with side wall

Technical Data

Overvoltage Category	III	III	II
Pollution Severity Level	3	2	2
Rated Voltage	250 V	320 V	630 V
Rated Impulse Voltage	4 kV	4 kV	4 kV
Rated Insulation Voltage	250 V acc. to EN 60998-1		
Rated Current	12 A		
Hole in PCB	ø 1,4 mm		

Material

Moulding	PA, grey, V-0
Comparative Tracking Index	CTI ≥ 600
Insulating Group	I
Temperature Range	-40°C up to 100°C
Solder pin	1,0 x 1,0 mm; tin plated brass

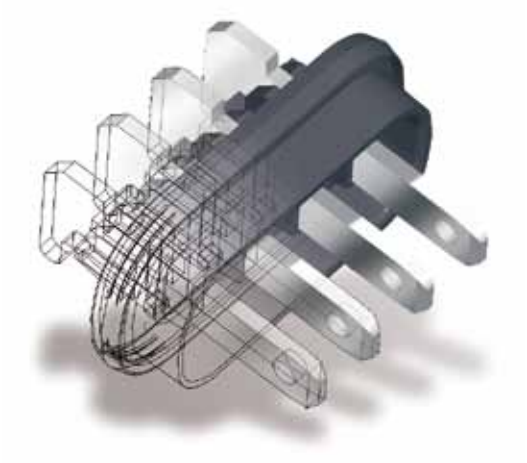
Approvals

	Current	Voltage	Group	AWG	Nm
	15	300	B		
	10	300	D		
	15	300	B		
	10	300	D, E		

Options / Accessories

- Consecutive numbering
- Special marking according to drawing
- Self-adhesive marking strip BST-5,08
- Pitch of 10,16 mm for larger clearance and creepage distances
- Coding elements 120-K
- Connectors equipped with coding elements on request

Looking for a Customer Designed Solution?



„Sealed“

With a pitch of 3.5 mm, this insert with four tabs 2.8 x 0.8 mm was designed to seal the contacts, for an application which required the protection class IP54.

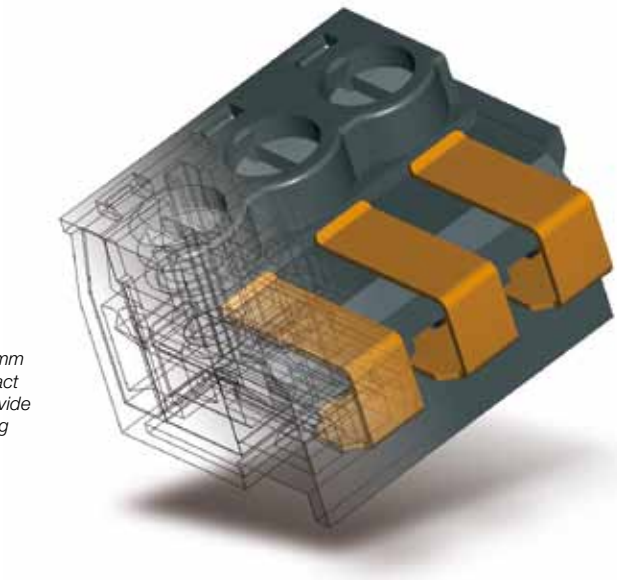
„Top“

Version of a terminal our series 970 in 5 mm pitch.
In order to achieve a distance of 100 mm from the PCB, a housing was constructed, which not only does protect the pins but also positions them in a special arrangement. In the terminal area are also placed elongated ribs.

Our Product Information Centre will assist you with every technical inquiry.

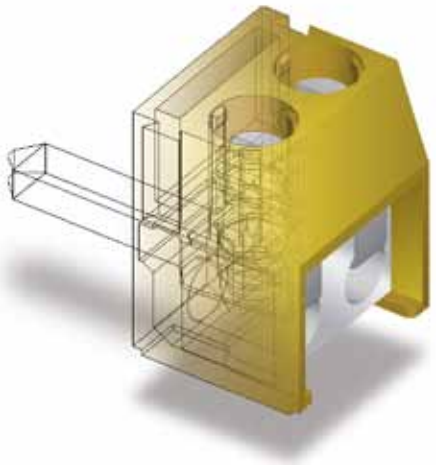
- Please, call us under +49 6181 105-151.
- Contact us via e-mail at products@wecogroup.com.
- You want us to pay you a visit? We are pleased to arrange an appointment.
- You would prefer a visit in Hanau?
  Of course, you are welcomed anytime.

We are looking forward to your call.



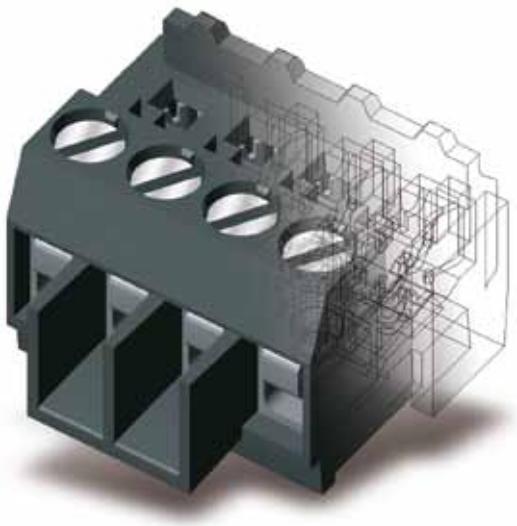
„Well Contacted“

This plug connector with the pitch of 5 mm is designed with outer gold-plated contact surfaces. Additionally, the side walls provide ribs for receiving a corresponding locking hook.



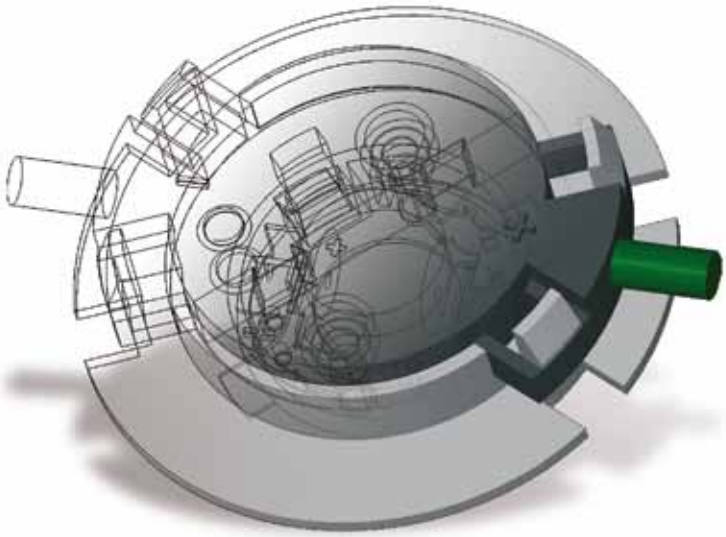
„Stable bridged“

Terminal connector in 5 mm pitch with one potential but two screw connections and a plug connector at the back. This allows a connection to other terminals.
For the customer the housing was made with buttercup yellow material (similar to RAL 1021).



„Long-ribbed“

A plug connector with a pitch of 3.5 mm, with a anti-twist peg and two extra-long guiding ribs.
In the plug connection area, tabs and round plug pins could be contacted.

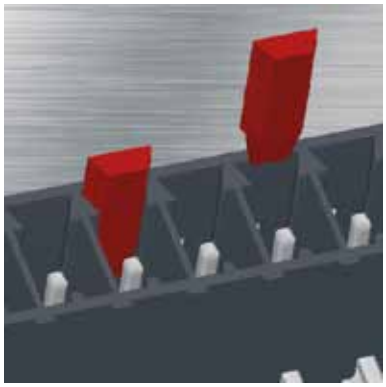


„Solar“

Draft for a photovoltaic-module connection.

Accessories / Options

Coding elements



This coding element is applicable for the Conecta Series of 110, 120, 121 and 122.
For coding, all pin strips and plug connectors of this series are equipped with a trapezoidal slot per pole into which the coding elements can easily be inserted.
With this, simple solution error free plugging is ensured.
In the standard version the coding elements have a bright red colour, making them clearly visible in mated condition. Alternatively, they are also available in light grey. 12 of each coding element are related to a strip.
The coding elements are not reflow solderable and for SMD & THR products they can only be used after the soldering process.

Part number	Type	Pcs
20.496.025	120-K/12 KODIEREL.	120
17.496.025	120-K/12 KODIEREL. LIGHTGREY	120

Marking strips

These marking strips are made of polyester with black print on a silver background. They have a scratch resistant mylar surface.
Numbering begins with 1, the specified pole number is the last digit respectively.
The marking strips withstand printed circuit board cleaning agents containing water and soap, freon, fluorinated or chlorinated ingredients; they are not suitable for reflow soldering procedures.
They are supplied on adhesive cards each containing ten strips.

Part number	Type	Pitch	Length (L)	Width (a)	Pcs
24.499.006	BST-5,08/12	5,08 mm	61 mm	3,5 mm	100
24.499.007	BST-5,08/32	5,08 mm	162 mm	3,5 mm	100

Marking

Alternatively to the self-adhesive marking strips, we offer a special marking to meet almost any special and individual marking requirement. The printing is carried out on pre-designed marking areas.
Depending upon the housing colour, the numbers are imprinted in white or in black.
Other printing colours are possible on request.

Accessories / Options

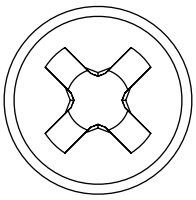
Colours

WECO offers a wide range of housing colours.
Besides our standard housing colours, you can choose between many other colours.
Please contact us for further information.

Screws

Our standard products are fitted with slotted screws.
On enquiry and customer‘s request, we also offer screws with Philips/Pozidrive or +/- screw heads.

Further materials:
Standard screws are made of steel; also screws out of various materials, e.g. brass, are available on request.



Packaging: Card board boxes, Tape-on-Reel, Magazines

According to standard, we pack our products in pollution free folding boxes from card board and from corrugated board. Besides, we offer transfer tubes (magazines) as packing for the use with feeders and dispensers for automated insertion machinery. Transfer tubes offer the advantage of a better transportation facility and a simple withdrawal over the cardboards.

Our SMD and THR products are packed in “Tape-on-Reel” for the automated assembly process in pick and place machines. Please find data sheet information about products packed on Tape-on-Reel on our website.

Technical Information

Rating of clearance and creepage distances according to DIN EN 60664-1 (VDE 0110-1)

The rating of clearance and creepage distances depends on the expected electrical surge, the characteristic values of the electronic protection measures as well as the contamination at the place of installation.

Clearanece distances are dimensioned in accordance with the rated impulse voltage table F.1, which results out of the overvoltage category and phase-to-earth voltage.

The minimum clearance in air is stated at altitudes of less than 2000m above sea level and ascertained in accordance with the impulse voltage and the contamination level, table 2.

Creepage distances are measured by the operating voltage, the characteristic of the insulants (CTI value), the expected contamination level as well as the preventive measures against contamination.

Basis of the creepage distance is the rated voltage derived from the operating and / or system voltage.

The minimum creepage distance (depending on the respective degree of contamination) are assigned to the rated voltage, see table F.4.

Overvoltage categories

Overvoltage category IV:

Electrical equipments for the use at the connection point of the installation e.g. electricity meter and primary over-current protection devices.

Overvoltage category III:

Electrical equipment in firm installations and for such cases in which special demands are made against the reliability and the availability of the electrical equipment, e.g. switches in firm installations and devices for industrial use with continuing connection to the firm installation.

Overvoltage category II:

Energy using electrical equipment, which is energised by a firm installation e.g. household appliances, portable tools and other domestic appliances as well as similar devices.

Electrical equipment for the connection to electric circuits, in which measures are taken for the delimitation of the transient overvoltages to a suitable low value, e.g. devices with electronic circuits and appropriate protection level.

F.2 DIN EN 60664-1 (VDE 0110-1), table F.2 (extract)
Clearance for transient overvoltages

Required impulse withstand voltage [1] [5]	Mimimum clearence in air up to 2 000 m above sea level		
	Case A Inhomogeneous field (see 3.15)		
	Pollution degree		
	1	2	3
kV	mm	mm	mm
1,2	0,25	0,25	0,8 [4]
1,5 [2]	0,5	0,5	
2,0	1,0	1,0	1,0
2,5 [2]	1,5	1,5	1,5
3,0	2,0	2,0	2,0
4,0 [2]	3,0	3,0	3,0
5,0	4,0	4,0	4,0
6,0 [2]	5,5	5,5	5,5
8,0 [2]	8,0	8,0	8,0

[1] This voltage is
- for functional insulation, the maximum impulse voltage expected to occur accross the clearence (see 5.1.5),
- for basic insulation directly exposed to or significantly influenced by transient overvoltages from the low-voltage mains (see 4.3.3.3, 4.3.3.4.1 and 5.1.6), the rated impulse voltage of the equipment,
- for other basic insulation (see 4.3.3.4.2), the highest impulse voltage that can occur in the circuit.

[2] Prefered values as specified in 4.2.3.

[4] The minimum clearences given for pollution degrees 2 and 3 are based on the reduced withstand characteristics of the associated creepage distance under humidity conditions (see IEC 60664-5).

[5] For parts or circuits within equipment subject to impulse voltages according to 4.3.3.4.2, interpolation of values is allowed. However, standardization is achieved by using the preferred series of impulse voltage values in 4.2.3.

F.4 DIN EN 60664-1 (VDE 0110-1), table F.4 (extract)
Creepage distance for the avoidance of the failure by tracking

Voltage r.m.s. [1]	Minimum creepage distances								
	Printed wiring material								
	Pollution degree								
	1	2	1	2			3		
	All material groups	All material groups except IIIb	All material groups	Material group I	Material group II	Material group III	Material group I	Material group II	Material group III [2]
V	mm	mm	mm	mm	mm	mm	mm	mm	mm
25	0,025	0,040	0,125	0,500	0,500	0,500	1,250	1,250	1,250
32	0,025	0,040	0,14	0,53	0,53	0,53	1,30	1,30	1,30
40	0,025	0,040	0,16	0,56	0,80	1,10	1,40	1,60	1,80
50	0,025	0,040	0,18	0,60	0,85	1,20	1,50	1,70	1,90
63	0,040	0,063	0,20	0,63	0,90	1,25	1,60	1,80	2,00
80	0,063	0,100	0,22	0,67	0,95	1,30	1,70	1,90	2,10
100	0,100	0,160	0,25	0,71	1,00	1,40	1,80	2,00	2,20
125	0,160	0,250	0,28	0,75	1,05	1,50	1,90	2,10	2,40
160	0,250	0,400	0,32	0,80	1,10	1,60	2,00	2,20	2,50
200	0,400	0,630	0,42	1,00	1,40	2,00	2,50	2,80	3,20
250	0,560	1,000	0,56	1,25	1,80	2,50	3,20	3,60	4,00
320	0,75	1,60	0,75	1,60	2,20	3,20	4,00	4,50	5,00
400	1,0	2,0	1,0	2,0	2,8	4,0	5,0	5,6	6,3
500	1,3	2,5	1,3	2,5	3,6	5,0	6,3	7,1	8,0
630	1,8	3,2	1,8	3,2	4,5	6,3	8,0	9,0	10,0
800	2,4	4,0	2,4	4,0	5,6	8,0	10,0	11,0	12,5
1000	3,2	5,0	3,2	5,0	7,1	10,0	12,5	14,0	16,0

[1] This voltage is
- for functional insulation, the working voltage,
- for basic and supplementary insulation of the circuit energized directly from the supply mains (see 4.3.2.2.1), the voltage rationalized through Table F.3a or Table F.3b, based on the rated voltage of the equipment, or the rated insulation voltage,
- for basic and supplementary insulation of systems, equipment and internal circuits not energized directly from the mains (see 4.3.2.2.2), the highest r.m.s. voltage which can occur in the system, equipment or internal circuit when supplied at rated voltage and under the most onerous combination of conditions of operation within equipment rating.

[2] Material group IIIb is no not recommended for application in pollution degree 3 above 630 V.

Degree of contamination

The micro environment determines the influence of the contamination on the isolation.

However the macro environment must be considered with the view of the micro environment.

Resources to achieve a reduction of the contamination on the regarded isolation can be planned by the effective employment of casings (housings), encapsulations or hermetic sealings.

The influence of the contamination is considered with the calculation of air and creepage distances by degrees of pollution.

F.1 DIN EN 60664-1 (VDE 0110-1), table F.1 (extract)
Rated impulse voltages for electrical equipments, which are energised directly by a low-voltage system

Nominal voltage of the supply system [1] based on IEC 60038 [3]		Rated impulse voltage [2]			
		Overvoltage catagory [4]			
Three phase	Single phase	I	II	III	IV
V	V	V	V	V	V
	120-240	800	1 500	2 500	4 000
230/400 277/480		1 500	2 500	4 000	6 000
400/690		2 500	4 000	6 000	8 000
1 000		4 000	6 000	8 000	12 000

[1] See Annex B for application to existing different low-voltage mains and their nominal voltages.

[2] Equipment with these rated impulse voltages can be used in installations in accordance with IEC 60364-4-44.

[3] The / mark indicates a four-wire three-phase distribution system. The lower value is the voltage line-to-neutral, while the higher value is the voltage line-to-line. Where only one value is indicated, it refers to three-wire, three-phase systems and specifies the value line-to-line.

[4] See 4.3.3.2.2 for an explanation of the overvoltage catagories.

Technical Information

Four degrees of contamination levels are defined for the micro environment:

Contamination level 1
No contamination or only dry, non-conductive contamination occurs. The contamination has no influence.

Contamination level 2
Only non-conductive contamination occurs. However, occasional temporary conductivity must be expected as a result of moisture condensation.

Contamination level 3
Conductive contamination occurs; dry, non-conductive contamination which becomes conductive as a result of moisture condensation may also occur.

Contamination level 4
Impurities in the form of conductive dust, rain or humidity result in permanent conductivity.

Insulant

DIN EN 60664-1 (VDE 0110-1) divides the insulants according to their CTI values in four groups. These are:

Insulant I: 600 = CTI
Insulant II: 400 = CTI < 600
Insulant IIIa: 175 = CTI < 400
Insulant IIIb: 100 = CTI < 175

The check numbers of the tracking must be determined according to IEC 60112 at an examination body using test solution A. The check number of the tracking is used as a proof of the creepage characteristics of insulants.

Rated cross section

The current carrying capacity depends not only on the terminal design, but also on the application of the terminals. The appropriate specifications for the devices, e.g. DIN EN 60335-1 (VDE 0700-1), should be taken into account.
According to DIN EN 60999-1/VDE 0609 part 1, the current cross section and respectively the rated connection ability of a connection referres to the wire cross section indicated by the manufacturer, to which determined thermal, mechanical and electrical requirements apply to.
The relationship between rated connection abilities and diameters of the wires is represented in table 1.
If nothing else is specified in the product standard, each connection point must be able to take up not only its rated cross section (rated connection ability) but also the next two lower cross sections.
Connecting points must be able to take up unprepared wires.
Regarded as unprepared wires are all cables stripped at their ends, whose form is adjusted before insertion or whose wires are twisted for the purpose of the solidification.

T1 DIN EN 60999-1, table 1 (extract)
Relation between rated connection abilities and wires

Rated cross section	Theoretical diameter of the largest conductor						
	metric			AWG			
	solid		flexible	solid			flexible
	single wire	multi-stranded wire			b) single wire	b) Class B multi-stranded wire	c) Class I, K, M multi-stranded wire
mm²	mm	mm	mm	No.	mm	mm	mm
0,2	0,51	0,53	0,61	24	0,54	0,61	0,64
0,34	0,63	0,66	0,8	22	0,68	0,71	0,80
0,5	0,9	1,1	1,1	20	0,85	0,97	1,02
0,75	1,0	1,2	1,3	18	1,07	1,23	1,28
1,0	1,2	1,4	1,5	–	–	–	–
1,5	1,5	1,7	1,8	16	1,35	1,55	1,60
2,5	1,9	2,2	2,3 a)	14	1,71	1,95	2,08
4,0	2,4	2,7	2,9 a)	12	2,15	2,45	2,70
6,0	2,9	3,3	3,9 a)	10	2,72	3,09	3,36
10,0	3,7	4,2	5,1	8	3,34	3,89	4,32
16,0	4,6	5,3	6,3	6	4,32	4,91	5,73
25,0	–	6,6	7,8	4	5,45	6,18	7,26
35	–	7,9	9,2	2	6,87	7,78	9,02

NOTE The diameter of the largest solid and flexible wire is based on Table 1 according to IEC 60228A and IEC 60344 and for AWG conductors on ASTM B 172-71 [4], ICEA-Publication S-19-81 [5], ICEA-Publication S-66-524 [6] and ICEA-Publication S-66-516 [7].

a) Information only for flexible wires in class 5 of IEC 60228A.
b) Nominal + 5 %.
c) Largest diameter for each of the three classes I, K, M + 5 %.

In the USA and Canada an identification is used by leader sizes (AWG) instead of the cross section indicated in mm².

Current carrying capacity

Current carrying capacity In the technical data a current carrying capacity is shown, with which no thermal damage and no disturbance of the function arise under consideration of the rated cross section and the ambient temperature.
testing currents according to DIN EN 60998-1 (VDE 0613 part 1) are assigned to the rated cross sections in table 2.
With the testing currents the heating up of energized parts of the connecting point may not exceed 45 K.
The permitted carrying capacity not only depends on the terminal construction, but also on the use of the terminal.
The appropriate technical regulations for devices, e.g. DIN EN 60335-1 (VDE 0700-1) should be taken into consideration.

T2 DIN EN 60998-1, table 2 (extract)
Relation between rated connection abilities and testing current

Rated Cross-section	Load capacity
mm²	A
0,2	4
0,34	5
0,5	6
0,75	9
1	13,5
1,5	17,5
2,5	24
4	32
6	41
10	57
16	76
25	101
35	125

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121-M-121/-221	41
121-M-151/-251	42
121-M-161/-261	43
121-M-181/-281	44
121-M-191/-281	45
141-A-111	6
141-A-121	7
141-C-111	8
146-A-111	9
146-A-121	10
146-C-111	11
181-A-111	12
181-A-121	13
940	14
940-T	15
941	16
941-T	17
960	18
960-T	19
961	20
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* = Pitch 6,35 mm

Catalogue overview

Electronic
1: Pitch 3,5 mm
2: Pitch 5 mm
3: Pitch 5,08 mm
4: Pitch 7,5 mm
5: Pitch >10 mm
6: SMD & THR

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Art.-No.: 45 955 102
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Connection Technology for Printed Circuit Boards Pitch 7.5 mm

WECO - making contact

Catalogue 4

Electronic

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982-W

122-D-121

900-SH-7,5

Symbols on data sheets

These symbols can be found on our data sheets on the right side of the product image.

RoHS COMPLIANT	These articles comply with the RoHS regulations.
pottable	Through its geometry, this product is specially suitable for potting.
„no flame“ after glow-wire test according to household appliance standard DIN EN/IEC 60335-1	The materials used for enclosures are VDE-tested and approved according to the glow-wire tests specified in DIN EN/IEC 60335-1. It is conform with the requirements of the increased household appliance standard.

We reserve the right to make technical as well as changes to measurements, colours and formats after print. Only the values given in our written confirmations will be binding for us. Please take notice that it is not allowed to use our photos, drawings or catalogue pages for your own applications without having our written agreement.

Overview

Connectors for printed circuit boards

WECO PCB connectors always offer a good solution for almost any connection problem by its big variety of types. The screw connections are available in socket terminal style, in elevator clamping style or as head contact terminals. The plug connectors are especially designed for the connection of components or peripheral devices. Tab connectors and screwless types complete the product program.

Plug-In connector systems

The series of conecta are plug-in connector systems consisting of plug connectors with screw and their corresponding pin strips.
Due to four different pitch sizes, lateral flange executions, tier versions and different plug directions, this product serie suit almost every application on the PCB. All connectors offer coding possibilities to avoid incorrect plugging.

SMD & THR

“SMarTconn” covers terminals and plug connectors for surface mount and reflow soldering technique. Apart from the proven Through-Hole-Technology (THR) we focus on genuine SMD - Surface Mount Devices – in this product serie. With their reliable adhesive forces and their good reflow soldering capabilities, we offer products, which are a worthy replacement for the conventional soldering technique. All products of this series are packed in tape-on-reel or tube magazines for the automatic assembling with a pick & place machine.

Terminal strips

This group contains socket terminals, plug-in connectors, screwless types and additionally the combination of screw and solder tag for the wire-to-wire connection. All types are available for different cross sections, with and without wire protectors. The used Polyamide plastic material pass the ball pressure test with 125°C according to VDE 0470, which is demanded in many IEC and VDE regulations for insulants.

Tab connectors

These connectors are equipped with receptacles in different sizes and styles. Mixed arrangements per terminal block as well as per pole (Multi-Point Tab Connectors) are possible. Combinations of tab / solder connectors, flat plug couplers and space saving tier versions increase the density of connections. The tab connectors offer a wide spectrum of possible combinations, whereby many connection problems can be solved.

Ceramic terminal blocks

This group covers mantle terminals, ceramic terminal strips and terminals for explosion and firedamp-hazard areas. Various sizes and designs permit them to be used for wire cross sections up to 120 mm² and including applications in furnace construction and ship building, for engines and intrinsically safe electrical equipment. The terminal blocks with ceramic insulator can be used at increased temperatures.

The WECO Group

We, WECO Contact GmbH, are a German manufacturer of high reputation in the field of electronics and electrical engineering. Our headquarter is located in Hanau and has own assembly and sales companies in USA, Canada, Brazil, France, China, Hong Kong and Mexico. With over 450 employees and a worldwide distribution network in 56 countries, we speak the language of our customers.

Our extensive product range includes nearly 17,000 different articles.

We are well known for innovation which is particularly evident in the patented SMD series for the genuine surface mounting technology. Hereby, the user experiences real cost savings in the manufacturing process, especially if the terminal is the last component of the customer to be soldered on the board.

Another strength are the customer-specific developments and a fast and flexible project implementation with which we respond to the increasing engineering demands of the middle class customers.

The entire WECO Group is a reliable partner for our customers, and the customers' satisfaction is one of our main goals to achieve.

www.wecogroup.com

Household Appliance Standard DIN EN/IEC 60335-1

What is the household appliance standard all about?

The Household Appliance Standard DIN EN/IEC 60335-1:2007-02 standardizes the safety features of electrical appliances for household use and similar purposes.

The standard requires testing of glow wire resistance for non-metallic materials used in appliances operated with >0,2 A and applies for non-metallic materials which hold active components in position.

These fire protection requirements shall prevent self-ignition of unattended appliances thus significantly increasing fire safety.

For which appliances does this standard apply?

The standard is applicable for electric and electronic components in unattended household appliances with rated currents of >0,2 A, such as

terminals and switches, e.g. in:

- Dishwashers, washing machines, refrigerators
- Kitchen stoves, microwaves
- Small household appliances, such as mixers, coffee machines

Unattended equipment used in small and medium-sized enterprises is also affected, namely:

- Pump components
- Illuminant components
- Industrial and commercial cleaning equipment
- Hair salon equipment etc.

WECO products are compliant with the glow-wire tests according to the household appliance standard!

For the white goods market segment, WECO Contact GmbH offers an extensive range of products meeting the requirements of the Household Appliance Standard DIN EN/IEC 60335-1. Even before the transition period expired in July 2007, many WECO products had already been compliant with the tightened household appliance standard, providing WECO Contact with an enormous edge over competitors, particularly over those in Asia.

The materials used for enclosures are VDE-tested and approved according to the glow-wire tests specified in DIN EN/IEC 60335-1. This applies for all standard WECO colours!

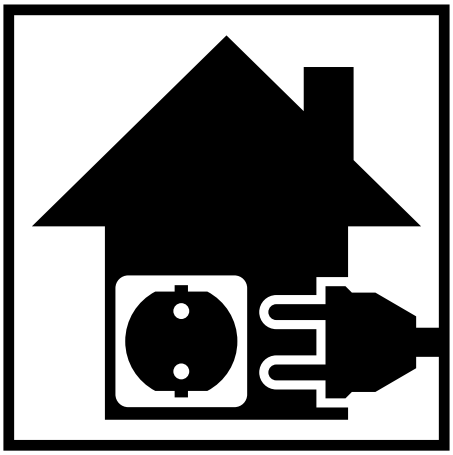
PRODUCTS:

- All products of the connections for printed circuit boards with the exception of large-pole articles of the series 95.., 96.. and 97.. as well as SMD and THR products.
- Series 326 and 327
- Other products: Producibility must verified for each product

We designate products compliant with this tightened household appliance standard, if a specific variant compatible to the household appliance standard is available:

- **PART NUMBER:**
  The existing 8-digit article number will be continued and supplemented by „EN6“.

- **DESIGNATION:**
  The existing designation will be continued. A „6“ will be placed before „GP“ resulting in „6GP“.



Are you affected?

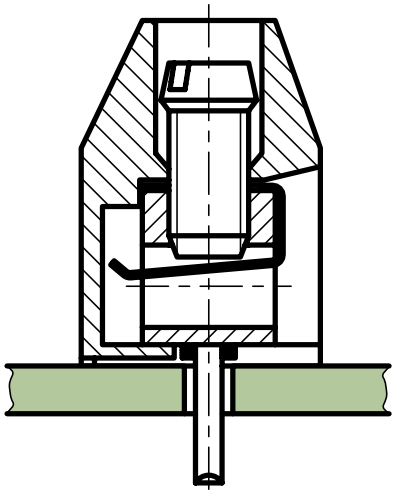
Even today, long after the tightened Household Appliance Standard DIN EN/IEC 60335-1 entered into force, many questions still arise and need clarification.

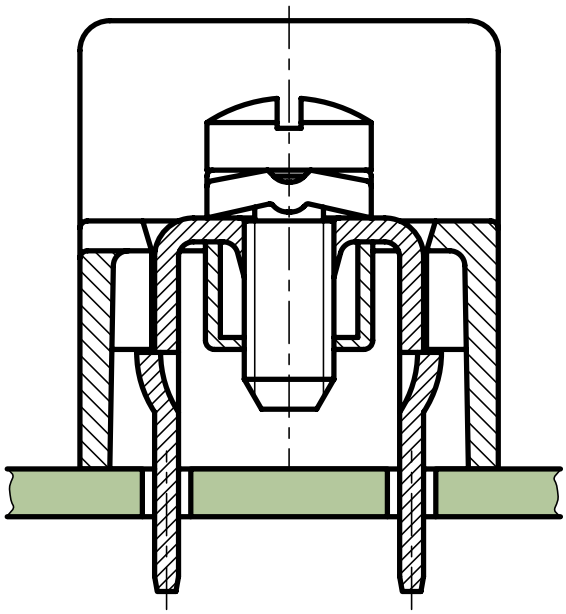
Even equipment manufacturers affected by this household appliance standard often are unaware of the standard's requirements and only find out that they ARE AFFECTED, when they submit their products at VDE and are denied approval because products do not meet the currently valid standards.

We at WECO Contact take technical support and service for our customers seriously. Therefore, we have compiled on our website a list of all manufacturer products affected by the household appliance standard. At a glance, our customers can now gather information on whether their appliances are affected or not.

The list is also a valuable tool for both sales staff and field reps, helping them to resolve possible unclear issues in project meetings, and enabling them to optimally support the customer.

PCB connectors





Thanks to their versatile design, WECO Contact PCB connectors offers a solution for every connection application. Here, you can find all 7,5 mm and 9,52 pitch connector systems available for printed circuits.

Depending on the respective series, PCB connectors are available with the standard pole numbers 2 to 12 or 2 to 24 poles. "..-T"-versions are only available with 2 and 3 poles. With their lateral latching elements they can be locked to terminal strips of any pole number. That way, maintaining accuracy and correctness of the pitch is always guaranteed.

The screw terminals are built on the principle of the socket terminal, either as a lift system or as a head contact terminal.

Damage to flexible conductors can be prevented through the use of our products with wire protection (indicated by the name "-DS" in the product) reliably prevented.

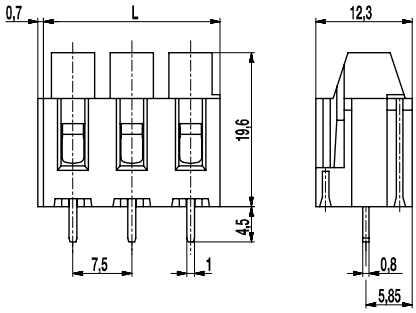
All versions – except the series 982 – are equipped with captive screws which also allow over-head assembly.

As standard, our terminals are delivered unmarked. Upon request, they can also be printed, e.g. with consecutive numbering or individual marking according to customer requirement.

PCB connector

152-A-111

Screw connection, interlocking, with test holes



The PCB connector 152-A-111 with a pitch of 7,5 mm is available with 2 or 3 poles.

Due to the ample terminal space and the lift system, this PCB connector is particularly user-friendly. Optimum wire protection is guaranteed even after countless disconnections of one or multiple wires.
Due to their large clearance and creepage distances, these PCB connectors are particularly suitable for higher voltages.

Lateral latching elements on the housing allow to latch the PCB connector to longer terminal strips without pole loss.
The wire entrance is parallel to the PCB.
The screws are captive.

This PCB connector has test holes for ø 2.3 mm test plugs.

Part Numbers

No. of poles	152-A-111	Length	Pcs
2	10.801.762	15,00	200
3	10.801.763	22,50	100

General Information

Pitch	7,5 mm
No. of poles	2 + 3

Technical Data

Clamping Range	*solid / flexible / AWG*		
	0,14 - 4 mm² / 0,14 - 2,5 mm² / 26 - 14 AWG		
Rated Cross Section	2,5 mm²		
Wire Stripping Length	7,5 mm ± 0,5 mm		
Overvoltage Category	III	III	II
Pollution Severity Level	3	2	2
Rated Voltage	400 V	630 V	1000 V
Rated Impulse Voltage	6 kV	6 kV	6 kV
Rated Insulation Voltage	750 V acc. to EN 60998-1		
Rated Current	24 A		
Hole in PCB	ø 1,3 mm		
Torque	0,5 Nm		

Material

Moulding	PA, grey, V-0
Comparative Tracking Index	CTI ≥ 600
Insulating Group	I
Temperature Range	-40°C up to 100°C
Terminal body	Nickel plated brass
Pressure clamp	Copper alloy, tin plated
Screw	M3; zinc plated steel, blue passivated
Solder pin	1,0 x 0,8 mm; copper alloy, tin plated

Approvals

	Current	Voltage	Group	AWG	Nm
	20 [1]	300	B	22-10 [2]	0,51
	10	300	D	22-10 [2]	0,51
	20	300	B	26 - 10	0,51
	10	300	D, E	26 - 10	0,51

[1] 20 A max for factory-wiring only
[2] Wire sizes No. 26 - 24 AWG for factory-wiring only

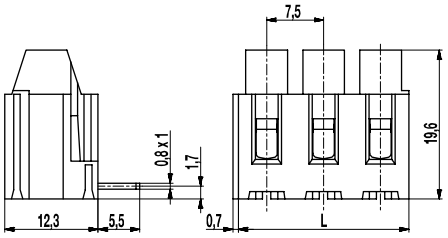
Options / Accessories

- Consecutive numbering
- Special marking according to drawing
- Self-adhesive marking strip BST-7,50
- Version with empty poles
- Connected to larger number of poles

PCB connector

152-A-121

Screw connection, wire entrance vertical to PCB, interlocking, with test holes



The PCB connector 152-A-111 is the horizontal version of 152-A-111 with a pitch of 7,5 mm is available with 2 or 3 poles.

Due to the ample terminal space and the lift system, this PCB connector is particularly user-friendly. Optimum wire protection is guaranteed even after countless disconnections of one or multiple wires.
Due to their large clearance and creepage distances, these PCB connectors are particularly suitable for higher voltages.

Lateral latching elements on the housing allow to latch the PCB connector to longer terminal strips without pole loss.
The wire entrance is parallel to the PCB.
The screws are captive.

This PCB connector has test holes for ø 2.3 mm test plugs.

Part Numbers

No. of poles	152-A-121	Length	Pcs
2	20.801.762	15,00	200
3	20.801.763	22,50	100

General Information

Pitch	7,5 mm
No. of poles	2 + 3

Technical Data

Clamping Range	*solid / flexible / AWG*		
	0,14 - 4 mm² / 0,14 - 2,5 mm² / 26 - 14 AWG		
Rated Cross Section	2,5 mm²		
Wire Stripping Length	7,5 mm ± 0,5 mm		
Overvoltage Category	III	III	II
Pollution Severity Level	3	2	2
Rated Voltage	400 V	630 V	1000 V
Rated Impulse Voltage	6 kV	6 kV	6 kV
Rated Insulation Voltage	750 V acc. to EN 60998-1		
Rated Current	24 A		
Hole in PCB	ø 1,3 mm		
Torque	0,5 Nm		

Material

Moulding	PA, grey, V-0
Comparative Tracking Index	CTI ≥ 600
Insulating Group	I
Temperature Range	-40°C up to 100°C
Terminal body	Nickel plated brass
Pressure clamp	Copper alloy, tin plated
Screw	M3; zinc plated steel, blue passivated
Solder pin	1,0 x 0,8 mm; copper alloy, tin plated

Approvals

	Current	Voltage	Group	AWG	Nm
	20 [1]	300	B	22-10 [2]	0,51
	10	300	D	22-10 [2]	0,51
	20	300	B	26 - 10	0,51
	10	300	D, E	26 - 10	0,51

[1] 20 A max for factory-wiring only
[2] Wire sizes No. 26 - 24 AWG for factory-wiring only

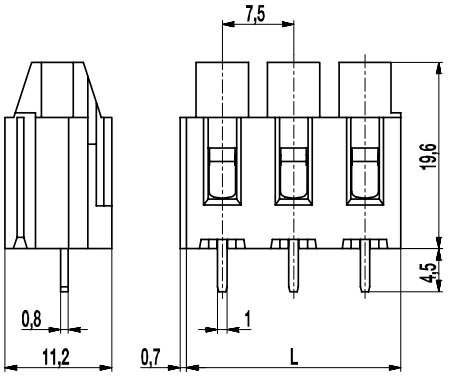
Options / Accessories

- Consecutive numbering
- Special marking according to drawing
- Self-adhesive marking strip BST-7,50
- Version with empty poles
- Connected to larger number of poles

PCB connector

152-A-211

Screw connection, interlocking, with test pick-off



The PCB connector 152-A-211 with a pitch of 7,5 mm is available with 2 or 3 poles.

Due to the ample terminal space and the lift system, this PCB connector is particularly user-friendly. Optimum wire protection is guaranteed even after countless disconnections of one or multiple wires.
Due to their large clearance and creepage distances, these PCB connectors are particularly suitable for higher voltages.

Lateral latching elements on the housing allow to latch the PCB connector to longer terminal strips without pole loss.
The wire entrance is parallel to the PCB.
The screws are captive.

This PCB connector features one test pick-off per pole.

Part Numbers

No. of poles	152-A-211	Length	Pcs
2	10.801.702	15,00	200
3	10.801.703	22,50	100

General Information

Pitch	7,5 mm
No. of poles	2 + 3

Technical Data

Clamping Range	*solid / flexible / AWG*		
	0,14 - 4 mm² / 0,14 - 2,5 mm² / 26 - 14 AWG		
Rated Cross Section	2,5 mm²		
Wire Stripping Length	7,5 mm ± 0,5 mm		
Overvoltage Category	III	III	II
Pollution Severity Level	3	2	2
Rated Voltage	400 V	630 V	1000 V
Rated Impulse Voltage	6 kV	6 kV	6 kV
Rated Insulation Voltage	750 V acc. to EN 60998-1		
Rated Current	24 A		
Hole in PCB	ø 1,3 mm		
Torque	0,5 Nm		

Material

Moulding	PA, grey, V-0
Comparative Tracking Index	CTI ≥ 600
Insulating Group	I
Temperature Range	-40°C up to 100°C
Terminal body	Nickel plated brass
Pressure clamp	Copper alloy, tin plated
Screw	M3; zinc plated steel, blue passivated
Solder pin	1,0 x 0,8 mm; copper alloy, tin plated

Approvals

	Current	Voltage	Group	AWG	Nm
	20 [1]	300	B	22-10 [2]	0,51
	10	300	D	22-10 [2]	0,51
	20	300	B	26 - 10	0,51
	10	300	D, E	26 - 10	0,51

[1] 20 A max for factory-wiring only
[2] Wire sizes No. 26 - 24 AWG for factory-wiring only

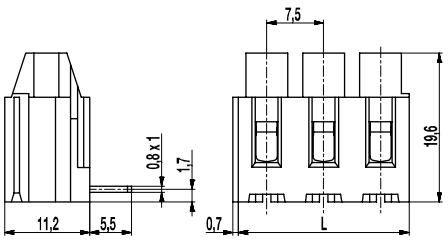
Options / Accessories

- Consecutive numbering
- Special marking according to drawing
- Self-adhesive marking strip BST-7,50
- Version with empty poles
- Connected to larger number of poles

PCB connector

152-A-221

Screw connection, wire entrance vertical to PCB, interlocking, with test pick-off



The PCB connector 152-A-221 is the horizontal version of 152-A-211 with a pitch of 7,5 mm is available with 2 or 3 poles.

Due to the ample terminal space and the lift system, this PCB connector is particularly user-friendly. Optimum wire protection is guaranteed even after countless disconnections of one or multiple wires.
Due to their large clearance and creepage distances, these PCB connectors are particularly suitable for higher voltages.

Lateral latching elements on the housing allow to latch the PCB connector to longer terminal strips without pole loss.
The wire entrance is parallel to the PCB.
The screws are captive.

This PCB connector features one test pick-off per pole.

Part Numbers

No. of poles	152-A-221	Length	Pcs
2	20.801.702	15,00	200
3	20.801.703	22,50	100

General Information

Pitch	7,5 mm
No. of poles	2 + 3

Technical Data

Clamping Range	*solid / flexible / AWG*		
	0,14 - 4 mm² / 0,14 - 2,5 mm² / 26 - 14 AWG		
Rated Cross Section	2,5 mm²		
Wire Stripping Length	7,5 mm ± 0,5 mm		
Overvoltage Category	III	III	II
Pollution Severity Level	3	2	2
Rated Voltage	400 V	630 V	1000 V
Rated Impulse Voltage	6 kV	6 kV	6 kV
Rated Insulation Voltage	750 V acc. to EN 60998-1		
Rated Current	24 A		
Hole in PCB	ø 1,3 mm		
Torque	0,5 Nm		

Material

Moulding	PA, grey, V-0
Comparative Tracking Index	CTI ≥ 600
Insulating Group	I
Temperature Range	-40°C up to 100°C
Terminal body	Nickel plated brass
Pressure clamp	Copper alloy, tin plated
Screw	M3; zinc plated steel, blue passivated
Solder pin	1,0 x 0,8 mm; copper alloy, tin plated

Approvals

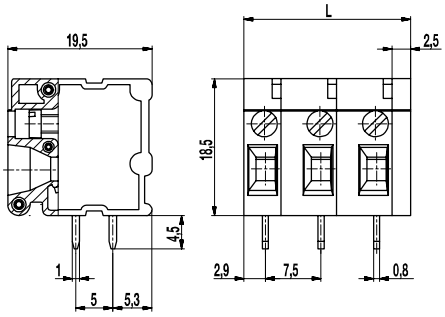
	Current	Voltage	Group	AWG	Nm
	20 [1]	300	B	22-10 [2]	0,51
	10	300	D	22-10 [2]	0,51
	20	300	B	26 - 10	0,51
	10	300	D, E	26 - 10	0,51

[1] 20 A max for factory-wiring only
[2] Wire sizes No. 26 - 24 AWG for factory-wiring only

Options / Accessories

- Consecutive numbering
- Special marking according to drawing
- Self-adhesive marking strip BST-7,50
- Version with empty poles
- Connected to larger number of poles

PCB connector
182-A-111
Screw connection



The PCB connector 182-A-111 features parallel entry for both conductor and screwdriver. It can also be used as printed circuit board termination with front panel penetration.

These PCB connectors are available in 7.5 mm pitch with up to 12 poles, but they can also be plugged together as longer terminal strips.
Each pole has a double solder termination with 5 mm pin spacing.
The wire entrance is parallel to the PCB.

Part Numbers

No. of poles	182-A-111	Length	Pcs
2	12.819.008	15,00	200
3	13.819.008	22,50	100
4	14.819.008	30,00	50
5	15.819.008	37,50	100
6	16.819.008	45,00	100
7	17.819.008	52,50	50
8	18.819.008	60,00	50
9	19.819.008	67,50	50
10	20.819.008	75,00	25
11	21.819.008	82,50	25
12	22.819.008	90,00	25

General Information

Pitch	7,5 mm
No. of poles	2 - 12
Areas of application	Particularly suitable for confined mounting space or only single-sided access.

Technical Data

Clamping Range	*solid / flexible / AWG*		
	0,14 - 4 mm² / 0,14 - 2,5 mm² / 26 - 12 AWG		
Rated Cross Section	2,5 mm²		
Wire Stripping Length	9 mm ± 0,5 mm		
Overvoltage Category	III	III	II
Pollution Severity Level	3	2	2
Rated Voltage	500 V	630 V	1000 V
Rated Impulse Voltage	6 kV	6 kV	6 kV
Rated Insulation Voltage	750 V acc. to EN 60998-1		
Rated Current	24 A		
Hole in PCB	ø 1,4 mm		
Torque	0,4 Nm		

Material

Moulding	PA, grey, V-0
Comparative Tracking Index	CTI ≥ 600
Insulating Group	I
Temperature Range	-40°C up to 100°C
Pressure clamp	Tin plated copper
Screw	M2,5; zinc plated steel, blue passivated
Solder pin	1,0 x 0,8 mm; tin plated copper
Terminal body	Zinc plated steel, blue passivated
Pressure plate	Brass, bright

Approvals

	Current	Voltage	Group	AWG	Nm
	20	300	B	24 - 12	0,4
	20	150	C	24 - 12	0,4
	10	300	D	24 - 12	0,4
	20	300	B	24 - 12	0,4
	10	300	D, E	24 - 12	0,4

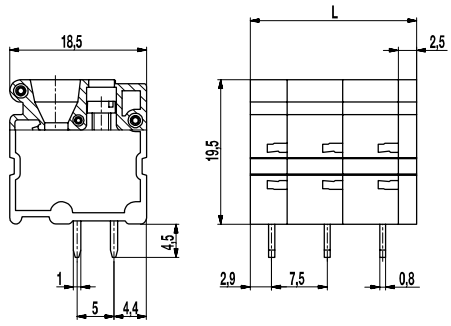
Options / Accessories

- Consecutive numbering
- Special marking according to drawing
- Self-adhesive marking strip BST-7,50
- Connected to larger number of poles

PCB connector

182-A-121

Screw connection, wire entrance vertical to PCB



The PCB connector 182-A-121 features parallel entry for both conductor and screwdriver. It can also be used as printed circuit board termination with front panel penetration.

These PCB connectors are available in 7.5 mm pitch with up to 12 poles, but they can also be plugged together as longer terminal strips.
Each pole has a double solder termination with 5 mm pin spacing.
The wire entrance is vertical to the PCB.

Part Numbers

No. of poles	182-A-121	Length	Pcs
2	12.819.007	15,00	200
3	13.819.007	22,50	100
4	14.819.007	30,00	50
5	15.819.007	37,50	100
6	16.819.007	45,00	100
7	17.819.007	52,50	50
8	18.819.007	60,00	50
9	19.819.007	67,50	50
10	20.819.007	75,00	50
11	21.819.007	82,50	50
12	22.819.007	90,00	50

General Information

Pitch	7,5 mm
No. of poles	2 - 12
Areas of application	Particularly suitable for confined mounting space or only single-sided access.

Technical Data

Clamping Range	*solid / flexible / AWG*		
	0,14 - 4 mm² / 0,14 - 2,5 mm² / 26 - 12 AWG		
Rated Cross Section	2,5 mm²		
Wire Stripping Length	9 mm ± 0,5 mm		
Overvoltage Category	III	III	II
Pollution Severity Level	3	2	2
Rated Voltage	500 V	630 V	1000 V
Rated Impulse Voltage	6 kV	6 kV	6 kV
Rated Insulation Voltage	750 V acc. to EN 60998-1		
Rated Current	24 A		
Hole in PCB	ø 1,4 mm		
Torque	0,4 Nm		

Material

Moulding	PA, grey, V-0
Comparative Tracking Index	CTI ≥ 600
Insulating Group	I
Temperature Range	-40°C up to 100°C
Pressure clamp	Tin plated copper
Screw	M2,5; zinc plated steel, blue passivated
Solder pin	1,0 x 0,8 mm; tin plated copper
Terminal body	Zinc plated steel, blue passivated
Pressure plate	Brass, bright

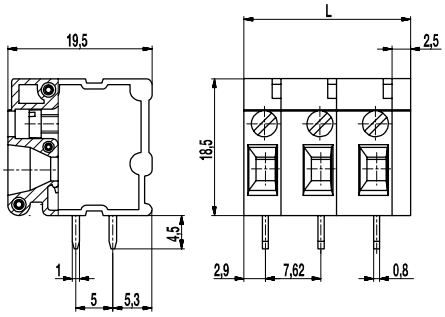
Approvals

	Current	Voltage	Group	AWG	Nm
	20	300	B	24 - 12	0,4
	20	150	C	24 - 12	0,4
	10	300	D	24 - 12	0,4
	20	300	B	24 - 12	0,4
	10	300	D, E	24 - 12	0,4

Options / Accessories

- Consecutive numbering
- Special marking according to drawing
- Self-adhesive marking strip BST-7,50
- Connected to larger number of poles

PCB connector
183-A-111
Screw connection



The PCB connector 183-A-111 features parallel entry for both conductor and screwdriver. It can also be used as printed circuit board termination with front panel penetration.

These PCB connectors are available in 7.62 mm pitch with up to 12 poles, but they can also be plugged together as longer terminal strips.
Each pole has a double solder termination with 5 mm pin spacing.
The wire entrance is parallel to the PCB.

Part Numbers

No. of poles	183-A-111	Length	Pcs
2	12.819.058	15,24	200
3	13.819.058	22,86	100
4	14.819.058	30,48	50
5	15.819.058	38,10	100
6	16.819.058	45,72	100
7	17.819.058	53,34	50
8	18.819.058	60,96	50
9	19.819.058	68,58	50
10	20.819.058	76,20	50
11	21.819.058	83,82	50
12	22.819.058	91,44	50

General Information

Pitch	7,62 mm
No. of poles	2 - 12
Areas of application	Particularly suitable for confined mounting space or only single-sided access.

Technical Data

Clamping Range	*solid / flexible / AWG*		
	0,14 - 4 mm² / 0,14 - 2,5 mm² / 26 - 12 AWG		
Rated Cross Section	2,5 mm²		
Wire Stripping Length	9 mm ± 0,5 mm		
Overvoltage Category	III	III	II
Pollution Severity Level	3	2	2
Rated Voltage	500 V	630 V	1000 V
Rated Impulse Voltage	6 kV	6 kV	6 kV
Rated Insulation Voltage	750 V acc. to EN 60998-1		
Rated Current	24 A		
Hole in PCB	ø 1,4 mm		
Torque	0,4 Nm		

Material

Moulding	PA, grey, V-0
Comparative Tracking Index	CTI ≥ 600
Insulating Group	I
Temperature Range	-40°C up to 100°C
Pressure clamp	Tin plated copper
Screw	M2,5; zinc plated steel, blue passivated
Solder pin	1,0 x 0,8 mm; tin plated copper
Terminal body	Zinc plated steel, blue passivated
Pressure plate	Brass, bright

Approvals

	Current	Voltage	Group	AWG	Nm
	20	300	B	24 - 12	0,4
	20	150	C	24 - 12	0,4
	10	300	D	24 - 12	0,4
	20	300	B	24 - 12	0,4
	10	300	D, E	24 - 12	0,4

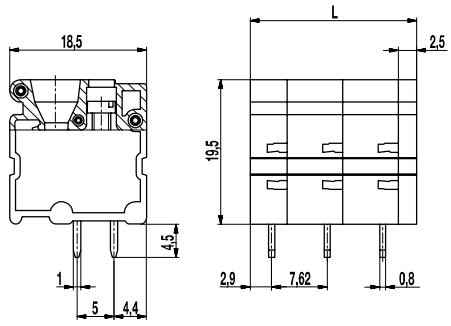
Options / Accessories

- Consecutive numbering
- Special marking according to drawing
- Connected to larger number of poles

PCB connector

183-A-121

Screw connection, wire entrance vertical to PCB



The PCB connector 183-A-121 features parallel entry for both conductor and screwdriver. It can also be used as printed circuit board termination with front panel penetration.

These PCB connectors are available in 7.62 mm pitch with up to 12 poles, but they can also be plugged together as longer terminal strips.
Each pole has a double solder termination with 5 mm pin spacing.
The wire entrance is vertical to the PCB.

Part Numbers

No. of poles	183-A-121	Length	Pcs
2	12.819.007	15,24	200
3	13.819.007	22,86	100
4	14.819.007	30,48	50
5	15.819.007	38,10	100
6	16.819.007	45,72	100
7	17.819.007	53,34	50
8	18.819.007	60,96	50
9	19.819.007	68,58	50
10	20.819.007	76,20	50
11	21.819.007	83,82	50
12	22.819.007	91,44	50

General Information

Pitch	7,62 mm
No. of poles	2 - 12
Areas of application	Particularly suitable for confined mounting space or only single-sided access.

Technical Data

Clamping Range	*solid / flexible / AWG*		
	0,14 - 4 mm² / 0,14 - 2,5 mm² / 26 - 12 AWG		
Rated Cross Section	2,5 mm²		
Wire Stripping Length	9 mm ± 0,5 mm		
Overvoltage Category	III	III	II
Pollution Severity Level	3	2	2
Rated Voltage	500 V	630 V	1000 V
Rated Impulse Voltage	6 kV	6 kV	6 kV
Rated Insulation Voltage	750 V acc. to EN 60998-1		
Rated Current	24 A		
Hole in PCB	ø 1,4 mm		
Torque	0,4 Nm		

Material

Moulding	PA, grey, V-0
Comparative Tracking Index	CTI ≥ 600
Insulating Group	I
Temperature Range	-40°C up to 100°C
Pressure clamp	Tin plated copper
Screw	M2,5; zinc plated steel, blue passivated
Solder pin	1,0 x 0,8 mm; tin plated copper
Terminal body	Zinc plated steel, blue passivated
Pressure plate	Brass, bright

Approvals

	Current	Voltage	Group	AWG	Nm
	20	300	B	24 - 12	0,4
	20	150	C	24 - 12	0,4
	10	300	D	24 - 12	0,4
	20	300	B	24 - 12	0,4
	10	300	D, E	24 - 12	0,4

Options / Accessories

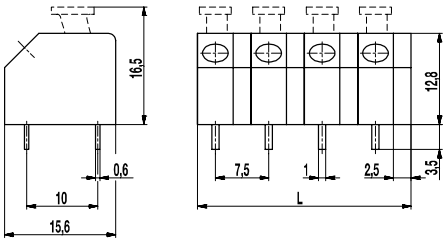
- Consecutive numbering
- Special marking according to drawing
- Connected to larger number of poles

PCB connector

876(-DR)

Spring clamp connection diagonal 45° to PCB

RoHS COMPLIANT



The PCB connectors 876 und 876-DR with spring clamp connection and a pitch of 7,5 mm, are available with 2 to 10 poles.

They provide easy connection of solid and stranded conductors and feature a stainless steel spring clamp which ensures safe permanent contact. The spring clamp of version 876 is operated by pressing a pusher inside the housing with a screwdriver whereas the spring clamp of version 876-DR is manually operated by a protruding lever.
The wire entrance is in a 45° angle to the PC board.

Each pole has a double solder termination with 10 mm pin spacing.

Part Numbers

No. of poles	876	876-DR	Length	Pcs
2	72.812.001	82.812.001	15,00	200
3	73.812.001	83.812.001	22,50	100
4	74.812.001	84.812.001	30,00	100
5	75.812.001	85.812.001	37,50	100
6	76.812.001	86.812.001	45,00	50
7	77.812.001	87.812.001	52,50	50
8	78.812.001	88.812.001	60,00	50
9	79.812.001	89.812.001	67,50	50
10	80.812.001	90.812.001	75,00	50

General Information

Pitch	7,5 mm
No. of poles	2 - 10

Technical Data

Clamping Range	*solid / flexible / AWG*		
	0,14 - 2,5 mm² / 0,14 - 1,5 mm² / 26 - 16 AWG		
Rated Cross Section	1,5 mm²		
Wire Stripping Length	10 mm ± 0,5 mm		
Overvoltage Category	III	III	II
Pollution Severity Level	3	2	2
Rated Voltage	500 V	630 V	1000 V
Rated Impulse Voltage	6 kV	6 kV	6 kV
Rated Insulation Voltage	750 V acc. to EN 60998-1		
Rated Current	10 A		
Hole in PCB	ø 1,3 mm		

Material

Moulding	PA, red V-0
Comparative Tracking Index	CTI ≥ 600
Insulating Group	I
Temperature Range	-40°C up to 100°C
Terminal body	Tin plated brass
Solder pin	0,6 x 1,0 mm; tin plated brass
Spring	Stainless strip steel

Approvals

	Current	Voltage	Group	AWG	Nm
	10	300	B	22 - 16	
	10	300	B, D, E	22 - 16	

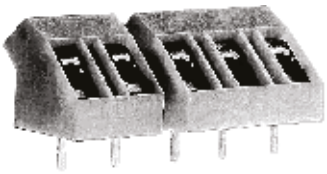
Options / Accessories

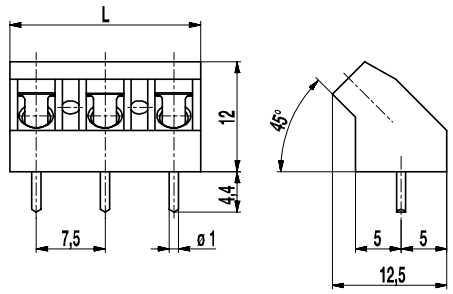
- Consecutive numbering
- Special marking according to drawing
- Self-adhesive marking strip BST-7,50
- Other pitch
- Connected to larger number of poles

PCB connector

976(-DS)

Screw connection 45°-angle to PCB





The PCB connector 976, inclined version with a pitch of 7,5 mm is available with 2 and 3 poles and can be mounted side-by-side in the nominal pitch.
Due to their large clearance and creepage distances, these PCB connectors are particularly suitable for higher voltages.
The wire entrance is in a 45° angle diagonal to the PC board. Therefore, this PCB connector is ideal for the assembly in the center of PCBs. The design of this PCB connector allows space-saving arrangement of consecutive rows of terminals.

Wire protection in DS-design reliably prevents damage to stranded wires by the screw.

Part Numbers

No. of poles	976	976-DS	Length	Pcs
2	10.874.204	20.874.204	13,30	250
3	10.874.205	20.874.205	20,80	250

General Information

Pitch	7,5 mm
No. of poles	2 + 3

Technical Data

Clamping Range	*solid / flexible / AWG*		
without wire protector	1 - 6 mm² / 1 - 2,5 mm² / 16 - 12 AWG		
with wire protector	0,75 - 4 mm² / 0,75 - 2,5 mm² / 18 - 12 AWG		
Rated Cross Section	2,5 mm²		
Wire Stripping Length	6,5 mm ± 0,5 mm		
Overvoltage Category	III	III	II
Pollution Severity Level	3	2	2
Rated Voltage	400 V	630 V	1000 V
Rated Impulse Voltage	6 kV	6 kV	6 kV
Rated Insulation Voltage	750 V acc. to EN 60998-1		
Rated Current	24 A		
Hole in PCB	ø 1,3 mm		
Torque	0,5 Nm		

Material

Moulding	PA, grey, V-0
Comparative Tracking Index	CTI ≥ 600
Insulating Group	I
Temperature Range	-40°C up to 100°C
Terminal body	Tin plated brass
Screw	M3; zinc plated steel, clear passivated
Solder pin	ø 1 mm; tin plated copper
Wire protector	Tin plated tin bronze

Approvals

	Current	Voltage	Group	AWG	Nm
	15	300	B	22-12 [1]	0,51
	20	300	B	26 - 12	0,51
	10	300	D, E	26 - 12	0,51
	Current	Voltage	mm²		
	24	750	2,5		

[1] Min No. 26 AWG for factory-wiring only

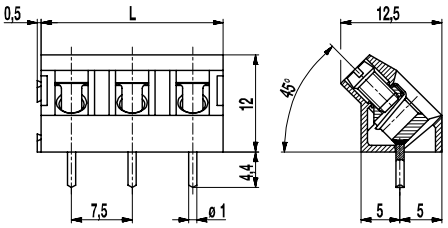
Options / Accessories

- Consecutive numbering
- Special marking according to drawing
- Self-adhesive marking strip BST-7,50
- Longer P.C. pins up to 95 mm
- Special wire protector for very thin conductors
- Version with raised foot of 1,6 mm

PCB connector

976-T(-DS)

Screw connection 45°-angle to PCB, interlocking



The PCB connector 976-T, inclined version with a pitch of 7,5 mm is available with 2 and 3 poles.
Lateral latching elements on the housing allow to latch the PCB connector to longer terminal strips without pole loss.

Due to their large clearance and creepage distances, these PCB connectors are particularly suitable for higher voltages.

The wire entrance is in a 45° angle diagonal to the PC board. Therefore, this PCB connector is ideal for the assembly in the center of PCBs. The design of this PCB connector allows space-saving arrangement of consecutive rows of terminals.

Wire protection in DS-design reliably prevents damage to stranded wires by the screw.

Part Numbers

No. of poles	976-T	976-T-DS	Length	Pcs
2	10.874.232	20.874.232	15,00	250
3	10.874.233	20.874.233	22,50	250

General Information

Pitch	7,5 mm
No. of poles	2 + 3

Technical Data

Clamping Range	*solid / flexible / AWG*		
without wire protector	1 - 6 mm² / 1 - 2,5 mm² / 16 - 12 AWG		
with wire protector	0,75 - 4 mm² / 0,75 - 2,5 mm² / 18 - 12 AWG		
Rated Cross Section	2,5 mm²		
Wire Stripping Length	6,5 mm ± 0,5 mm		
Overvoltage Category	III	III	II
Pollution Severity Level	3	2	2
Rated Voltage	400 V	630 V	1000 V
Rated Impulse Voltage	6 kV	6 kV	6 kV
Rated Insulation Voltage	750 V acc. to EN 60998-1		
Rated Current	24 A		
Hole in PCB	ø 1,3 mm		
Torque	0,5 Nm		

Material

Moulding	PA, grey, V-0
Comparative Tracking Index	CTI ≥ 600
Insulating Group	I
Temperature Range	-40°C up to 100°C
Terminal body	Tin plated brass
Screw	M3; zinc plated steel, clear passivated
Solder pin	ø 1 mm; tin plated copper
Wire protector	Tin plated tin bronze

Approvals

	Current	Voltage	Group	AWG	Nm
	15	300	B	22-12 [1]	0,51
	20	300	B	26 - 12	0,51
	10	300	D, E	26 - 12	0,51
	Current	Voltage	mm²		
	24	750	2,5		

[1] Min No. 26 AWG for factory-wiring only

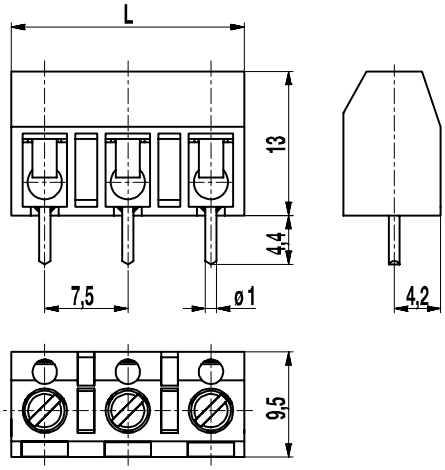
Options / Accessories

- Consecutive numbering
- Special marking according to drawing
- Self-adhesive marking strip BST-7,50
- Longer P.C. pins up to 75 mm
- Special wire protector for very thin conductors

PCB connector

977(-DS)

Screw connection, with test holes



The PCB connector 977 with a pitch of 7,5 mm is available in 2- to 8-pole design and can be mounted side-by-side in the nominal pitch.
Due to their large clearance and creepage distances, these PCB connectors are particularly suitable for higher voltages.

Wire protection in DS-design reliably prevents damage to stranded wires by the screw.
The screws are secured against self-loosening.

This PCB connector has test holes for ø 2 mm test plugs.

Part Numbers

No. of poles	977	977-DS	Length	Pcs
2	10.872.302	20.872.302	13,50	250
3	10.872.303	20.872.303	21,00	250
4	10.872.304	20.872.304	28,50	200
5	10.872.305	20.872.305	36,00	100
6	10.872.306	20.872.306	43,50	100
7	10.872.307	20.872.307	51,00	100
8	10.872.308	20.872.308	58,50	100

General Information

Pitch	7,5 mm
No. of poles	2 - 8

Technical Data

Clamping Range	*solid / flexible / AWG*		
without wire protector	1 - 6 mm² / 1 - 2,5 mm² / 16 - 12 AWG		
with wire protector	0,75 - 4 mm² / 0,75 - 2,5 mm² / 18 - 12 AWG		
Rated Cross Section	2,5 mm²		
Wire Stripping Length	7 mm ± 0,5 mm		
Overvoltage Category	III	III	II
Pollution Severity Level	3	2	2
Rated Voltage	400 V	630 V	1000 V
Rated Impulse Voltage	6 kV	6 kV	6 kV
Rated Insulation Voltage	450 V acc. to EN 60998-1		
Rated Current	24 A		
Hole in PCB	ø 1,3 mm		
Torque	0,5 Nm		

Material

Moulding	PA, grey, V-0
Comparative Tracking Index	CTI ≥ 600
Insulating Group	I
Temperature Range	-40°C up to 100°C
Terminal body	Tin plated brass
Screw	M3; zinc plated steel, blue passivated
Solder pin	ø 1 mm; tin plated copper
Wire protector	Tin plated tin bronze

Approvals

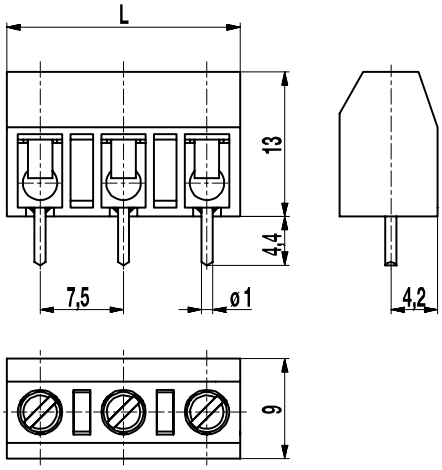
	Current	Voltage	Group	AWG	Nm
	15	300	B	22-12 [1]	0,51
	20	300	B	26 - 12	0,51
	10	300	D, E	26 - 12	0,51
	Current	Voltage	mm²		
	24	750	2,5		

[1] Min No. 26 AWG for factory-wiring only

Options / Accessories

- Consecutive numbering
- Special marking according to drawing
- Self-adhesive marking strip BST-7,50
- Longer P.C. pins up to 95 mm
- Version with larger clamping range

PCB connector
977-OP(-DS)
Screw connection



The PCB connector 977-OP with a pitch of 7,5 mm is available in 2- to 19-pole design and can be mounted side-by-side in the nominal pitch.
Due to their large clearance and creepage distances, these PCB connectors are particularly suitable for higher voltages.

Wire protection in DS-design reliably prevents damage to stranded wires by the screw.
The screws are secured against self-loosening.

Part Numbers

No. of poles	977-OP	977-OP-DS	Length	Pcs
2	10.872.332	20.872.332	13,50	250
3	10.872.333	20.872.333	21,00	250
4	10.872.334	20.872.334	28,50	200
5	10.872.335	20.872.335	36,00	100
6	10.872.336	20.872.336	43,50	100
7	10.872.337	20.872.337	51,00	100
8	10.872.338	20.872.338	58,50	100
9	10.872.339	20.872.339	66,00	100
10	10.872.340	20.872.340	73,50	100
11	10.872.341	20.872.341	81,00	100
12	10.872.342	20.872.342	88,50	100
13	10.872.343	20.872.343	96,00	100
14	10.872.344	20.872.344	103,50	100
15	10.872.345	20.872.345	111,00	100
16	10.872.346	20.872.346	118,50	100
17	10.872.347	20.872.347	126,00	100
18	10.872.348	20.872.348	133,50	100
19	10.872.349	20.872.349	141,00	100

General Information

Pitch	7,5 mm
No. of poles	2 - 19

Technical Data

Clamping Range	*solid / flexible / AWG*		
without wire protector	1 - 6 mm² / 1 - 2,5 mm² / 16 - 12 AWG		
with wire protector	0,75 - 4 mm² / 0,75 - 2,5 mm² / 18 - 12 AWG		
Rated Cross Section	2,5 mm²		
Wire Stripping Length	6,5 mm ± 0,5 mm		
Overvoltage Category	III	III	II
Pollution Severity Level	3	2	2
Rated Voltage	400 V (320 V)	630 V (500 V)	1000 V (500V)
Rated Impulse Voltage	6 kV	6 kV	6 kV
Rated Insulation Voltage	450 V acc. to EN 60998-1		
Rated Current	24 A		
Hole in PCB	ø 1,3 mm		
Torque	0,5 Nm		
Other specifications	Rated voltage in brackets applies to 9-19-pole connectors, “no-flame” according to glow wire test applies to 2-8-pole connectors.		

Material

Moulding	PA, grey, V-0
Comparative Tracking Index	2-8 poles: CTI ≥ 600; 9-19 poles: CTI 250
Insulating Group	2-8 poles: I; 9-19 poles: IIIa
Temperature Range	-40°C up to 100°C
Terminal body	Tin plated brass
Screw	M3; zinc plated steel, blue passivated
Solder pin	ø 1 mm; tin plated copper
Wire protector	Tin plated tin bronze

Approvals

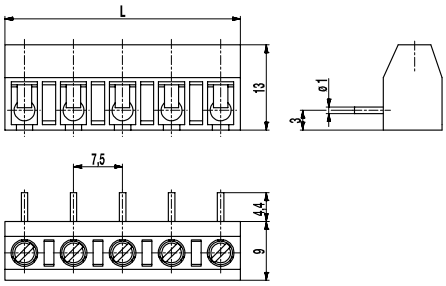
	Current	Voltage	Group	AWG	Nm
	15	300	B	22-12 [1]	0,51
	20	300	B	26 - 12	0,51
	10	300	D, E	26 - 12	0,51
	Current	Voltage	mm²		
	24	750	2,5		

[1] Min No. 26 AWG for factory-wiring only

Options / Accessories

- Consecutive numbering
- Special marking according to drawing
- Self-adhesive marking strip BST-7,50
- Longer P.C. pins up to 95 mm
- Version with larger clamping range

PCB connector
977-OPSG(-DS)
Screw connection, wire entrance vertical to PCB



The PCB screw connector 977-OPSG is the horizontal version of 977-OP with a pitch of 7,5 mm. It is available in 2- to 19-pole design and can be mounted side-by-side in the nominal pitch.
Due to their large clearance and creepage distances, these PCB connectors are particularly suitable for higher voltages.

Wire protection in DS-design reliably prevents damage to stranded wires by the screw.
The wire entrance is vertical to the PCB.
The screws are secured against self-loosening.

Part Numbers

No. of poles	977-OPSG	977-OPSG-DS	Length	Pcs
2	10.872.352	20.872.352	13,50	250
3	10.872.353	20.872.353	21,00	250
4	10.872.354	20.872.354	28,50	200
5	10.872.355	20.872.355	36,00	100
6	10.872.356	20.872.356	43,50	100
7	10.872.357	20.872.357	51,00	100
8	10.872.358	20.872.358	58,50	100
9	10.872.359	20.872.359	66,00	100
10	10.872.360	20.872.360	73,50	100
11	10.872.361	20.872.361	81,00	100
12	10.872.362	20.872.362	88,50	100
13	10.872.363	20.872.363	96,00	100
14	10.872.364	20.872.364	103,50	100
15	10.872.365	20.872.365	111,00	100
16	10.872.366	20.872.366	118,50	100
17	10.872.367	20.872.367	126,00	100
18	10.872.368	20.872.368	133,50	100
19	10.872.369	20.872.369	141,00	100

General Information

Pitch	7,5 mm
No. of poles	2 - 19

Technical Data

Clamping Range	*solid / flexible / AWG*
without wire protector	1 - 6 mm² / 1 - 2,5 mm² / 16 - 12 AWG
with wire protector	0,75 - 4 mm² / 0,75 - 2,5 mm² / 18 - 12 AWG
Rated Cross Section	2,5 mm²
Wire Stripping Length	5,5 mm
Overvoltage Category	III
Pollution Severity Level	3
Rated Voltage	400 V (320 V)
Rated Impulse Voltage	6 kV
Rated Insulation Voltage	450 V acc. to EN 60998-1
Rated Current	24 A
Hole in PCB	ø 1,3 mm
Torque	0,5 Nm
Other specifications	Rated voltage in brackets applies to 9-19-pole connectors, “no-flame” according to glow wire test applies to 2-8-pole connectors.

Material

Moulding	PA, grey, V-0
Comparative Tracking Index	2-8 poles: CTI ≥ 600; 9-19 poles: CTI 250
Insulating Group	2-8 poles: I; 9-19 poles: IIIa
Temperature Range	-40°C up to 100°C
Terminal body	Tin plated brass
Screw	M3; zinc plated steel, blue passivated
Solder pin	ø 1 mm; tin plated brass
Wire protector	Tin plated tin bronze

Approvals

	Current	Voltage	Group	AWG	Nm
	15	300	B	22-12 [1]	0,51
	20	300	B	26 - 12	0,51
	10	300	D, E	26 - 12	0,51
	Current	Voltage	mm²		
	24	750	2,5		

[1] Min No. 26 AWG for factory-wiring only

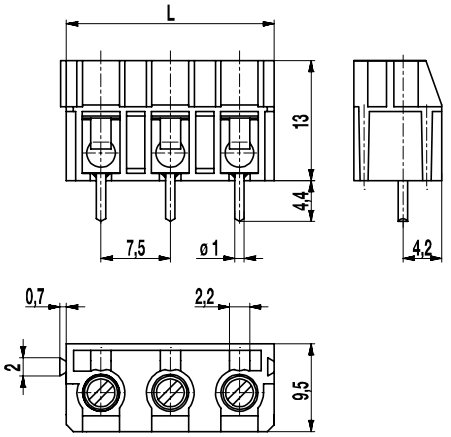
Options / Accessories

- Consecutive numbering
- Special marking according to drawing
- Self-adhesive marking strip BST-7,50

PCB connector

977-T(-DS)

Screw connection, with test holes, interlocking



The PCB connector 977-T with a pitch of 7,5 mm is available is available with 2 and 3 poles.
Lateral latching elements on the housing allow to latch the PCB connector to longer terminal strips without pole loss.

Due to their large clearance and creepage distances, these PCB connectors are particularly suitable for higher voltages.

Wire protection in DS-design reliably prevents damage to stranded wires by the screw.
The wire entrance is parallel to the PCB.
The screws are captive.

This PCB connector has test holes for ø 2,2 mm test plugs.

Part Numbers

No. of poles	977-T	977-T-DS	Length	Pcs
2	10.872.632	20.872.632	13,50	250
3	10.872.633	20.872.633	21,00	250

General Information

Pitch	7,5 mm
No. of poles	2 + 3

Technical Data

Clamping Range	*solid / flexible / AWG*
without wire protector	1 - 6 mm² / 1 - 2,5 mm² / 16 - 12 AWG
with wire protector	0,75 - 4 mm² / 0,75 - 2,5 mm² / 18 - 12 AWG
Rated Cross Section	2,5 mm²
Wire Stripping Length	7 mm
Overvoltage Category	III
Pollution Severity Level	3
Rated Voltage	400 V
Rated Impulse Voltage	6 kV
Rated Insulation Voltage	450 V acc. to EN 60998-1
Rated Current	24 A
Hole in PCB	ø 1,3 mm
Torque	0,5 Nm

Material

Moulding	PA, grey, V-0
Comparative Tracking Index	CTI ≥ 600
Insulating Group	I
Temperature Range	-40°C up to 100°C
Terminal body	Tin plated brass
Screw	M3; zinc plated steel, blue passivated
Solder pin	ø 1 mm; tin plated copper
Wire protector	Tin plated tin bronze

Approvals

	Current	Voltage	Group	AWG	Nm
	15	300	B	22-12 [1]	0,51
	20	300	B	26 - 12	0,51
	10	300	D, E	26 - 12	0,51
	Current	Voltage	mm²		
	24	750	2,5		

[1] Min No. 26 AWG for factory-wiring only

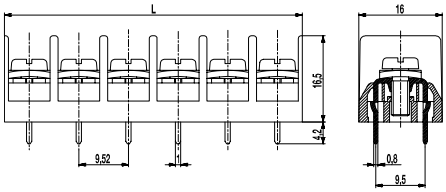
Options / Accessories

- Consecutive numbering
- Special marking according to drawing
- Self-adhesive marking strip BST-7,50
- Longer P.C. pins up to 95 mm
- Version with larger clamping range

PCB connector

982-D

Screw connection, 2 solder pins per pole



The PCB connector 982-D in 9.52 mm pitch is available in 2- to 26-pole design and can be mounted side-by-side in the nominal pitch.
This version is equipped with two solder pins per pole.

The conductor terminal is of head contact design, whereby the screws and square washers are movably connected.
For easier connection, the non-rotably mounted square washers are automatically lifted when the screw is loosened.

Part Numbers

No. of poles	982-D	Length	Pcs
2	20.873.702	19,00	200
3	20.873.703	28,60	250
4	20.873.704	38,10	100
5	20.873.705	47,60	50
6	20.873.706	57,10	50
7	20.873.707	66,60	50
8	20.873.708	76,20	50
9	20.873.709	85,70	50
10	20.873.710	95,20	50
11	20.873.711	104,70	50
12	20.873.712	114,30	50
13	20.873.713	123,80	50
14	20.873.714	133,30	25
15	20.873.715	142,80	25
16	20.873.716	152,30	25
17	20.873.717	161,90	25
18	20.873.718	171,40	25
19	20.873.719	180,90	25
20	20.873.720	190,40	25
21	20.873.721	199,90	25
22	20.873.722	209,50	25
23	20.873.723	219,00	25
24	20.873.724	228,50	25
25	20.873.725	238,00	20
26	20.873.726	247,60	20

General Information

Pitch	9,52 mm
No. of poles	2 - 26

Technical Data

Clamping Range	*solid / flexible / AWG* 0,75 - 2,5 mm² / 0,75 - 2,5 mm² / 18 - 12 AWG
Rated Cross Section	2,5 mm²
Wire Stripping Length	8,5 mm
Overvoltage Category	III
Pollution Severity Level	3
Rated Voltage	320 V
Rated Impulse Voltage	4 kV
Rated Insulation Voltage	450 V acc. to EN 60998-1
Rated Current	24 A at 30°C ambient temperature
Hole in PCB	ø 1,6 mm
Torque	0,8 Nm
Other specifications	Per pole two conductors of identical cross-section can be connected.

Material

Moulding	PA, grey, V-0
Comparative Tracking Index	CTI ≥ 600
Insulating Group	I
Temperature Range	-40°C up to 100°C
Pressure clamp	Tin plated brass
Screw	M3,5; zinc plated steel, blue passivated
Solder pin	0,8 x 1,0 mm; tin plated brass

Approvals

	Current	Voltage	Group	AWG	Nm
	20	300	B	20 - 12	0,79
	20	300	B	20 - 12	0,79
	10	300	D, E	20 - 12	0,79

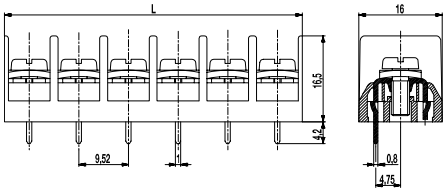
Options / Accessories

- Consecutive numbering
- Special marking according to drawing
- Crosshead screws
- Cover cap 982-A
- Securing pins BEF-983
- Tab connections
- 10 mm pin length

PCB connector

982-S

Screw connection, 1 solder pin per pole



The PCB connector 982-S in 9.52 mm pitch is available in 2- to 26-pole design and can be mounted side-by-side in the nominal pitch.
This version is equipped with one solder pin per pole.

The conductor terminal is of head contact design, whereby the screws and square washers are movably connected.
For easier connection, the non-rotably mounted square washers are automatically lifted when the screw is loosened.

Part Numbers

No. of poles	982-S	Length	Pcs
2	10.873.702	19,00	200
3	10.873.703	28,60	200
4	10.873.704	38,10	100
5	10.873.705	47,60	50
6	10.873.706	57,10	50
7	10.873.707	66,60	50
8	10.873.708	76,20	50
9	10.873.709	85,70	50
10	10.873.710	95,20	50
11	10.873.711	104,70	50
12	10.873.712	114,30	50
13	10.873.713	123,80	50
14	10.873.714	133,30	20
15	10.873.715	142,80	25
16	10.873.716	152,30	25
17	10.873.717	161,90	25
18	10.873.718	171,40	25
19	10.873.719	180,90	25
20	10.873.720	190,40	25
21	10.873.721	199,90	25
22	10.873.722	209,50	25
23	10.873.723	219,00	25
24	10.873.724	228,50	25
25	10.873.725	238,00	20
26	10.873.726	247,60	20

General Information

Pitch	9,52 mm
No. of poles	2 - 26

Technical Data

Clamping Range	*solid / flexible / AWG* 0,75 - 2,5 mm² / 0,75 - 2,5 mm² / 18 - 12 AWG
Rated Cross Section	2,5 mm²
Wire Stripping Length	8,5 mm
Overvoltage Category	III
Pollution Severity Level	3
Rated Voltage	320 V
Rated Impulse Voltage	4 kV
Rated Insulation Voltage	450 V acc. to EN 60998-1
Rated Current	20 A at 30°C ambient temperature
Hole in PCB	ø 1,6 mm
Torque	0,8 Nm
Other specifications	Per pole two conductors of identical cross-section can be connected.

Material

Moulding	PA, grey, V-0
Comparative Tracking Index	CTI ≥ 600
Insulating Group	I
Temperature Range	-40°C up to 100°C
Pressure clamp	Tin plated brass
Screw	M3,5; zinc plated steel, blue passivated
Solder pin	0,8 x 1,0 mm; tin plated brass

Approvals

	Current	Voltage	Group	AWG	Nm
	20	300	B	20 - 12	0,79
	20	300	B	20 - 12	0,79
	10	300	D, E	20 - 12	0,79

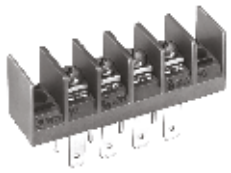
Options / Accessories

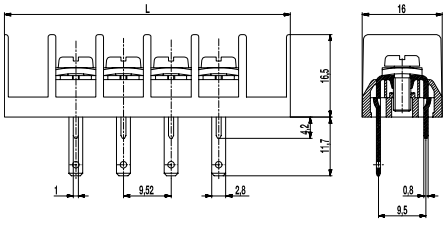
- Consecutive numbering
- Special marking according to drawing
- Crosshead screws
- Cover cap 982-A
- Securing pins BEF-983
- Tab connections
- 10 mm pin length

PCB connector

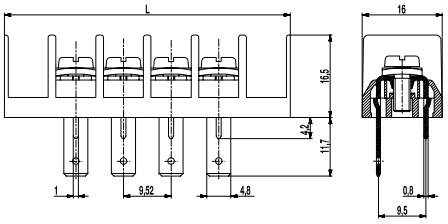
982-SMF-2,8/-4,8

Screw connection, with solder pin and tab





982-SMF-2,8



982-SMF-4,8

The PCB connectors 982-SMF-2,8 and 982-SMF-4,8 with a pitch of 9.52 mm are available in 1- to 12-pole design and can be mounted side-by-side in the nominal pitch.
They are based on our series 982 terminal strips.

The conductor terminal is of head contact design with Screws M3.5, whereby the screws and square washers are movably connected.
For easier connection, the non-rotably mounted square washers are automatically lifted when the screw is loosened.

On the solder side and the plug-in side they feature one solder pin and one tab connection of 2.8 mm or 4.8 mm width per pole.
This allows current to flow to other components without having to use additional conductor paths.

Part Numbers

No. of poles	982-SMF-2,8	982-SMF-4,8	Length	Pcs
1	91.873.703	92.873.703	28,56	200
2	91.873.704	92.873.704	38,08	200
3	91.873.705	92.873.705	47,60	200
4	91.873.706	92.873.706	57,12	100
5	91.873.707	92.873.707	66,64	50
6	91.873.708	92.873.708	76,16	50
7	91.873.709	92.873.709	85,68	50
8	91.873.710	92.873.710	95,20	50
9	91.873.711	92.873.711	104,72	50
10	91.873.712	92.873.712	114,24	50
11	91.873.713	92.873.713	123,76	50
12	91.873.714	92.873.714	133,28	50

further number of poles on request

General Information

Pitch	9,52 mm
No. of poles	1 - 12

Technical Data

Clamping Range	*solid / flexible / AWG* 0,75 - 2,5 mm² / 0,75 - 2,5 mm² / 18 - 12 AWG
Rated Cross Section	2,5 mm²
Wire Stripping Length	8,5 mm
Overvoltage Category	III
Pollution Severity Level	3
Rated Voltage	320 V
Rated Impulse Voltage	4 kV
Rated Insulation Voltage	450 V acc. to EN 60998-1
Rated Current	6 A: with receptacles 2,8; wire 1 mm² (16 AWG) 16 A: with receptacles 4,8; wire 2,5 mm² (14 AWG)
Hole in PCB	ø 1,6 mm
Torque	0,8 Nm
Other specifications	Screw-fixing holes ø 3,2 mm. Per pole two wires of identical cross-section can be connected. Indicated rated voltage applies to applications with insulation receptacles.

Material

Moulding	PA, grey, V-0
Comparative Tracking Index	CTI ≥ 600
Insulating Group	I
Temperature Range	-40°C up to 100°C
Pressure clamp	Tin plated brass
Screw	M3,5; zinc plated steel, blue passivated
Solder pin	0,8 x 1,0 mm; tin plated brass

Approvals

	Current	Voltage	Group	AWG	Nm
	20	300	B	20 - 12	0,79
	6	300	B, D, E	20 - 12	0,79 [1]
	15	300	B	20 - 12	0,79 [2]
	10	300	D, E	20 - 12	0,79 [2]

[1] for 982-SMF-2,8
[2] for 982-SMF-4,8

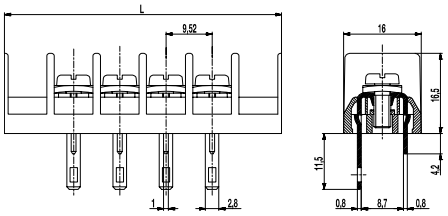
Options / Accessories

- Consecutive numbering
- Special marking according to drawing
- Crosshead screws
- Cover cap 982-A
- Securing pins BEF-983
- Fastening pole position can be freely selected
- Various versions of tabs instead of screw connections

PCB connector

982-SML-2,8

Screw connection, with solder pin and solder tag



The PCB connector 982-SML-2,8 with a pitch of 9.52 mm is available in 1- to 12-pole design and can be mounted side-by-side in the nominal pitch.
They are based on our series 982 terminal strips.

The conductor terminal is of head contact design with screws M3.5, whereby the screws and square washers are movably connected.
For easier connection, the non-rotably mounted square washers are automatically lifted when the screw is loosened.

On the solder side and the plug-in side they feature one solder pin and one soldering tag of 2.8 mm width per pole.
This allows current to flow to other components without having to use additional conductor paths.

Part Numbers

No. of poles	982-SML-2,8	Length	Pcs
1	94.873.703	28,56	200
2	94.873.704	38,08	200
3	94.873.705	47,60	200
4	94.873.706	57,12	100
5	94.873.707	66,64	50
6	94.873.708	76,16	50
7	94.873.709	85,68	50
8	94.873.710	95,20	50
9	94.873.711	104,72	50
10	94.873.712	114,24	50
11	94.873.713	123,76	50
12	94.873.714	133,28	50

further number of poles on request

General Information

Pitch	9,52 mm
No. of poles	1 - 12

Technical Data

Clamping Range	*solid / flexible / AWG*
	0,75 - 2,5 mm² / 0,75 - 2,5 mm² / 18 - 12 AWG
Rated Cross Section	2,5 mm²
Wire Stripping Length	8,5 mm
Overvoltage Category	III
Pollution Severity Level	3
Rated Voltage	320 V
Rated Impulse Voltage	4 kV
Rated Insulation Voltage	450 V acc. to EN 60998-1
Rated Current	17,5 A (wire 1.5 mm² in soldering tag area)
Hole in PCB	ø 1,6 mm
Torque	0,8 Nm
Other specifications	Fixing holes ø 3,2 mm. Per pole two wires of identical cross-section can be connected.

Material

Moulding	PA, grey, V-0
Comparative Tracking Index	CTI ≥ 600
Insulating Group	I
Temperature Range	-40°C up to 100°C
Pressure clamp	Tin plated brass
Screw	M3,5; zinc plated steel, blue passivated
Solder pin	0,8 x 1,0 mm; tin plated brass

Approvals

	Current	Voltage	Group	AWG	Nm
	20	300	B	20 - 12	0,79
	20	300	B	20 - 12	0,79
	10	300	D, E	20 - 12	0,79

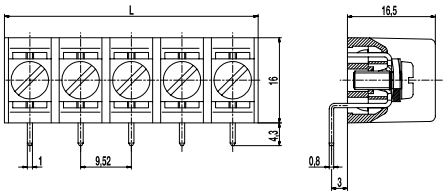
Options / Accessories

- Consecutive numbering
- Special marking according to drawing
- Cover cap 982-A
- Securing pins BEF-983
- Fastening pole position can be freely selected
- Crosshead screws
- Various tab versions available instead of screw connections
- Version without solder pin

PCB connector

982-W

Screw connection, wire entrance vertical to PCB



The PCB screw connector 982-W in 9.52 mm pitch is available with 2- to 26-pole design and can be mounted side-by-side in the nominal pitch.
This version is equipped with one solder pin per pole.

The conductor terminal, located vertical to the PCB, is of head contact design, whereby the screws and square washers are movably connected.
For easier connection, the non-rotably mounted square washers are automatically lifted when the screw is loosened.

Part Numbers

No. of poles	982-W	Length	Pcs
2	30.873.702	19,00	200
3	30.873.703	28,60	200
4	30.873.704	38,10	100
5	30.873.705	47,60	50
6	30.873.706	57,10	50
7	30.873.707	66,60	50
8	30.873.708	76,20	50
9	30.873.709	85,70	50
10	30.873.710	95,20	50
11	30.873.711	104,70	50
12	30.873.712	114,30	50

further number of poles on request

General Information

Pitch	9,52 mm
No. of poles	2 - 26

Technical Data

Clamping Range	*solid / flexible / AWG* 0,75 - 2,5 mm² / 0,75 - 2,5 mm² / 18 - 12 AWG
Rated Cross Section	2,5 mm²
Wire Stripping Length	8,5 mm
Overvoltage Category	III
Pollution Severity Level	3
Rated Voltage	320 V
Rated Impulse Voltage	4 kV
Rated Insulation Voltage	450 V acc. to EN 60998-1
Rated Current	15 A
Hole in PCB	ø 1,6 mm
Torque	0,8 Nm
Other specifications	Per pole two conductors of identical cross-section can be connected.

Material

Moulding	PA, grey, V-0
Comparative Tracking Index	CTI ≥ 600
Insulating Group	I
Temperature Range	-40°C up to 100°C
Pressure clamp	Tin plated brass
Screw	M3,5; zinc plated steel, blue passivated
Solder pin	0,8 x 1,0 mm; tin plated brass

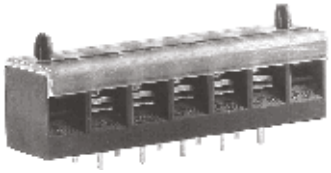
Approvals

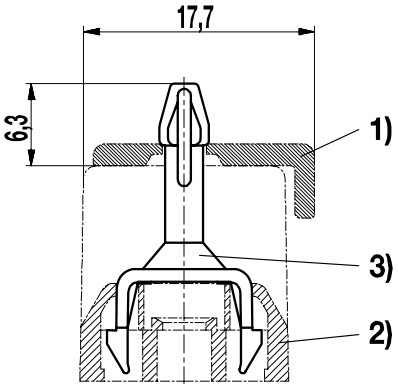
	Current	Voltage	Group	AWG	Nm
	20	300	B	20 - 12	0,79
	20 10	300 300	B D, E	20 - 12 20 - 12	0,79 0,79

Options / Accessories

- Consecutive numbering
- Special marking according to drawing
- Crosshead screws
- Cover cap 982-A
- Securing pins BEF-983
- Tab connections

Cover cap
982-A





1) Cover cap
2) PCB connector
3) Securing pin

The 982-A cover cap is used as shock protection for series 982 PCB connectors.
All cover caps have two ø 3 mm fastening holes.
They are fastened after wiring the strips with two securing pins BEF-983, which are pressed into the first and the last empty pole compartment of the PCB connector.

When ordering series 982 PCB connectors, the two empty pole compartments on the far left and the far right must be specified because terminal pole numbers are only allocated to connected pole compartments.

The number of poles and the cover cap sizes stated herein are already configured according to the number of empty pole compartments, i.e. a 3-pole cover cap is suitable for a 3-pole PCB connector equipped with two additional empty pole compartments.

General Information

No. of poles	1 - 24
Usable with	PCB connectors series 982

Material

Moulding	ABS, transparent
Temperature Range	-30°C up to 80°C

Options / Accessories

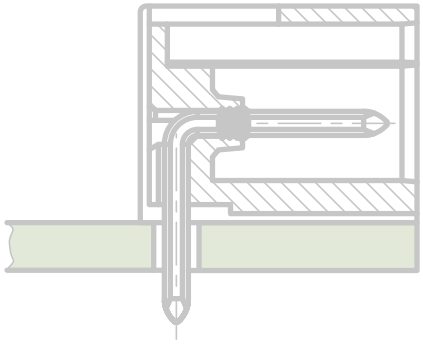
- Fixing holes in different position
- Securing pins BEF-983

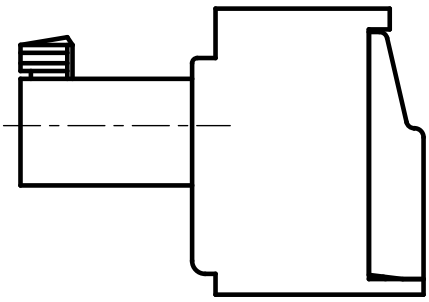
Part Numbers

No. of poles	982-A	Length	Pcs
1	13.891.202	28,50	200
2	14.891.202	38,00	100
3	15.891.202	47,60	100
4	16.891.202	51,10	100
5	17.891.202	66,60	100
6	18.891.202	76,10	100
7	19.891.202	85,70	100
8	20.891.202	95,20	100
9	21.891.202	104,70	100
10	22.891.202	114,30	100
11	23.891.202	123,80	100
12	24.891.202	133,30	100
13	25.891.202	142,80	100
14	26.891.202	152,40	100
15	27.891.202	161,90	100
16	28.891.202	171,40	100
18	30.891.202	190,50	100
20	32.891.202	209,50	100
22	34.891.202	228,60	100
24	36.891.202	247,60	100

further number of poles on request

Plug connectors





This section lists our plug connectors with a pitch of 7,5 mm.

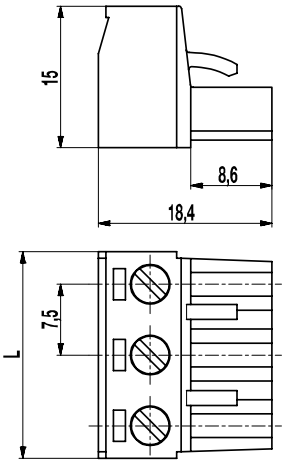
In combination with mating socket terminal strips and pin strips, plug connectors offer a variety of benefits:

- decentralized part/component assembly,
- prevention of wiring errors
- easy disconnection for service and maintenance purposes
- easy connection in confined space.

In addition to the screw version, the plug connector assortment also features solutions with tension spring technology. The screws of these plug connectors are secured against self-loosening.
Our plug connectors can also be mounted side-by-side without pole loss.

Series 122 plug connectors have standard grooves to accommodate coding keys. Plug connectors with such coded pin strips provide optimum protection against twisting and/or incorrect plugging.

Plug connector
122-A-111
Screw connection



The plug connector 122-A-111 with a pitch of 7,5 mm, is available in 2- to 12-pole design.
The large pitch allows connecting higher rated voltages under tough industrial conditions.

Interlocking plug connector with the pin strip results in optimum vibration resistance.

For each pole the plug connector has one trapezoidal coding slot in which the coding elements 120-K can be inserted. The wire entrance is parallel to the plug direction.
The screws are captive.

Part Numbers

No. of poles	122-A-111	Length	Pcs
2	10.809.002	13,00	200
3	10.809.003	20,50	100
4	10.809.004	28,00	100
5	10.809.005	35,50	50
6	10.809.006	43,00	50
7	10.809.007	50,50	50
8	10.809.008	58,00	50
9	10.809.009	65,50	50
10	10.809.010	73,00	50
11	10.809.011	80,50	50
12	10.809.012	88,00	50

further number of poles on request

General Information

Pitch	7,5 mm
No. of poles	2 - 12
Usable with	all pin strips of series 122

Technical Data

Clamping Range	*solid / flexible / AWG*		
	0,2 - 4 mm² / 0,2 - 2,5 mm² / 26 - 12 AWG		
Rated Cross Section	2,5 mm²		
Wire Stripping Length	7 mm ± 0,5 mm		
Overvoltage Category	III	III	II
Pollution Severity Level	3	2	2
Rated Voltage	400 V	630 V	1000 V
Rated Impulse Voltage	6 kV	6 kV	6 kV
Rated Insulation Voltage	450 V acc. to EN 60998-1		
Rated Current	12 A		
Torque	0,5 Nm		

Material

Moulding	PA, grey, V-0
Comparative Tracking Index	CTI ≥ 600
Insulating Group	I
Temperature Range	-40°C up to 100°C
Terminal body	Nickel plated brass
Pressure clamp	Tin plated tin bronze
Screw	M3; zinc plated steel, blue passivated
Spring	Tin plated tin bronze

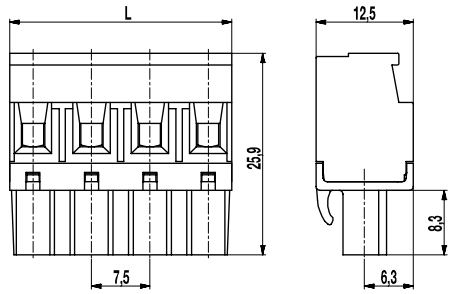
Approvals

	Current	Voltage	Group	AWG	Nm
	15	300	B	26 - 12	0,51
	10	300	D	26 - 12	0,51
	15	300	B	26 - 12	0,51
	10	300	D, E	26 - 12	0,51

Options / Accessories

- Consecutive numbering
- Special marking according to drawing
- Self-adhesive marking strip BST-7,50
- Coding elements 120-K
- Connectors equipped with coding elements on request

Plug connector
122-D-111
Screw connection, backside latching hooks



The plug connector 122-D-111 with a pitch of 7,5 mm, is available in 2- to 12-pole design.
The large pitch allows connecting higher rated voltages under tough industrial conditions.

Interlocking plug connector with the pin strip results in optimum vibration resistance.

On version 122-D-111, the wire entrance is located opposite to the latching hook side; on version 122-D-121, it is located on the same side. Plugging the plug connector on pin strips of series 122 therefore results in inverted plug-in configurations.

For each pole the plug connector has one trapezoidal coding slot in which the coding elements 120-K can be inserted.
The wire entrance is vertical to the plug direction.
The screws are captive.

Part Numbers

No. of poles	122-D-111	Length	Pcs
2	10.809.402	13,00	200
3	10.809.403	20,50	100
4	10.809.404	28,00	100
5	10.809.405	35,50	50
6	10.809.406	43,00	50
7	10.809.407	50,50	50
8	10.809.408	58,00	50
9	10.809.409	65,50	50
10	10.809.410	73,00	50
11	10.809.411	80,50	50
12	10.809.412	88,00	50

further number of poles on request

General Information

Pitch	7,5 mm
No. of poles	2 - 12
Usable with	all pin strips of series 122

Technical Data

Clamping Range	*solid / flexible / AWG*		
	0,2 - 6 mm² / 0,2 - 4 mm² / 26 - 12 AWG		
Rated Cross Section	2,5 mm²		
Wire Stripping Length	7 mm ± 0,5 mm		
Overvoltage Category	III	III	II
Pollution Severity Level	3	2	2
Rated Voltage	500 V	630 V	1000 V
Rated Impulse Voltage	6 kV	6 kV	6 kV
Rated Insulation Voltage	450 V acc. to EN 60998-1		
Rated Current	12 A		
Torque	0,5 Nm		

Material

Moulding	PA, grey, V-0
Comparative Tracking Index	CTI ≥ 600
Insulating Group	I
Temperature Range	-40°C up to 100°C
Terminal body	Nickel plated brass
Pressure clamp	Tin plated tin bronze
Screw	M3; zinc plated steel, blue passivated
Spring	Tin plated tin bronze

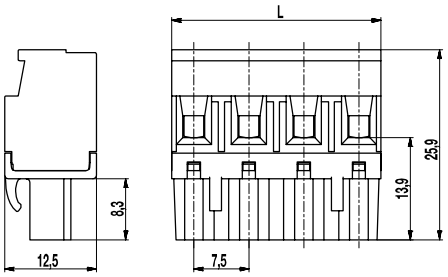
Approvals

	Current	Voltage	Group	AWG	Nm
	15	300	B	26 - 12	0,51
	10	300	D	26 - 12	0,51
	15	300	B	26 - 12	0,51
	10	300	D, E	26 - 12	0,51

Options / Accessories

- Consecutive numbering
- Special marking according to drawing
- Self-adhesive marking strip BST-7,50
- Coding elements 120-K
- Connectors equipped with coding elements on request

Plug connector
122-D-121
Screw connection



The plug connector 122-D-121 with a pitch of 7,5 mm, is available in 2- to 12-pole design.
The large pitch allows connecting higher rated voltages under tough industrial conditions.

Interlocking plug connector with the pin strip results in optimum vibration resistance.

On version 122-D-111, the wire entrance is located opposite to the latching hook side; on version 122-D-121, it is located on the same side. Plugging the plug connector on pin strips of series 122 therefore results in inverted plug-in configurations.

For each pole the plug connector has one trapezoidal coding slot in which the coding elements 120-K can be inserted.
The wire entrance is vertical to the plug direction.
The screws are captive.

Part Numbers

No. of poles	122-D-121	Length	Pcs
2	20.809.402	13,00	200
3	20.809.403	20,50	100
4	20.809.404	28,00	100
5	20.809.405	35,50	50
6	20.809.406	43,00	50
7	20.809.407	50,50	50
8	20.809.408	58,00	50
9	20.809.409	65,50	50
10	20.809.410	73,00	50
11	20.809.411	80,50	50
12	20.809.412	88,00	50

General Information

Pitch	7,5 mm
No. of poles	2 - 12
Usable with	all pin strips of series 122

Technical Data

Clamping Range	*solid / flexible / AWG*		
	0,2 - 6 mm² / 0,2 - 4 mm² / 26 - 12 AWG		
Rated Cross Section	2,5 mm²		
Wire Stripping Length	7 mm ± 0,5 mm		
Overvoltage Category	III	III	II
Pollution Severity Level	3	2	2
Rated Voltage	500 V	630 V	1000 V
Rated Impulse Voltage	6 kV	6 kV	6 kV
Rated Insulation Voltage	450 V acc. to EN 60998-1		
Rated Current	12 A		
Torque	0,5 Nm		

Material

Moulding	PA, grey, V-0
Comparative Tracking Index	CTI ≥ 600
Insulating Group	I
Temperature Range	-40°C up to 100°C
Terminal body	Nickel plated brass
Pressure clamp	Tin plated tin bronze
Screw	M3; zinc plated steel, blue passivated
Spring	Tin plated tin bronze

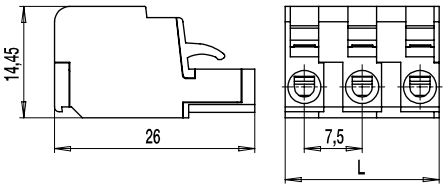
Approvals

	Current	Voltage	Group	AWG	Nm
	15	300	B	26 - 12	0,51
	10	300	D	26 - 12	0,51
	15	300	B	26 - 12	0,51
	10	300	D, E	26 - 12	0,51

Options / Accessories

- Consecutive numbering
- Special marking according to drawing
- Self-adhesive marking strip BST-7,50
- Coding elements 120-K
- Connectors equipped with coding elements on request

Plug connector
122-F-111
Spring clamp connection



The plug connector 122-F-111 series with screwless terminals and a pitch of 7,5 mm complements our “CONECTA”-Series. The large pitch allows connecting higher rated voltages under tough industrial conditions.

The rated cross-section of 2,5 mm² is geared towards screw-connector variants. This plug connector can be used with single-core copper conductors and fine-stranded wires (2,5 mm²), but also with pin cable sockets or crimped ferrules. For crimped ferrules, the cross-section must be reduced accordingly. All other rated data is identical with the screw-connector variants.

Test ports for ø 2 mm or ø 2,3 mm test plugs or for spring test pins are accessible from the top of the clamp. The plug connector consists of individual poles and can be manufactured to any required pole configuration at our factory.

For each pole the plug connector has one trapezoidal coding groove in which the coding elements 120-K can be inserted.

Interlocking plug connector with the pin strip results in optimum vibration resistance.

The plug connector can be operated by either a standard 3 mm blade screwdriver, terminal pliers or the built-in pusher, see 122-F-211.

Part Numbers

No. of poles	122-F-111	Length	Pcs
2	12.808.922	13,50	200
3	13.808.922	21,00	100
4	14.808.922	28,50	100
5	15.808.922	36,00	100
6	16.808.922	43,50	50
7	17.808.922	51,00	50
8	18.808.922	58,50	50
9	19.808.922	66,00	50
10	20.808.922	73,50	50
11	21.808.922	81,00	50
12	22.808.922	88,50	50

General Information

Pitch	7,5 mm
No. of poles	2 - 12
Usable with	all pin strips of series 122

Technical Data

Clamping Range	*solid / flexible / AWG*
	0,2 - 4 mm² / 0,2 - 2,5 mm² / 24 - 12 AWG
Rated Cross Section	2,5 mm²
Wire Stripping Length	8,5 mm ± 0,5 mm
Overvoltage Category	II
Pollution Severity Level	2
Rated Voltage	320 V
Rated Impulse Voltage	2,5 kV
Rated Insulation Voltage	250 V acc. to EN 60998-1
Rated Current	12 A

Material

Moulding	PA, grey, V-0
Comparative Tracking Index	CTI ≥ 600
Insulating Group	I
Temperature Range	-40°C up to 100°C
Pressure clamp	Copper alloy, tin plated
Tension spring	Stainless steel
Spring	Copper alloy, tin plated

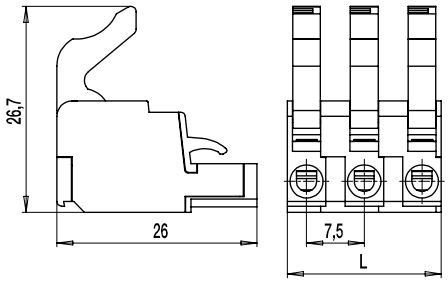
Options / Accessories

- Consecutive numbering
- Special marking according to drawing
- Self-adhesive marking strip BST-7,50
- Coding elements 120-K
- Terminal pliers 120-F
- Connectors equipped with coding elements on request
- Higher number of poles

Plug connector

122-F-211

Spring clamp connection, with pusher



The plug connector 122-F-211 series with screwless terminals and a pitch of 7,5 mm complements our “CONECTA”-Series. The large pitch allows connecting higher rated voltages under tough industrial conditions.

The rated cross-section of 2,5 mm² is geared towards screw-connector variants. This plug connector can be used with single-core copper conductors and fine-stranded wires (2,5 mm²), but also with pin cable sockets or crimped ferrules. For crimped ferrules, the cross-section must be reduced accordingly. All other rated data is identical with the screw-connector variants.

Test ports for ø 2 mm or ø 2,3 mm test plugs or for spring test pins are accessible from the top of the clamp. The plug connector consists of individual poles and can be manufactured to any required pole configuration at our factory.

For each pole the plug connector has one trapezoidal coding groove in which the coding elements 120-K can be inserted.

Interlocking plug connector with the pin strip results in optimum vibration resistance.

The plug connector is operated by the built-in pusher.

Part Numbers

No. of poles	122-F-211	Length	Pcs
2	12.808.925	13,50	200
3	13.808.925	21,00	100
4	14.808.925	28,50	100
5	15.808.925	36,00	100
6	16.808.925	43,50	50
7	17.808.925	51,00	50
8	18.808.925	58,50	50
9	19.808.925	66,00	50
10	20.808.925	73,50	50
11	21.808.925	81,00	50
12	22.808.925	88,50	50

General Information

Pitch	7,5 mm
No. of poles	2 - 12
Usable with	all pin strips of series 122

Technical Data

Clamping Range	*solid / flexible / AWG*
	0,2 - 4 mm² / 0,2 - 2,5 mm² / 24 - 12 AWG
Rated Cross Section	2,5 mm²
Wire Stripping Length	8,5 mm ± 0,5 mm
Overvoltage Category	II
Pollution Severity Level	2
Rated Voltage	320 V
Rated Impulse Voltage	2,5 kV
Rated Insulation Voltage	250 V acc. to EN 60998-1
Rated Current	12 A

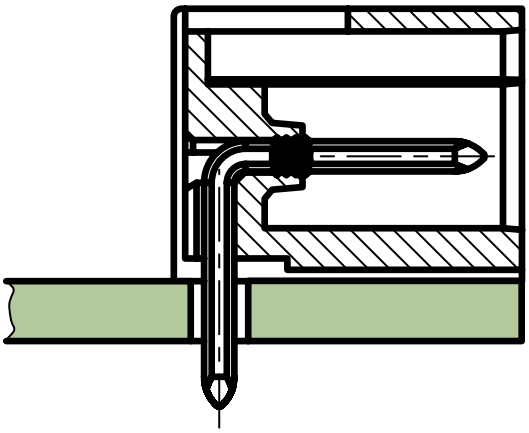
Material

Moulding	PA, grey, V-0
Comparative Tracking Index	CTI ≥ 600
Insulating Group	I
Temperature Range	-40°C up to 100°C
Pressure clamp	Copper alloy, tin plated
Tension spring	Stainless steel
Spring	Copper alloy, tin plated

Options / Accessories

- Consecutive numbering
- Special marking according to drawing
- Self-adhesive marking strip BST-7,50
- Coding elements 120-K
- Connectors equipped with coding elements on request
- Higher number of poles

Pin strips

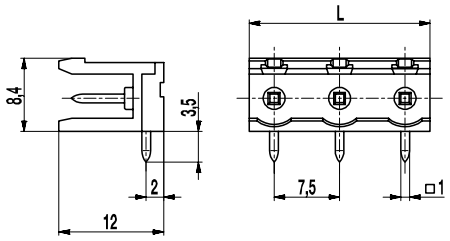


In this section, you will find the series 122 male pin strips used for the corresponding female plug connectors.
They are available with 2 to 12 poles.

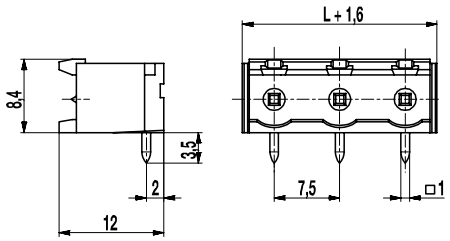
The user can choose from different designs with perpendicular or parallel plug direction to the PC board.

Series 121 pin strips as well as socket terminal strips feature grooves to accomodate coding elements. Laterally attached dovetail expansions on the housings reliably prevent offset plugging of the socket terminal strips.

Pin strip
122-M-111/-211
Plug-in direction parallel to PCB



122-M-111 (without side wall)



122-M-211 (with side wall)

The pin strips 122-M-111 and 122-M-211 with a pitch of 7,5 mm are available in 2- to 12-pole design.

The ..-M-111 version is a pin strip without side wall. The ..-M-211 version is a pin strip with side wall. For both designs, the plug direction for mating plug connectors is parallel to the PCB.

For each pole, the pin strip has one trapezoidal coding slot in which the coding elements 120-K can be inserted.

Part Numbers

No. of poles	122-M-111	122-M-211	Length	Pcs
2	10.807.002	10.807.017	13,00	200
3	10.807.003	10.807.018	20,50	100
4	10.807.004	10.807.019	28,00	100
5	10.807.005	10.807.020	35,50	50
6	10.807.006	10.807.021	43,00	50
7	10.807.007	10.807.022	50,50	50
8	10.807.008	10.807.023	58,00	50
9	10.807.009	10.807.024	65,50	50
10	10.807.010	10.807.025	73,00	50
11	10.807.011	10.807.026	80,50	50
12	10.807.012	10.807.027	88,00	50

General Information

Pitch	7,5 mm
No. of poles	2 - 12
Usable with	all plug connectors of series 122
Additonal Information	Ordering information: ..-111: without side wall ..-211: with side wall

Technical Data

Overvoltage Category	III	III	II
Pollution Severity Level	3	2	2
Rated Voltage	500 V	630 V	1000 V
Rated Impulse Voltage	6 kV	6 kV	6 kV
Rated Insulation Voltage	750 V acc. to EN 60998-1		
Rated Current	12 A		
Hole in PCB	ø 1,4 mm		

Material

Moulding	PA, grey, V-0
Comparative Tracking Index	CTI ≥ 600
Insulating Group	I
Temperature Range	-40°C up to 100°C
Solder pin	1,0 x 1,0 mm; tin plated brass

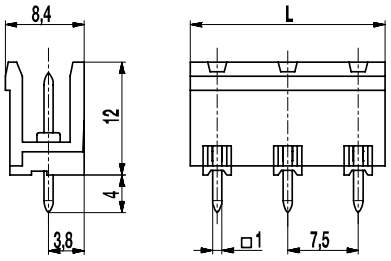
Approvals

	Current	Voltage	Group	AWG	Nm
	15	300	B		
	10	300	D		
	15	300	B		
	10	300	D, E		

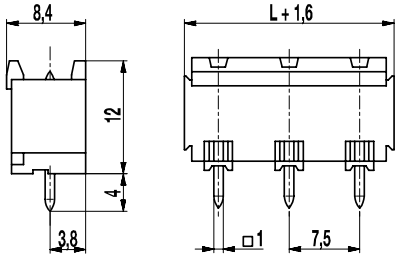
Options / Accessories

- Consecutive numbering
- Special marking according to drawing
- Self-adhesive marking strip BST-7,50
- Coding elements 120-K
- Longer P.C. pins on request
- Connectors equipped with coding elements on request

Pin strip
122-M-121/-221
Plug-in direction vertical to PCB



122-M-121 (without side wall)



120-M-221 (with side wall)

The pin strips 122-M-121 and 122-M-221 with a pitch of 7,5 mm are available in 2- to 12-pole design.

The ..-M-121 version is a pin strip without side wall. The ..-M-221 version is a pin strip with side wall. For both designs, the plug direction for mating plug connectors is vertical to the PCB.

For each pole, the pin strip has one trapezoidal coding slot in which the coding elements 120-K can be inserted.

Part Numbers

No. of poles	122-M-121	122-M-221	Length	Pcs
2	20.807.002	20.807.017	13,00	200
3	20.807.003	20.807.018	20,50	100
4	20.807.004	20.807.019	28,00	100
5	20.807.005	20.807.020	35,50	50
6	20.807.006	20.807.021	43,00	50
7	20.807.007	20.807.022	50,50	50
8	20.807.008	20.807.023	58,00	50
9	20.807.009	20.807.024	65,50	50
10	20.807.010	20.807.025	73,00	50
11	20.807.011	20.807.026	80,50	50
12	20.807.012	20.807.027	88,00	50

General Information

Pitch	7,5 mm
No. of poles	2 - 12
Usable with	all plug connectors of series 122
Additonal Information	Ordering information: ..-121: without side wall ..-221: with side wall

Technical Data

Overvoltage Category	III	III	II
Pollution Severity Level	3	2	2
Rated Voltage	500 V	630 V	1000 V
Rated Impulse Voltage	6 kV	6 kV	6 kV
Rated Insulation Voltage	750 V acc. to EN 60998-1		
Rated Current	12 A		
Hole in PCB	ø 1,4 mm		

Material

Moulding	PA, grey, V-0
Comparative Tracking Index	CTI ≥ 600
Insulating Group	I
Temperature Range	-40°C up to 100°C
Solder pin	1,0 x 1,0 mm; tin plated brass

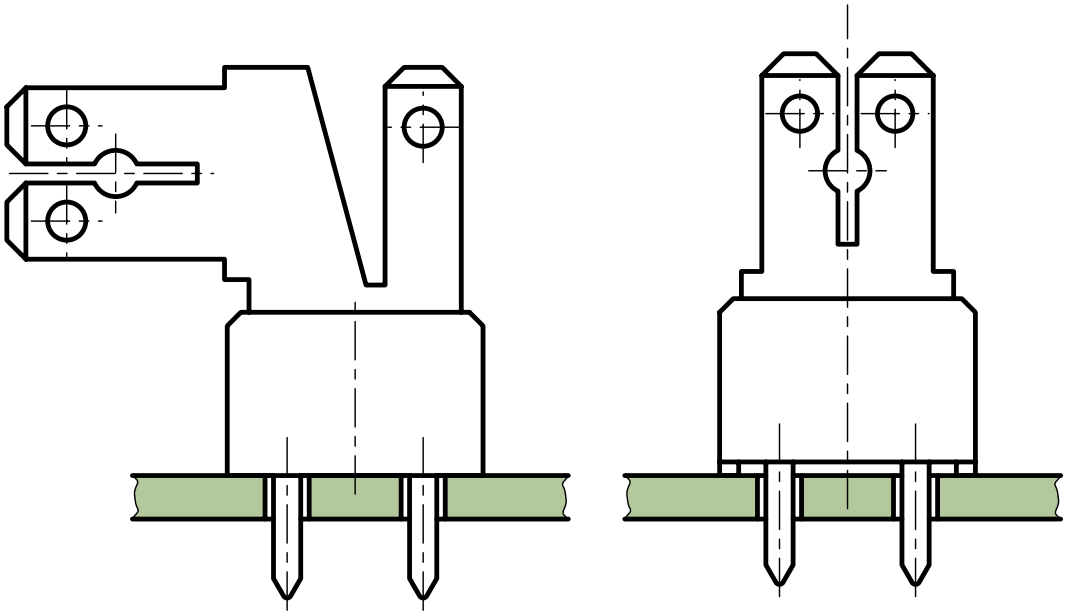
Approvals

	Current	Voltage	Group	AWG	Nm
	15	300	B		
	10	300	D		
	15	300	B		
	10	300	D, E		

Options / Accessories

- Consecutive numbering
- Special marking according to drawing
- Self-adhesive marking strip BST-7,50
- Coding elements 120-K
- Longer P.C. pins on request
- Connectors equipped with coding elements on request

Tab connectors



On the following pages you can find our range of tab connectors with a pitch of 7.5 mm.

The Series 900 of our tab connector assortment can be flexibly used on various pitches. The tab connectors with double solder termination are designed for 2.8 mm, 4.8 mm, 6.3 mm tab receptacles.

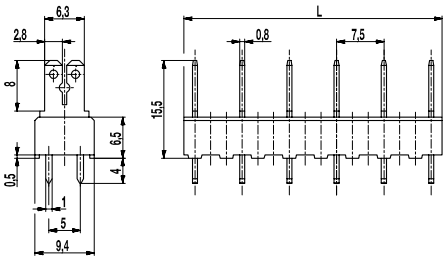
Depending on the respective application, the series 900 allows to plug on bare, partially or fully insulated tab receptacles according to DIN 46247.

For the insulation of the tabs, receptacles ISO-110 for 2.8 mm and ISO-25 for 6.3 mm or 2x 2.8 mm can be used (see accessories). When using double-spring contacts for 6.3 mm tab connectors, our insulation socket ISO-900 is best suitable.

Tab connector

900-F-S-7,5

Tab 2x 2,8 mm / 1x 6,3 mm, with pegs



The tab connector 900-F-S-7,5 with a pitch of 7,5 mm is a raised 900-S-7,5 version and designed for tab receptacles of 1x 2,8 mm or 1x 6,3 mm.

The tab connector housing of series 900-F was raised for this special variant. The enormous variety of different tab connector designs and their mixed mounting increase the versatility of this series. When potting the tab connector moulding, the casting resin can penetrate between the raised feet from below without affecting the blade connection area.

Depending on the respective application, the series 900-F allows to plug in bare, partially or fully insulated tab receptacles according to DIN 46247. Also non-insulated 2,8 mm or 6,3 mm tab receptacles can be plugged on these tab connectors. Insulation receptacles ISO-25 (see also ISO product data sheet) can be used to insulate 2,8 mm or 6,3 mm tab receptacles.
Insulation sockets are available for 6,3 mm tab connectors with double-spring contacts (see also ISO-900 product data sheet).

Part Numbers

No. of poles	900-F-S-7,5	Length	Pcs
3	75.870.704	18,50	200
5	75.870.707	33,50	100
6	75.870.709	43,50	100
9	75.870.713	63,50	100
10	75.870.715	73,50	100

further number of poles on request

General Information

Pitch	7,5 mm
No. of poles	2 - 17

Technical Data

Overvoltage Category	III	III	II
Pollution Severity Level	3	2	2
Rated Voltage	500 V	630 V	1000 V
Rated Impulse Voltage	6 kV	6 kV	6 kV
Rated Insulation Voltage	750 V acc. to EN 60998-1		
Rated Current	6 A: with receptacles 2,8; wire 1 mm² (16 AWG) 16 A: with receptacles 6,3; wire 2,5 mm² (14 AWG)		
Hole in PCB	ø 1,6 mm		
Other specifications	Indicated rated voltages refer to applications with insulation receptacles		

Material

Moulding	PA, grey, V-0
Comparative Tracking Index	CTI ≥ 600
Insulating Group	I
Temperature Range	-40°C up to 100°C
Solder pin	1,0 x 0,8 mm; tin plated brass
Tab	2,8 x 0,8 mm; 6,3 x 0,8 mm: tin plated brass

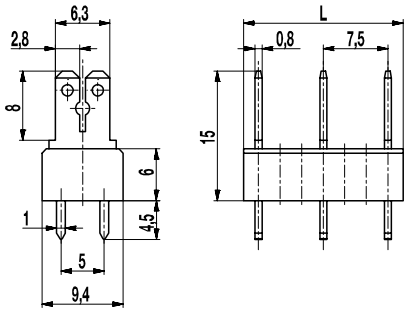
Options / Accessories

- Consecutive numbering
- Special marking according to drawing
- Self-adhesive marking strip BST-7,50
- Insulation receptacles ISO
- Insulation sockets ISO-900
- Change of pitch
- Component mix of tab connector versions
- Tab connectors are also individually available (see single tabs GST-900)

Tab connector

900-S-7,5

Tab 2x 2,8 mm / 1x 6,3 mm



The tab connector 900-S-7,5 with double solder termination and a pitch of 7,5 mm is designed for 1x 2,8 mm or 1x 6,3 mm tab connector receptacles.

Depending on the respective application, the tab connectors of series 900 allow to plug in bare, partially or fully insulated tab receptacles according to DIN 46247. Also non-insulated 2,8 mm or 6,3 mm tab receptacles can be plugged on these tab connectors. Insulation receptacles ISO-25 (see also ISO product data sheet) can be used to insulate 2,8 mm or 6,3 mm tab receptacles.
Insulation sockets are available for 6,3 mm tab connectors with double-spring contacts (see also ISO-900 product data sheet).

Part Numbers

No. of poles	900-S-7,5	Length	Pcs
2	75.870.903	13,50	250
3	75.870.904	18,50	200
4	75.870.906	28,50	100
5	75.870.907	33,50	100
6	75.870.909	43,50	100
7	75.870.910	48,50	100
8	75.870.912	58,50	100
9	75.870.913	63,50	100
10	75.870.915	73,50	100
11	75.870.916	78,50	100
12	75.870.918	88,50	100
13	75.870.919	93,50	100
14	75.870.921	103,50	100
15	75.870.922	108,50	100
16	75.870.924	118,50	50
17	75.870.925	123,50	50

General Information

Pitch	7,5 mm
No. of poles	2 - 17

Technical Data

Overvoltage Category	III	III	II
Pollution Severity Level	3	2	2
Rated Voltage	500 V	630 V	1000 V
Rated Impulse Voltage	6 kV	6 kV	6 kV
Rated Insulation Voltage	750 V acc. to EN 60998-1		
Rated Current	6 A: with receptacles 2,8; wire 1 mm² (16 AWG) 16 A: with receptacles 6,3; wire 2,5 mm² (14 AWG)		
Hole in PCB	ø 1,6 mm		
Other specifications	Indicated rated voltages refer to applications with insulation receptacles		

Material

Moulding	PA, red, V-0
Comparative Tracking Index	CTI ≥ 600
Insulating Group	I
Temperature Range	-40°C up to 100°C
Solder pin	1,0 x 0,8 mm; tin plated brass
Tab	2,8 x 0,8 mm; 6,3 x 0,8 mm; tin plated brass

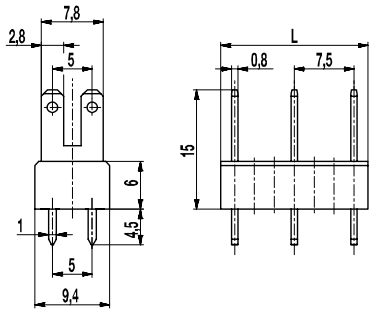
Approvals

	Current	Voltage	Group	AWG	Nm
	15 15	300 150	B C		
	15 10	300 300	B D, E		

Options / Accessories

- Consecutive numbering
- Special marking according to drawing
- Self-adhesive marking strip BST-7,50
- Insulation receptacles ISO
- Insulation sockets ISO-900
- Change of pitch
- Component mix of tab connector versions
- Tab connectors are also individually available (see single tabs GST-900)

Tab connector
900-SH-7,5
Tab 2x 2,8 mm



The tab connector 900-SH-7,5 with double solder termination and a pitch of 7,5 mm is designed for 2x 2,8 mm tab connector receptacles.

Depending on the respective application, the tab connectors of series 900 allow to plug in bare, partially or fully insulated tab receptacles according to DIN 46247. On tab connectors of this series, two non-insulated 2,8 mm tab receptacles can be plugged in parallel. Insulation receptacles ISO-110 (see also ISO product data sheet) can be used to insulate 2,8 mm tab receptacles.

Part Numbers

No. of poles	900-SH-7,5	Length	Pcs
2	37.870.903	13,50	250
3	37.870.904	18,50	200
4	37.870.906	28,50	100
5	37.870.907	33,50	100
6	37.870.909	43,50	100
7	37.870.910	48,50	100
8	37.870.912	58,50	100
9	37.870.913	63,50	100
10	37.870.915	73,50	100
11	37.870.916	78,50	100
12	37.870.918	88,50	100
13	37.870.919	93,50	100
14	37.870.921	103,50	100
15	37.870.922	108,50	100
16	37.870.924	118,50	50
17	37.870.925	123,50	50

General Information

Pitch	7,5 mm
No. of poles	2 - 17

Technical Data

Overvoltage Category	III	III	II
Pollution Severity Level	3	2	2
Rated Voltage	500 V	630 V	1000 V
Rated Impulse Voltage	6 kV	6 kV	6 kV
Rated Insulation Voltage	750 V acc. to EN 60998-1		
Rated Current	6 A: with receptacles 2,8; wire 1 mm² (16 AWG)		
Hole in PCB	ø 1,6 mm		
Other specifications	Indicated rated voltages refer to applications with insulation receptacles		

Material

Moulding	PA, red, V-0
Comparative Tracking Index	CTI ≥ 600
Insulating Group	I
Temperature Range	-40°C up to 100°C
Solder pin	1,0 x 0,8 mm; tin plated brass
Tab	2,8 x 0,8 mm; tin plated brass

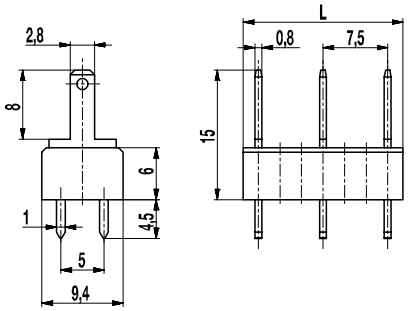
Approvals

	Current	Voltage	Group	AWG	Nm
	15	300	B		
	15	150	C		
	15	300	B		
	10	300	D, E		

Options / Accessories

- Consecutive numbering
- Special marking according to drawing
- Self-adhesive marking strip BST-7,50
- Insulation receptacles ISO
- Change of pitch
- Component mix of tab connector versions
- Tab connectors are also individually available (see single tabs GST-900)

Tab connector
900-SUB-7,5
Tab 2,8 mm



The tab connector 900-SUB-7,5 with double solder termination and a pitch of 7,5 mm is designed for 2,8 mm tab connector receptacles.

Depending on the respective application, the tab connectors of series 900 allow to plug in bare, partially or fully insulated tab receptacles according to DIN 46247. Insulation receptacles ISO-110 (see also ISO product data sheet) can be used to insulate 2,8 mm tab receptacles.
Insulation sockets are available for 6,3 mm tab connectors with double-spring contacts (see also ISO-900 product data sheet).

Part Numbers

No. of poles	900-SUB-7,5	Length	Pcs
2	12.870.903	13,50	250
3	12.870.904	18,50	200
4	12.870.906	28,50	100
5	12.870.907	33,50	100
6	12.870.909	43,50	100
7	12.870.910	48,50	100
8	12.870.912	58,50	100
9	12.870.913	63,50	100
10	12.870.915	73,50	100
11	12.870.916	78,50	100
12	12.870.918	88,50	100
13	12.870.919	93,50	100
14	12.870.921	103,50	100
15	12.870.922	108,50	100
16	12.870.924	118,50	50
17	12.870.925	123,50	50

General Information

Pitch	7,5 mm
No. of poles	2 - 17

Technical Data

Overvoltage Category	III	III	II
Pollution Severity Level	3	2	2
Rated Voltage	500 V	630 V	1000 V
Rated Impulse Voltage	6 kV	6 kV	6 kV
Rated Insulation Voltage	750 V acc. to EN 60998-1		
Rated Current	6 A: with receptacles 2,8; wire 1 mm² (16 AWG)		
Hole in PCB	ø 1,6 mm		
Other specifications	Indicated rated voltages refer to applications with insulation receptacles		

Material

Moulding	PA, red, V-0
Comparative Tracking Index	CTI ≥ 600
Insulating Group	I
Temperature Range	-40°C up to 100°C
Solder pin	1,0 x 0,8 mm; tin plated brass
Tab	2,8 x 0,8 mm; tin plated brass

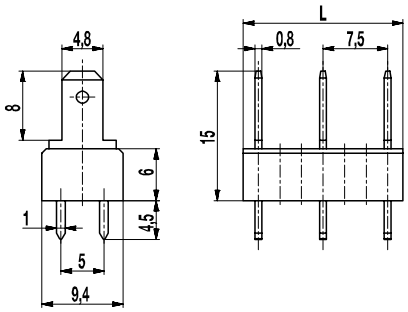
Approvals

	Current	Voltage	Group	AWG	Nm
	15	300	B		
	15	150	C		
	6	300	B, D, E		

Options / Accessories

- Consecutive numbering
- Special marking according to drawing
- Self-adhesive marking strip BST-7,50
- Insulation receptacles ISO
- Insulation sockets ISO-900
- Change of pitch
- Component mix of tab connector versions
- Tab connectors are also individually available (see single tabs GST-900)

Tab connector
900-SUC-7,5
Tab 4,8 mm



The tab connector 900-SUC-7,5 with double solder termination and a pitch of 7,5 mm is designed for 4,8 mm tab connector receptacles.

Depending on the respective application, the tab connectors of series 900 allow to plug in bare, partially or fully insulated tab receptacles according to DIN 46247. Insulation receptacles ISO-187 (see also ISO product data sheet) can be used to insulate 4,8 mm tab receptacles.
Insulation sockets are available for 6,3 mm tab connectors with double-spring contacts (see also ISO-900 product data sheet).

Part Numbers

No. of poles	900-SUC-7,5	Length	Pcs
2	17.870.903	13,50	250
3	17.870.904	18,50	200
4	17.870.906	28,50	100
5	17.870.907	33,50	100
6	17.870.909	43,50	100
7	17.870.910	48,50	100
8	17.870.912	58,50	100
9	17.870.913	63,50	100
10	17.870.915	73,50	100
11	17.870.916	78,50	100
12	17.870.918	88,50	100
13	17.870.919	93,50	100
14	17.870.921	103,50	100
15	17.870.922	108,50	100
16	17.870.924	118,50	50
17	17.870.925	123,50	50

General Information

Pitch	7,5 mm
No. of poles	2 - 17

Technical Data

Overvoltage Category	III	III	II
Pollution Severity Level	3	2	2
Rated Voltage	500 V	630 V	1000 V
Rated Impulse Voltage	6 kV	6 kV	6 kV
Rated Insulation Voltage	750 V acc. to EN 60998-1		
Rated Current	16 A: with receptacles 4,8; wire 2,5 mm² (14 AWG)		
Hole in PCB	ø 1,6 mm		
Other specifications	Indicated rated voltages refer to applications with insulation receptacles		

Material

Moulding	PA, red, V-0
Comparative Tracking Index	CTI ≥ 600
Insulating Group	I
Temperature Range	-40°C up to 100°C
Solder pin	1,0 x 0,8 mm; tin plated brass
Tab	4,8 x 0,8 mm; tin plated brass

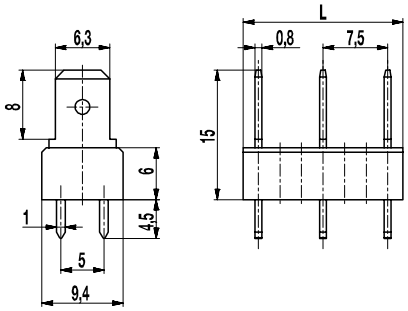
Approvals

	Current	Voltage	Group	AWG	Nm
	15	300	B		
	15	150	C		
	15	300	B		
	10	300	D, E		

Options / Accessories

- Consecutive numbering
- Special marking according to drawing
- Self-adhesive marking strip BST-7,50
- Insulation receptacles ISO
- Insulation sockets IS0-900
- Change of pitch
- Component mix of tab connector versions
- Tab connectors are also individually available (see single tabs GST-900)

Tab connector
900-SUN-7,5
Tab 6,3 mm



The tab connector 900-SUN-7,5 with double solder termination and a pitch of 7,5 mm is designed for 6,3 mm tab connector receptacles.

Depending on the respective application, the tab connectors of series 900 allow to plug in bare, partially or fully insulated tab receptacles according to DIN 46247. Insulation receptacles ISO-25 and ISO-250 (see also ISO product data sheet) can be used to insulate 6,3 mm tab receptacles.
Insulation sockets are available for 6,3 mm tab connectors with double-spring contacts (see also ISO-900 product data sheet).

Part Numbers

No. of poles	900-SUN-7,5	Length	Pcs
2	47.870.903	13,50	250
3	47.870.904	18,50	200
4	47.870.906	28,50	100
5	47.870.907	33,50	100
6	47.870.909	43,50	100
7	47.870.910	48,50	100
8	47.870.912	58,50	100
9	47.870.913	63,50	100
10	47.870.915	73,50	100
11	47.870.916	78,50	100
12	47.870.918	88,50	100
13	47.870.919	93,50	100
14	47.870.921	103,50	100
15	47.870.922	108,50	100
16	47.870.924	118,50	50
17	47.870.925	123,50	50

General Information

Pitch	7,5 mm
No. of poles	2 - 17

Technical Data

Overvoltage Category	III	III	II
Pollution Severity Level	3	2	2
Rated Voltage	500 V	630 V	1000 V
Rated Impulse Voltage	6 kV	6 kV	6 kV
Rated Insulation Voltage	750 V acc. to EN 60998-1		
Rated Current	16 A: with receptacles 6,3; wire 2,5 mm² (14 AWG)		
Hole in PCB	ø 1,6 mm		
Other specifications	Indicated rated voltages refer to applications with insulation receptacles		

Material

Moulding	PA, red, V-0
Comparative Tracking Index	CTI ≥ 600
Insulating Group	I
Temperature Range	-40°C up to 100°C
Solder pin	1,0 x 0,8 mm; tin plated brass
Tab	6,3 x 0,8 mm; tin plated brass

Approvals

	Current	Voltage	Group	AWG	Nm
	15	300	B		
	15	150	C		
	15	300	B		
	10	300	D, E		

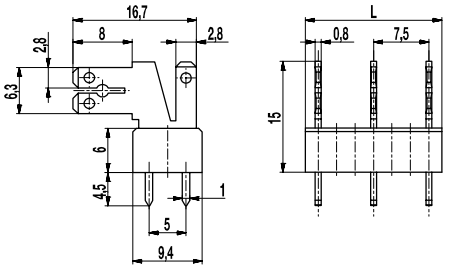
Options / Accessories

- Consecutive numbering
- Special marking according to drawing
- Self-adhesive marking strip BST-7,50
- Insulation receptacles ISO
- Insulation sockets IS0-900
- Change of pitch
- Component mix of tab connector versions
- Tab connectors are also individually available (see single tabs GST-900)

Tab connector

900-W-7,5

Tabs with 90° angle



The tab connector 900-W-7,5 with double solder termination and a pitch of 7,5 mm is designed for 1x 2,8 mm and 1x 2,8 mm / 1x 6,3 mm tab connector receptacles.

Depending on the respective application, the tab connectors of series 900 allow to plug in bare, partially or fully insulated tab receptacles according to DIN 46247. A non-insulated 2,8 mm or a 6,3 mm (optionally also insulated) tab connector receptacle can be plugged in the angled plug-in area of the tab connector. To the vertical tab connector, a non-insulated 2,8 mm tab connector receptacle can be also be connected. Insulation receptacles ISO-25 and ISO-250 (see also ISO product data sheet) can be used to insulate 6,3 mm tab receptacles.

Part Numbers

No. of poles	900-W-7,5	Length	Pcs
2	27.870.903	13,50	250
3	27.870.904	18,50	200
4	27.870.906	28,50	100
5	27.870.907	33,50	100
6	27.870.909	43,50	100
7	27.870.910	48,50	100
8	27.870.912	58,50	100
9	27.870.913	63,50	100
10	27.870.915	73,50	50
11	27.870.916	78,50	50
12	27.870.918	88,50	50
13	27.870.919	93,50	50
14	27.870.921	103,50	50
15	27.870.922	108,50	50
16	27.870.923	118,50	50
17	27.870.924	123,50	50

General Information

Pitch	7,5 mm
No. of poles	2 - 17

Technical Data

Overvoltage Category	III	III	II
Pollution Severity Level	3	2	2
Rated Voltage	500 V	630 V	1000 V
Rated Impulse Voltage	6 kV	6 kV	6 kV
Rated Insulation Voltage	750 V acc. to EN 60998-1		
Rated Current	6 A: with receptacles 2,8; wire 1 mm² (16 AWG) 16 A: with receptacles 6,3; wire 2,5 mm² (14 AWG)		
Hole in PCB	ø 1,6 mm		
Other specifications	Indicated rated voltages refer to applications with insulation receptacles		

Material

Moulding	PA, red, V-0
Comparative Tracking Index	CTI ≥ 600
Insulating Group	I
Temperature Range	-40°C up to 100°C
Solder pin	1,0 x 0,8 mm; tin plated brass
Tab	2,8 x 0,8 mm; 6,3 x 0,8 mm; tin plated brass

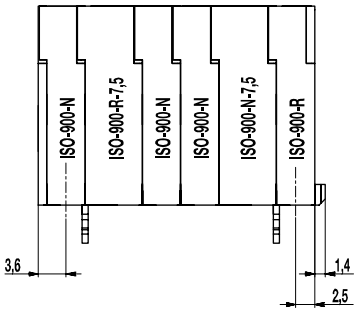
Approvals

	Current	Voltage	Group	AWG	Nm
	15 15	300 150	B C		
	15 10	300 300	B D, E		

Options / Accessories

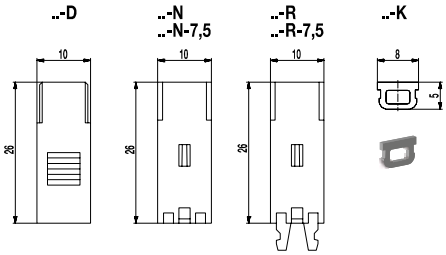
- Consecutive numbering
- Special marking according to drawing
- Self-adhesive marking strip BST-7,50
- Insulation receptacles ISO
- Change of pitch
- Component mix of tab connector versions
- Tab connectors are also individually available (see single tabs GST-900)

Insulation sockets
ISO-900
Accessories



Mounting example

Versions



Version D: Cover
Version N: Standard insulation socket
Version R: Insulation socket with snap-fits
Version K: Coding keys to block empty chambers

ISO-900 insulation sockets are used to insulate double spring contacts.
They are single pole and can be mounted side-by-side in 5 mm and 7,5 mm pitch.
Apart from the standard insulation sockets ISO-900-N und ISO-900-N-7,5, type ISO-900-R and ISO-900-R-7,5 with a latching hook are available to provide additional locking strength against accidental withdrawal. These latching hooks snap in the empty receptacles of tab connectors 900-S and 900-SUN.
The cover ISO-900-D is used as contact protection for the last pole.
Insulation sockets with latching hooks and ISO-900-K coding keys allow contacting the sockets. They are inserted into the empty slots of the tab connector, in which no insulation socket with latching hook is allocated, thus preventing incorrect connections.

General Information

Pitch	5 mm / 7,5 mm
Usable with	Tab connectors 900-S, 900-SUN and 900-SUC
Additonal Information	When accurately positioned in the socket, the double-spring contacts audibly snap into place. These metal parts are not part of our product range. They can be used e.g. for TYCO timer contacts (no. 925598-1).

Material

Moulding	PA, red, V-0
Comparative Tracking Index	CTI ≥ 600
Insulating Group	I
Temperature Range	-40°C up to 100°C

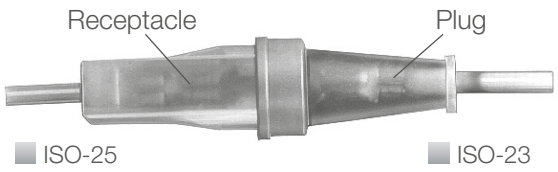
Options / Accessories

- Special marking according to drawing
- ISO-900 insulation sockets can be provided as multipole combinations. Please enclose a drawing.
- Spacer 2,5 mm (ISO-900-Z)

Part Numbers

Type	Part Numbers	Length	Pcs
ISO-900-D	25.838.106		1000
ISO-900-N	10.838.104		1000
ISO-900-N-7,5	10.838.105		1000
ISO-900-R	20.838.107		1000
ISO-900-R-7,5	10.838.108		1000
ISO-900-K	10.496.021		1000

Insulation receptacles
ISO
Accessories



Mounting example

Depending of their scope of application, insulation receptacles are made of either polyethylene (..-PE) or polypropylene V-0 (..-PPV0) and are available in various colours and sizes. Tab receptables according to DIN 46 247 are fully insulated (including the crimped point) with insulation receptacles. Prior to crimping, they are pushed onto the wire end, and are therefore captive. They can also be used to insulate crimped plug-in receptacles and cable sockets.

General Information

Additional Information	By means of using both ISO-23 (tab connector side) and ISO-25 insulation receptacles, a 6,3 mm cross-section cable connection can be completely insulated (see figure).

Material

Moulding	PE = Polyethylene (see table for colours) PP = Polypropylene, nature, V-0
Comparative Tracking Index	CTI ≥ 600
Insulating Group	I
Temperature Range	PE: ca. 70 up to 80°C, short-time ca. 90°C PP: up to 80°C, short-time ca. 140°C

Options / Accessories

- Insulation receptacles in other colours

Part numbers

Part numbers	Type	Colour	Nom. size	Cross-section	Length x width x height	Pcs
10.838.001	ISO-110-PEN	natural	2,8	up to 1 mm² (16 AWG)	19,5 x 5,5 x 3,5 mm	10.000
10.838.031	ISO-110-PEG	yellow	2,8	up to 1 mm² (16 AWG)	19,5 x 5,5 x 3,5 mm	10.000
10.838.034	ISO-110-PER	red	2,8	up to 1 mm² (16 AWG)	19,5 x 5,5 x 3,5 mm	10.000
10.838.021	ISO-110-PES	black	2,8	up to 1 mm² (16 AWG)	19,5 x 5,5 x 3,5 mm	10.000
10.838.032	ISO-110-PPV0	nature	2,8	up to 1 mm² (16 AWG)	19,5 x 5,5 x 3,5 mm	10.000
10.838.011	ISO-187-PEN	natural	4,8	up to 1,5 mm² (16 AWG)	21 x 8 x 4,5 mm	10.000
10.838.005	ISO-187-PEG	yellow	4,8	up to 1,5 mm² (16 AWG)	21 x 8 x 4,5 mm	10.000
10.838.035	ISO-187-PER	red	4,8	up to 1,5 mm² (16 AWG)	21 x 8 x 4,5 mm	10.000
10.838.036	ISO-187-PES	black	4,8	up to 1,5 mm² (16 AWG)	21 x 8 x 4,5 mm	10.000
10.838.044	ISO-187-PPV0	nature	4,8	up to 1,5 mm² (16 AWG)	21 x 8 x 4,5 mm	10.000
10.838.006	ISO-23-PEN	natural	6,3	up to 2,5 mm² (14 AWG)	23 x 12,5 x 8,5 mm	10.000
10.838.007	ISO-23-PEG	yellow	6,3	up to 2,5 mm² (14 AWG)	23 x 12,5 x 8,5 mm	10.000
10.838.017	ISO-23-PES	black	6,3	up to 2,5 mm² (14 AWG)	23 x 12,5 x 8,5 mm	10.000
10.838.046	ISO-23-PPV0	nature	6,3	up to 2,5 mm² (14 AWG)	23 x 12,5 x 8,5 mm	10.000
10.838.013	ISO-25-PEN	natural	6,3	up to 2,5 mm² (14 AWG)	25 x 9,5 x 5 mm	10.000
10.838.014	ISO-25-PEG	yellow	6,3	up to 2,5 mm² (14 AWG)	25 x 9,5 x 5 mm	10.000
10.838.016	ISO-25-PES	black	6,3	up to 2,5 mm² (14 AWG)	25 x 9,5 x 5 mm	10.000
10.838.045	ISO-25-PPV0	nature	6,3	up to 2,5 mm² (14 AWG)	25 x 9,5 x 5 mm	10.000
10.838.009	ISO-250-PEN	natural	6,3	up to 4 mm² (12 AWG)	25 x 9,5 x 6 mm	10.000
10.838.010	ISO-250-PEG	yellow	6,3	up to 4 mm² (12 AWG)	25 x 9,5 x 6 mm	10.000
10.838.018	ISO-250-PES	black	6,3	up to 4 mm² (12 AWG)	25 x 9,5 x 6 mm	10.000
10.838.048	ISO-250-PPV0	nature	6,3	up to 4 mm² (12 AWG)	25 x 9,5 x 6 mm	10.000

* Since cable diameters vary, cross-sections are only reference values.

Single tabs
GST-900
Accessories

This tabs for printed circuits with a thickness of 0,8 mm are used to connect tab receptacles, size 2,8, 4,8 and 6,3 according to DIN 46 247.
Depending on their scope of application they are available with vertical and/or parallel outgoing wires.
Tabs can be insulated with our ISO insulation receptecles.

Technical Data

Rated Current	Tab 2,8:	6 A
	Tab 4,8:	16 A
	Tab 6,3:	25 A
	please see DIN 46 249	

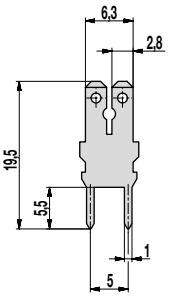
Material

Tab	Tin plated brass, thickness 0,8 mm

Options / Accessories

- Tab GST-900-S with press-fit pins

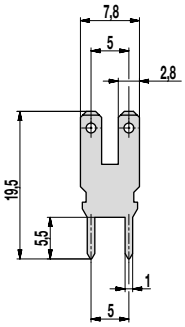
Versions



GST-900-S

Tab width
1x 6,3 mm / 2x 2,8 mm

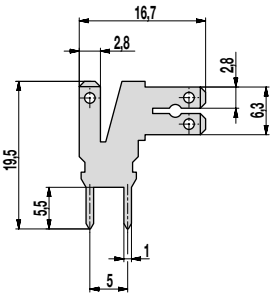
For a non-insulated
2,8 mm or an
insulated 6,3 mm
tab receptacle



GST-900-SH

Tab width
2x 2,8 mm

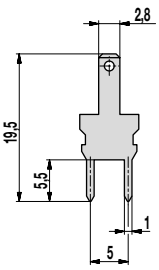
2 non-insulated
2,8 mm tab
receptacles fit next
to each other



GST-900-W

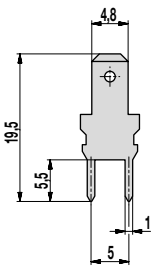
Tab width
1x 2,8 mm
1x 6,3 mm / 2x 2,8 mm

For a non-insulated
2,8 mm or an
insulated 6,3 mm
tab receptacle



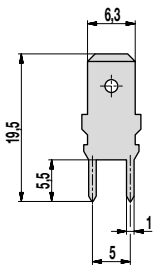
GST-900-SUB

Tab width
2,8 mm



GST-900-SUC-4,8

Tab width
4,8 mm



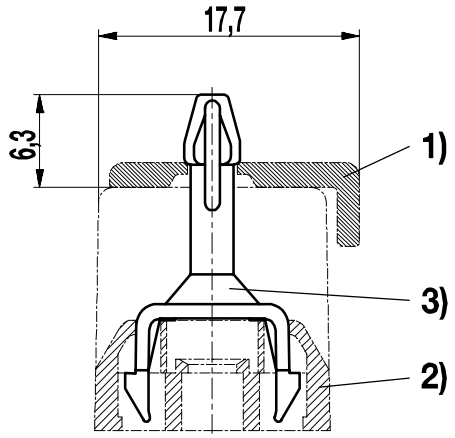
GST-900-SUN

Tab width
6,3 mm

Part numbers

Type	Part number	Pcs
GST-900-S	10.351.107	1.000
GST-900-SH	10.351.111	1.000
GST-900-SUB	10.371.106	1.000
GST-900-SUC-4,8	10.361.108	1.000
GST-900-SUN	10.351.113	1.000
GST-900-W	10.351.109	1.000

Securing pin
BEF-983
Accessories



1) Cover cap
2) PCB connector
3) Securing pin

The securing pins BEF-983 are used to attach the cover caps onto series 982 and 983 PCB connectors.
Both pins are pressed into the far end empty pole compartments of the series 982 and 983 PCB connectors.

Part Numbers

No. of poles	BEF-983	Length	Pcs
1	10.476.008		1.000

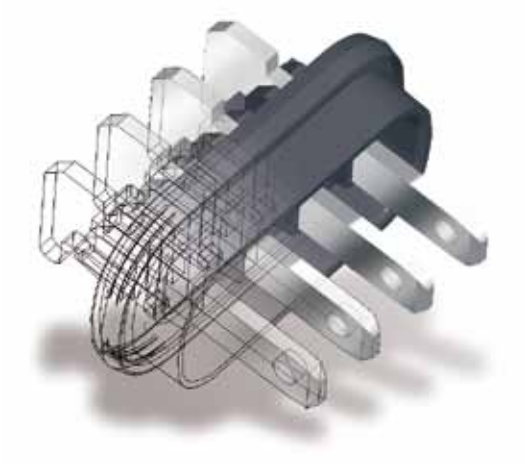
General Information

Usable with	PCB connectors series 982 and 983, cover caps 982-A and 983-A

Material

Moulding	PA, grey, V-0
Temperature Range	-30°C up to 80°C

Looking for a Customer Designed Solution?



„Sealed“

With a pitch of 3.5 mm, this insert with four tabs 2.8 x 0.8 mm was designed to seal the contacts, for an application which required the protection class IP54.

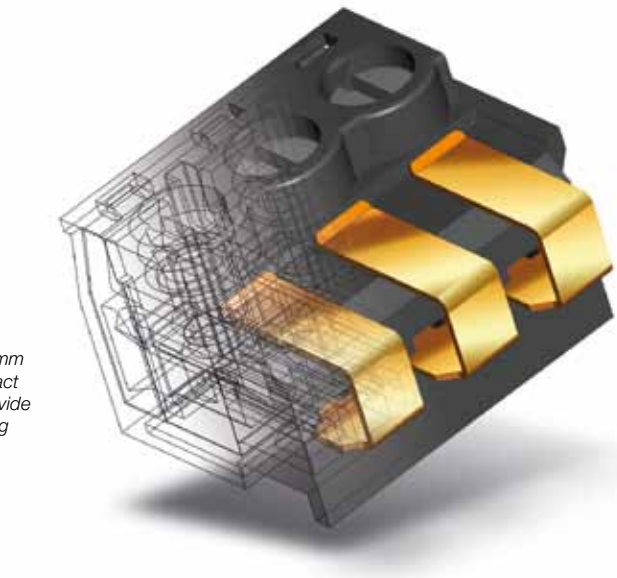
„Top“

Version of a terminal our series 970 in 5 mm pitch.
In order to achieve a distance of 100 mm from the PCB, a housing was constructed, which not only does protect the pins but also positions them in a special arrangement. In the terminal area are also placed elongated ribs.

Our Product Information Centre will assist you with every technical inquiry.

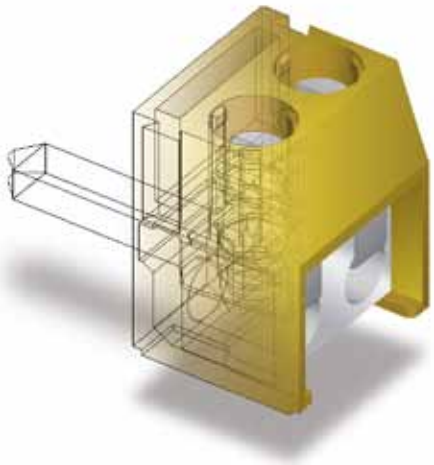
- Please, call us under +49 6181 105-151.
- Contact us via e-mail at products@wecogroup.com.
- You want us to pay you a visit? We are pleased to arrange an appointment.
- You would prefer a visit in Hanau?
  Of course, you are welcomed anytime.

We are looking forward to your call.



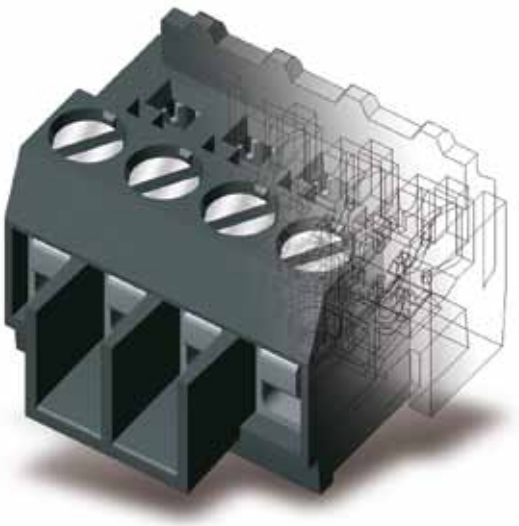
„Well Contacted“

This plug connector with the pitch of 5 mm is designed with outer gold-plated contact surfaces. Additionally, the side walls provide ribs for receiving a corresponding locking hook.



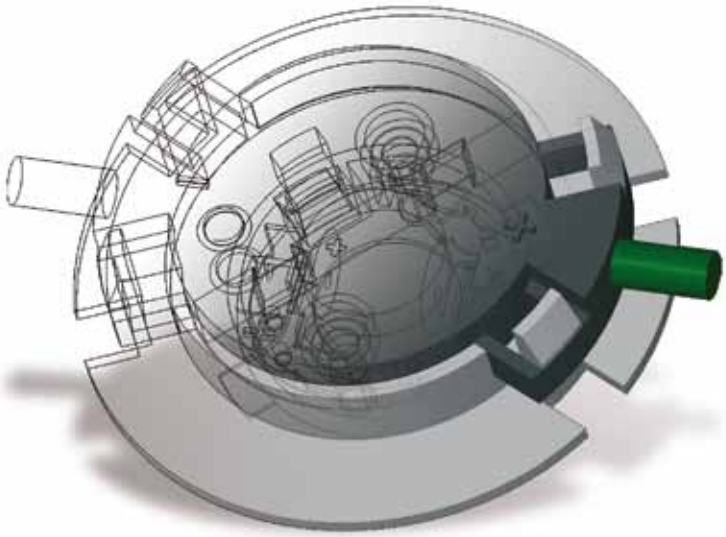
„Stable bridged“

Terminal connector in 5 mm pitch with one potential but two screw connections and a plug connector at the back. This allows a connection to other terminals.
For the customer the housing was made with buttercup yellow material (similar to RAL 1021).



„Long-ribbed“

A plug connector with a pitch of 3.5 mm, with a anti-twist peg and two extra-long guiding ribs.
In the plug connection area, tabs and round plug pins could be contacted.

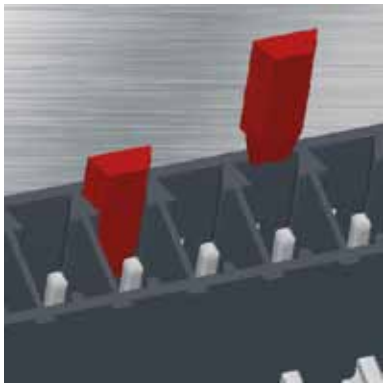


„Solar“

Draft for a photovoltaic-module connection.

Accessories / Options

Coding elements



This coding element is applicable for the Conecta Series of 110, 120, 121 and 122.
For coding, all pin strips and plug connectors of this series are equipped with a trapezoidal slot per pole into which the coding elements can easily be inserted.
With this, simple solution error free plugging is ensured.
In the standard version the coding elements have a bright red colour, making them clearly visible in mated condition. Alternatively, they are also available in light grey. 12 of each coding element are related to a strip.

Part number	Type	Colour	Pcs
20.496.025	120-K/12 KODIEREL.	red	120
17.496.025	120-K/12 KODIEREL. LG	light grey	120

Marking strips

These marking strips are made of polyester with black print on a silver background. They have a scratch resistant mylar surface.
Numbering begins with 1, the specified pole number is the last digit respectively.
The marking strips withstand printed circuit board cleaning agents containing water and soap, freon, fluorinated or chlorinated ingredients; they are not suitable for reflow soldering procedures.
They are supplied on adhesive cards each containing ten strips.

Part number	Type	Pitch	Length (L)	Width (a)	Pcs
24.499.012	BST-7,50/19	7,50 mm	141 mm	3,5 mm	100

Marking

Alternatively to the self-adhesive marking strips, we offer a special marking to meet almost any special and individual marking requirement. The printing is carried out on pre-designed marking areas.
Depending upon the housing colour, the numbers are imprinted in white or in black.
Other printing colours are possible on request.

Accessories / Options

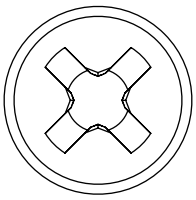
Colours

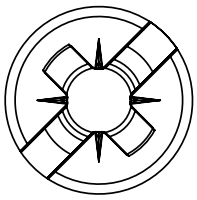
WECO offers a wide range of housing colours.
Besides our standard housing colours, you can choose between many other colours.
Please contact us for further information.

Screws

Our standard products are fitted with slotted screws.
On enquiry and customer‘s request, we also offer screws with Philips/Pozidrive or +/- screw heads.

Further materials:
Standard screws are made of steel; also screws out of various materials, e.g. brass, are available on request.





Packaging: Card board boxes, Tape-on-Reel, Magazines

According to standard, we pack our products in pollution free folding boxes from card board and from corrugated board. Besides, we offer transfer tubes (magazines) as packing for the use with feeders and dispensers for automated insertion machinery. Transfer tubes offer the advantage of a better transportation facility and a simple withdrawal over the cardboards.

Our SMD and THR products are packed in “Tape-on-Reel” for the automated assembly process in pick and place machines. Please find data sheet information about products packed on Tape-on-Reel on our website.

Technical Information

Rating of clearance and creepage distances according to DIN EN 60664-1 (VDE 0110-1)

The rating of clearance and creepage distances depends on the expected electrical surge, the characteristic values of the electronic protection measures as well as the contamination at the place of installation.

Clearanece distances are dimensioned in accordance with the rated impulse voltage table F.1, which results out of the overvoltage category and phase-to-earth voltage.

The minimum clearance in air is stated at altitudes of less than 2000m above sea level and ascertained in accordance with the impulse voltage and the contamination level, table 2.

Creepage distances are measured by the operating voltage, the characteristic of the insulants (CTI value), the expected contamination level as well as the preventive measures against contamination.

Basis of the creepage distance is the rated voltage derived from the operating and / or system voltage.

The minimum creepage distance (depending on the respective degree of contamination) are assigned to the rated voltage, see table F.4.

Overvoltage categories

Overvoltage category IV

Electrical equipments for the use at the connection point of the installation e.g. electricity meter and primary over-current protection devices.

Overvoltage category III

Electrical equipment in firm installations and for such cases in which special demands are made against the reliability and the availability of the electrical equipment, e.g. switches in firm installations and devices for industrial use with continuing connection to the firm installation.

F.2 DIN EN 60664-1 (VDE 0110-1), table F.2 (extract)
Clearance for transient overvoltages

Required impulse withstand voltage [1] [5]	Mimimum clearence in air up to 2 000 m above sea level		
	Case A Inhomogeneous field (see 3.15)		
	Pollution degree		
	1	2	3
kV	mm	mm	mm
1,2	0,25	0,25	0,8 [4]
1,5 [2]	0,5	0,5	
2,0	1,0	1,0	1,0
2,5 [2]	1,5	1,5	1,5
3,0	2,0	2,0	2,0
4,0 [2]	3,0	3,0	3,0
5,0	4,0	4,0	4,0
6,0 [2]	5,5	5,5	5,5
8,0 [2]	8,0	8,0	8,0

[1] This voltage is
- for functional insulation, the maximum impulse voltage expected to occur accross the clearence (see 5.1.5),
- for basic insulation directly exposed to or significantly influenced by transient overvoltages from the low-voltage mains (see 4.3.3.3, 4.3.3.4.1 and 5.1.6), the rated impulse voltage of the equipment,
- for other basic insulation (see 4.3.3.4.2), the highest impulse voltage that can occur in the circuit.

[2] Prefered values as specified in 4.2.3.

[4] The minimum clearences given for pollution degrees 2 and 3 are based on the reduced withstand characteristics of the associated creepage distance under humidity conditions (see IEC 60664-5).

[5] For parts or circuits within equipment subject to impulse voltages according to 4.3.3.4.2, interpolation of values is allowed. However, standardization is achieved by using the preferred series of impulse voltage values in 4.2.3.

Overvoltage category II

Energy using electrical equipment, which is energised by a firm installation e.g. household appliances, portable tools and other domestic appliances as well as similar devices.

Overvoltage category I

Electrical equipment for the connection to electric circuits, in which measures are taken for the delimitation of the transient overvoltages to a suitable low value, e.g. devices with electronic circuits and appropriate protection level.

F.4 DIN EN 60664-1 (VDE 0110-1), table F.4 (extract)
Creepage distance for the avoidance of the failure by tracking

Voltage r.m.s. [1]	Minimum creepage distances								
	Printed wiring material								
	Pollution degree								
	1	2	1	2			3		
	All material groups	All material groups except IIIb	All material groups	Material group I	Material group II	Material group III	Material group I	Material group II	Material group III [2]
V	mm	mm	mm	mm	mm	mm	mm	mm	mm
25	0,025	0,040	0,125	0,500	0,500	0,500	1,250	1,250	1,250
32	0,025	0,040	0,14	0,53	0,53	0,53	1,30	1,30	1,30
40	0,025	0,040	0,16	0,56	0,80	1,10	1,40	1,60	1,80
50	0,025	0,040	0,18	0,60	0,85	1,20	1,50	1,70	1,90
63	0,040	0,063	0,20	0,63	0,90	1,25	1,60	1,80	2,00
80	0,063	0,100	0,22	0,67	0,95	1,30	1,70	1,90	2,10
100	0,100	0,160	0,25	0,71	1,00	1,40	1,80	2,00	2,20
125	0,160	0,250	0,28	0,75	1,05	1,50	1,90	2,10	2,40
160	0,250	0,400	0,32	0,80	1,10	1,60	2,00	2,20	2,50
200	0,400	0,630	0,42	1,00	1,40	2,00	2,50	2,80	3,20
250	0,560	1,000	0,56	1,25	1,80	2,50	3,20	3,60	4,00
320	0,75	1,60	0,75	1,60	2,20	3,20	4,00	4,50	5,00
400	1,0	2,0	1,0	2,0	2,8	4,0	5,0	5,6	6,3
500	1,3	2,5	1,3	2,5	3,6	5,0	6,3	7,1	8,0
630	1,8	3,2	1,8	3,2	4,5	6,3	8,0	9,0	10,0
800	2,4	4,0	2,4	4,0	5,6	8,0	10,0	11,0	12,5
1000	3,2	5,0	3,2	5,0	7,1	10,0	12,5	14,0	16,0

[1] This voltage is
- for functional insulation, the working voltage,
- for basic and supplementary insulation of the circuit energized directly from the supply mains (see 4.3.2.2.1), the voltage rationalized through Table F.3a or Table F.3b, based on the rated voltage of the equipment, or the rated insulation voltage,
- for basic and supplementary insulation of systems, equipment and internal circuits not energized directly from the mains (see 4.3.2.2.2), the highest r.m.s. voltage which can occur in the system, equipment or internal circuit when supplied at rated voltage and under the most onerous combination of conditions of operation within equipment rating.

[2] Material group IIIb is no not recommended for application in pollution degree 3 above 630 V.

Degree of contamination

The micro environment determines the influence of the contamination on the isolation.

However the macro environment must be considered with the view of the micro environment.

Resources to achieve a reduction of the contamination on the regarded isolation can be planned by the effective employment of casings (housings), encapsulations or hermetic sealings.

The influence of the contamination is considered with the calculation of air and creepage distances by degrees of pollution.

F.1 DIN EN 60664-1 (VDE 0110-1), table F.1 (extract)
Rated impulse voltages for electrical equipments, which are energised directly by a low-voltage system

Nominal voltage of the supply system [1] based on IEC 60038 [3]		Rated impulse voltage [2]			
		Overvoltage catagory [4]			
Three phase	Single phase	I	II	III	IV
V	V	V	V	V	V
	120-240	800	1 500	2 500	4 000
230/400 277/480		1 500	2 500	4 000	6 000
400/690		2 500	4 000	6 000	8 000
1 000		4 000	6 000	8 000	12 000

[1] See Annex B for application to existing different low-voltage mains and their nominal voltages.

[2] Equipment with these rated impulse voltages can be used in installations in accordance with IEC 60364-4-44.

[3] The / mark indicates a four-wire three-phase distribution system. The lower value is the voltage line-to-neutral, while the higher value is the voltage line-to-line. Where only one value is indicated, it refers to three-wire, three-phase systems and specifies the value line-to-line.

[4] See 4.3.3.2.2 for an explanation of the overvoltage catagories.

Technical Information

Four degrees of contamination levels are defined for the micro environment:

Contamination level 1
No contamination or only dry, non-conductive contamination occurs. The contamination has no influence.

Contamination level 2
Only non-conductive contamination occurs. However, occasional temporary conductivity must be expected as a result of moisture condensation.

Contamination level 3
Conductive contamination occurs; dry, non-conductive contamination which becomes conductive as a result of moisture condensation may also occur.

Contamination level 4
Impurities in the form of conductive dust, rain or humidity result in permanent conductivity.

Insulant

DIN EN 60664-1 (VDE 0110-1) divides the insulants according to their CTI values in four groups. These are:

Insulant I: 600 = CTI
Insulant II: 400 = CTI < 600
Insulant IIIa: 175 = CTI < 400
Insulant IIIb: 100 = CTI < 175

The check numbers of the tracking must be determined according to IEC 60112 at an examination body using test solution A. The check number of the tracking is used as a proof of the creepage characteristics of insulants.

Rated cross section

The current carrying capacity depends not only on the terminal design, but also on the application of the terminals. The appropriate specifications for the devices, e.g. DIN EN 60335-1 (VDE 0700-1), should be taken into account.
According to DIN EN 60999-1/VDE 0609 part 1, the current cross section and respectively the rated connection ability of a connection referres to the wire cross section indicated by the manufacturer, to which determined thermal, mechanical and electrical requirements apply to.
The relationship between rated connection abilities and diameters of the wires is represented in table 1.
If nothing else is specified in the product standard, each connection point must be able to take up not only its rated cross section (rated connection ability) but also the next two lower cross sections.
Connecting points must be able to take up unprepared wires.
Regarded as unprepared wires are all cables stripped at their ends, whose form is adjusted before insertion or whose wires are twisted for the purpose of the solidification.

T1 DIN EN 60999-1, table 1 (extract)
Relation between rated connection abilities and wires

Rated cross section	Theoretical diameter of the largest conductor						
	metric			AWG			
	solid		flexible	solid			flexible
	single wire	multi-stranded wire			b) single wire	b) Class B multi-stranded wire	c) Class I, K, M multi-stranded wire
mm²	mm	mm	mm	No.	mm	mm	mm
0,2	0,51	0,53	0,61	24	0,54	0,61	0,64
0,34	0,63	0,66	0,8	22	0,68	0,71	0,80
0,5	0,9	1,1	1,1	20	0,85	0,97	1,02
0,75	1,0	1,2	1,3	18	1,07	1,23	1,28
1,0	1,2	1,4	1,5	–	–	–	–
1,5	1,5	1,7	1,8	16	1,35	1,55	1,60
2,5	1,9	2,2	2,3 a)	14	1,71	1,95	2,08
4,0	2,4	2,7	2,9 a)	12	2,15	2,45	2,70
6,0	2,9	3,3	3,9 a)	10	2,72	3,09	3,36
10,0	3,7	4,2	5,1	8	3,34	3,89	4,32
16,0	4,6	5,3	6,3	6	4,32	4,91	5,73
25,0	–	6,6	7,8	4	5,45	6,18	7,26
35	–	7,9	9,2	2	6,87	7,78	9,02

NOTE The diameter of the largest solid and flexible wire is based on Table 1 according to IEC 60228A and IEC 60344 and for AWG conductors on ASTM B 172-71 [4], ICEA-Publication S-19-81 [5], ICEA-Publication S-66-524 [6] and ICEA-Publication S-66-516 [7].

a) Information only for flexible wires in class 5 of IEC 60228A.
b) Nominal + 5 %.
c) Largest diameter for each of the three classes I, K, M + 5 %.

In the USA and Canada an identification is used by leader sizes (AWG) instead of the cross section indicated in mm².

Current carrying capacity

Current carrying capacity In the technical data a current carrying capacity is shown, with which no thermal damage and no disturbance of the function arise under consideration of the rated cross section and the ambient temperature.
Testing currents according to DIN EN 60998-1 (VDE 0613 part 1) are assigned to the rated cross sections in table 2.
With the testing currents the heating up of energized parts of the connecting point may not exceed 45 K.
The permitted carrying capacity not only depends on the terminal construction, but also on the use of the terminal.
The appropriate technical regulations for devices, e.g. DIN EN 60335-1 (VDE 0700-1) should be taken into consideration.

T2 DIN EN 60998-1, table 2 (extract)
Relation between rated connection abilities and testing current

Rated Cross-section	Load capacity
mm²	A
0,2	4
0,34	5
0,5	6
0,75	9
1	13,5
1,5	17,5
2,5	24
4	32
6	41
10	57
16	76
25	101
35	125

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* = Pitch 7,62 mm

** = Pitch 9,52 mm

Catalogue overview

Electronic

1: Pitch 3,5 mm
2: Pitch 5 mm
3: Pitch 5,08 mm
4: Pitch 7,5 mm
5: Pitch >10 mm
6: SMD & THR

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Art.-No.: 46 955 102
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Connection Technology for Printed Circuit Boards up from pitch 10 mm

WECO - making contact

Catalogue 5

Electronic

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983-FD

Symbols on data sheets

These symbols can be found on our data sheets on the right side of the product image.

RoHS COMPLIANT	These articles comply with the RoHS regulations.
pottable	Through its geometry, this product is specially suitable for potting.
„no flame“ after glow-wire test according to household appliance standard DIN EN/IEC 60335-1	The materials used for enclosures are VDE-tested and approved according to the glow-wire tests specified in DIN EN/IEC 60335-1. It is conform with the requirements of the increased household appliance standard.

We reserve the right to make technical as well as changes to measurements, colours and formats after print. Only the values given in our written confirmations will be binding for us. Please take notice that it is not allowed to use our photos, drawings or catalogue pages for your own applications without having our written agreement.

Overview

Connectors for printed circuit boards

WECO PCB connectors always offer a good solution for almost any connection problem by its big variety of types. The screw connections are available in socket terminal style, in elevator clamping style or as head contact terminals. The plug connectors are especially designed for the connection of components or peripheral devices. Tab connectors and screwless types complete the product program.

Plug-In connector systems

The series of conecta are plug-in connector systems consisting of plug connectors with screw and their corresponding pin strips.
Due to four different pitch sizes, lateral flange executions, tier versions and different plug directions, this product serie suit almost every application on the PCB. All connectors offer coding possibilities to avoid incorrect plugging.

SMD & THR

“SMarTconn” covers terminals and plug connectors for surface mount and reflow soldering technique. Apart from the proven Through-Hole-Technology (THR) we focus on genuine SMD - Surface Mount Devices – in this product serie. With their reliable adhesive forces and their good reflow soldering capabilities, we offer products, which are a worthy replacement for the conventional soldering technique. All products of this series are packed in tape-on-reel or tube magazines for the automatic assembling with a pick & place machine.

Terminal strips

This group contains socket terminals, plug-in connectors, screwless types and additionally the combination of screw and solder tag for the wire-to-wire connection. All types are available for different cross sections, with and without wire protectors. The used Polyamide plastic material pass the ball pressure test with 125°C according to VDE 0470, which is demanded in many IEC and VDE regulations for insulants.

Tab connectors

These connectors are equipped with receptacles in different sizes and styles. Mixed arrangements per terminal block as well as per pole (Multi-Point Tab Connectors) are possible. Combinations of tab / solder connectors, flat plug couplers and space saving tier versions increase the density of connections. The tab connectors offer a wide spectrum of possible combinations, whereby many connection problems can be solved.

Ceramic terminal blocks

This group covers mantle terminals, ceramic terminal strips and terminals for explosion and firedamp-hazard areas. Various sizes and designs permit them to be used for wire cross sections up to 120 mm² and including applications in furnace construction and ship building, for engines and intrinsically safe electrical equipment. The terminal blocks with ceramic insulator can be used at increased temperatures.

The WECO Group

We, WECO Contact GmbH, are a German manufacturer of high reputation in the field of electronics and electrical engineering. Our headquarter is located in Hanau and has own assembly and sales companies in USA, Canada, Brazil, France, China, Hong Kong and Mexico. With over 450 employees and a worldwide distribution network in 56 countries, we speak the language of our customers.

Our extensive product range includes nearly 17,000 different articles.

We are well known for innovation which is particularly evident in the patented SMD series for the genuine surface mounting technology. Hereby, the user experiences real cost savings in the manufacturing process, especially if the terminal is the last component of the customer to be soldered on the board.

Another strength are the customer-specific developments and a fast and flexible project implementation with which we respond to the increasing engineering demands of the middle class customers.

The entire WECO Group is a reliable partner for our customers, and the customers' satisfaction is one of our main goals to achieve.

www.wecogroup.com

Household Appliance Standard DIN EN/IEC 60335-1

What is the household appliance standard all about?

The Household Appliance Standard DIN EN/IEC 60335-1:2007-02 standardizes the safety features of electrical appliances for household use and similar purposes.

The standard requires testing of glow wire resistance for non-metallic materials used in appliances operated with >0,2 A and applies for non-metallic materials which hold active components in position.

These fire protection requirements shall prevent self-ignition of unattended appliances thus significantly increasing fire safety.

For which appliances does this standard apply?

The standard is applicable for electric and electronic components in unattended household appliances with rated currents of >0,2 A, such as

terminals and switches, e.g. in:

- Dishwashers, washing machines, refrigerators
- Kitchen stoves, microwaves
- Small household appliances, such as mixers, coffee machines

Unattended equipment used in small and medium-sized enterprises is also affected, namely:

- Pump components
- Illuminant components
- Industrial and commercial cleaning equipment
- Hair salon equipment etc.

WECO products are compliant with the glow-wire tests according to the household appliance standard!

For the white goods market segment, WECO Contact GmbH offers an extensive range of products meeting the requirements of the Household Appliance Standard DIN EN/IEC 60335-1. Even before the transition period expired in July 2007, many WECO products had already been compliant with the tightened household appliance standard, providing WECO Contact with an enormous edge over competitors, particularly over those in Asia.

The materials used for enclosures are VDE-tested and approved according to the glow-wire tests specified in DIN EN/IEC 60335-1. This applies for all standard WECO colours!

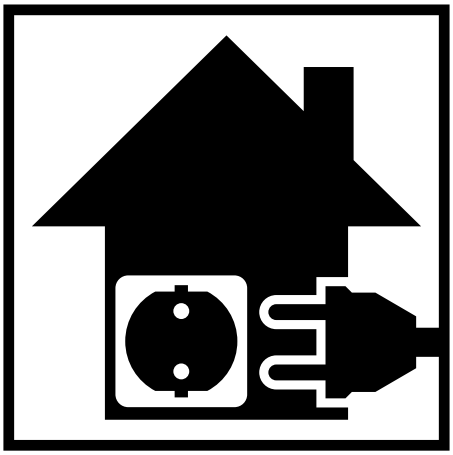
PRODUCTS:

- All products of the connections for printed circuit boards with the exception of large-pole articles of the series 95.., 96.. and 97.. as well as SMD and THR products.
- Series 326 and 327
- Other products: Producibility must verified for each product

We designate products compliant with this tightened household appliance standard, if a specific variant compatible to the household appliance standard is available:

- **PART NUMBER:**
  The existing 8-digit article number will be continued and supplemented by „EN6“.

- **DESIGNATION:**
  The existing designation will be continued. A „6“ will be placed before „GP“ resulting in „6GP“.



Are you affected?

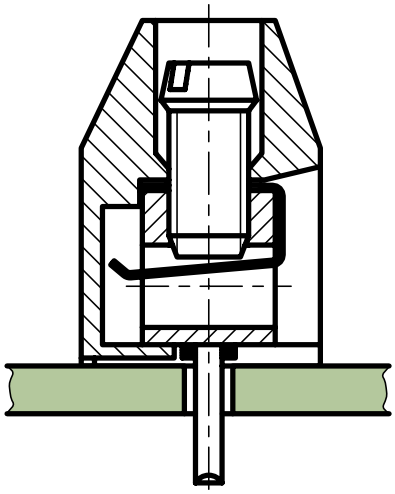
Even today, long after the tightened Household Appliance Standard DIN EN/IEC 60335-1 entered into force, many questions still arise and need clarification.

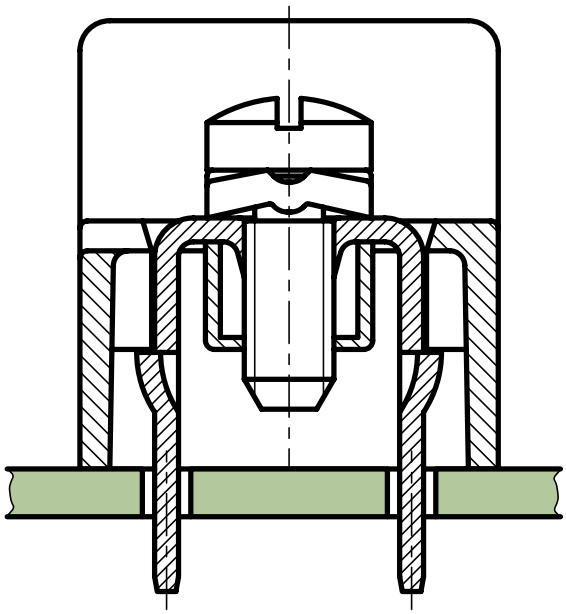
Even equipment manufacturers affected by this household appliance standard often are unaware of the standard's requirements and only find out that they ARE AFFECTED, when they submit their products at VDE and are denied approval because products do not meet the currently valid standards.

We at WECO Contact take technical support and service for our customers seriously. Therefore, we have compiled on our website a list of all manufacturer products affected by the household appliance standard. At a glance, our customers can now gather information on whether their appliances are affected or not.

The list is also a valuable tool for both sales staff and field reps, helping them to resolve possible unclear issues in project meetings, and enabling them to optimally support the customer.

PCB connectors





Thanks to their versatile design, WECO Contact PCB connectors offers a solution for every connection application. This catalogue lists connectors for printed circuits in 10 mm, 10,16 mm and 12,7 mm pitch.

Depending on the type, the connectors are available with the common number of poles.

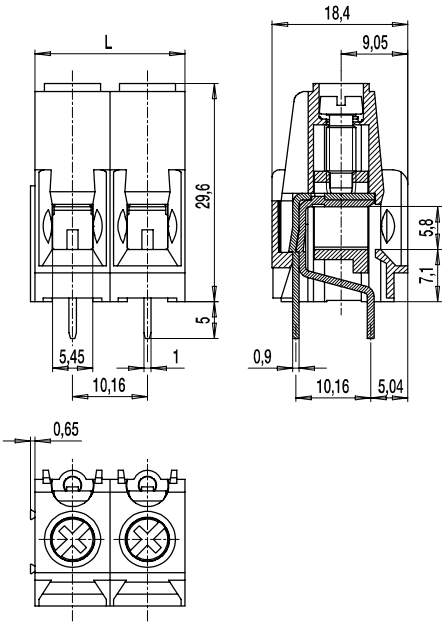
The screw terminals are built on the principle of the socket terminal, either as a lift system or as a head contact terminal.

Damage to flexible conductors can be prevented through the use of our products with wire protection (indicated by the name “-DS” in the product) reliably prevented.

All versions – with the exception of the series 983 - are equipped with captive screws which also allow over-head assembly.

As standard, our terminals are delivered unmarked. Upon request, they can also be printed, e.g. with consecutive numbering or individual labeling according to customer requirement.

PCB connector
158-A-111
Screw connection



Series 158-A is particularly designed for high voltages and strong currents. A terminal space for solid wires of up to 16 mm² or for flexible wires of up to 10 mm² is characteristic for this series. Two solder pins per pole ensure safe connection to the PCB.
Series 158-A-111 is a low version in 10.16 mm pitch and suitable for voltages up to 690 V.

Unlimited UL-approval (UL1059, general industrial, Group C) for 300 V facilitates design approval. This series is suitable for field wiring applications according to UL508C.

General Information

Pitch	10,16 mm
No. of poles	2 - 12
Usable with	158-A-211, 159-A-111 and 159-A-211, mountable side-by-side to any series connector
Areas of application	Power electronics, in particular for drives with frequency converters, and also for power supplies and charging units.
Additonal Information	Hole for ø 2 mm test plug

Technical Data

Clamping Range	*solid / flexible / AWG*		
	0,5 - 16 mm² / 0,5 - 10 mm² / 20 - 6 AWG		
Rated Cross Section	10 mm²		
Wire Stripping Length	10,5 mm ± 1 mm		
Overvoltage Category	III	III	II
Pollution Severity Level	3	2	2
Rated Voltage	690 V	1000 V	1000 V
Rated Impulse Voltage	8 kV	8 kV	6 kV
Rated Current	57 A		
Hole in PCB	ø 1,5 mm		
Torque	1,2 Nm		
Other specifications	Maximum current/cross-section 76 A / 16 mm², stranded wire		

Material

Moulding	PA, grey, V-0
Comparative Tracking Index	CTI ≥ 600
Insulating Group	I
Temperature Range	-40°C up to 100°C
Terminal body	Nickel plated brass
Pressure clamp	Tin plated copper
Screw	Plus-minus, M4; zinc plated steel, blue passivated
Solder pin	Tin plated copper

Part Numbers

No. of poles	158-A-111	Length	Pcs
2	12.801.901	20,32	50
3	13.801.901	30,48	50
4	14.801.901	40,64	50
5	15.801.901	50,80	50

further number of poles on request

Approvals

	Current	Voltage	Group	AWG	Nm
c UL us	60	300	B, C	20 - 6	1,3
	10	300	D	20 - 6	1,3

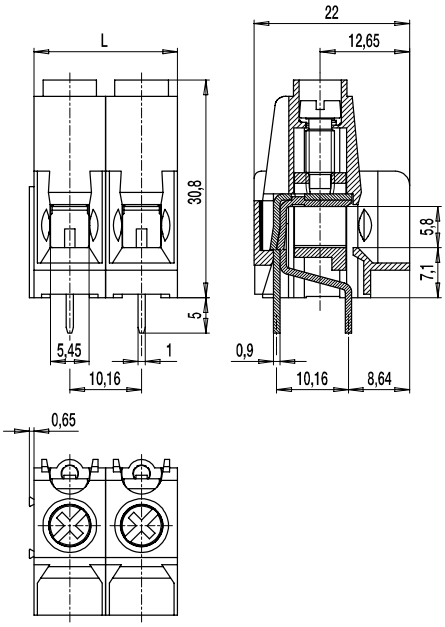
Options / Accessories

- Consecutive numbering
- Special marking according to drawing
- Self-adhesive marking strip BST-10,16

PCB connector

158-A-211

Screw connection, tall version, extended wire entrance



Series 158-A is particularly designed for high voltages and strong currents. A terminal space for solid wires of up to 16 mm² or for flexible wires of up to 10 mm² is characteristic for this series. Two solder pins per pole ensure safe connection to the PCB.
Series 158-A-211 is a tall version in 10.16 mm pitch and suitable for voltages up to 800 V.

Unlimited UL-approval (UL1059, general industrial, Group C) for 300 V facilitates design approval. This series is suitable for field wiring applications according to UL508C.

Part Numbers

No. of poles	158-A-211	Length	Pcs
2	12.801.902	20,32	50
3	13.801.902	30,48	50
4	14.801.902	40,64	50
5	15.801.902	50,80	50

further number of poles on request

General Information

Pitch	10,16 mm
No. of poles	2 - 12
Usable with	158-A-111, 159-A-111 and 159-A-211, mountable side-by-side to any series connector
Areas of application	Power electronics, in particular for drives with frequency converters, and also for power supplies and charging units.
Additonal Information	Hole for ø 2 mm test plug

Technical Data

Clamping Range	*solid / flexible / AWG*		
	0,5 - 16 mm² / 0,5 - 10 mm² / 20 - 6 AWG		
Rated Cross Section	10 mm²		
Wire Stripping Length	10,5 mm ± 1 mm		
Overvoltage Category	III	III	II
Pollution Severity Level	3	2	2
Rated Voltage	800 V	1000 V	1000 V
Rated Impulse Voltage	8 kV	8 kV	6 kV
Rated Current	57 A		
Hole in PCB	ø 1,5 mm		
Torque	1,2 Nm		
Other specifications	Maximum current/cross-section 76 A / 16 mm², stranded wire		

Material

Moulding	PA, grey, V-0
Comparative Tracking Index	CTI ≥ 600
Insulating Group	I
Temperature Range	-40°C up to 100°C
Terminal body	Nickel plated brass
Pressure clamp	Tin plated copper
Screw	Plus-minus, M4; zinc plated steel, blue passivated
Solder pin	Tin plated copper

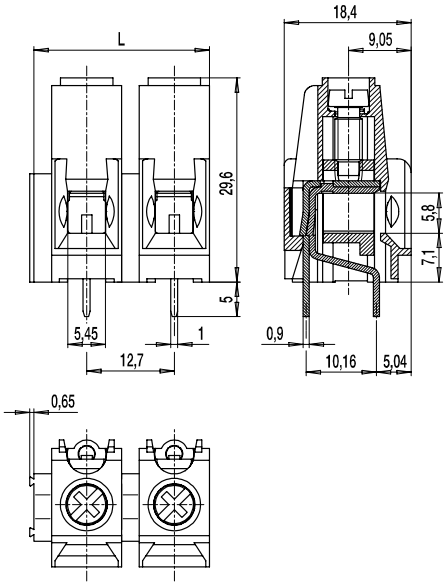
Approvals

	Current	Voltage	Group	AWG	Nm
c UL us	60	300	B, C	20 - 6	1,3
	10	300	D	20 - 6	1,3

Options / Accessories

- Consecutive numbering
- Special marking according to drawing
- Self-adhesive marking strip BST-10,16

PCB connector
159-A-111
Screw connection



Series 159-A is particularly designed for high voltages and strong currents. A terminal space for solid wires of up to 16 mm² or for flexible wires of up to 10 mm² is characteristic for this series. Two solder pins per pole ensure safe connection to the PCB.
Series 159-A-111 is a low version in 12.7 mm pitch and suitable for voltages up to 1000 V.

Unlimited UL-approval (UL1059, general industrial, Group C) for 600 V facilitates design approval. This series is suitable for field wiring applications according to UL508C.

Part Numbers

No. of poles	159-A-111	Length	Pcs
2	12.801.903	25,40	50
3	13.801.903	38,10	50
4	14.801.903	50,80	50
5	15.801.903	63,50	50

further number of poles on request

General Information

Pitch	12,7 mm
No. of poles	2 - 12
Usable with	159-A-211, 158-A-111 and 158-A-211, mountable side-by-side to any series connector
Areas of application	Power electronics, in particular for drives with frequency converters, and also for power supplies and charging units.
Additonal Information	Hole for ø 2 mm test plug

Technical Data

Clamping Range	*solid / flexible / AWG*		
	0,5 - 16 mm² / 0,5 - 10 mm² / 20 - 6 AWG		
Rated Cross Section	10 mm²		
Wire Stripping Length	10,5 mm ± 1 mm		
Overvoltage Category	III	III	II
Pollution Severity Level	3	2	2
Rated Voltage	1000 V	1000 V	1000 V
Rated Impulse Voltage	8 kV	8 kV	6 kV
Rated Current	57 A		
Hole in PCB	ø 1,5 mm		
Torque	1,2 Nm		
Other specifications	Maximum current/cross-section 76 A / 16 mm², stranded wire		

Material

Moulding	PA, grey, V-0
Comparative Tracking Index	CTI ≥ 600
Insulating Group	I
Temperature Range	-40°C up to 100°C
Terminal body	Nickel plated brass
Pressure clamp	Tin plated copper
Screw	Plus-minus, M4; zinc plated steel, blue passivated
Solder pin	Tin plated copper

Approvals

	Current	Voltage	Group	AWG	Nm
c UL us	60	600	B, C	20 - 6	1,3
	5	600	D	20 - 6	1,3

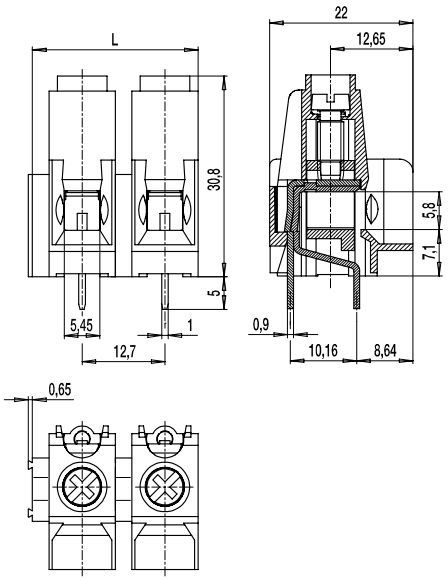
Options / Accessories

- Consecutive numbering
- Special marking according to drawing

PCB connector

159-A-211

Screw connection, tall version, extended wire entrance



Series 159-A is particularly designed for high voltages and strong currents. A terminal space for solid wires of up to 16 mm² or for flexible wires of up to 10 mm² is characteristic for this series. Two solder pins per pole ensure safe connection to the PCB.
Series 159-A is a tall version in 12.7 mm pitch. As the low version, it is suitable for voltages of up to 1000 V. Due to its extended wire entrance, it is particularly shock-proof and easy to assemble.

Unlimited UL-approval (UL1059, general industrial, Group C) for 600 V facilitates design approval. This series is suitable for field wiring applications according to UL508C.

Part Numbers

No. of poles	159-A-211	Length	Pcs
2	12.801.904	25,40	50
3	13.801.904	38,10	50
4	14.801.904	50,80	50
5	15.801.904	63,50	50

further number of poles on request

General Information

Pitch	12,7 mm
No. of poles	2 - 12
Usable with	159-A-111, 158-A-111 and 158-A-211, mountable side-by-side to any series connector
Areas of application	Power electronics, in particular for drives with frequency converters, and also for power supplies and charging units.
Additonal Information	Hole for ø 2 mm test plug

Technical Data

Clamping Range	*solid / flexible / AWG*		
	0,5 - 16 mm² / 0,5 - 10 mm² / 20 - 6 AWG		
Rated Cross Section	10 mm²		
Wire Stripping Length	10,5 mm ± 1 mm		
Overvoltage Category	III	III	II
Pollution Severity Level	3	2	2
Rated Voltage	1000 V	1000 V	1000 V
Rated Impulse Voltage	8 kV	8 kV	6 kV
Rated Current	57 A		
Hole in PCB	ø 1,5 mm		
Torque	1,2 Nm		
Other specifications	Maximum current/cross-section 76 A / 16 mm², stranded wire		

Material

Moulding	PA, grey, V-0
Comparative Tracking Index	CTI ≥ 600
Insulating Group	I
Temperature Range	-40°C up to 100°C
Terminal body	Nickel plated brass
Pressure clamp	Tin plated copper
Screw	Plus-minus, M4; zinc plated steel, blue passivated
Solder pin	Tin plated copper

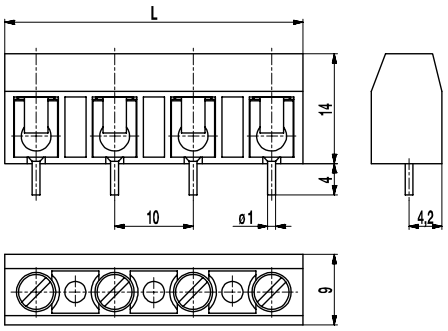
Approvals

	Current	Voltage	Group	AWG	Nm
c UL us	60	600	B, C	20 - 6	1,3
	5	600	D	20 - 6	1,3

Options / Accessories

- Consecutive numbering
- Special marking according to drawing

PCB connector
910(-DS)
Screw connection



The series 910 PCB connector in 10 mm pitch is designed for particularly large wires.

General Information

Pitch	10 mm
No. of poles	2 - 12

Technical Data

Clamping Range	*solid / flexible / AWG*		
without wire protector	2,5 - 10 mm² / 2,5 - 6 mm² / 14 - 10 AWG		
with wire protector	1,5 - 6 mm² / 1,5 - 4 mm² / 16 - 12 AWG		
Rated Cross Section	4 mm²		
Wire Stripping Length	6,5 mm ± 0,5 mm		
Overvoltage Category	III	III	II
Pollution Severity Level	3	2	2
Rated Voltage	500 V	630 V	1000 V
Rated Impulse Voltage	6 kV	6 kV	6 kV
Rated Insulation Voltage	750 V acc. to EN 60998-1		
Rated Current	25 A		
Hole in PCB	ø 1,3 mm		
Torque	0,8 Nm		

Material

Moulding	PA, grey, V-0
Comparative Tracking Index	CTI 400
Insulating Group	II
Temperature Range	-40°C up to 100°C
Terminal body	Tin plated brass
Screw	M3,5; zinc plated steel, blue passivated
Solder pin	ø 1 mm; tin plated brass
Wire protector	Tin plated tin bronze

Approvals

	Current	Voltage	Group	AWG	Nm
	25	300	B	18 - 10	0,79
	25	300	B	22-10 [1]	0,79
	10	300	D, E	22-10 [1]	0,79
	Current	Voltage	mm²		
	32	750	4,0		

[1] for 910-DS: 26 - 10 AWG

Part Numbers

No. of poles	910	910-DS	Length	Pcs
2	10.876.002	20.876.002	18,00	250
3	10.876.003	20.876.003	28,00	250
4	10.876.004	20.876.004	38,00	200
5	10.876.005	20.876.005	48,00	100
6	10.876.006	20.876.006	58,00	100
7	10.876.007	20.876.007	68,00	100
8	10.876.008	20.876.008	78,00	100
9	10.876.009	20.876.009	88,00	100
10	10.876.010	20.876.010	98,00	100
11	10.876.011	20.876.011	108,00	100
12	10.876.012	20.876.012	118,00	100

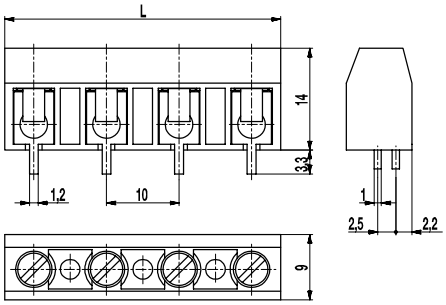
Options / Accessories

- Consecutive numbering
- Special marking according to drawing
- Self-adhesive marking strip BST-10,00
- Solder pin ø 1.5 mm
- Version with two solder pins per pole, please see 910-Y(-DS)

PCB connector

910-Y(-DS)

Screw connection, 2 solder pins per pole



The series 910-Y PCB connector in 10 mm pitch with two solder pins per pole is designed for particularly large wires.

Part Numbers

No. of poles	910-Y	910-Y-DS	Length	Pcs
2	30.876.002	40.876.002	18,00	250
3	30.876.003	40.876.003	28,00	250
4	30.876.004	40.876.004	38,00	200
5	30.876.005	40.876.005	48,00	100
6	30.876.006	40.876.006	58,00	100
7	30.876.007	40.876.007	68,00	100
8	30.876.008	40.876.008	78,00	100
9	30.876.009	40.876.009	88,00	100
10	30.876.010	40.876.010	98,00	100
11	30.876.011	40.876.011	108,00	100
12	30.876.012	40.876.012	118,00	100

General Information

Pitch	10 mm
No. of poles	2 - 12

Technical Data

Clamping Range	*solid / flexible / AWG*		
without wire protector	2,5 - 10 mm² / 2,5 - 6 mm² / 14 - 10 AWG		
with wire protector	1,5 - 6 mm² / 1,5 - 4 mm² / 16 - 12 AWG		
Rated Cross Section	4 mm²		
Wire Stripping Length	6,5 mm ± 0,5 mm		
Overvoltage Category	III	III	II
Pollution Severity Level	3	2	2
Rated Voltage	500 V	630 V	1000 V
Rated Impulse Voltage	6 kV	6 kV	6 kV
Rated Insulation Voltage	750 V acc. to EN 60998-1		
Rated Current	25 A		
Hole in PCB	ø 1,8 mm		
Torque	0,8 Nm		

Material

Moulding	PA, grey, V-0
Comparative Tracking Index	CTI 400
Insulating Group	II
Temperature Range	-40°C up to 100°C
Terminal body	Tin plated brass
Screw	M3,5; zinc plated steel, blue passivated
Solder pin	1,0 x 1,2 mm; tin plated brass
Wire protector	Tin plated tin bronze

Approvals

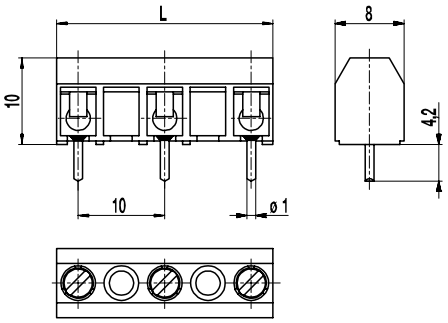
	Current	Voltage	Group	AWG	Nm
	25	300	B	18 - 10	0,79
	25 10	300 300	B D, E	22-10 [1] 22-10 [1]	0,79 0,79

[1] for 910-Y-DS: 26 - 10 AWG

Options / Accessories

- Consecutive numbering
- Special marking according to drawing
- Self-adhesive marking strip BST-10,00

PCB connector
952(-DS)
Screw connection



PCB connector 952 with a pitch of 10 mm is available in 2- to 16-pole design and is a very space saving PCB connector.

Wire protection in DS-design reliably prevents damage to stranded wires by the screw.
The screws are secured against self-loosening.

Part Numbers

No. of poles	952	952-DS	Length	Pcs
2	12.871.053	22.871.053	15,00	250
3	12.871.055	22.871.055	25,00	100
4	12.871.001	22.871.001	35,00	100
5	12.871.009	22.871.009	45,00	100
6	12.871.011	22.871.011	55,00	100
7	12.871.063	22.871.063	65,00	100
8	12.871.065	22.871.065	75,00	100
9	12.871.067	22.871.067	85,00	100
10	12.871.069	22.871.069	95,00	100
11	12.871.071	22.871.071	105,00	100
12	12.871.073	22.871.073	115,00	100
13	12.871.075	22.871.075	125,00	100
14	12.871.077	22.871.077	135,00	100
15	12.871.079	22.871.079	145,00	100
16	12.871.061	22.871.061	155,00	100

General Information

Pitch	10 mm
No. of poles	2 - 16

Technical Data

Clamping Range	*solid / flexible / AWG*		
without wire protector	0,75 - 4 mm² / 0,75 - 2,5 mm² / 18 - 12 AWG		
with wire protector	0,34 - 2,5 mm² / 0,34 - 2,5 mm² / 22 - 14 AWG		
Rated Cross Section	1,5 mm²		
Wire Stripping Length	6 mm ± 0,5 mm		
Overvoltage Category	III	III	II
Pollution Severity Level	3	2	2
Rated Voltage	630 V (500 V)	630 V	1000 V
Rated Impulse Voltage	6 kV	6 kV	6 kV
Rated Insulation Voltage	750 V acc. to EN 60998-1		
Rated Current	17,5 A		
Hole in PCB	ø 1,3 mm		
Torque	0,4 Nm		
Other specifications	Rated voltage in brackets applies to 5-16-pole connectors, “no-flame” according to glow wire test applies to 2-4-pole connectors.		

Material

Moulding	PA, grey, V-0
Comparative Tracking Index	2-4 poles: CTI ≥ 600; 5-16 poles: CTI 400
Insulating Group	2-4 poles: I; 5-16 poles: II
Temperature Range	-40°C up to 100°C
Terminal body	Tin plated brass
Screw	M2,6; zinc plated steel, blue passivated
Solder pin	ø 1 mm; tin plated copper
Wire protector	Tin plated tin bronze

Approvals

	Current	Voltage	Group	AWG	Nm
	15	300	B	26 - 14	0,4
	10	300	D	26 - 14	0,4
	15	300	B	26 - 14	0,4
	10	300	D, E	26 - 14	0,4
	Current	Voltage	mm²		
	17,5	750	1,5		

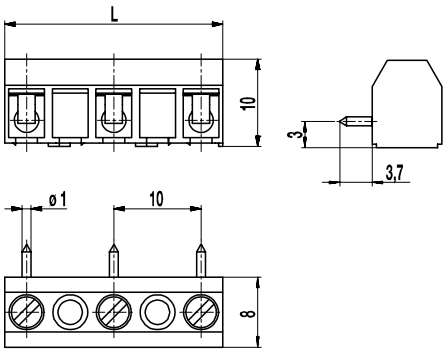
Options / Accessories

- Consecutive numbering
- Special marking according to drawing
- Self-adhesive marking strip BST-10,00
- Longer solder pins up to 75 mm

PCB connector

953(-DS)

Screw connection, wire entrance vertical to PCB



PCB connector 953 is the horizontal version of 952 and with a pitch of 10 mm available in 2- to 16-pole design.
It is a very space saving PCB connector.

Wire protection in DS-design reliably prevents damage to stranded wires by the screw.
The wire entrance is vertical to the PCB.
The screws are secured against self-loosening.

Part Numbers

No. of poles	953	953-DS	Length	Pcs
2	12.871.083	22.871.083	15,00	250
3	12.871.085	22.871.085	25,00	100
4	12.871.022	22.871.022	35,00	100
5	12.871.019	22.871.019	45,00	100
6	12.871.021	22.871.021	55,00	100
7	12.871.023	22.871.023	65,00	100
8	12.871.025	22.871.025	75,00	100
9	12.871.027	22.871.027	85,00	100
10	12.871.029	22.871.029	95,00	100
11	12.871.031	22.871.031	105,00	100
12	12.871.039	22.871.039	115,00	100
13	12.871.041	22.871.041	125,00	100
14	12.871.037	22.871.037	135,00	100
15	12.871.089	22.871.089	145,00	100
16	12.871.091	22.871.091	155,00	100

General Information

Pitch	10 mm
No. of poles	2 - 16

Technical Data

Clamping Range	*solid / flexible / AWG*		
without wire protector	0,75 - 4 mm² / 0,75 - 2,5 mm² / 18 - 12 AWG		
with wire protector	0,34 - 2,5 mm² / 0,34 - 2,5 mm² / 22 - 14 AWG		
Rated Cross Section	1,5 mm²		
Wire Stripping Length	5 mm ± 0,5 mm		
Overvoltage Category	III	III	II
Pollution Severity Level	3	2	2
Rated Voltage	630 V (500 V)	630 V	1000 V
Rated Impulse Voltage	6 kV	6 kV	6 kV
Rated Insulation Voltage	750 V acc. to EN 60998-1		
Rated Current	17,5 A		
Hole in PCB	ø 1,3 mm		
Torque	0,4 Nm		
Other specifications	Rated voltage in brackets applies to 5-16-pole connectors, “no-flame” according to glow wire test applies to 2-4-pole connectors.		

Material

Moulding	PA, grey, V-0
Comparative Tracking Index	2-4 poles: CTI ≥ 600; 5-16 poles: CTI 400
Insulating Group	2-4 poles: I; 5-16 poles: II
Temperature Range	-40°C up to 100°C
Terminal body	Tin plated brass
Screw	M2,6; zinc plated steel, blue passivated
Solder pin	ø 1 mm; tin plated copper
Wire protector	Tin plated tin bronze

Approvals

	Current	Voltage	Group	AWG	Nm
	15	300	B	26 - 14	0,4
	10	300	D	26 - 14	0,4
	15	300	B	26 - 14	0,4
	10	300	D, E	26 - 14	0,4
	Current	Voltage	mm²		
	17,5	750	1,5		

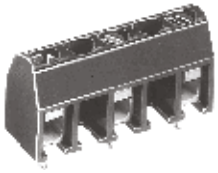
Options / Accessories

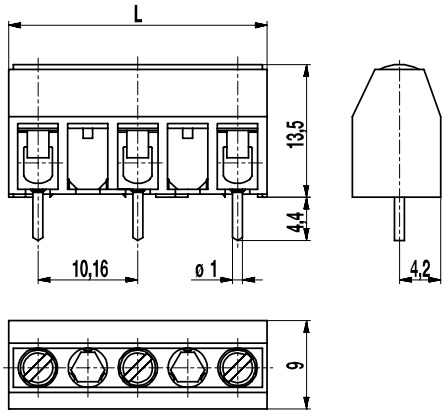
- Consecutive numbering
- Special marking according to drawing
- Self-adhesive marking strip BST-10,00

PCB connector

969(-DS)

Screw connection, large conductor space





The PCB connector 969 with a pitch of 10,16 mm is available in 2- to 16-pole design.
It has a large conductor space and large clearance and creepage distances.

Wire protection in DS-design reliably prevents damage to stranded wires by the screw.
The screws are secured against self-loosening.

Part Numbers

No. of poles	969	969-DS	Length	Pcs
2	32.878.003	42.878.003	16,24	250
3	32.878.005	42.878.005	26,40	100
4	32.878.007	42.878.007	36,56	100
5	32.878.009	42.878.009	46,62	100
6	32.878.011	42.878.011	56,88	100
7	32.878.013	42.878.013	67,04	100
8	32.878.015	42.878.015	77,20	100
9	32.878.017	42.878.017	87,36	100
10	32.878.019	42.878.019	97,52	100
11	32.878.021	42.878.021	107,68	100
12	32.878.023	42.878.023	117,84	100
13	32.878.025	42.878.025	128,00	100
14	32.878.027	42.878.027	138,16	100
15	32.878.029	42.878.029	148,32	100
16	32.878.031	42.878.031	158,48	100

General Information

Pitch	10,16 mm
No. of poles	2 - 16

Technical Data

Clamping Range	*solid / flexible / AWG*		
without wire protector	1 - 6 mm² / 1 - 4 mm² / 16 - 12 AWG		
with wire protector	0,75 - 4 mm² / 0,75 - 2,5 mm² / 18 - 12 AWG		
Rated Cross Section	2,5 mm²		
Wire Stripping Length	6,5 mm ± 0,5 mm		
Overvoltage Category	III	III	II
Pollution Severity Level	3	2	2
Rated Voltage	630 V (500 V)	630 V	1000 V
Rated Impulse Voltage	6 kV	6 kV	6 kV
Rated Insulation Voltage	750 V acc. to EN 60998-1		
Rated Current	24 A		
Hole in PCB	ø 1,3 mm		
Torque	0,5 Nm		
Other specifications	Rated voltage in brackets applies to 5-16-pole connectors, “no-flame” according to glow wire test applies to 2-4-pole connectors.		

Material

Moulding	PA, grey, V-0
Comparative Tracking Index	2-4 poles: CTI ≥ 600; 5-16 poles: CTI 400
Insulating Group	2-4 poles: I; 5-16 poles: II
Temperature Range	-40°C up to 100°C
Terminal body	Tin plated brass
Screw	M3; zinc plated steel, blue passivated
Solder pin	ø 1 mm; tin plated copper
Wire protector	Tin plated tin bronze

Approvals

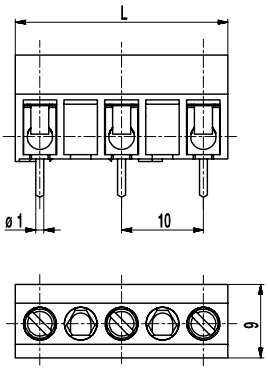
	Current	Voltage	Group	AWG	Nm
	20	300	B	22-12 [1]	0,51
	20	300	B	26 - 12	0,51
	10	300	D, E	26 - 12	0,51
	Current	Voltage	mm²		
	24	750	4,0		

[1] Min No. 26 AWG for factory-wiring only

Options / Accessories

- Consecutive numbering
- Special marking according to drawing
- Self-adhesive marking strip BST-10,16
- Longer solder pins up to 95 mm
- Two solder pins per pole, please see 978-TY(-DS) in 5 mm pitch
- Version with extended wire entrance

PCB connector
972(-DS)
Screw connection



The PCB connector 972 with a pitch of 10 mm is available in 2- to 16-pole design and has large clearance and creepage distances.

Wire protection in DS-design reliably prevents damage to stranded wires by the screw.
The screws are secured against self-loosening.

Part Numbers

No. of poles	972	972-DS	Length	Pcs
2	12.872.003	22.872.003	16,00	250
3	12.872.005	22.872.005	26,00	100
4	12.872.007	22.872.007	36,00	100
5	12.872.009	22.872.009	46,00	100
6	12.872.011	22.872.011	56,00	100
7	12.872.013	22.872.013	66,00	100
8	12.872.015	22.872.015	76,00	100
9	12.872.017	22.872.017	86,00	100
10	12.872.019	22.872.019	96,00	100
11	12.872.021	22.872.021	106,00	100
12	12.872.023	22.872.023	116,00	100
13	12.872.025	22.872.025	126,00	100
14	12.872.027	22.872.027	136,00	100
15	12.872.029	22.872.029	146,00	100
16	12.872.031	22.872.031	156,00	100

General Information

Pitch	10 mm
No. of poles	2 - 16

Technical Data

Clamping Range	*solid / flexible / AWG*		
without wire protector	1 - 6 mm² / 1 - 2,5 mm² / 16 - 12 AWG		
with wire protector	0,75 - 4 mm² / 0,75 - 2,5 mm² / 18 - 12 AWG		
Rated Cross Section	2,5 mm²		
Wire Stripping Length	6,5 mm ± 0,5 mm		
Overvoltage Category	III	III	II
Pollution Severity Level	3	2	2
Rated Voltage	630 V (500 V)	630 V	1000 V
Rated Impulse Voltage	6 kV	6 kV	6 kV
Rated Insulation Voltage	750 V acc. to EN 60998-1		
Rated Current	24 A		
Hole in PCB	ø 1,3 mm		
Torque	0,5 Nm		
Other specifications	Rated voltage in brackets applies to 5-16-pole connectors, “no-flame” according to glow wire test applies to 2-4-pole connectors.		

Material

Moulding	PA, grey, V-0
Comparative Tracking Index	2-4 poles: CTI ≥ 600; 5-16 poles: CTI 400
Insulating Group	2-4 poles: I; 5-16 poles: II
Temperature Range	-40°C up to 100°C
Terminal body	Tin plated brass
Screw	M3; zinc plated steel, blue passivated
Solder pin	ø 1 mm; tin plated copper
Wire protector	Tin plated tin bronze

Approvals

	Current	Voltage	Group	AWG	Nm
	20	300	B	22-12 [1]	0,51
	20	150	C	22-12 [1]	0,51
	20	300	B	26 - 12	0,51
	10	300	D, E	26 - 12	0,51
	Current	Voltage	mm²		
	24	750	2,5		

[1] Min No. 26 AWG for factory-wiring only

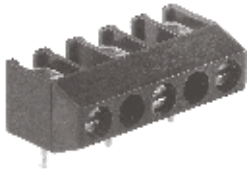
Options / Accessories

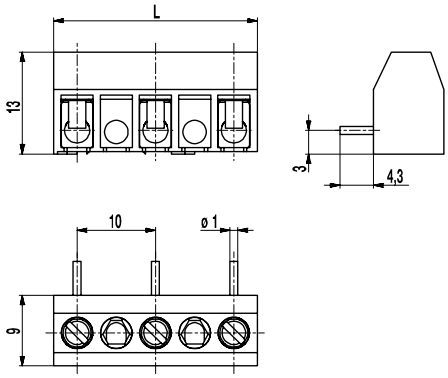
- Consecutive numbering
- Special marking according to drawing
- Self-adhesive marking strip BST-10,00
- Longer solder pins up to 95 mm
- Two solder pins per pole, please see 978-TY(-DS) in 5 mm pitch
- Version with extended wire entrance
- Version with larger clamping range

PCB connector

973(-DS)

Screw connection, wire entrance vertical to PCB





The PCB connector 973 is the horizontal version of 972 and with a pitch of 10 mm available in 2- to 16-pole design.
It has large clearance and creepage distances.

Wire protection in DS-design reliably prevents damage to stranded wires by the screw.
The wire entrance is vertical to the PCB.
The screws are secured against self-loosening.

Part Numbers

No. of poles	973	973-DS	Length	Pcs
2	12.872.103	22.872.103	16,00	250
3	12.872.105	22.872.105	26,00	100
4	12.872.107	22.872.107	36,00	100
5	12.872.109	22.872.109	46,00	100
6	12.872.111	22.872.111	56,00	100
7	12.872.113	22.872.113	66,00	100
8	12.872.115	22.872.115	76,00	100
9	12.872.117	22.872.117	86,00	100
10	12.872.119	22.872.119	96,00	100
11	12.872.121	22.872.121	106,00	100
12	12.872.123	22.872.123	116,00	100
13	12.872.125	22.872.125	126,00	100
14	12.872.127	22.872.127	136,00	100
15	12.872.129	22.872.129	146,00	100
16	12.872.131	22.872.131	156,00	100

General Information

Pitch	10 mm
No. of poles	2 - 16

Technical Data

Clamping Range	*solid / flexible / AWG*		
without wire protector	1 - 6 mm² / 1 - 2,5 mm² / 16 - 12 AWG		
with wire protector	0,75 - 4 mm² / 0,75 - 2,5 mm² / 18 - 12 AWG		
Rated Cross Section	2,5 mm²		
Wire Stripping Length	5,5 mm ± 0,5 mm		
Overvoltage Category	III	III	II
Pollution Severity Level	3	2	2
Rated Voltage	630 V (500 V)	630 V	1000 V
Rated Impulse Voltage	6 kV	6 kV	6 kV
Rated Insulation Voltage	750 V acc. to EN 60998-1		
Rated Current	24 A		
Hole in PCB	ø 1,3 mm		
Torque	0,5 Nm		
Other specifications	Rated voltage in brackets applies to 5-16-pole connectors, “no-flame” according to glow wire test applies to 2-4-pole connectors.		

Material

Moulding	PA, grey, V-0
Comparative Tracking Index	2-4 poles: CTI ≥ 600; 5-16 poles: CTI 400
Insulating Group	2-4 poles: I; 5-16 poles: II
Temperature Range	-40°C up to 100°C
Terminal body	Tin plated brass
Screw	M3; zinc plated steel, blue passivated
Solder pin	ø 1 mm; tin plated brass
Wire protector	Tin plated tin bronze

Approvals

	Current	Voltage	Group	AWG	Nm
	20	300	B	22-12 [1]	0,51
	20	150	C	22-12 [1]	0,51
	20	300	B	26 - 12	0,51
	10	300	D, E	26 - 12	0,51
	Current	Voltage	mm²		
	24	750	2,5		

[1] Min No. 26 AWG for factory-wiring only

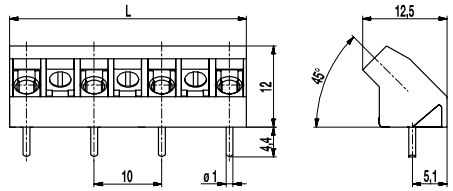
Options / Accessories

- Consecutive numbering
- Special marking according to drawing
- Self-adhesive marking strip BST-10,00
- Version with extended wire entrance
- Version like type 971-HG(-DS) in 5 mm pitch

PCB connector

975(-DS)

Screw connection 45°-angle to PCB



The PCB connector 975, inclined version with a pitch of 10 mm is available in 2- to 13-pole design.

The wire entrance is in a 45° angle diagonal to the PC board. Therefore, this PCB connector is ideal for the assembly in the center of PCBs. The design of this PCB connector allows space-saving arrangement of consecutive rows of terminals.

Wire protection in DS-design reliably prevents damage to stranded wires by the screw.
The screws are secured against self-loosening.

Part Numbers

No. of poles	975	975-DS	Length	Pcs
2	12.874.003	22.874.003	15,00	250
3	12.874.005	22.874.005	25,00	100
4	12.874.007	22.874.007	35,00	100
5	12.874.009	22.874.009	45,00	100
6	12.874.011	22.874.011	55,00	100
7	12.874.013	22.874.013	65,00	100
8	12.874.015	22.874.015	75,00	50
9	12.874.017	22.874.017	85,00	50
10	12.874.019	22.874.019	95,00	50
11	12.874.021	22.874.021	105,00	50
12	12.874.023	22.874.023	115,00	50
13	12.874.025	22.874.025	125,00	50

General Information

Pitch	10 mm
No. of poles	2 - 13

Technical Data

Clamping Range	*solid / flexible / AWG*		
without wire protector	1 - 6 mm² / 1 - 2,5 mm² / 16 - 12 AWG		
with wire protector	0,75 - 4 mm² / 0,75 - 2,5 mm² / 18 - 12 AWG		
Rated Cross Section	2,5 mm²		
Wire Stripping Length	6,5 mm ± 0,5 mm		
Overvoltage Category	III	III	II
Pollution Severity Level	3	2	2
Rated Voltage	630 V	630 V	1000 V
Rated Impulse Voltage	6 kV	6 kV	6 kV
Rated Insulation Voltage	750 V acc. to EN 60998-1		
Rated Current	24 A		
Hole in PCB	ø 1,3 mm		
Torque	0,5 Nm		

Material

Moulding	PA, grey, V-0
Comparative Tracking Index	CTI ≥ 600
Insulating Group	I
Temperature Range	-40°C up to 100°C
Terminal body	Tin plated brass
Screw	M3; zinc plated steel, clear passivated
Solder pin	ø 1 mm; tin plated copper
Wire protector	Tin plated tin bronze

Approvals

	Current	Voltage	Group	AWG	Nm
	20	300	B	22-12 [1]	0,51
	10	300	D	22-12 [1]	0,51
	20	300	B	26 - 12	0,51
	10	300	D, E	26 - 12	0,51
	Current	Voltage	mm²		
	24	750	2,5		

[1] Min No. 26 AWG for factory-wiring only

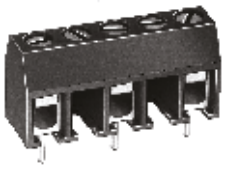
Options / Accessories

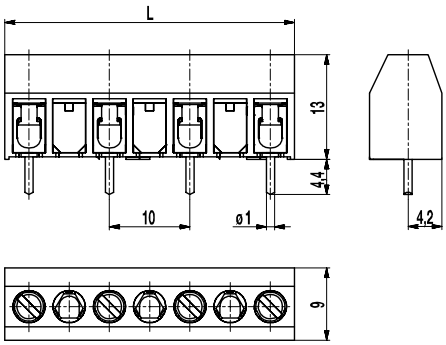
- Consecutive numbering
- Special marking according to drawing
- Self-adhesive marking strip BST-10,00
- Longer solder pins up to 95 mm
- Special wire protector for very thin conductors
- Version with additional raised base of 1,6 mm

PCB connector

979(-DS)

Screw connection, large conductor space





The PCB connector 979 with a pitch of 10 mm is available in 2- to 16-pole design. Compared to the PCB connector 972, it has a larger conductor space for wires up to 6 mm² and has also large clearance and creepage distances.

Wire protection in DS-design reliably prevents damage to stranded wires by the screw.
The screws are secured against self-loosening.

Part Numbers

No. of poles	979	979-DS	Length	Pcs
2	32.872.003	42.872.003	16,00	250
3	32.872.005	42.872.005	26,00	100
4	32.872.007	42.872.007	36,00	100
5	32.872.009	42.872.009	46,00	100
6	32.872.011	42.872.011	56,00	100
7	32.872.013	42.872.013	66,00	100
8	32.872.015	42.872.015	76,00	100
9	32.872.017	42.872.017	86,00	100
10	32.872.019	42.872.019	96,00	100
11	32.872.021	42.872.021	106,00	100
12	32.872.023	42.872.023	116,00	100
13	32.872.025	42.872.025	126,00	100
14	32.872.027	42.872.027	136,00	100
15	32.872.029	42.872.029	146,00	100
16	32.872.031	42.872.031	156,00	100

General Information

Pitch	10 mm
No. of poles	2 - 16

Technical Data

Clamping Range	*solid / flexible / AWG*		
without wire protector	0,75 - 6 mm² / 0,75 - 4 mm² / 18 - 10 AWG		
with wire protector	0,34 - 6 mm² / 0,34 - 4 mm² / 22 - 10 AWG		
Rated Cross Section	2,5 mm²		
Wire Stripping Length	6,5 mm ± 0,5 mm		
Overvoltage Category	III	III	II
Pollution Severity Level	3	2	2
Rated Voltage	630 V (500 V)	630 V	1000 V
Rated Impulse Voltage	6 kV	6 kV	6 kV
Rated Insulation Voltage	750 V acc. to EN 60998-1		
Rated Current	24 A		
Hole in PCB	ø 1,3 mm		
Torque	0,5 Nm		
Other specifications	Rated voltage in brackets applies to 5-16-pole connectors, “no-flame” according to glow wire test applies to 2-4-pole connectors.		

Material

Moulding	PA, grey, V-0
Comparative Tracking Index	2-4 poles: CTI ≥ 600; 5-16 poles: CTI 400
Insulating Group	2-4 poles: I; 5-16 poles: II
Temperature Range	-40°C up to 100°C
Terminal body	Tin plated brass
Screw	M3; zinc plated steel, blue passivated
Solder pin	ø 1 mm; tin plated copper
Wire protector	Tin plated tin bronze

Approvals

	Current	Voltage	Group	AWG	Nm
	20	300	B	22-12 [1]	0,51
	20	300	B	26 - 12	0,51
	10	300	D, E	26 - 12	0,51
	Current	Voltage	mm²		
	24	750	4,0		

[1] Min No. 26 AWG for factory-wiring only

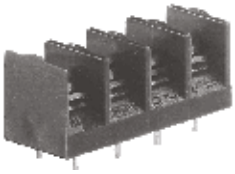
Options / Accessories

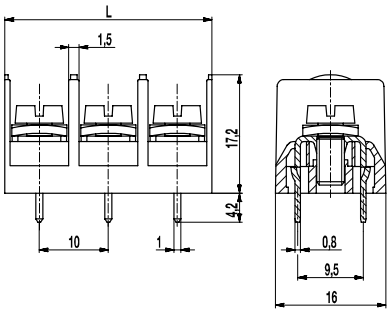
- Consecutive numbering
- Special marking according to drawing
- Self-adhesive marking strip BST-10,00
- Longer solder pins up to 95 mm
- Version with extended wire entrance
- With test holes, compare 970-MP, 970-TMP

PCB connector

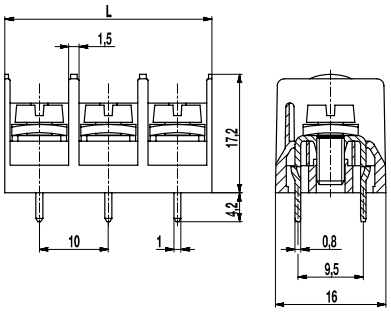
983-D/-ZD

Screw connection, 2 solder pins per pole





983-D



983-ZD

The PCB connector 983-D with a pitch of 10 mm features in spite of its small dimensions, large clearance and creepage distances.
This version is equipped with two solder pins per pole and is available in 2- to 26-pole design.
The conductor terminal is of head contact design, whereby the screws and square washers are movably connected.
For easier connection, the non-rotably mounted square washers are automatically lifted when the screw is loosened.
The connector can be mounted side-by-side in the nominal pitch.
Variant "-ZD" features an additional back wall.

Part Numbers

No. of poles	983-D	983-ZD	Length	Pcs
2	20.873.802	20.873.872	20,00	100
3	20.873.803	20.873.873	30,00	100
4	20.873.804	20.873.874	40,00	100
5	20.873.805	20.873.875	50,00	100
6	20.873.806	20.873.876	60,00	100
8	20.873.808	20.873.878	80,00	50
10	20.873.810	20.873.880	100,00	50
12	20.873.812	20.873.882	120,00	50
14	20.873.814	20.873.884	140,00	80
16	20.873.816	20.873.886	160,00	20
18	20.873.818	20.873.888	180,00	25
20	20.873.820	20.873.890	200,00	25
22	20.873.822	20.873.892	220,00	25
24	20.873.824	20.873.894	240,00	25
26	20.873.826	20.873.896	260,00	10

further number of poles on request

General Information

Pitch	10 mm
No. of poles	2 - 26

Technical Data

Clamping Range	*solid / flexible / AWG*		
	0,75 - 2,5 mm² / 0,75 - 2,5 mm² / 18 - 12 AWG		
Rated Cross Section	2,5 mm²		
Wire Stripping Length	8,5 mm ± 0,5 mm		
Overvoltage Category	III	III	II
Pollution Severity Level	3	2	2
Rated Voltage	500 V	630 V	1000 V
Rated Impulse Voltage	6 kV	6 kV	6 kV
Rated Insulation Voltage	750 V acc. to EN 60998-1		
Rated Current	24 A		
Hole in PCB	ø 1,6 mm		
Torque	1,2 Nm		
Other specifications	Per pole two wires of identical cross-section can be connected.		

Material

Moulding	PA, grey, V-0
Comparative Tracking Index	CTI ≥ 600
Insulating Group	I
Temperature Range	-40°C up to 100°C
Pressure clamp	Tin plated brass
Screw	M4; zinc plated steel, blue passivated
Solder pin	0,8 x 1,0 mm; tin plated brass

Approvals

	Current	Voltage	Group	AWG	Nm
	20	300	B	20 - 12	1,13
	20	300	B	20 - 12	1,13
	10	300	D, E	20 - 12	1,13

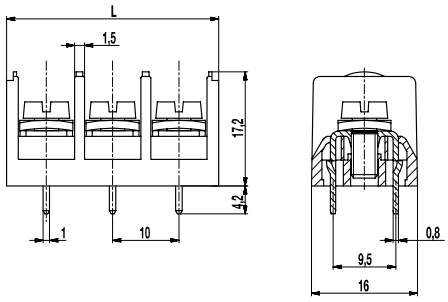
Options / Accessories

- Consecutive numbering
- Special marking according to drawing
- Self-adhesive marking strip BST-10,00
- Cover cap 983-A
- Securing pins BEF-983
- Crosshead screws
- 10 mm pin length

PCB connector

983-D/..-DAM

Screw connection, reinforced side walls, 2 pins per pole



The PCB connector 983-D/..-DAM is based on the well proven terminals of the series 983.
The optimized geometry and slightly modified housing offer some advantages compared to the standard versions:
• The reinforced side walls can equalize the resulting torque to the outside. As a result, the reinforced side avoid the stacking without pole loss as given in the standard version.
• The new housing geometry creates now the possibility to implement central soldering pins.

The connection is designed as head contact, screw and washers forming a combination.
This terminal is available from 2 to 6 poles as well as a version with only one soldering pin (see 983-S/..-DAM).

Part Numbers

No. of poles	983-D/..-DAM	Length	Pcs
2	20.873.912	22,00	100
3	20.873.913	32,00	100
4	20.873.914	42,00	100
5	20.873.915	52,00	100
6	20.873.916	62,00	100

General Information

Pitch	10 mm
No. of poles	2 - 6

Technical Data

Clamping Range	*solid / flexible / AWG*		
	0,75 - 2,5 mm² / 0,75 - 2,5 mm² / 18 - 12 AWG		
Rated Cross Section	2,5 mm²		
Wire Stripping Length	8,5 mm ± 0,5 mm		
Overvoltage Category	III	III	II
Pollution Severity Level	3	2	2
Rated Voltage	500 V	630 V	1000 V
Rated Impulse Voltage	6 kV	6 kV	6 kV
Rated Insulation Voltage	750 V acc. to EN 60998-1		
Rated Current	24 A		
Hole in PCB	ø 1,6 mm		
Torque	1,2 Nm		
Other specifications	Per pole two wires of identical cross-section can be connected.		

Material

Moulding	PA, grey, V-0
Comparative Tracking Index	CTI ≥ 600
Insulating Group	I
Temperature Range	-40°C up to 100°C
Pressure clamp	Tin plated brass
Screw	M4; zinc plated steel, blue passivated
Solder pin	0,8 x 1,0 mm; tin plated brass

Approvals

	Current	Voltage	Group	AWG	Nm
	20	300	B	20 - 12	1,13
	pending				

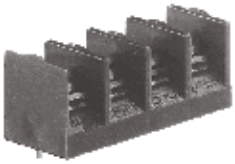
Options / Accessories

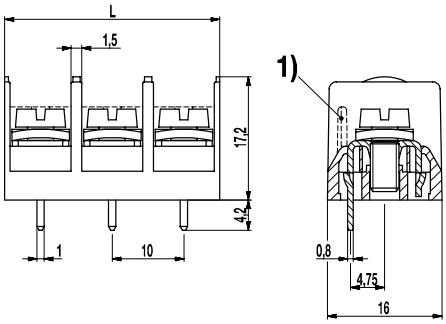
- Consecutive numbering
- Special marking according to drawing
- Self-adhesive marking strip BST-10,00
- Cover cap 983-A
- Securing pins BEF-983
- Crosshead screws
- 10 mm pin length

PCB connector

983-S/-ZS

Screw connection, 1 solder pin per pole





1) Backwall (Version -ZS)

The PCB connector 983-S with a pitch of 10 mm features in spite of its small dimensions, large clearance and creepage distances.
This version is equipped with one solder pin per pole and is available in 2- to 26-pole design.
The conductor terminal is of head contact design, whereby the screws and square washers are movably connected.
For easier connection, the non-rotably mounted square washers are automatically lifted when the screw is loosened.
The connector can be mounted side-by-side in the nominal pitch.
Variant "-ZS" features an additional back wall.

Part Numbers

No. of poles	983-S	983-ZS	Length	Pcs
2	10.873.802	10.873.872	20,00	100
3	10.873.803	10.873.873	30,00	100
4	10.873.804	10.873.874	40,00	100
5	10.873.805	10.873.875	50,00	100
6	10.873.806	10.873.876	60,00	100
7	10.873.807	10.873.877	70,00	50
8	10.873.808	10.873.878	80,00	50
9	10.873.809	10.873.879	90,00	50
10	10.873.810	10.873.880	100,00	50
11	10.873.811	10.873.881	110,00	50
12	10.873.812	10.873.882	120,00	50
13	10.873.813	10.873.883	130,00	20
14	10.873.814	10.873.884	140,00	20
15	10.873.815	10.873.885	150,00	20
16	10.873.816	10.873.886	160,00	20
17	10.873.817	10.873.887	170,00	25
18	10.873.818	10.873.888	180,00	25
19	10.873.819	10.873.889	190,00	25
20	10.873.820	10.873.890	200,00	25
21	10.873.821	10.873.891	210,00	25
22	10.873.822	10.873.892	220,00	25
23	10.873.823	10.873.893	230,00	25
24	10.873.824	10.873.894	240,00	25
25	10.873.825	10.873.895	250,00	10
26	10.873.826	10.873.896	260,00	10

General Information

Pitch	10 mm
No. of poles	2 - 26

Technical Data

Clamping Range	*solid / flexible / AWG*		
	0,75 - 2,5 mm² / 0,75 - 2,5 mm² / 18 - 12 AWG		
Rated Cross Section	2,5 mm²		
Wire Stripping Length	8,5 mm ± 0,5 mm		
Overvoltage Category	III	III	II
Pollution Severity Level	3	2	2
Rated Voltage	500 V	630 V	1000 V
Rated Impulse Voltage	6 kV	6 kV	6 kV
Rated Insulation Voltage	750 V acc. to EN 60998-1		
Rated Current	24 A		
Hole in PCB	ø 1,6 mm		
Torque	1,2 Nm		
Other specifications	Per pole two wires of identical cross-section can be connected.		

Material

Moulding	PA, grey, V-0
Comparative Tracking Index	CTI ≥ 600
Insulating Group	I
Temperature Range	-40°C up to 100°C
Pressure clamp	Tin plated brass
Screw	M4; zinc plated steel, blue passivated
Solder pin	0,8 x 1,0 mm; tin plated brass

Approvals

	Current	Voltage	Group	AWG	Nm
	20	300	B	20 - 12	1,13
	20	300	B	20 - 12	1,13
	10	300	D, E	20 - 12	1,13

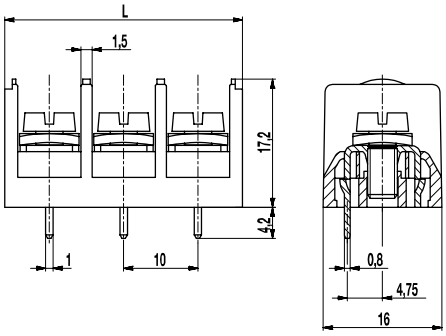
Options / Accessories

- Consecutive numbering
- Special marking according to drawing
- Self-adhesive marking strip BST-10,00
- Cover cap 983-A
- Securing pins BEF-983
- Crosshead screws
- 10 mm pin length

PCB connector

983-S/..-DAM

Screw connection, reinforced side walls, 1 solder pin per pole



The PCB connector 983-S/..-DAM is based on the well proven terminals of the series 983.
The optimized geometry and slightly modified housing offer some advantages compared to the standard
versions:
• The reinforced side walls can equalize the resulting torque to the outside. As a result, the reinforced side avoid the stacking without pole loss as given in the standard version.
• The new housing geometry creates now the possibility to implement central soldering pins.

The connection is designed as head contact, screw and washers forming a combination.
This terminal is available from 2 to 6 poles as well as a version with two soldering pins (see 983-D/..-DAM).

Part Numbers

No. of poles	983-S/..-DAM	Length	Pcs
2	10.873.912	22,00	100
3	10.873.913	32,00	100
4	10.873.914	42,00	100
5	10.873.915	52,00	100
6	10.873.915	62,00	100

General Information

Pitch	10 mm
No. of poles	2 - 6

Technical Data

Clamping Range	*solid / flexible / AWG*		
	0,75 - 2,5 mm² / 0,75 - 2,5 mm² / 18 - 12 AWG		
Rated Cross Section	2,5 mm²		
Wire Stripping Length	8,5 mm ± 0,5 mm		
Overvoltage Category	III	III	II
Pollution Severity Level	3	2	2
Rated Voltage	500 V	630 V	1000 V
Rated Impulse Voltage	6 kV	6 kV	6 kV
Rated Insulation Voltage	750 V acc. to EN 60998-1		
Rated Current	24 A		
Hole in PCB	ø 1,6 mm		
Torque	1,2 Nm		
Other specifications	Per pole two wires of identical cross-section can be connected.		

Material

Moulding	PA, grey, V-0
Comparative Tracking Index	CTI ≥ 600
Insulating Group	I
Temperature Range	-40°C up to 100°C
Pressure clamp	Tin plated brass
Screw	M4; zinc plated steel, blue passivated
Solder pin	0,8 x 1,0 mm; tin plated brass

Approvals

	Current	Voltage	Group	AWG	Nm
	20	300	B	20 - 12	1,13
	pending				

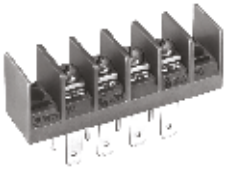
Options / Accessories

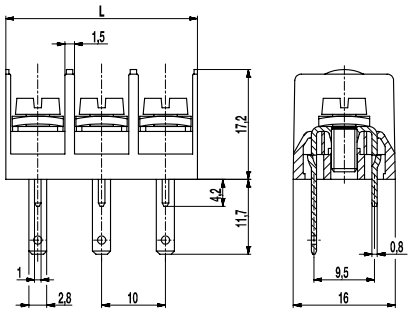
- Consecutive numbering
- Special marking according to drawing
- Self-adhesive marking strip BST-10,00
- Cover cap 983-A
- Securing pins BEF-983
- Crosshead screws
- 10 mm pin length

PCB connector

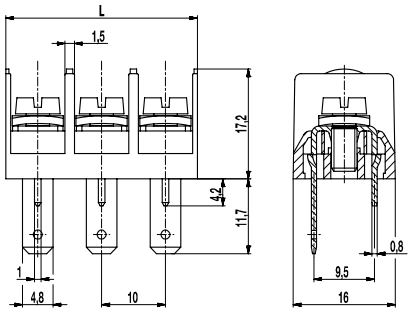
983-SMF-2,8/-4,8

Screw connection, with solder pin and tab





983-SMF-2,8



983-SMF-4,8

The PCB connectors 983-SMF-2,8 and 983-SMF-4,8 with a pitch of 10 mm are available in 1- to 12-pole design and can be mounted side-by-side in the nominal pitch.
They are based on our series 983 terminal strips.

The conductor terminal is of head contact design with Screws M4, whereby the screws and square washers are movably connected.
For easier connection, the non-rotably mounted square washers are automatically lifted when the screw is loosened.

On the solder side and the plug-in side they feature one solder pin and one tab connection of 2.8 mm or 4.8 mm width per pole.
This allows current to flow to other components without having to use additional conductor paths.

Part Numbers

No. of poles	983-SMF-2,8	983-SMF-4,8	Length	Pcs
1	91.873.803	92.873.803	30,00	100
2	91.873.804	92.873.804	40,00	100
3	91.873.805	92.873.805	50,00	100
4	91.873.806	92.873.806	60,00	100
5	91.873.807	92.873.807	70,00	100
6	91.873.808	92.873.808	80,00	100
7	91.873.809	92.873.809	90,00	50
8	91.873.810	92.873.810	100,00	50
9	91.873.811	92.873.811	110,00	50
10	91.873.812	92.873.812	120,00	50
11	91.873.813	92.873.813	130,00	50
12	91.873.814	92.873.814	140,00	50

General Information

Pitch	10 mm
No. of poles	1 - 12

Technical Data

Clamping Range	*solid / flexible / AWG*
	0,5 - 2,5 mm² / 0,5 - 2,5 mm² / 20 - 12 AWG
Rated Cross Section	2,5 mm²
Wire Stripping Length	8,5 mm
Overvoltage Category	III
Pollution Severity Level	3
Rated Voltage	320 V
Rated Impulse Voltage	4 kV
Rated Insulation Voltage	450 V acc. to EN 60998-1
Rated Current	6 A: with receptacles 2,8; wire 1 mm² (16 AWG) 16 A: with receptacles 4,8; wire 2,5 mm² (14 AWG)
Hole in PCB	ø 1,6 mm
Torque	1,2 Nm
Other specifications	Screw-fixing holes ø 3,2 mm. Per pole two wires of identical cross-section can be connected. Indicated rated voltage applies to applications with insulation receptacles.

Material

Moulding	PA, grey, V-0
Comparative Tracking Index	CTI ≥ 600
Insulating Group	I
Temperature Range	-40°C up to 100°C
Pressure clamp	Tin plated brass
Screw	M4; zinc plated steel, blue passivated
Solder pin	0,8 x 1,0 mm; tin plated brass

Approvals

	Current	Voltage	Group	AWG	Nm
	20	300	B	20 - 12	1,13
	6	300	B, D, E	20 - 12	1,13 [1]
	15	300	B	20 - 12	1,33 [2]
	10	300	D, E	20 - 12	1,33 [2]

[1] for 982-SMF-2,8
[2] for 982-SMF-4,8

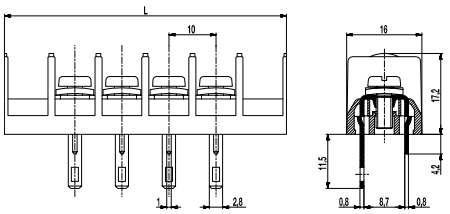
Options / Accessories

- Consecutive numbering
- Special marking according to drawing
- Self-adhesive marking strip BST-10,00
- Cover cap 983-A
- Securing pins BEF-983, fastening pole position can be freely selected
- Crosshead screws
- Various versions of tabs instead of screw connections

PCB connector

983-SML-2,8

Screw connection, with solder pin and solder tag



The PCB connector 983-SML-2,8 with a pitch of 10 mm is available in 1- to 12-pole design and can be mounted side-by-side in the nominal pitch.
They are based on our series 983 terminal strips.

The conductor terminal is of head contact design with screws M4, whereby the screws and square washers are movably connected.
For easier connection, the non-rotably mounted square washers are automatically lifted when the screw is loosened.

On the solder side and the plug-in side they feature one solder pin and one soldering tag of 2.8 mm width per pole.
This allows current to flow to other components without having to use additional conductor paths.

Part Numbers

No. of poles	983-SML-2,8	Length	Pcs
1	94.873.803	30,00	100
2	94.873.804	40,00	100
3	94.873.805	50,00	100
4	94.873.806	60,00	100
5	94.873.807	70,00	100
6	94.873.808	80,00	100
7	94.873.809	90,00	50
8	94.873.810	100,00	50
9	94.873.811	110,00	50
10	94.873.812	120,00	50
11	94.873.813	130,00	50
12	94.873.814	140,00	50

General Information

Pitch	10 mm
No. of poles	1 - 12

Technical Data

Clamping Range	*solid / flexible / AWG*
	0,5 - 2,5 mm² / 0,5 - 2,5 mm² / 20 - 12 AWG
Rated Cross Section	2,5 mm²
Wire Stripping Length	8,5 mm
Overvoltage Category	III
Pollution Severity Level	3
Rated Voltage	320 V
Rated Impulse Voltage	4 kV
Rated Insulation Voltage	450 V acc. to EN 60998-1
Rated Current	17,5 A (wire 1.5 mm² in soldering tag area)
Hole in PCB	ø 1,6 mm
Torque	1,2 Nm
Other specifications	Fixing holes ø 3,2 mm. Per pole two wires of identical cross-section can be connected.

Material

Moulding	PA, grey, V-0
Comparative Tracking Index	CTI ≥ 600
Temperature Range	-40°C up to 100°C
Pressure clamp	Tin plated brass
Screw	M4; zinc plated steel, blue passivated
Solder pin	0,8 x 1,0 mm; tin plated brass

Approvals

	Current	Voltage	Group	AWG	Nm
	20	300	B	20 - 12	1,13
	20	300	B	20 - 12	1,13
	10	300	D, E	20 - 12	1,13

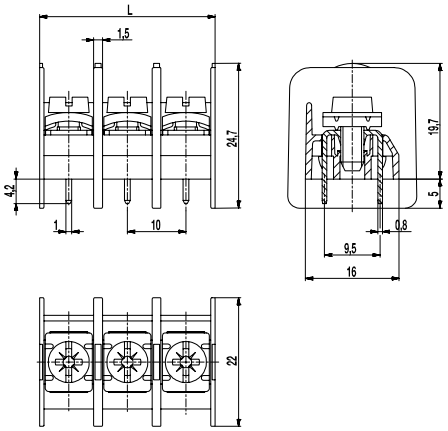
Options / Accessories

- Consecutive numbering
- Special marking according to drawing
- Self-adhesive marking strip BST-10,00
- Cover cap 983-A
- Securing pins BEF-983
- Fastening pole position can be freely selected
- Crosshead screws
- Various tab versions available instead of screw connections

PCB connector

983-UD

Screw connection, 2 solder pins per pole, with surrounding rib



Version with framed ribs to realize larger clearance and creepage distances.
For wave soldering corresponding slots are necessary in the printed circuit board.

Part Numbers

No. of poles	983-UD	Length	Pcs
2	20.873.862	20,00	200
3	20.873.863	30,00	200
4	20.873.864	40,00	100
5	20.873.865	50,00	100
6	20.873.866	60,00	100
7	20.873.867	70,00	50

General Information

Pitch	10 mm
No. of poles	2 - 7
Additonal Information	with plus/minus screw, cross recess: Pozidriv

Technical Data

Clamping Range	*solid / flexible / AWG*
	0,75 - 2,5 mm² / 0,75 - 2,5 mm² / 18 - 12 AWG
Rated Cross Section	2,5 mm²
Wire Stripping Length	8,5 mm
Overvoltage Category	III
Pollution Severity Level	3
Rated Voltage	800 V
Rated Impulse Voltage	8 kV
Rated Insulation Voltage	750 V acc. to EN 60998-1
Rated Current	24 A
Hole in PCB	ø 1,6 mm
Torque	1,2 Nm
Other specifications	Per pole two wires of identical cross-section can be connected.

Material

Moulding	PA HT, black, V-0
Comparative Tracking Index	CTI 250
Insulating Group	IIIa
Temperature Range	-40°C up to 120°C; temporary max. 260°C
Pressure clamp	Tin plated brass
Screw	M4; zinc plated steel, blue passivated
Solder pin	0,8 x 1,0 mm; tin plated brass

Approvals

	Current	Voltage	Group	AWG	Nm
	20	600	B, C	20 - 12	1,13
	20	600	B, C	20 - 12	1,13

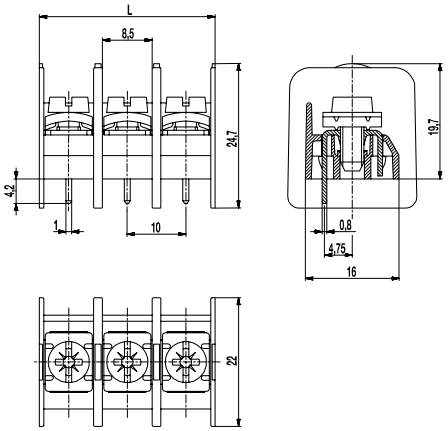
Options / Accessories

- 10 mm pin length

PCB connector

983-US

Screw connection, 1 solder pin per pole, with surrounding rib



Version with framed ribs to realize larger clearance and creepage distances.
For wave soldering corresponding slots are necessary in the printed circuit board.

Part Numbers

No. of poles	983-US	Length	Pcs
2	10.873.862	20,00	200
3	10.873.863	30,00	200
4	10.873.864	40,00	100
5	10.873.865	50,00	100
6	10.873.866	60,00	100
7	10.873.867	70,00	50

General Information

Pitch	10 mm
No. of poles	2 - 7
Additonal Information	with plus/minus screw, cross recess: Pozidriv

Technical Data

Clamping Range	*solid / flexible / AWG*
	0,75 - 2,5 mm² / 0,75 - 2,5 mm² / 18 - 12 AWG
Rated Cross Section	2,5 mm²
Wire Stripping Length	8,5 mm
Overvoltage Category	III
Pollution Severity Level	3
Rated Voltage	800 V
Rated Impulse Voltage	8 kV
Rated Insulation Voltage	750 V acc. to EN 60998-1
Rated Current	24 A
Hole in PCB	ø 1,6 mm
Torque	1,2 Nm
Other specifications	Per pole two wires of identical cross-section can be connected.

Material

Moulding	PA HT, black, V-0
Comparative Tracking Index	CTI 250
Insulating Group	IIIa
Temperature Range	-40°C up to 120°C; temporary max. 260°C
Pressure clamp	Tin plated brass
Screw	M4; zinc plated steel, blue passivated
Solder pin	0,8 x 1,0 mm; tin plated brass

Approvals

	Current	Voltage	Group	AWG	Nm
	20	600	B, C	20 - 12	1,13
	20	600	B, C	20 - 12	1,13

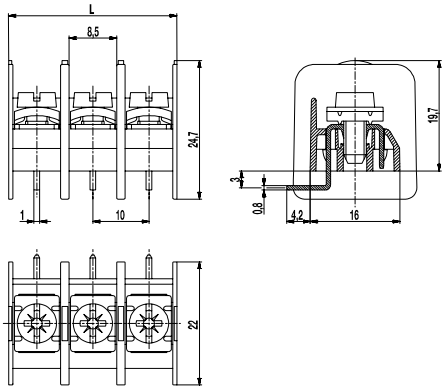
Options / Accessories

- 10 mm pin length

PCB connector

983-UW

Screw connection, wire entrance vertical to PCB, with surrounding rib



Version with framed ribs to realize larger clearance and creepage distances.
For wave soldering corresponding slots are necessary in the printed circuit board.

Part Numbers

No. of poles	983-UW	Length	Pcs
2	30.873.862	20,00	100
3	30.873.863	30,00	100
4	30.873.864	40,00	100
5	30.873.865	50,00	100
6	30.873.866	60,00	100
7	30.873.867	70,00	50

General Information

Pitch	10 mm
No. of poles	2 - 7
Additonal Information	with plus/minus screw, cross recess: Pozidriv

Technical Data

Clamping Range	*solid / flexible / AWG*
	0,75 - 2,5 mm² / 0,75 - 2,5 mm² / 18 - 12 AWG
Rated Cross Section	2,5 mm²
Wire Stripping Length	8,5 mm
Overvoltage Category	III
Pollution Severity Level	3
Rated Voltage	800 V
Rated Impulse Voltage	8 kV
Rated Insulation Voltage	750 V acc. to EN 60998-1
Rated Current	15 A
Hole in PCB	ø 1,6 mm
Torque	1,2 Nm
Other specifications	Per pole two wires of identical cross-section can be connected.

Material

Moulding	PA HT, black, V-0
Comparative Tracking Index	CTI 250
Insulating Group	IIIa
Temperature Range	-40°C up to 120°C; temporary max. 260°C
Pressure clamp	Tin plated brass
Screw	M4; zinc plated steel, blue passivated
Solder pin	0,8 x 1,0 mm; tin plated brass

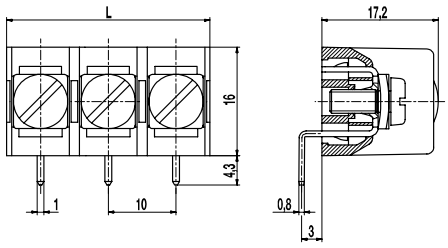
Approvals

	Current	Voltage	Group	AWG	Nm
	20	600	B, C	20 - 12	1,13
	20	600	B, C	20 - 12	1,13

PCB connector

983-W/-ZW

Screw connection, wire entrance vertical to PCB



The PCB screw connector 983-W in 10 mm pitch is available with 2- to 26-pole design and can be mounted side-by-side in the nominal pitch.
This version is equipped with one solder pin per pole.

The conductor terminal, located vertical to the PCB, is of head contact design, whereby the screws and square washers are movably connected.
For easier connection, the non-rotably mounted square washers are automatically lifted when the screw is loosened.

Part Numbers

No. of poles	983-W	983-ZW	Length	Pcs
2	30.873.802	30.872.872	20,00	100
3	30.873.803	30.872.873	30,00	100
4	30.873.804	30.872.874	40,00	100
5	30.873.805	30.872.875	50,00	100
6	30.873.806	30.872.876	60,00	100
7	30.873.807	30.872.877	70,00	50
8	30.873.808	30.872.878	80,00	50
9	30.873.809	30.872.879	90,00	50
10	30.873.810	30.872.880	100,00	50
11	30.873.811	30.872.881	110,00	50
12	30.873.812	30.872.882	120,00	50

further number of poles on request

General Information

Pitch	10 mm
No. of poles	2 - 26

Technical Data

Clamping Range	*solid / flexible / AWG* 0,75 - 2,5 mm² / 0,75 - 2,5 mm² / 18 - 12 AWG
Wire Stripping Length	8,5 mm
Overvoltage Category	III
Pollution Severity Level	3
Rated Voltage	500 V
Rated Impulse Voltage	6 kV
Rated Insulation Voltage	450 V acc. to EN 60998-1
Rated Current	15 A
Hole in PCB	ø 1,6 mm
Torque	1,2 Nm
Other specifications	Per pole two wires of identical cross-section can be connected.

Material

Moulding	PA, grey, V-0
Comparative Tracking Index	CTI ≥ 600
Insulating Group	I
Temperature Range	-40°C up to 100°C
Pressure clamp	Tin plated brass
Screw	M4; zinc plated steel, blue passivated
Solder pin	0,8 x 1,0 mm; tin plated brass

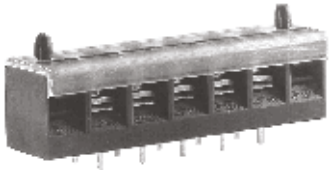
Approvals

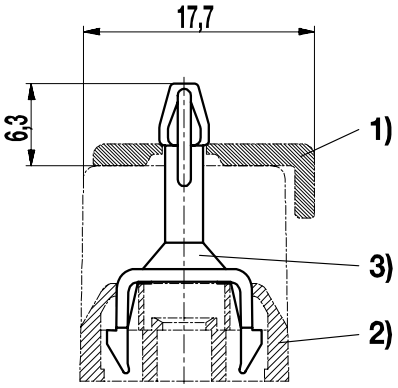
	Current	Voltage	Group	AWG	Nm
	20	300	B	20 - 12	1,13
	20	300	B	20 - 12	1,13
	10	300	D, E	20 - 12	1,13

Options / Accessories

- Consecutive numbering
- Special marking according to drawing
- Self-adhesive marking strip BST-10,00
- Cover cap 983-A
- Securing pins BEF-983
- Crosshead screws

Cover cap
983-A
Accessories





1) Cover cap
2) PCB connector
3) Securing pin

The 983-A cover cap is used as shock protection for series 983 PCB connectors.
All cover caps have two ø 3 mm fastening holes.
They are fastened after wiring the strips with two securing pins BEF-983, which are pressed into the first and the last empty pole compartment of the PCB connector.

When ordering PCB connectors of series 983, the two empty pole compartments on the far left and the far right must be specified because terminal pole numbers are only allocated to connected pole compartments.

The number of poles and the cover cap sizes stated herein are already configured according to the number of empty pole compartments, i.e. a 3-pole cover cap is suitable for a 3-pole PCB connector equipped with two additional empty pole compartments.

General Information

No. of poles	1 - 24
Usable with	PCB connector of series 983

Material

Moulding	ABS, transparent
Temperature Range	-30°C up to 80°C

Options / Accessories

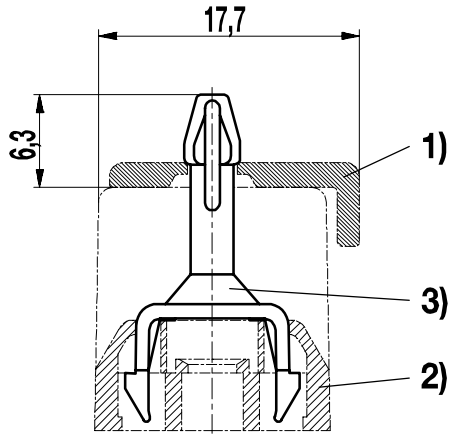
- Securing pins BEF-983
- Fixing holes in different position

Part Numbers

No. of poles	983-A	Length	Pcs
1	13.891.203	30,00	200
2	14.891.203	40,00	200
3	15.891.203	50,00	200
4	16.891.203	60,00	100
5	17.891.203	70,00	100
6	18.891.203	80,00	100
7	19.891.203	90,00	100
8	20.891.203	100,00	100
9	21.891.203	110,00	100
10	22.891.203	120,00	100
11	23.891.203	130,00	100
12	24.891.203	140,00	100
14	26.891.203	160,00	100
16	28.891.203	180,00	100
18	30.891.203	200,00	100
20	32.891.203	220,00	100
22	34.891.203	240,00	100
24	36.891.203	260,00	100

further number of poles on request

Securing pin
BEF-983
Accessories



1) Cover cap
2) PCB connector
3) Securing pin

The securing pins BEF-983 are used to attach the cover caps onto series 982 and 983 PCB connectors.
Both pins are pressed into the far end empty pole compartments of the series 982 and 983 PCB connectors.

Part Numbers

No. of poles	BEF-983	Length	Pcs
1	10.476.008		1.000

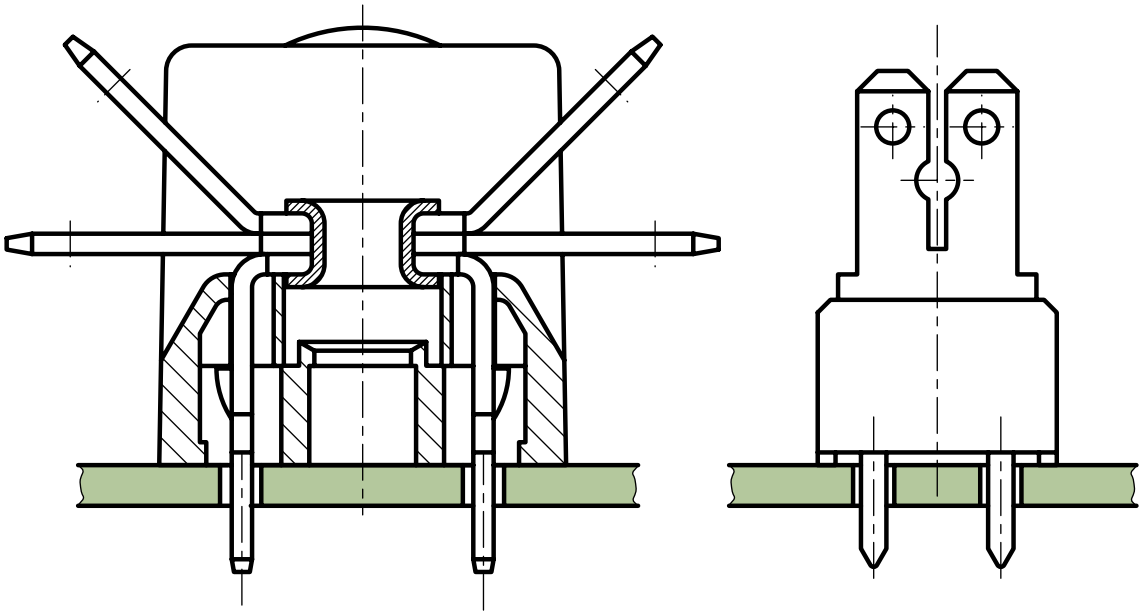
General Information

Usable with	PCB connectors series 982 and 983, cover caps 982-A and 983-A

Material

Moulding	PA, grey, V-0
Temperature Range	-30°C up to 80°C

Tab connectors



On the following pages you can find our range of tab connectors with a pitch of 10 mm.

The Series 900 of our tab connector assortment can be flexibly used on various pitches. The tab connectors with double solder termination are designed for 2,8 mm, 4,8 mm, 6,3 mm tab receptacles.

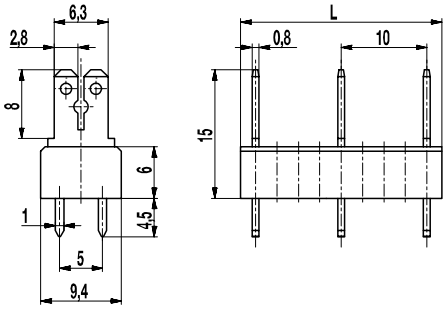
Depending on the respective application, the series 900 allows to plug on bare, partially or fully insulated tab receptacles according to DIN 46247.

For the insulation of the tabs, receptacles ISO-110 for 2,8 mm and ISO-25 for 6,3 mm or 2x 2,8 mm can be used (see accessories). When using double-spring contacts for 6,3 mm tab connectors, our insulation socket ISO-900 is best suitable.

Tab connector

900-S-10

Tab 2x 2,8 mm / 1x 6,3 mm



The tab connector 900-S-10 with double solder termination and a pitch of 10 mm is designed for 1x 2,8 mm or 1x 6,3 mm tab connector receptacles.

Depending on the respective application, the tab connectors of series 900 allow to plug in bare, partially or fully insulated tab receptacles according to DIN 46247. Also non-insulated 2,8 mm or 6,3 mm tab receptacles can be plugged on these tab connectors. Insulation receptacles ISO-25 (see also ISO product data sheet) can be used to insulate 2,8 mm or 6,3 mm tab receptacles.
Insulation sockets are available for 6,3 mm tab connectors with double-spring contacts (see also ISO-900 product data sheet).

Part Numbers

No. of poles	900-S-10	Length	Pcs
2	80.870.903	13,50	250
3	80.870.905	23,50	100
4	80.870.907	33,50	100
5	80.870.909	43,50	100
6	80.870.911	53,50	100
7	80.870.913	63,50	100
8	80.870.915	73,50	100
9	80.870.917	83,50	100
10	80.870.919	93,50	100
11	80.870.921	103,50	100
12	80.870.923	113,50	100
13	80.870.925	123,50	50

further number of poles on request

General Information

Pitch	10 mm
No. of poles	2 - 13

Technical Data

Overvoltage Category	III	III	II
Pollution Severity Level	3	2	2
Rated Voltage	630 V	630 V	1000 V
Rated Impulse Voltage	6 kV	6 kV	6 kV
Rated Insulation Voltage	750 V acc. to EN 60998-1		
Rated Current	6 A: with receptacles 2,8; wire 1 mm² (16 AWG) 16 A: with receptacles 6,3; wire 2,5 mm² (14 AWG)		
Hole in PCB	ø 1,6 mm		
Other specifications	Indicated rated voltages refer to applications with insulation receptacles		

Material

Moulding	PA, red, V-0
Comparative Tracking Index	CTI ≥ 600
Insulating Group	I
Temperature Range	-40°C up to 100°C
Solder pin	1,0 x 0,8 mm; tin plated brass
Tab	2,8 x 0,8 mm; 6,3 x 0,8 mm; tin plated brass

Approvals

	Current	Voltage	Group	AWG	Nm
	15	300	B		
	15	150	C		
	15	300	B		
	10	300	D, E		

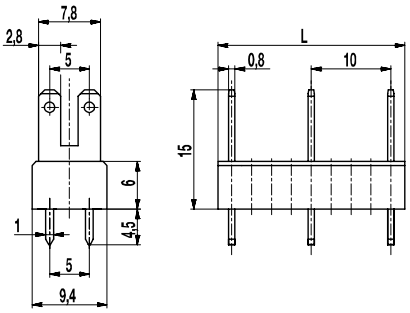
Options / Accessories

- Consecutive numbering
- Special marking according to drawing
- Self-adhesive marking strip BST-10,00
- Insulation receptacles ISO
- Insulation sockets ISO-900
- Change of pitch
- Component mix of tab connector versions
- Tab connectors are also individually available (see single tabs GST-900)

Tab connector

900-SH-10

Tab 2x 2,8 mm



The tab connector 900-SH-10 with double solder termination and a pitch of 10 mm is designed for 2x 2,8 mm tab connector receptacles.

Depending on the respective application, the tab connectors of series 900 allow to plug in bare, partially or fully insulated tab receptacles according to DIN 46247. On tab connectors of this series, two non-insulated 2,8 mm tab receptacles can be plugged in parallel. Insulation receptacles ISO-110 (see also ISO product data sheet) can be used to insulate 2,8 mm tab receptacles.

Part Numbers

No. of poles	900-SH-10	Length	Pcs
2	39.870.903	13,50	250
3	39.870.905	23,50	100
4	39.870.907	33,50	100
5	39.870.909	43,50	100
6	39.870.911	53,50	100
7	39.870.913	63,50	100
8	39.870.915	73,50	100
9	39.870.917	83,50	100
10	39.870.919	93,50	100
11	39.870.921	103,50	100
12	39.870.923	113,50	100
13	39.870.925	123,50	50

further number of poles on request

General Information

Pitch	10 mm
No. of poles	2 - 13

Technical Data

Overvoltage Category	III	III	II
Pollution Severity Level	3	2	2
Rated Voltage	630 V	630 V	1000 V
Rated Impulse Voltage	6 kV	6 kV	6 kV
Rated Insulation Voltage	750 V acc. to EN 60998-1		
Rated Current	6 A: with receptacles 2,8; wire 1 mm² (16 AWG)		
Hole in PCB	ø 1,6 mm		
Other specifications	Indicated rated voltages refer to applications with insulation receptacles		

Material

Moulding	PA, red, V-0
Comparative Tracking Index	CTI ≥ 600
Insulating Group	I
Temperature Range	-40°C up to 100°C
Solder pin	1,0 x 0,8 mm; tin plated brass
Tab	2,8 x 0,8 mm; tin plated brass

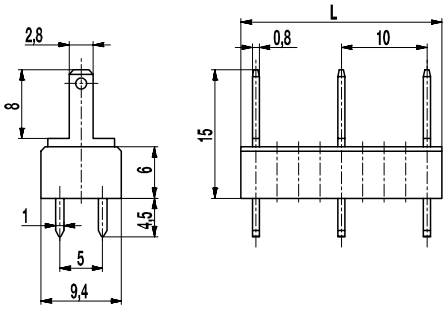
Approvals

	Current	Voltage	Group	AWG	Nm
	15	300	B		
	15	150	C		
	15	300	B		
	10	300	D, E		

Options / Accessories

- Consecutive numbering
- Special marking according to drawing
- Self-adhesive marking strip BST-10,00
- Insulation receptacles ISO
- Change of pitch
- Component mix of tab connector versions
- Tab connectors are also individually available (see single tabs GST-900)

Tab connector
900-SUB-10
Tab 2,8 mm



The tab connector 900-SUB-10 with double solder termination and a pitch of 10 mm is designed for 2,8 mm tab connector receptacles.

Depending on the respective application, the tab connectors of series 900 allow to plug in bare, partially or fully insulated tab receptacles according to DIN 46247. Insulation receptacles ISO-110 (see also ISO product data sheet) can be used to insulate 2,8 mm tab receptacles.
Insulation sockets are available for 6,3 mm tab connectors with double-spring contacts (see also ISO-900 product data sheet).

Part Numbers

No. of poles	900-SUB-10	Length	Pcs
2	13.870.903	13,50	250
3	13.870.905	23,50	250
4	13.870.907	33,50	250
5	13.870.909	43,50	250
6	13.870.911	53,50	250
7	13.870.913	63,50	100
8	13.870.915	73,50	100
9	13.870.917	83,50	100
10	13.870.919	93,50	100
11	13.870.921	103,50	100
12	13.870.923	113,50	100
13	13.870.925	123,50	50

further number of poles on request

General Information

Pitch	10 mm
No. of poles	2 - 13

Technical Data

Overvoltage Category	III	III	II
Pollution Severity Level	3	2	2
Rated Voltage	630 V	630 V	1000 V
Rated Impulse Voltage	6 kV	6 kV	6 kV
Rated Insulation Voltage	750 V acc. to EN 60998-1		
Rated Current	6 A: with receptacles 2,8; wire 1 mm² (16 AWG)		
Hole in PCB	ø 1,6 mm		
Other specifications	Indicated rated voltages refer to applications with insulation receptacles		

Material

Moulding	PA, red, V-0
Comparative Tracking Index	CTI ≥ 600
Insulating Group	I
Temperature Range	-40°C up to 100°C
Solder pin	1,0 x 0,8 mm; tin plated brass
Tab	2,8 x 0,8 mm; tin plated brass

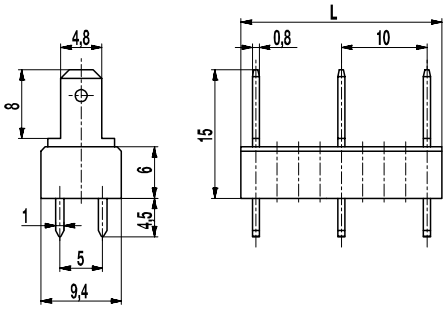
Approvals

	Current	Voltage	Group	AWG	Nm
	15 15	300 150	B C		
	6	300	B, D, E		

Options / Accessories

- Consecutive numbering
- Special marking according to drawing
- Self-adhesive marking strip BST-10,00
- Insulation receptacles ISO
- Insulation sockets ISO-900
- Change of pitch
- Component mix of tab connector versions
- Tab connectors are also individually available (see single tabs GST-900)

Tab connector
900-SUC-10
Tab 4,8 mm



The tab connector 900-SUC-10 with double solder termination and a pitch of 10 mm is designed for 4,8 mm tab connector receptacles.

Depending on the respective application, the tab connectors of series 900 allow to plug in bare, partially or fully insulated tab receptacles according to DIN 46247. Insulation receptacles ISO-187 (see also ISO product data sheet) can be used to insulate 4,8 mm tab receptacles.
Insulation sockets are available for 6,3 mm tab connectors with double-spring contacts (see also ISO-900 product data sheet).

Part Numbers

No. of poles	900-SUC-10	Length	Pcs
2	19.870.903	13,50	250
3	19.870.905	23,50	100
4	19.870.907	33,50	100
5	19.870.909	43,50	100
6	19.870.911	53,50	100
7	19.870.913	63,50	100
8	19.870.915	73,50	100
9	19.870.917	83,50	100
10	19.870.919	93,50	100
11	19.870.921	103,50	100
12	19.870.923	113,50	100
13	19.870.925	123,50	50

further number of poles on request

General Information

Pitch	10 mm
No. of poles	2 - 13

Technical Data

Overvoltage Category	III	III	II
Pollution Severity Level	3	2	2
Rated Voltage	630 V	630 V	1000 V
Rated Impulse Voltage	6 kV	6 kV	6 kV
Rated Insulation Voltage	750 V acc. to EN 60998-1		
Rated Current	16 A: with receptacles 4,8; wire 2,5 mm² (14 AWG)		
Hole in PCB	ø 1,6 mm		
Other specifications	Indicated rated voltages refer to applications with insulation receptacles		

Material

Moulding	PA, red, V-0
Comparative Tracking Index	CTI ≥ 600
Insulating Group	I
Temperature Range	-40°C up to 100°C
Solder pin	1,0 x 0,8 mm; tin plated brass
Tab	4,8 x 0,8 mm; tin plated brass

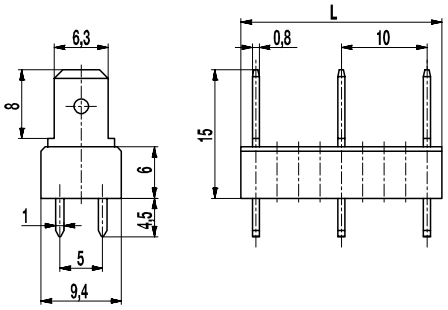
Approvals

	Current	Voltage	Group	AWG	Nm
	15	300	B		
	15	150	C		
	15	300	B		
	10	300	D, E		

Options / Accessories

- Consecutive numbering
- Special marking according to drawing
- Self-adhesive marking strip BST-10,00
- Insulation receptacles ISO
- Insulation sockets ISO-900
- Change of pitch
- Component mix of tab connector versions
- Tab connectors are also individually available (see single tabs GST-900)

Tab connector
900-SUN-10
Tab 6,3 mm



The tab connector 900-SUN-10 with double solder termination and a pitch of 10 mm is designed for 6,3 mm tab connector receptacles.

Depending on the respective application, the tab connectors of series 900 allow to plug in bare, partially or fully insulated tab receptacles according to DIN 46247. Insulation receptacles ISO-25 and ISO-250 (see also ISO product data sheet) can be used to insulate 6,3 mm tab receptacles.
Insulation sockets are available for 6,3 mm tab connectors with double-spring contacts (see also ISO-900 product data sheet).

Part Numbers

No. of poles	900-SUN-10	Length	Pcs
2	49.870.903	13,50	250
3	49.870.905	23,50	100
4	49.870.907	33,50	100
5	49.870.909	43,50	100
6	49.870.911	53,50	100
7	49.870.913	63,50	100
8	49.870.915	73,50	100
9	49.870.917	83,50	100
10	49.870.919	93,50	100
11	49.870.921	103,50	100
12	49.870.923	113,50	100
13	49.870.925	123,50	50

further number of poles on request

General Information

Pitch	10 mm
No. of poles	2 - 13

Technical Data

Overvoltage Category	III	III	II
Pollution Severity Level	3	2	2
Rated Voltage	630 V	630 V	1000 V
Rated Impulse Voltage	6 kV	6 kV	6 kV
Rated Insulation Voltage	750 V acc. to EN 60998-1		
Rated Current	16 A: with receptacles 6,3; wire 2,5 mm² (14 AWG)		
Hole in PCB	ø 1,6 mm		
Other specifications	Indicated rated voltages refer to applications with insulation receptacles		

Material

Moulding	PA, red, V-0
Comparative Tracking Index	CTI ≥ 600
Insulating Group	I
Temperature Range	-40°C up to 100°C
Solder pin	1,0 x 0,8 mm; tin plated brass
Tab	6,3 x 0,8 mm; tin plated brass

Approvals

	Current	Voltage	Group	AWG	Nm
	15	300	B		
	15	150	C		
	15	300	B		
	10	300	D, E		

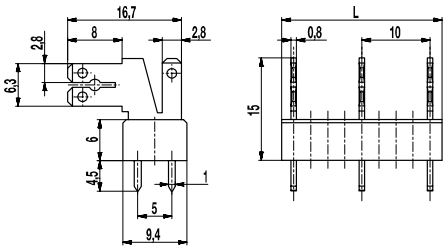
Options / Accessories

- Consecutive numbering
- Special marking according to drawing
- Self-adhesive marking strip BST-10,00
- Insulation receptacles ISO
- Insulation sockets ISO-900
- Change of pitch
- Component mix of tab connector versions
- Tab connectors are also individually available (see single tabs GST-900)

Tab connector

900-W-10

Tabs with 90° angle



The tab connector 900-W-10 with double solder termination and a pitch of 10 mm is designed for 1x 2,8 mm and 1x 2,8 mm / 1x 6,3 mm tab connector receptacles.

Depending on the respective application, the tab connectors of series 900 allow to plug in bare, partially or fully insulated tab receptacles according to DIN 46247. A non-insulated 2,8 mm or a 6,3 mm (optionally also insulated) tab connector receptacle can be plugged in the angled plug-in area of the tab connector. To the vertical tab connector, a non-insulated 2,8 mm tab connector receptacle can be also be connected. Insulation receptacles ISO-25 and ISO-250 (see also ISO product data sheet) can be used to insulate 6,3 mm tab receptacles.

Part Numbers

No. of poles	900-W-10	Length	Pcs
2	30.870.903	13,50	250
3	30.870.905	23,50	100
4	30.870.907	33,50	100
5	30.870.909	43,50	100
6	30.870.911	53,50	100
7	30.870.913	63,50	100
8	30.870.915	73,50	50
9	30.870.917	83,50	50
10	30.870.919	93,50	50
11	30.870.921	103,50	50
12	30.870.923	113,50	50
13	30.870.925	123,50	50

further number of poles on request

General Information

Pitch	10 mm
No. of poles	2 - 13

Technical Data

Overvoltage Category	III	III	II
Pollution Severity Level	3	2	2
Rated Voltage	630 V	630 V	1000 V
Rated Impulse Voltage	6 kV	6 kV	6 kV
Rated Insulation Voltage	750 V acc. to EN 60998-1		
Rated Current	6 A: with receptacles 2,8; wire 1 mm² (16 AWG) 16 A: with receptacles 6,3; wire 2,5 mm² (14 AWG)		
Hole in PCB	ø 1,6 mm		
Other specifications	Indicated rated voltages refer to applications with insulation receptacles		

Material

Moulding	PA, red, V-0
Comparative Tracking Index	CTI ≥ 600
Insulating Group	I
Temperature Range	-40°C up to 100°C
Solder pin	1,0 x 0,8 mm; tin plated brass
Tab	2,8 x 0,8 mm; 6,3 x 0,8 mm; tin plated brass

Approvals

	Current	Voltage	Group	AWG	Nm
	15	300	B		
	15	150	C		
	15	300	B		
	10	300	D, E		

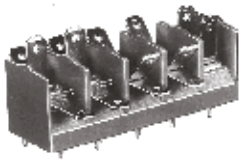
Options / Accessories

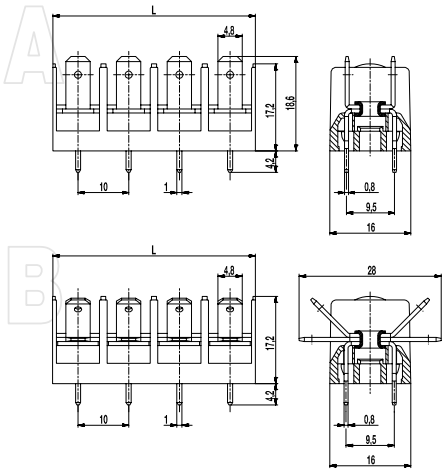
- Consecutive numbering
- Special marking according to drawing
- Self-adhesive marking strip BST-10,00
- Insulation receptacles ISO
- Change of pitch
- Component mix of tab connector versions
- Tab connectors are also individually available (see single tabs GST-900)

Tab connector

983-FD

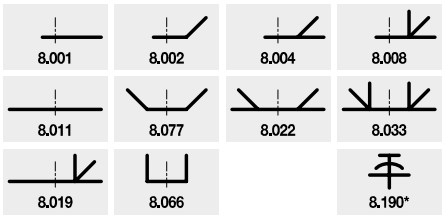
Tab/screw connection, 2 solder pins per pole

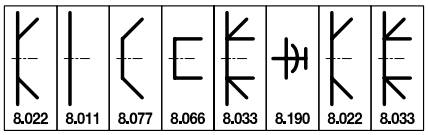




L = Number of poles x pitch
A: Terminal design with tab connector package 8.066
B: Terminal design with tab connector package 8.022

Terminal designs / Example of mixed assembly





* = Screw connection

On the input side, each pole of the tab connector 983-FD in 10 mm pitch can be connected to up to 6 tab connections or one screw connection.
For a uniform assembly, version, assembly type (4-digit number) and number of poles must be specified. Both technical drawings (A and B) show an example for uniform assembly. Mixed assembly requires either specifications of the terminal design for each pole or a drawing.

Due to the multitude of assembly combinations there is no designated order code. For uniform assembly with screw connections (8.190) see tab connector strip 983-D.

General Information

Pitch	10 mm
No. of poles	2 - 26
Usable with	receptacles for tabs acc. to DIN 46247

Technical Data

Clamping Range	*solid / flexible / AWG*
	0,75 - 2,5 mm² / 0,75 - 2,5 mm² / 18 - 12 AWG
Rated Cross Section	2,5 mm²
Wire Stripping Length	8,5 mm
Overvoltage Category	III
Pollution Severity Level	3
Rated Voltage	500 V
Rated Impulse Voltage	4 kV
Rated Insulation Voltage	450 V acc. to EN 60998-1
Rated Current	16 A: with receptacles 4,8; wire 2,5 mm² (14 AWG)
Hole in PCB	ø 1,6 mm
Torque	1,2 Nm
Other specifications	For screw connections, 2 wires of the same cross-section can be connected per pole. The specified rated voltage applies to applications with insulating receptacles.

Material

Moulding	PA, grey, V-0
Comparative Tracking Index	CTI ≥ 600
Insulating Group	I
Temperature Range	-40°C up to 100°C
Pressure clamp	Tin plated brass
Screw	M4; zinc plated steel, blue passivated
Solder pin	0,8 x 1,0 mm; tin plated brass
Tab	Nickel plated brass
Tubular rivet	Tin plated copper

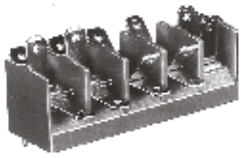
Approvals

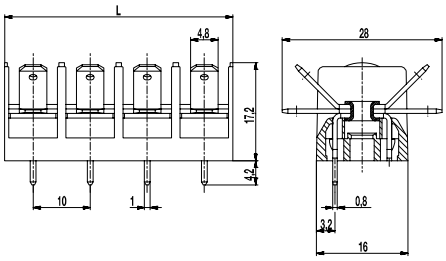
	Current	Voltage	Group	AWG	Nm
	15	300	B	20 - 12	
	15	300	B	20 - 12	
	10	300	D, E	20 - 12	

Options / Accessories

- Consecutive numbering
- Special marking according to drawing
- Self-adhesive marking strip BST-10,00
- Cover cap 983-A (two unassigned poles required); not suitable for every assembly type
- Crosshead screws
- 10 mm pin length
- Version without solder pin

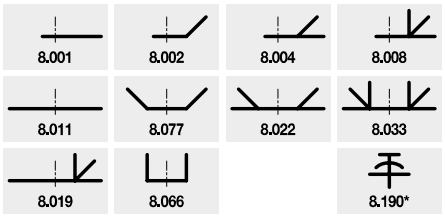
Tab connector
983-FS
Tab/screw connection, 1 solder pin per pole

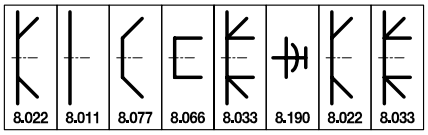




L = Number of poles x pitch
Terminal design with tab connector package 8.022

Terminal designs / Example of mixed assembly





* = Screw connection

On the input side, each pole of the tab connector 983-FS in 10 mm pitch can be connected to up to 6 tab connections or one screw connection.
For a uniform assembly, version, assembly type (4-digit number) and number of poles must be specified. Both technical drawings (A and B) show an example for uniform assembly. Mixed assembly requires either specifications of the terminal design for each pole or a drawing.

Due to the multitude of assembly combinations there is no designated order code.
For uniform assembly with screw connections (8.190) see tab connector strip 983-S.

General Information

Pitch	10 mm
No. of poles	2 - 26
Usable with	receptacles for tabs acc. to DIN 46247

Technical Data

Clamping Range	*solid / flexible / AWG*
	0,75 - 2,5 mm² / 0,75 - 2,5 mm² / 18 - 12 AWG
Rated Cross Section	2,5 mm²
Wire Stripping Length	8,5 mm
Overvoltage Category	III
Pollution Severity Level	3
Rated Voltage	500 V
Rated Impulse Voltage	4 kV
Rated Insulation Voltage	450 V acc. to EN 60998-1
Rated Current	16 A: with receptacles 4,8; wire 2,5 mm² (14 AWG)
Hole in PCB	ø 1,6 mm
Torque	1,2 Nm
Other specifications	For screw connections, 2 wires of the same cross-section can be connected per pole. The specified rated voltage applies to applications with insulating receptacles.

Material

Moulding	PA, grey, V-0
Comparative Tracking Index	CTI ≥ 600
Insulating Group	I
Temperature Range	-40°C up to 100°C
Pressure clamp	Tin plated brass
Screw	M4; zinc plated steel, blue passivated
Solder pin	0,8 x 1,0 mm; tin plated brass
Tab	Nickel plated brass
Tubular rivet	Tin plated copper

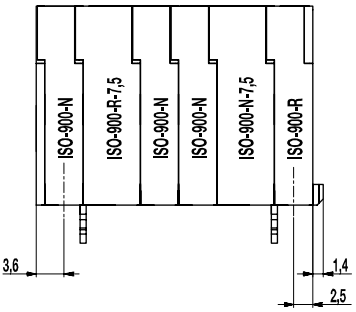
Approvals

	Current	Voltage	Group	AWG	Nm
	15	300	B	20 - 12	
	15	300	B	20 - 12	
	10	300	D, E	20 - 12	

Options / Accessories

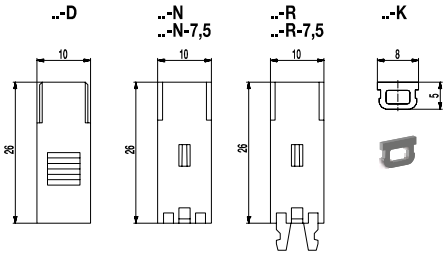
- Consecutive numbering
- Special marking according to drawing
- Self-adhesive marking strip BST-10,00
- Cover cap 983-A (two unassigned poles required); not suitable for every assembly type
- Crosshead screws
- 10 mm pin length
- Version without solder pin
- Version with screw connections only, please see 983-S

Insulation sockets
ISO-900
Accessories



Mounting example

Versions



Version D: Cover
Version N: Standard insulation socket
Version R: Insulation socket with snap-fits
Version K: Coding keys to block empty chambers

ISO-900 insulation sockets are used to insulate double spring contacts.
They are single pole and can be mounted side-by-side in 5 mm and 7,5 mm pitch.
Apart from the standard insulation sockets ISO-900-N und ISO-900-N-7,5, type ISO-900-R and ISO-900-R-7,5 with a latching hook are available to provide additional locking strength against accidental withdrawal. These latching hooks snap in the empty receptacles of tab connectors 900-S and 900-SUN.
The cover ISO-900-D is used as contact protection for the last pole.
Insulation sockets with latching hooks and ISO-900-K coding keys allow contacting the sockets. They are inserted into the empty slots of the tab connector, in which no insulation socket with latching hook is allocated, thus preventing incorrect connections.

General Information

Pitch	5 mm / 7,5 mm
Usable with	Tab connectors 900-S, 900-SUN and 900-SUC
Additonal Information	When accurately positioned in the socket, the double-spring contacts audibly snap into place. These metal parts are not part of our product range. They can be used e.g. for TYCO timer contacts (no. 925598-1).

Material

Moulding	PA, red, V-0
Comparative Tracking Index	CTI ≥ 600
Insulating Group	I
Temperature Range	-40°C up to 100°C

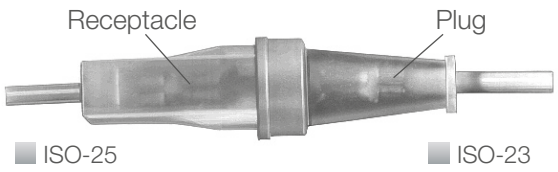
Options / Accessories

- Special marking according to drawing
- ISO-900 insulation sockets can be provided as multipole combinations. Please enclose a drawing.
- Spacer 2,5 mm (ISO-900-Z)

Part Numbers

Type	Part Numbers	Length	Pcs
ISO-900-D	25.838.106		1000
ISO-900-N	10.838.104		1000
ISO-900-N-7,5	10.838.105		1000
ISO-900-R	20.838.107		1000
ISO-900-R-7,5	10.838.108		1000
ISO-900-K	10.496.021		1000

Insulation receptacles
ISO
Accessories



Mounting example

Depending of their scope of application, insulation receptacles are made of either polyethylene (..-PE) or polypropylene V-0 (..-PPV0) and are available in various colours and sizes. Tab receptables according to DIN 46 247 are fully insulated (including the crimped point) with insulation receptacles. Prior to crimping, they are pushed onto the wire end, and are therefore captive. They can also be used to insulate crimped plug-in receptacles and cable sockets.

General Information

Additional Information	By means of using both ISO-23 (tab connector side) and ISO-25 insulation receptacles, a 6,3 mm cross-section cable connection can be completely insulated (see figure).

Material

Moulding	PE = Polyethylene (see table for colours) PP = Polypropylene, nature, V-0
Comparative Tracking Index	CTI ≥ 600
Insulating Group	I
Temperature Range	PE: ca. 70 up to 80°C, short-time ca. 90°C PP: up to 80°C, short-time ca. 140°C

Options / Accessories

- Insulation receptacles in other colours

Part numbers

Part numbers	Type	Colour	Nom. size	Cross-section	Length x width x height	Pcs
10.838.001	ISO-110-PEN	natural	2,8	up to 1 mm² (16 AWG)	19,5 x 5,5 x 3,5 mm	10.000
10.838.031	ISO-110-PEG	yellow	2,8	up to 1 mm² (16 AWG)	19,5 x 5,5 x 3,5 mm	10.000
10.838.034	ISO-110-PER	red	2,8	up to 1 mm² (16 AWG)	19,5 x 5,5 x 3,5 mm	10.000
10.838.021	ISO-110-PES	black	2,8	up to 1 mm² (16 AWG)	19,5 x 5,5 x 3,5 mm	10.000
10.838.032	ISO-110-PPV0	nature	2,8	up to 1 mm² (16 AWG)	19,5 x 5,5 x 3,5 mm	10.000
10.838.011	ISO-187-PEN	natural	4,8	up to 1,5 mm² (16 AWG)	21 x 8 x 4,5 mm	10.000
10.838.005	ISO-187-PEG	yellow	4,8	up to 1,5 mm² (16 AWG)	21 x 8 x 4,5 mm	10.000
10.838.035	ISO-187-PER	red	4,8	up to 1,5 mm² (16 AWG)	21 x 8 x 4,5 mm	10.000
10.838.036	ISO-187-PES	black	4,8	up to 1,5 mm² (16 AWG)	21 x 8 x 4,5 mm	10.000
10.838.044	ISO-187-PPV0	nature	4,8	up to 1,5 mm² (16 AWG)	21 x 8 x 4,5 mm	10.000
10.838.006	ISO-23-PEN	natural	6,3	up to 2,5 mm² (14 AWG)	23 x 12,5 x 8,5 mm	10.000
10.838.007	ISO-23-PEG	yellow	6,3	up to 2,5 mm² (14 AWG)	23 x 12,5 x 8,5 mm	10.000
10.838.017	ISO-23-PES	black	6,3	up to 2,5 mm² (14 AWG)	23 x 12,5 x 8,5 mm	10.000
10.838.046	ISO-23-PPV0	nature	6,3	up to 2,5 mm² (14 AWG)	23 x 12,5 x 8,5 mm	10.000
10.838.013	ISO-25-PEN	natural	6,3	up to 2,5 mm² (14 AWG)	25 x 9,5 x 5 mm	10.000
10.838.014	ISO-25-PEG	yellow	6,3	up to 2,5 mm² (14 AWG)	25 x 9,5 x 5 mm	10.000
10.838.016	ISO-25-PES	black	6,3	up to 2,5 mm² (14 AWG)	25 x 9,5 x 5 mm	10.000
10.838.045	ISO-25-PPV0	nature	6,3	up to 2,5 mm² (14 AWG)	25 x 9,5 x 5 mm	10.000
10.838.009	ISO-250-PEN	natural	6,3	up to 4 mm² (12 AWG)	25 x 9,5 x 6 mm	10.000
10.838.010	ISO-250-PEG	yellow	6,3	up to 4 mm² (12 AWG)	25 x 9,5 x 6 mm	10.000
10.838.018	ISO-250-PES	black	6,3	up to 4 mm² (12 AWG)	25 x 9,5 x 6 mm	10.000
10.838.048	ISO-250-PPV0	nature	6,3	up to 4 mm² (12 AWG)	25 x 9,5 x 6 mm	10.000

* Since cable diameters vary, cross-sections are only reference values.

Single tabs
GST-900
Accessories

This tabs for printed circuits with a thickness of 0,8 mm are used to connect tab receptacles, size 2,8, 4,8 and 6,3 according to DIN 46 247.
Depending on their scope of application they are available with vertical and/or parallel outgoing wires.
Tabs can be insulated with our ISO insulation receptecles.

Technical Data

Rated Current	Tab 2,8:	6 A
	Tab 4,8:	16 A
	Tab 6,3:	25 A
	please see DIN 46 249	

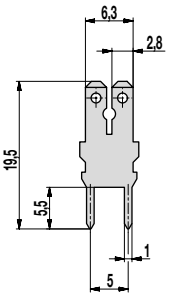
Material

Tab	Tin plated brass, thickness 0,8 mm

Options / Accessories

- Tab GST-900-S with press-fit pins

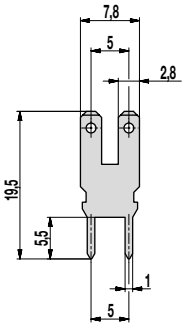
Versions



GST-900-S

Tab width
1x 6,3 mm / 2x 2,8 mm

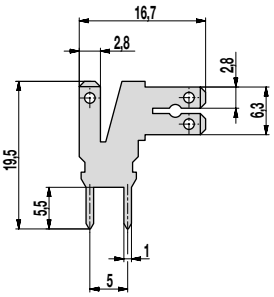
For a non-insulated
2,8 mm or an
insulated 6,3 mm
tab receptacle



GST-900-SH

Tab width
2x 2,8 mm

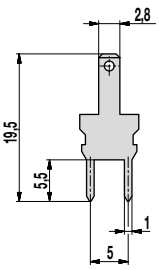
2 non-insulated
2,8 mm tab
receptacles fit next
to each other



GST-900-W

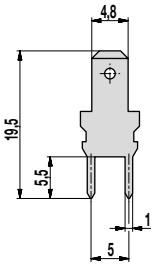
Tab width
1x 2,8 mm
1x 6,3 mm / 2x 2,8 mm

For a non-insulated
2,8 mm or an
insulated 6,3 mm
tab receptacle



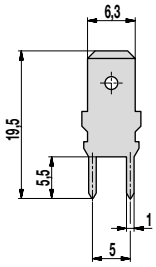
GST-900-SUB

Tab width
2,8 mm



GST-900-SUC-4,8

Tab width
4,8 mm



GST-900-SUN

Tab width
6,3 mm

Part numbers

Type	Part number	Pcs
GST-900-S	10.351.107	1.000
GST-900-SH	10.351.111	1.000
GST-900-SUB	10.371.106	1.000
GST-900-SUC-4,8	10.361.108	1.000
GST-900-SUN	10.351.113	1.000
GST-900-W	10.351.109	1.000

Looking for a Customer Designed Solution?

„Sealed“

With a pitch of 3.5 mm, this insert with four tabs 2.8 x 0.8 mm was designed to seal the contacts, for an application which required the protection class IP54.

„Top“

Version of a terminal our series 970 in 5 mm pitch.
In order to achieve a distance of 100 mm from the PCB, a housing was constructed, which not only does protect the pins but also positions them in a special arrangement. In the terminal area are also placed elongated ribs.

Our Product Information Centre will assist you with every technical inquiry.

- Please, call us under +49 6181 105-151.
- Contact us via e-mail at products@wecogroup.com.
- You want us to pay you a visit? We are pleased to arrange an appointment.
- You would prefer a visit in Hanau?
  Of course, you are welcomed anytime.

We are looking forward to your call.

„Well Contacted“

This plug connector with the pitch of 5 mm is designed with outer gold-plated contact surfaces. Additionally, the side walls provide ribs for receiving a corresponding locking hook.

Accessories / Options

Marking strips

These marking strips are made of polyester with black print on a silver background. They have a scratch resistant mylar surface.
Numbering begins with 1, the specified pole number is the last digit respectively.
The marking strips withstand printed circuit board cleaning agents containing water and soap, freon, fluorinated or chlorinated ingredients; they are not suitable for reflow soldering procedures.
They are supplied on adhesive cards each containing ten strips.

Part number	Type	Pitch	Length (L)	Width (a)	Pcs
24.499.011	BST-10,00/16	10,00 mm	155 mm	3,5 mm	100
24.499.008	BST-10,16/16	10,16 mm	157 mm	3,5 mm	100

Marking

Alternatively to the self-adhesive marking strips, we offer a special marking to meet almost any special and individual marking requirement. The printing is carried out on pre-designed marking areas.
Depending upon the housing colour, the numbers are imprinted in white or in black.
Other printing colours are possible on request.

Accessories / Options

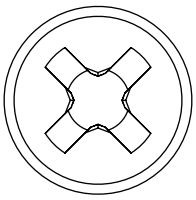
Colours

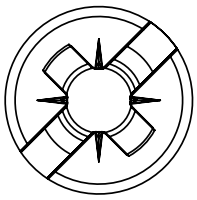
WECO offers a wide range of housing colours.
Besides our standard housing colours, you can choose between many other colours.
Please contact us for further information.

Screws

Our standard products are fitted with slotted screws.
On enquiry and customer‘s request, we also offer screws with Philips/Pozidrive or +/- screw heads.

Further materials:
Standard screws are made of steel; also screws out of various materials, e.g. brass, are available on request.





Packaging: Card board boxes, Tape-on-Reel, Magazines

According to standard, we pack our products in pollution free folding boxes from card board and from corrugated board. Besides, we offer transfer tubes (magazines) as packing for the use with feeders and dispensers for automated insertion machinery. Transfer tubes offer the advantage of a better transportation facility and a simple withdrawal over the cardboards.

Our SMD and THR products are packed in “Tape-on-Reel” for the automated assembly process in pick and place machines. Please find data sheet information about products packed on Tape-on-Reel on our website.

Technical Information

Rating of clearance and creepage distances according to DIN EN 60664-1 (VDE 0110-1)

The rating of clearance and creepage distances depends on the expected electrical surge, the characteristic values of the electronic protection measures as well as the contamination at the place of installation.

Clearanece distances are dimensioned in accordance with the rated impulse voltage table F.1, which results out of the overvoltage category and phase-to-earth voltage.

The minimum clearance in air is stated at altitudes of less than 2000m above sea level and ascertained in accordance with the impulse voltage and the contamination level, table 2.

Creepage distances are measured by the operating voltage, the characteristic of the insulants (CTI value), the expected contamination level as well as the preventive measures against contamination.

Basis of the creepage distance is the rated voltage derived from the operating and / or system voltage.

The minimum creepage distance (depending on the respective degree of contamination) are assigned to the rated voltage, see table F.4.

Overvoltage categories

Overvoltage category IV

Electrical equipments for the use at the connection point of the installation e.g. electricity meter and primary over-current protection devices.

Overvoltage category III

Electrical equipment in firm installations and for such cases in which special demands are made against the reliability and the availability of the electrical equipment, e.g. switches in firm installations and devices for industrial use with continuing connection to the firm installation.

F.2 DIN EN 60664-1 (VDE 0110-1), table F.2 (extract)
Clearance for transient overvoltages

Required impulse withstand voltage [1] [5]	Mimimum clearence in air up to 2 000 m above sea level		
	Case A Inhomogeneous field (see 3.15)		
	Pollution degree		
	1	2	3
kV	mm	mm	mm
1,2	0,25	0,25	0,8 [4]
1,5 [2]	0,5	0,5	
2,0	1,0	1,0	1,0
2,5 [2]	1,5	1,5	1,5
3,0	2,0	2,0	2,0
4,0 [2]	3,0	3,0	3,0
5,0	4,0	4,0	4,0
6,0 [2]	5,5	5,5	5,5
8,0 [2]	8,0	8,0	8,0

[1] This voltage is
- for functional insulation, the maximum impulse voltage expected to occur accross the clearence (see 5.1.5),
- for basic insulation directly exposed to or significantly influenced by transient overvoltages from the low-voltage mains (see 4.3.3.3, 4.3.3.4.1 and 5.1.6), the rated impulse voltage of the equipment,
- for other basic insulation (see 4.3.3.4.2), the highest impulse voltage that can occur in the circuit.

[2] Prefered values as specified in 4.2.3.

[4] The minimum clearences given for pollution degrees 2 and 3 are based on the reduced withstand characteristics of the associated creepage distance under humidity conditions (see IEC 60664-5).

[5] For parts or circuits within equipment subject to impulse voltages according to 4.3.3.4.2, interpolation of values is allowed. However, standardization is achieved by using the preferred series of impulse voltage values in 4.2.3.

Overvoltage category II

Energy using electrical equipment, which is energised by a firm installation e.g. household appliances, portable tools and other domestic appliances as well as similar devices.

Overvoltage category I

Electrical equipment for the connection to electric circuits, in which measures are taken for the delimitation of the transient overvoltages to a suitable low value, e.g. devices with electronic circuits and appropriate protection level.

F.4 DIN EN 60664-1 (VDE 0110-1), table F.4 (extract)
Creepage distance for the avoidance of the failure by tracking

Voltage r.m.s. [1]	Minimum creepage distances								
	Printed wiring material								
	Pollution degree								
	1	2	1	2			3		
	All material groups	All material groups except IIIb	All material groups	Material group I	Material group II	Material group III	Material group I	Material group II	Material group III [2]
V	mm	mm	mm	mm	mm	mm	mm	mm	mm
25	0,025	0,040	0,125	0,500	0,500	0,500	1,250	1,250	1,250
32	0,025	0,040	0,14	0,53	0,53	0,53	1,30	1,30	1,30
40	0,025	0,040	0,16	0,56	0,80	1,10	1,40	1,60	1,80
50	0,025	0,040	0,18	0,60	0,85	1,20	1,50	1,70	1,90
63	0,040	0,063	0,20	0,63	0,90	1,25	1,60	1,80	2,00
80	0,063	0,100	0,22	0,67	0,95	1,30	1,70	1,90	2,10
100	0,100	0,160	0,25	0,71	1,00	1,40	1,80	2,00	2,20
125	0,160	0,250	0,28	0,75	1,05	1,50	1,90	2,10	2,40
160	0,250	0,400	0,32	0,80	1,10	1,60	2,00	2,20	2,50
200	0,400	0,630	0,42	1,00	1,40	2,00	2,50	2,80	3,20
250	0,560	1,000	0,56	1,25	1,80	2,50	3,20	3,60	4,00
320	0,75	1,60	0,75	1,60	2,20	3,20	4,00	4,50	5,00
400	1,0	2,0	1,0	2,0	2,8	4,0	5,0	5,6	6,3
500	1,3	2,5	1,3	2,5	3,6	5,0	6,3	7,1	8,0
630	1,8	3,2	1,8	3,2	4,5	6,3	8,0	9,0	10,0
800	2,4	4,0	2,4	4,0	5,6	8,0	10,0	11,0	12,5
1000	3,2	5,0	3,2	5,0	7,1	10,0	12,5	14,0	16,0

[1] This voltage is
- for functional insulation, the working voltage,
- for basic and supplementary insulation of the circuit energized directly from the supply mains (see 4.3.2.2.1), the voltage rationalized through Table F.3a or Table F.3b, based on the rated voltage of the equipment, or the rated insulation voltage,
- for basic and supplementary insulation of systems, equipment and internal circuits not energized directly from the mains (see 4.3.2.2.2), the highest r.m.s. voltage which can occur in the system, equipment or internal circuit when supplied at rated voltage and under the most onerous combination of conditions of operation within equipment rating.

[2] Material group IIIb is no not recommended for application in pollution degree 3 above 630 V.

Degree of contamination

The micro environment determines the influence of the contamination on the isolation.

However the macro environment must be considered with the view of the micro environment.

Resources to achieve a reduction of the contamination on the regarded isolation can be planned by the effective employment of casings (housings), encapsulations or hermetic sealings.

The influence of the contamination is considered with the calculation of air and creepage distances by degrees of pollution.

F.1 DIN EN 60664-1 (VDE 0110-1), table F.1 (extract)
Rated impulse voltages for electrical equipments, which are energised directly by a low-voltage system

Nominal voltage of the supply system [1] based on IEC 60038 [3]		Rated impulse voltage [2]			
		Overvoltage catagory [4]			
Three phase	Single phase	I	II	III	IV
V	V	V	V	V	V
	120-240	800	1 500	2 500	4 000
230/400 277/480		1 500	2 500	4 000	6 000
400/690		2 500	4 000	6 000	8 000
1 000		4 000	6 000	8 000	12 000

[1] See Annex B for application to existing different low-voltage mains and their nominal voltages.

[2] Equipment with these rated impulse voltages can be used in installations in accordance with IEC 60364-4-44.

[3] The / mark indicates a four-wire three-phase distribution system. The lower value is the voltage line-to-neutral, while the higher value is the voltage line-to-line. Where only one value is indicated, it refers to three-wire, three-phase systems and specifies the value line-to-line.

[4] See 4.3.3.2.2 for an explanation of the overvoltage catagories.

Technical Information

Four degrees of contamination levels are defined for the micro environment:

Contamination level 1
No contamination or only dry, non-conductive contamination occurs. The contamination has no influence.

Contamination level 2
Only non-conductive contamination occurs. However, occasional temporary conductivity must be expected as a result of moisture condensation.

Contamination level 3
Conductive contamination occurs; dry, non-conductive contamination which becomes conductive as a result of moisture condensation may also occur.

Contamination level 4
Impurities in the form of conductive dust, rain or humidity result in permanent conductivity.

Insulant

DIN EN 60664-1 (VDE 0110-1) divides the insulants according to their CTI values in four groups. These are:

Insulant I: 600 = CTI
Insulant II: 400 = CTI < 600
Insulant IIIa: 175 = CTI < 400
Insulant IIIb: 100 = CTI < 175

The check numbers of the tracking must be determined according to IEC 60112 at an examination body using test solution A. The check number of the tracking is used as a proof of the creepage characteristics of insulants.

Rated cross section

The current carrying capacity depends not only on the terminal design, but also on the application of the terminals. The appropriate specifications for the devices, e.g. DIN EN 60335-1 (VDE 0700-1), should be taken into account.
According to DIN EN 60999-1/VDE 0609 part 1, the current cross section and respectively the rated connection ability of a connection referres to the wire cross section indicated by the manufacturer, to which determined thermal, mechanical and electrical requirements apply to.
The relationship between rated connection abilities and diameters of the wires is represented in table 1.
If nothing else is specified in the product standard, each connection point must be able to take up not only its rated cross section (rated connection ability) but also the next two lower cross sections.
Connecting points must be able to take up unprepared wires.
Regarded as unprepared wires are all cables stripped at their ends, whose form is adjusted before insertion or whose wires are twisted for the purpose of the solidification.

T1 DIN EN 60999-1, table 1 (extract)
Relation between rated connection abilities and wires

Rated cross section	Theoretical diameter of the largest conductor						
	metric			AWG			
	solid		flexible	solid			flexible
	single wire	multi-stranded wire			b) single wire	b) Class B multi-stranded wire	c) Class I, K, M multi-stranded wire
mm²	mm	mm	mm	No.	mm	mm	mm
0,2	0,51	0,53	0,61	24	0,54	0,61	0,64
0,34	0,63	0,66	0,8	22	0,68	0,71	0,80
0,5	0,9	1,1	1,1	20	0,85	0,97	1,02
0,75	1,0	1,2	1,3	18	1,07	1,23	1,28
1,0	1,2	1,4	1,5	–	–	–	–
1,5	1,5	1,7	1,8	16	1,35	1,55	1,60
2,5	1,9	2,2	2,3 a)	14	1,71	1,95	2,08
4,0	2,4	2,7	2,9 a)	12	2,15	2,45	2,70
6,0	2,9	3,3	3,9 a)	10	2,72	3,09	3,36
10,0	3,7	4,2	5,1	8	3,34	3,89	4,32
16,0	4,6	5,3	6,3	6	4,32	4,91	5,73
25,0	–	6,6	7,8	4	5,45	6,18	7,26
35	–	7,9	9,2	2	6,87	7,78	9,02

NOTE The diameter of the largest solid and flexible wire is based on Table 1 according to IEC 60228A and IEC 60344 and for AWG conductors on ASTM B 172-71 [4], ICEA-Publication S-19-81 [5], ICEA-Publication S-66-524 [6] and ICEA-Publication S-66-516 [7].

a) Information only for flexible wires in class 5 of IEC 60228A.
b) Nominal + 5 %.
c) Largest diameter for each of the three classes I, K, M + 5 %.

In the USA and Canada an identification is used by leader sizes (AWG) instead of the cross section indicated in mm².

Current carrying capacity

Current carrying capacity In the technical data a current carrying capacity is shown, with which no thermal damage and no disturbance of the function arise under consideration of the rated cross section and the ambient temperature.
Testing currents according to DIN EN 60998-1 (VDE 0613 part 1) are assigned to the rated cross sections in table 2.
With the testing currents the heating up of energized parts of the connecting point may not exceed 45 K.
The permitted carrying capacity not only depends on the terminal construction, but also on the use of the terminal.
The appropriate technical regulations for devices, e.g. DIN EN 60335-1 (VDE 0700-1) should be taken into consideration.

T2 DIN EN 60998-1, table 2 (extract)
Relation between rated connection abilities and testing current

Rated Cross-section	Load capacity
mm²	A
0,2	4
0,34	5
0,5	6
0,75	9
1	13,5
1,5	17,5
2,5	24
4	32
6	41
10	57
16	76
25	101
35	125

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[1] Pitch 10,16 mm
[2] Pitch 12,7 mm

Catalogue overview

Electronic

1: Pitch 3,5 mm
2: Pitch 5 mm
3: Pitch 5,08 mm
4: Pitch 7,5 mm
5: Pitch >10 mm
6: SMD & THR

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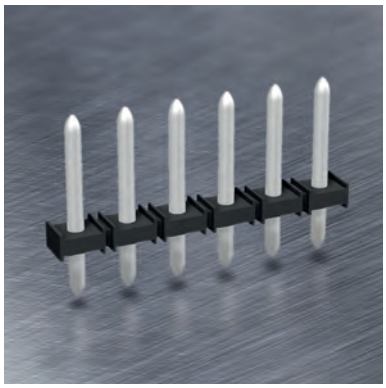
CONNECTION WITHOUT LIMITS

WECO®

Connection Technology on Printed Circuit Boards SMD & THR

6



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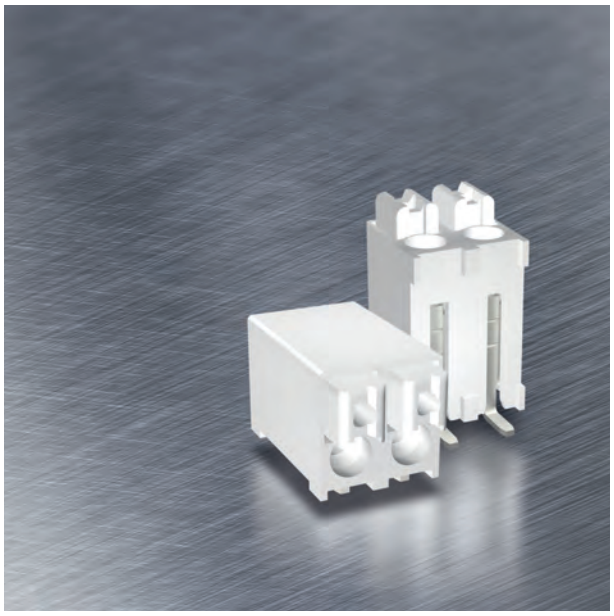

Electronic

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Pin strip in 3.5 mm pitch, with „Floating Anchor“
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Series 830-A
Screwless SMD PCB connector in 3.5 mm pitch
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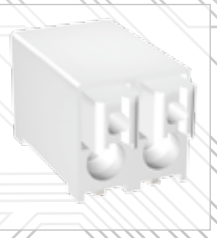

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Pin strip in 3.5 mm pitch
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950-THR
PCB connector for THR in 5.0 mm pitch
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Symbols on data sheets

These symbols can be found on our data sheets on the right side of the product image.

RoHS COMPLIANT

RoHS compliant

These articles comply with the RoHS regulations.

„no flame“ after glow-wire test according to household appliance standard DIN EN/IEC 60335-1

The housing materials used are VDE-tested and approved according to the glow-wire tests specified in DIN EN/IEC 60335-1. They meet the requirements of the household appliance standard.

pottable

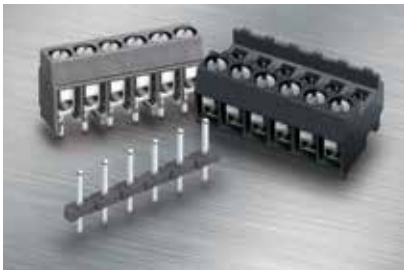
Through its geometry, this product is specially suitable for potting.

Tape-on-Reel Product

This product is available in Tape-on-Reel.
Detailed information about number of poles, part numbers, tape width, belt height and packing units is given on the data sheet.

We reserve the right to make technical as well as changes to measurements, colours and formats after print. Only the values given in our written confirmations will be binding for us. Please take notice that it is not allowed to use our photos, drawings or catalogue pages for your own applications without having our written agreement.

Overview



Connectors for printed circuit boards

WECO PCB connectors always offer a good solution for almost any connection problem by its big variety of types. The screw connections are available in socket terminal style, in elevator clamping style or as head contact terminals. The plug connectors are especially designed for the connection of components or peripheral devices. Tab connectors and screwless types complete the product program.

Plug-In connector systems

The plug-in connector system consisting of plug connectors with screw and their corresponding pin strips.
Due to four different pitch sizes, lateral flange executions, tier versions and different plug directions, this product serie suit almost every application on the PCB. All connectors offer coding possibilities to avoid incorrect plugging.

SMD & THR

“SMarTconn” covers terminals and plug connectors for surface mount and reflow soldering technique. Apart from the proven Through-Hole-Technology (THR) we focus on genuine SMD - Surface Mount Devices – in this product serie. With their reliable adhesive forces and their good reflow soldering capabilities, we offer products, which are a worthy replacement for the conventional soldering technique. All products of this series are packed in tape-on-reel or tube magazines for the automatic assembling with a pick & place machine.

Terminal strips

This group contains socket terminals, plug-in connectors, screwless types and additionally the combination of screw and solder tag for the wire-to-wire connection. All types are available for different cross sections, with and without wire protectors. The used Polyamide plastic material pass the ball pressure test with 125°C according to VDE 0470, which is demanded in many IEC and VDE regulations for insulants.

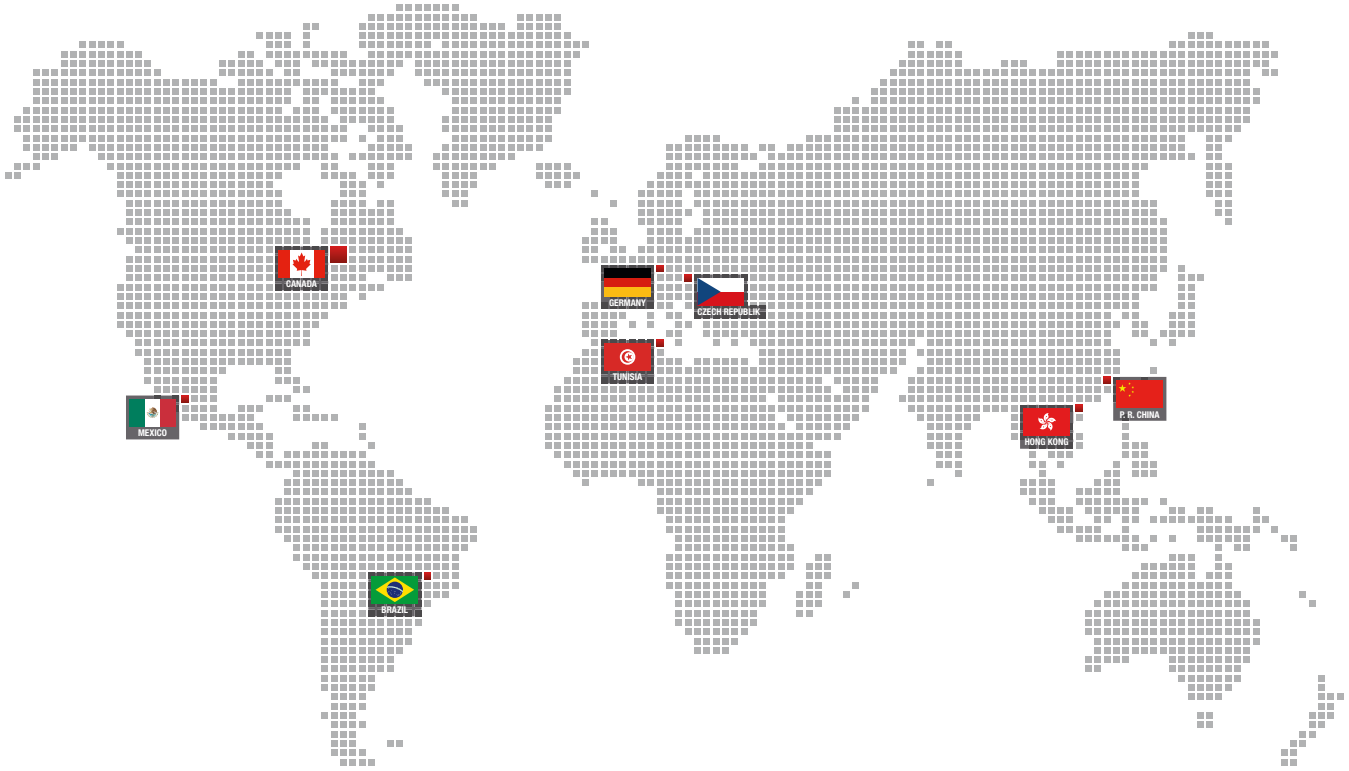
Tab connectors

These connectors are equipped with receptacles in different sizes and styles. Mixed arrangements per terminal block as well as per pole (Multi-Point Tab Connectors) are possible. Combinations of tab / solder connectors, flat plug couplers and space saving tier versions increase the density of connections. The tab connectors offer a wide spectrum of possible combinations, whereby many connection problems can be solved.

Ceramic terminal blocks

This group covers mantle terminals, ceramic terminal strips and terminals for explosion and firedamp-hazard areas. Various sizes and designs permit them to be used for wire cross sections up to 120 mm² and including applications in furnace construction and ship building, for engines and intrinsically safe electrical equipment. The terminal blocks with ceramic insulator can be used at increased temperatures.

The WECO Group



For more than 90 years, WECO has been one of the leading recognized partners for safe and top-quality connectors in the field of electronics and electrical engineering.

With our globally operating sales network, own production plants, competent and experienced contact partners, we are always at your disposition on-site. From our extensive portfolio of 17,000 different articles but also with customized products, our team of about 450 employees will find you the optimum solution for your specific requirements. All of our products comply with the pertinent regulations of Household Appliance, UL, CSA and VDE Standards.

Our unique customer-specific developments prove the high level of innovation power of WECO products and services. The fast and flexible project implementation in combination with delivery reliability ultimately enables us to flexibly respond to the increasingly challenging demands of the market.

Our patented product series for Surface Mount Technology (SMD), suitable even for rough surfaces, provide you with significant cost savings in production and quality control processes.

Customer satisfaction and the durability of our products are our top priorities.

You can always count on WECO as your competent, cooperative and reliable partner for secure connections - worldwide.

Household Appliance Standard DIN EN/IEC 60335-1

What is the household appliance standard all about?

The household appliance standard DIN EN/IEC 60335-1:2012-10 standardizes the safety features of electrical appliances for household and commercial use whose rated voltages do not exceed 250 V for single-phase appliances and 480 V for other appliances.

Which aspects of the household appliance standard are particularly important for WECO products?

Chapter 30: Heat- and flame-resistance. Components made of non-metallic materials holding active components (e.g. connection elements) in position must be resistant against ignition and fire propagation.
Electrical appliances are divided into several classes. Depending on their application, they are tested according to different methods.
Most WECO products meet the requirements for unattended appliances with currents > 0.2 A. These requirements stipulate the glow-wire resistance test for non-metallic materials and refer to other glow-wire tests.

These flame-resistance requirements shall prevent self-ignition of unattended appliances. On the market, they are designated as “no flame”.

Who is affected by this household appliance standard?

The standard is applicable for manufacturers of electric and electronic components in household appliances, such as terminals and switches, e.g. in:

- Dishwashers, washing machines, refrigerators
- Kitchen stoves, microwaves
- Small household appliances, such as mixers, coffee machines

Also affected is unattended equipment used in small and medium-sized enterprises, particularly:

- Pump components
- Illuminant components
- Industrial and commercial cleaning equipment
- Hair salon equipment etc.

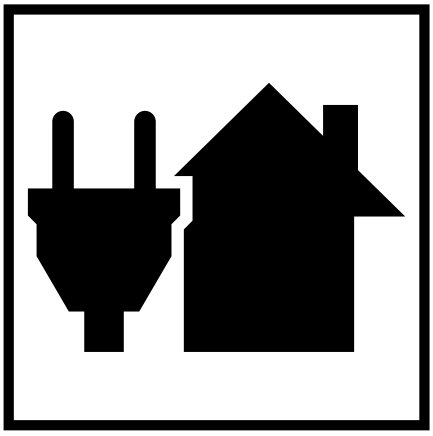
WECO products are compliant with the glow-wire test of the household appliance standard!

For the white goods market segment, WECO Contact GmbH offers an extensive range of PC board terminals and PC board plug connectors which meet the flame-resistance requirements of the Household Appliance Standard DIN EN/IEC 60335-1.

Molding materials used by WECO are tested and VDE-approved according to the glow-wire test requirements specified in DIN EN/IEC 60335-1. This applies for all standard WECO colors!

WECO products made of these molding materials are:

- All products with PC board connection technology, except for versions with higher number of poles such as series 95.., 96.. and 97…,
- Terminal strips (catalogue 7), if purchased made of V-0 molding material (for unprinted versions, the part number ends with “EN6”),
- Other products. Feasibility must be checked individually.



WECO “no flame” products are designated with a small symbol on our label:

Our customer service

WECO takes technical support and after-sale service for our customers very seriously.
For your information, we have therefore compiled a list of all manufacturer products affected by the household appliance standard on our website. At a glance, you can gather information on whether your appliances are affected or not.

The list is also a valuable tool for both our sales staff and our field reps, helping them to resolve unclear issues in project meetings, and enabling them to optimally support the customer.

RoHS - Restriction of Hazardous Substances

Declaration

The directive 2002/95/EC (RoHS 1) on the restriction of the use of certain hazardous substances in electrical and electronic equipment controls since 1st July 2006 the use of hazardous substances in devices and components. The directive is generally named with the short term RoHS (Restriction of Hazardous Substances). It affects manufacturers, sellers, distributors and recyclers of electrical and electronic equipment containing mercury, cadmium, lead, chromium VI, polybrominated biphenyls (PBB) and polybrominated diphenyl ethers (PBDE).

This directive has been replaced on 3rd January 2013 by the revised version 2011/65/EU (RoHS 2). Thus, the ranges of validity of the RoHS have been extended. Earlier given exceptions are reduced step by step.

WECO Contact is a responsible manufacturer of components for electrical connection technology and thus provides products in RoHS - compliant versions since the implementation of the EU Directive 2002/95/EC in 2006. All products are now RoHS compliant since the recast 2011/65/EU.

Labeling of our products

Customers can clearly see the RoHS Compliance of the product on the right bottom of our product labels, marked with a little icon:

Looking for a Customer Designed Solution?

Our unique customer-specific developments prove the high level of innovation power of WECO products and services. The fast and flexible project implementation in combination with delivery reliability ultimately enables us to flexibly respond to the increasingly challenging demands of the market.

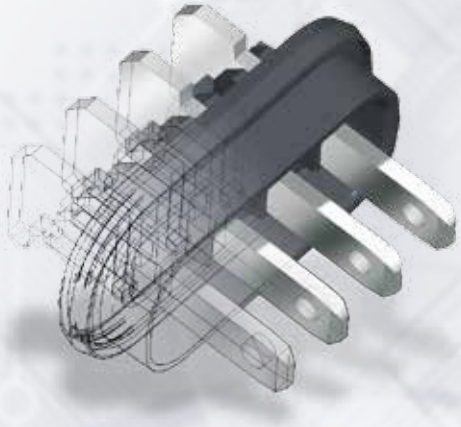
Our Product Information Center is ready to assist you with any technical issues.

- Please call us under +49 6181 105-151.
- Contact us via e-mail at products@wecogroup.com.
- You want us to pay you a visit? We are pleased to arrange an appointment.
- You would prefer a visit in Hanau?
  Of course, you are welcomed anytime.

We are looking forward to your contact.

„Top“

Version of a terminal our series 970 in 5 mm pitch.
In order to achieve a distance of 100 mm from the PCB, a housing was constructed, which not only does protect the pins but also positions them in a special arrangement. In the terminal area are also placed elongated ribs.



„Sealed“

With a pitch of 3.5 mm, this insert with four tabs 2.8 x 0.8 mm was designed to seal the contacts to fulfill the application according to protection class IP54.

„Well Contacted“

This plug connector with the pitch of 5 mm is designed with outer gold-plated contact surfaces. Additionally, the side walls provide ribs for receiving a corresponding locking hook.

Visual Guide: 3.5 mm pitch

Visual Guide for all SMD & THR products with a pitch of 3.5 mm

SMD

110-M-211-SMD
Page 10

110-M-216-SMD
Page 11

110-M-221-SMD
Page 12

110-M-226-SMD
Page 13

210-A-SMD
Page 14

210-A-126-SMD
Page 15

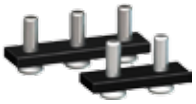
830-A-111-SMD
Page 16

830-A-121-SMD
Page 17

930-D-SMD
Page 18

931-SLR-SMD-1,1
Page 19

931-SLR-SMD-1,3
Page 20



931-SLT-SMD-1,1-L4
Page 21

THR

110-M-211-THR
Page 22

110-M-215-THR
Page 23

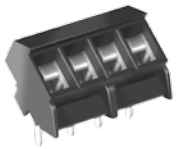
110-M-221-THR
Page 24

110-M-225-THR
Page 25

830-A-111-THR
Page 26

830-A-121-THR
Page 27

930-THR
Page 28



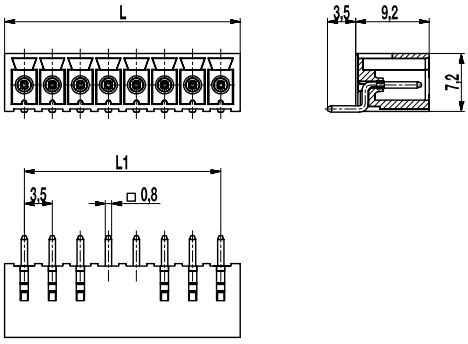
934-THR-DS
Page 29

931-SLR-THR
Page 30

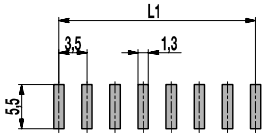
931-SLR-THR-1,1
Page 31

931-SLR-THR-1,3
Page 32

Pin strip for SMD
110-M-211-SMD
Plug-in direction parallel to PCB



PCB Layout



L1 = (No. of poles - 1) x pitch
Solder paste thickness: 0,2 mm

The 110-M-211-SMD is a pin strip for the reflow soldering process in a horizontal version with a pitch of 3.5 mm and available in 2 to 12 poles.
It is compatible with all standard connectors series 110 and 110-A-IDC (Insulation Displacement Contacts).
The housing of the pin strips meets the requirements of the elevated soldering temperatures in the lead-free soldering process.

Part Numbers

No. of poles	110-M-211-SMD	Length	PU
2	10.843.102	8,40	1116
3	10.843.103	11,90	792
4	10.843.104	15,40	612
5	10.843.105	18,90	486
6	10.843.106	22,40	414
7	10.843.107	25,90	360
8	10.843.108	29,40	306
9	10.843.109	32,90	270
10	10.843.110	36,40	252
11	10.843.111	39,90	234
12	10.843.112	43,40	216

General Information

Pitch	3,5 mm
No. of poles	2 - 12
Usable with	all plug connectors of series 110
Additonal Information	Version with solder flanges see also 110-M-216-SMD

Technical Data

Overvoltage Category	III	III	II
Pollution Severity Level	3	2	2
Rated Voltage	160 V	160 V	320 V
Rated Impulse Voltage	2,5 kV	2,5 kV	2,5 kV
Rated Insulation Voltage	130 V acc. to EN 60998-1		
Rated Current	8 A		
Soldering process	Reflow solder		

Material

Moulding	PA HT, black, V-0
Comparative Tracking Index	CTI ≥ 600
Insulating Group	I
Temperature Range	-40°C up to 120°C; reflow solder temperature (Peak) max. 260°C (15-30 s)
Solder pin	0,8 x 0,8 mm; tin plated brass

Approvals

	Current	Voltage	Group	AWG	Nm
	8	300	B, D		
	8	300	B		

Options / Accessories

- Consecutive numbering
- Special marking according to drawing
- Self-adhesive marking strip BST-3,50 [1]
- Coding elements 120-K-HT-WS

Part Numbers: Tape-on-Reel

No. of poles	110-M-211-SMD	Tape Width	Tape Height	PU
4	10.843.104.A00	56 mm	8 mm	475
5	10.843.105.A00	56 mm	8 mm	475
6	10.843.106.A00	56 mm	8 mm	475
7	10.843.107.A00	56 mm	8 mm	475
8	10.843.108.A00	56 mm	8 mm	475
9	10.843.109.A00	56 mm	8 mm	475
10	10.843.110.A00	56 mm	8 mm	475

further number of poles on request

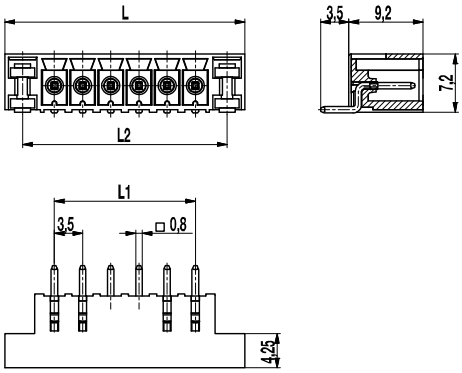
[1] To be fitted after reflow soldering process

Technical modification reserved

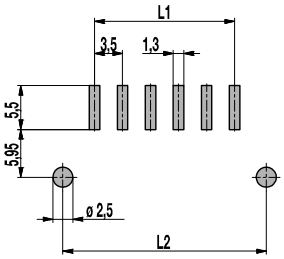
Pin strip for SMD

110-M-216-SMD

Plug-in direction parallel to PCB, with solder flanges



PCB Layout



L1 = (No. of poles - 1) x pitch
L2 = L - 4,4
Solder paste thickness: 0,2 mm

The 110-M-216-SMD is a pin strip for the reflow soldering process in a horizontal version with a pitch of 3.5 mm and available in 2 to 12 poles.
This product is characterized by the "Floating Anchors". They are movable in vertical direction and achieve 100% coplanarity. Side flanges improve the stability and increase the adhesion force on the PC board.
The pin strip is compatible with all standard connectors series 110 and 110-A-IDC (Insulation Displacement Contacts).
The housing of the pin strips meets the requirements of the elevated soldering temperatures in the lead-free soldering process.

Part Numbers

No. of poles	110-M-216-SMD	Length	PU
2	10.843.126	15,80	594
3	10.843.127	19,30	486
4	10.843.128	22,80	414
5	10.843.129	26,30	360
6	10.843.130	29,80	306
7	10.843.131	33,30	270
8	10.843.132	36,80	252
9	10.843.133	40,30	234
10	10.843.134	43,80	216
11	10.843.135	47,30	198
12	10.843.136	50,80	180

General Information

Pitch	3,5 mm
No. of poles	2 - 12
Usable with	all plug connectors of series 110

Technical Data

Overvoltage Category	III	III	II
Pollution Severity Level	3	2	2
Rated Voltage	160 V	160 V	320 V
Rated Impulse Voltage	2,5 kV	2,5 kV	2,5 kV
Rated Insulation Voltage	130 V acc. to EN 60998-1		
Rated Current	8 A		
Soldering process	Reflow solder		

Material

Moulding	PA HT, black, V-0
Comparative Tracking Index	CTI ≥ 600
Insulating Group	I
Temperature Range	40°C up to 120°C; reflow solder temperature (Peak) max. 260°C (15-30 s)
Solder pin	0,8 x 0,8 mm; tin plated brass
Solder cylinder	tin plated brass

Approvals

	Current	Voltage	Group	AWG	Nm
	8	300	B, D		
	B	300	B		

Options / Accessories

- Consecutive numbering
- Special marking according to drawing
- Self-adhesive marking strip BST-3,50 [1]
- Coding elements 120-K-HT-WS

Part Numbers: Tape-on-Reel

No. of poles	110-M-216-SMD	Tape Width	Tape Height	PU
2	10.843.126.A00	56 mm	8 mm	475
3	10.843.127.A00	56 mm	8 mm	475
4	10.843.128.A00	56 mm	8 mm	475
5	10.843.129.A00	56 mm	8 mm	475
6	10.843.130.A00	56 mm	8 mm	475
7	10.843.131.A00	56 mm	8 mm	475
8	10.843.132.A00	56 mm	8 mm	475

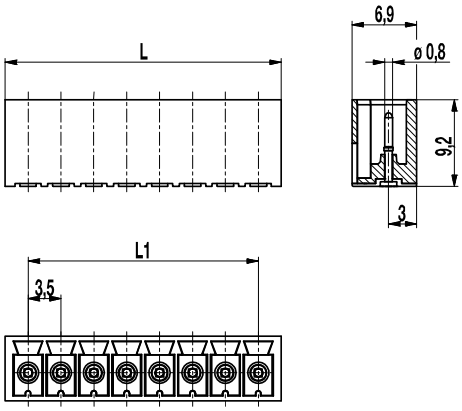
further number of poles on request

[1] To be fitted after reflow soldering process

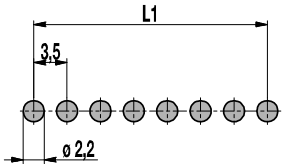
Pin strip for SMD

110-M-221-SMD

Plug-in direction vertical to PCB



PCB Layout



L1 = (No. of poles - 1) x pitch
Solder paste thickness: 0,15 - 0,2 mm

The 110-M-221-SMD is a pin strip for the reflow soldering process in a vertical version with a pitch of 3.5 mm and available in 2 to 12 poles.
This product is characterized by the so-called "Floating Pins". They are movable in vertical direction and achieve a 100% coplanarity.
It is compatible with all standard connectors series 110 and 110-A-IDC (Insulation Displacement Contacts).
The housing of the pin strips meets the requirements of the elevated soldering temperatures in the lead-free soldering process.
The pin strips of this series are available in Tape-on-Reel for automatic pick & place and are equipped with high temperature resistant Pick Caps which can easily be removed after the soldering process.

Part Numbers

No. of poles	110-M-221-SMD	Length	PU
2	20.843.152	8,40	200
3	20.843.153	11,90	200
4	20.843.154	15,40	100
5	20.843.155	18,90	100
6	20.843.156	22,40	100
7	20.843.157	25,90	50
8	20.843.158	29,40	50
9	20.843.159	32,90	50
10	20.843.160	36,40	50
11	20.843.161	39,90	50
12	20.843.162	43,40	50

General Information

Pitch	3,5 mm
No. of poles	2 - 12
Usable with	all plug connectors of series 110
Additonal Information	Version with solder flanges see also 110-M-226-SMD

Technical Data

Overvoltage Category	III	III	II
Pollution Severity Level	3	2	2
Rated Voltage	160 V	160 V	320 V
Rated Impulse Voltage	2,5 kV	2,5 kV	2,5 kV
Rated Insulation Voltage	130 V acc. to EN 60998-1		
Rated Current	8 A		
Soldering process	Reflow solder		

Material

Moulding	PA HT, black, V-0
Comparative Tracking Index	CTI ≥ 600
Insulating Group	I
Temperature Range	-40°C up to 120°C; reflow solder temperature (Peak) max. 260°C (15-30 s)
Solder pin	ø 0,8 mm; tin plated brass

Approvals

	Current	Voltage	Group	AWG	Nm
	8	150	B		
	8	300	D		
	8	150	B		

Options / Accessories

- Consecutive numbering
- Special marking according to drawing
- Self-adhesive marking strip BST-3,50 [1]
- Coding elements 120-K-HT-WS

Part Numbers: Tape-on-Reel

No. of poles	110-M-221-SMD	Tape Width	Tape Height	PU
5	20.843.155.A00	56 mm	10,9 mm	550
6	20.843.156.A00	56 mm	10,9 mm	550
7	20.843.157.A00	56 mm	10,9 mm	550
8	20.843.158.A00	56 mm	10,9 mm	550
9	20.843.159.A00	56 mm	10,9 mm	550
10	20.843.160.A00	56 mm	10,9 mm	550

further number of poles on request

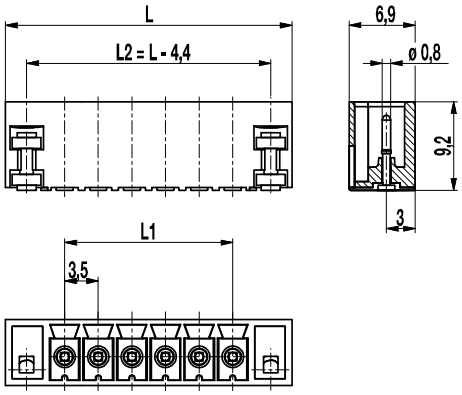
[1] To be fitted after reflow soldering process

Technical modification reserved

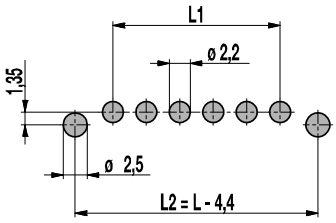
Pin strip for SMD

110-M-226-SMD

Plug-in direction vertical to PCB, with solder flanges



PCB Layout



L1 = (No. of poles - 1) x pitch
Solder paste thickness: 0,15 - 0,2 mm

The 110-M-226-SMD is a pin strip for the reflow soldering process in a vertical version with a pitch of 3.5 mm and available in 2 to 12 poles.
This product is characterized by the "Floating Anchors" and "Floating Pins". They are movable in vertical direction and achieve a 100% coplanarity. Side flanges improve the stability and increase the adhesion force on the PC board.
It is compatible with all standard connectors series 110 and 110-A-IDC (Insulation Displacement Contacts).
The housing of the pin strips meets the requirements of the elevated soldering temperatures in the lead-free soldering process.
The pin strips of this series are available in Tape-on-Reel for automatic pick & place and are equipped with high temperature resistant Pick Caps which can easily be removed after the soldering process.

Part Numbers

No. of poles	110-M-226-SMD	Length	PU
2	20.843.176	15,80	200
3	20.843.177	19,30	200
4	20.843.178	22,80	100
5	20.843.179	26,30	100
6	20.843.180	29,80	100
7	20.843.181	33,30	50
8	20.843.182	36,80	50
9	20.843.183	40,30	50
10	20.843.184	43,80	50
11	20.843.185	47,30	50
12	20.843.186	50,80	50

General Information

Pitch	3,5 mm
No. of poles	2 - 12
Usable with	all plug connectors of series 110

Technical Data

Overvoltage Category	III	III	II
Pollution Severity Level	3	2	2
Rated Voltage	160 V	160 V	320 V
Rated Impulse Voltage	2,5 kV	2,5 kV	2,5 kV
Rated Insulation Voltage	130 V acc. to EN 60998-1		
Rated Current	8 A		
Soldering process	Reflow solder		

Material

Moulding	PA HT, black, V-0
Comparative Tracking Index	CTI ≥ 600
Insulating Group	I
Temperature Range	-40°C up to 120°C; reflow solder temperature (Peak) max. 260°C (15-30 s)
Solder pin	ø 0,8 mm; tin plated brass
Solder cylinder	tin plated brass

Approvals

	Current	Voltage	Group	AWG	Nm
	8	150	B		
	8	300	D		
	8	150	B		

Options / Accessories

- Consecutive numbering
- Special marking according to drawing
- Self-adhesive marking strip BST-3,50 [1]
- Coding elements 120-K-HT-WS

Part Numbers: Tape-on-Reel

No. of poles	110-M-226-SMD	Tape Width	Tape Height	PU
3	20.843.177.A00	56 mm	10,9 mm	550
4	20.843.178.A00	56 mm	10,9 mm	550
5	20.843.179.A00	56 mm	10,9 mm	550
6	20.843.180.A00	56 mm	10,9 mm	550
7	20.843.181.A00	56 mm	10,9 mm	550
8	20.843.182.A00	56 mm	10,9 mm	550

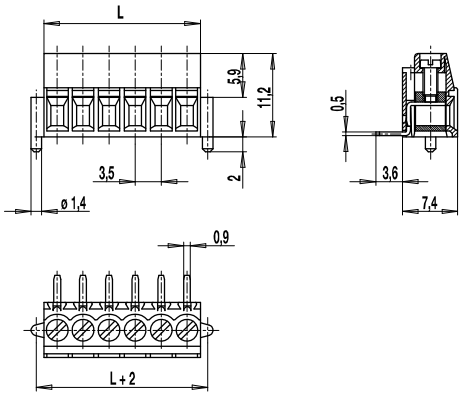
further number of poles on request

[1] To be fitted after reflow soldering process

PCB connector for SMD

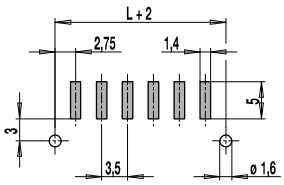
210-A-SMD

Screw connection, with anti-twist peg



L = No. of poles x pitch

PCB Layout



Solder paste thickness: 0,2 mm

The PCB connectors for surface mounting comprise several types for reflow processes.
The SMD connector 210-A-SMD with a pitch of 3,5 mm is designed with screw connections in elevator clamping style and available in 2 to 12 pole design.
The terminal clamp and the soldering tag are manufactured as a single unit and permanently engaged in the housing. The solder pins are exactly aligned parallel to the printed circuit board in order to create a coplanar connection after the reflow soldering process.
The moulding is made of heat resistant thermoplastic material and equipped with plastic pegs on both sides to prevent twisting.
The use of a strain relief is recommended. This article is only available in tubes or in Tape-on-Reel.

Part Numbers

No. of poles	210-A-SMD	Length	PU
2	10.804.202	7,00	900
3	10.804.203	10,50	684
4	10.804.204	14,00	540
5	10.804.205	17,50	450
6	10.804.206	21,00	378
8	10.804.208	28,00	288
10	10.804.210	35,00	234
12	10.804.212	42,00	198

further number of poles on request

General Information

Pitch	3,5 mm
No. of poles	2 - 12

Technical Data

Clamping Range	*solid / flexible / AWG*		
	0,14 - 1,5 mm² / 0,14 - 1,5 mm² / 30 - 16 AWG		
Rated Cross Section	1 mm²		
Wire Stripping Length	5,5 mm ± 0,5 mm		
Overvoltage Category	III	III	II
Pollution Severity Level	3	2	2
Rated Voltage	160 V	160 V	320 V
Rated Impulse Voltage	2,5 kV	2,5 kV	2,5 kV
Rated Insulation Voltage	130 V acc. to EN 60998-1		
Rated Current	12,5 A		
Soldering process	Reflow solder		
Torque	0,2 Nm		

Material

Moulding	PA HT, black, V-0
Comparative Tracking Index	CTI ≥ 600
Insulating Group	I
Temperature Range	-40°C up to 120°C; reflow solder temperature (Peak) max. 260°C (15-30 s)
Terminal body	Nickel plated brass
Pressure clamp	Copper alloy, tin plated
Screw	M2; Copper alloy, tin plated
Solder pin	Copper alloy, tin plated

Approvals

	Current	Voltage	Group	AWG	Nm
	10	300	B	30 - 16	0,23
	10	300	B	30 - 16	0,22

Options / Accessories

- Consecutive numbering
- Special marking according to drawing
- Self-adhesive marking strip BST-3,50 [1]

Part Numbers: Tape-on-Reel

No. of poles	210-A-SMD	Tape Width	Tape Height	PU
2	10.804.202.A00	44 mm	14,6 mm	325
3	10.804.203.A00	44 mm	14,6 mm	325
4	10.804.204.A00	44 mm	14,6 mm	325
5	10.804.205.A00	44 mm	14,6 mm	325
6	10.804.206.A00	44 mm	14,6 mm	325
7	10.804.207.A00	44 mm	14,6 mm	325

further number of poles on request

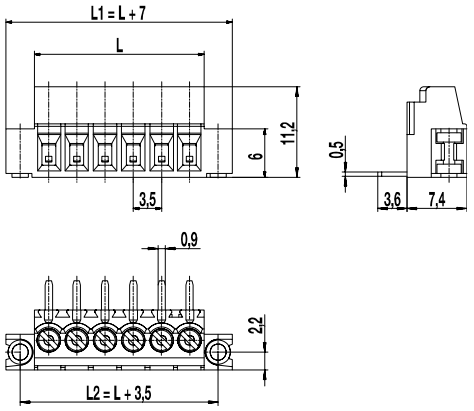
[1] To be fitted after reflow soldering process

Technical modification reserved

PCB connector for SMD

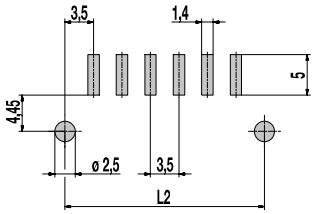
210-A-126-SMD

Screw connection, with solder flanges



L = No. of poles x pitch

PCB Layout



Solder paste thickness: 0,2 mm

The 2 to 12 pole connectors with a pitch of 3,5 mm have a screw connection with elevator clamping system and are equipped with M2 captive screws. Just as the 210-A-SMD, the 210-A-126-SMD represents a space saving and compact connector with a high connecting capacity. The generous clamping range is of 1,7 mm x 2,6 mm.
A distinguishing characteristic to the 210-A-SMD, however, is the clearly increased adhesion force on the PCB. Soldering cylinders on either side of the housing (floating anchors) are movable in vertical direction and thereby they obtain 100% coplanarity between solder pins and soldering cylinders.
They are transferred more to the front in comparison to the connector centre in order to keep the retaining strength, where the wires are connected. Thus, the force, acting on the solder pins, is reduced in a very important way.
Packed in magazines or equipped with Pick Discs in Tape-on-Reel, this genuine SMD terminal is suitable for the automatic assembly.

Part Numbers

No. of poles	210-A-126-SMD	Length	PU
2	20.804.232	14,00	888
3	20.804.233	17,50	696
4	20.804.234	21,00	576
6	20.804.236	28,00	432
10	20.804.240	42,00	234
12	20.804.242	49,00	198

further number of poles on request

General Information

Pitch	3,5 mm
No. of poles	2 - 12

Technical Data

Clamping Range	*solid / flexible / AWG*		
	0,14 - 1,5 mm² / 0,14 - 1,5 mm² / 30 - 16 AWG		
Rated Cross Section	1 mm²		
Wire Stripping Length	5,5 mm ± 0,5 mm		
Overvoltage Category	III	III	II
Pollution Severity Level	3	2	2
Rated Voltage	160 V	160 V	320 V
Rated Impulse Voltage	2,5 kV	2,5 kV	2,5 kV
Rated Insulation Voltage	130 V acc. to EN 60998-1		
Rated Current	12,5 A		
Soldering process	Reflow solder		
Torque	0,2 Nm		

Material

Moulding	PA HT, black, V-0
Comparative Tracking Index	CTI ≥ 600
Insulating Group	I
Temperature Range	-40°C up to 120°C; reflow solder temperature (Peak) max. 260°C (15-30 s)
Terminal body	Nickel plated brass
Pressure clamp	Copper alloy, tin plated
Screw	M2; copper alloy, tin plated
Solder pin	Copper alloy, tin plated
Solder cylinder	Tin plated brass

Approvals

	Current	Voltage	Group	AWG	Nm
	10	300	B	30 - 16	0,23
	10	300	B	30 - 16	0,22

Options / Accessories

- Self-adhesive marking strip BST-3,50 [1]
- Black colour on request

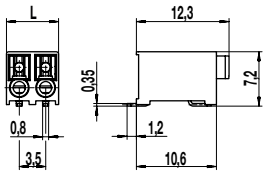
Part Numbers: Tape-on-Reel

No. of poles	210-A-126-SMD	Tape Width	Tape Height	PU
2	20.804.232.A00	32 mm	12,0 mm	375
3	20.804.233.A00	44 mm	14,6 mm	325
4	20.804.234.A00	44 mm	14,6 mm	325
5	20.804.235.A00	44 mm	14,6 mm	325
6	20.804.236.A00	44 mm	14,6 mm	325
8	20.804.238.A00	56 mm	14,6 mm	325

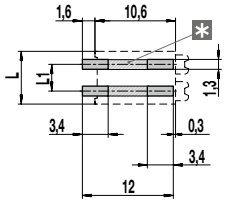
further number of poles on request

[1] To be fitted after reflow soldering process

PCB connector for SMD
830-A-111-SMD
Push-In connection



PCB Layout (Recommendation)



L = (No. of poles) x pitch
L1 = (No. of poles - 1) x pitch
Solder paste thickness: 0,15 - 0,2 mm

✱ = Both solder pads of each pole can be connected together.

The PCB terminal block 830-A-111-SMD with the pitch of 3,5 mm offers strong performance in the smallest space. The position of the entries in parallel to the printed circuit board enables the advantageous application within housings with external connection. Due to the very small space requirement and the white colour it is ideally suited to various applications in the lighting industry.

The front of the terminal is equipped with pushers to be handled with standard screwdrivers for the removal of the parallel connected conductors.

The easy to use spring system allows beside the use of 1 mm² solid wires also the connection of 0,75 mm² flexible by use of the pushers.

The advanced design of this high temperature resistant terminal allows in the area of the solder pins the free circulation of hot air in the convection oven during the reflow soldering process.

The standard packaging in Tape-on-Reel makes this terminal very suitable for its automatic pick & place in the production line.

Part Numbers: Bar magazines

No. of poles	830-A-111-SMD		Length	PU
2	10.813.002	(49 bar mag.)	6,90	3626
3	10.813.003	(49 bar mag.)	10,40	2401
2	10.813.002.B00	(4 bar mag.)	6,90	296
3	10.813.003.B00	(4 bar mag.)	10,40	196

General Information

Pitch	3,5 mm
No. of poles	2 + 3
Areas of application	Lighting technology, devices

Technical Data

Clamping Range	*solid / flexible / AWG*		
	0,2 - 1,0 mm² / 0,2 - 0,75 mm² / 24 - 18 AWG		
Rated Cross Section	1 mm² (starr / solid) / 0,75 mm²		
Wire Stripping Length	7,5 mm ± 0,5 mm		
Overvoltage Category	III	III	II
Pollution Severity Level	3	2	2
Rated Voltage	160 V	160 V	320 V
Rated Impulse Voltage	2,5 kV	2,5 kV	2,5 kV
Rated Insulation Voltage	130 V acc. to EN 60998-1		
Rated Current	13,5 A apply to 1 mm² solid 9 A apply to 0,75 mm²		
Soldering process	Reflow solder		

Material

Moulding	PA HT, white, V-0
Comparative Tracking Index	CTI ≥ 600
Insulating Group	I
Temperature Range	-40°C up to 120°C; reflow solder temperature (Peak) max. 260°C (15-30 s)
Terminal body	Tin plated copper alloy
Spring	Stainless steel

Approvals

	Current	Voltage	Group	AWG	Nm
cULus	6	300	B	24 - 18	

Options / Accessories

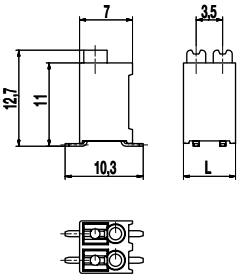
- Consecutive numbering
- Special marking according to drawing
- Black colour on request

Part Numbers: Tape-on-Reel

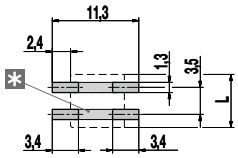
No. of poles	830-A-111-SMD	Tape Width	Tape Height	PU
2	10.813.002.A00	24 mm	8,4 mm	550
3	10.813.003.A00	24 mm	8,4 mm	550

Technical modification reserved

PCB connector for SMD
830-A-121-SMD
Push-In connection vertical to PCB



PCB Layout (Recommendation)



L = (No. of poles) x pitch
L1 = (No. of poles - 1) x pitch
Solder paste thickness: 0,15 - 0,2 mm

✱ = Both solder pads of each pole can be connected together.

The PCB terminal block 830-A-121-SMD with the pitch of 3,5 mm offers strong performance in the smallest space. It is available in 2- and 3-pole design.
The position of the entries in vertical to the printed circuit board enables the advantageous application within housings with external connection. Due to the very small space requirement and the white colour it is ideally suited to various applications in the lighting industry.

The top of the terminal is equipped with pushers to be handled with standard screwdrivers for the removal of the parallel connected conductors.

The easy to use spring system allows beside the use of 1 mm² solid wires also the connection of 0,75 mm² flexible by use of the pushers.

The advanced design of this high temperature resistant terminal allows in the area of the solder pins the free circulation of hot air in the convection oven during the reflow soldering process.

This product is suitable for its automatic pick & place in the production line.

Part Numbers

No. of poles	830-A-121-SMD		Length	PU
2	10.813.032.B00	(1 bar mag.)	6,90	75
3	10.813.033.B00	(1 bar mag.)	10,40	50

General Information

Pitch	3,5 mm
No. of poles	2 + 3
Areas of application	Lighting technology, devices

Technical Data

Clamping Range	*solid / flexible / AWG*		
	0,2 - 1,0 mm² / 0,2 - 0,75 mm² / 24 - 18 AWG		
Rated Cross Section	1 mm² (starr / solid) / 0,75 mm²		
Wire Stripping Length	7,5 mm ± 0,5 mm		
Overvoltage Category	III	III	II
Pollution Severity Level	3	2	2
Rated Voltage	160 V	160 V	320 V
Rated Impulse Voltage	2,5 kV	2,5 kV	2,5 kV
Rated Insulation Voltage	130 V acc. to EN 60998-1		
Rated Current	13,5 A apply to 1 mm² solid 9 A apply to 0,75 mm²		
Soldering process	Reflow solder		

Material

Moulding	PA HT, white, V-0
Comparative Tracking Index	CTI ≥ 600
Insulating Group	I
Temperature Range	-40°C up to 120°C; reflow solder temperature (Peak) max. 260°C (15-30 s)
Terminal body	Tin plated copper alloy
Spring	Stainless steel

Approvals

	Current	Voltage	Group	AWG	Nm
cULus	6	300	B	24 - 18	

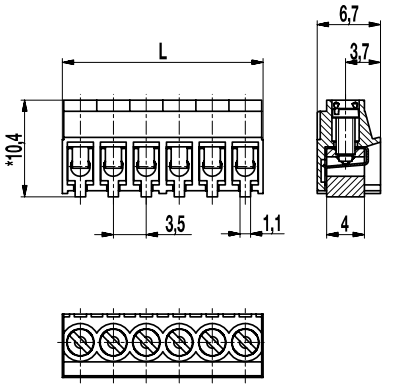
Options / Accessories

- Black colour on request
- Tape-on-Reel on request

Part Numbers: Tape-on-Reel

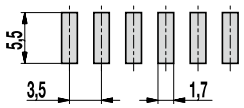
No. of poles	830-A-121-SMD	Tape Width	Tape Height	PU
2	10.813.032.A00	24 mm	14,4 mm	300
3	10.813.033.A00	24 mm	14,4 mm	300

PCB connector for SMD
930-D-SMD(-DS)
Screw connection, floating terminal bodies



* = Height without -DS: 10,2 mm
L = No. of poles x pitch + 0,3 mm

PCB Layout



Solder paste thickness: 0,15 - 0,2 mm

The PCB connector 930-D-SMD with a pitch of 3,5 mm for genuine surface mount technology is specifically designed for automated processing assembly and is available in 2 to 12 pole design.

In the Tape-on-Reel packaging, it is equipped with a glued pick disc that can be easily removed after the soldering process.
Its floating terminal bodies compensate irregularities (non planarity and bumps) on the printed circuit board.
The same feature eliminates CTE (coefficient of thermal expansion) mismatch with the PCB and thus promotes excellent in field reliability and the successful passing of thermal cycling testing.

Part Numbers

No. of poles	930-D-SMD	930-D-SMD-DS	Length	PU
2	10.870.602	20.870.602	7,30	250
3	10.870.603	20.870.603	10,80	250
4	10.870.604	20.870.604	14,30	250
5	10.870.605	20.870.605	17,80	200
6	10.870.606	20.870.606	21,30	200
7	10.870.607	20.870.607	24,80	100
8	10.870.608	20.870.608	28,30	100
9	10.870.609	20.870.609	31,80	100
10	10.870.610	20.870.610	35,30	100
11	10.870.611	20.870.611	38,80	100
12	10.870.612	20.870.612	42,30	100

General Information

Pitch	3,5 mm
No. of poles	2 - 12

Technical Data

Clamping Range	*solid / flexible / AWG*		
without wire protector	0,75 - 1,5 mm² / 0,75 - 1,5 mm² / 18 - 16 AWG		
with wire protector	0,25 - 1 mm² / 0,25 - 1 mm² / 24 - 18 AWG		
Rated Cross Section	1 mm²		
Wire Stripping Length	5 mm ± 0,5 mm		
Overvoltage Category	III	III	II
Pollution Severity Level	3	2	2
Rated Voltage	125 V	160 V	320 V
Rated Impulse Voltage	2,5 kV	2,5 kV	2,5 kV
Rated Insulation Voltage	130 V acc. to EN 60998-1		
Rated Current	13,5 A		
Soldering process	Reflow solder		
Torque	0,2 Nm		
Other specifications	Recommended screwdriver: blade 0,4 x 2,0 mm		

Material

Moulding	PA HT, black, V-0
Comparative Tracking Index	CTI ≥ 600
Insulating Group	I
Temperature Range	-40°C up to 120°C; reflow solder temperature (Peak) max. 260°C (15-30 s)
Terminal body	Tin plated brass
Screw	M2; tin plated brass
Wire protector	German silver

Approvals

	Current	Voltage	Group	AWG	Nm
	10	150	B	26 - 16	0,23
	10	150	B	26 - 16	0,2

Options / Accessories

- Special marking according to drawing
- Self-adhesive marking strip BST-3,50 [1]
- White housing colour on request

Part Numbers: Tape-on-Reel

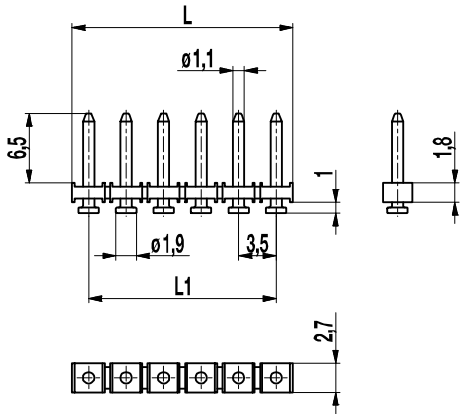
No. of poles	930-D-SMD	930-D-SMD-DS	Tape Width	Tape Height	PU
2	10.870.602.A00	20.870.602.A00	24 mm	11,3 mm	500
3	10.870.603.A00	20.870.603.A00	24 mm	11,3 mm	500
4	10.870.604.A00	20.870.604.A00	24 mm	11,3 mm	500
5	10.870.605.A00	20.870.605.A00	32 mm	11,3 mm	500
6	10.870.606.A00	20.870.606.A00	44 mm	11,3 mm	500
12	10.870.612.A00	20.870.612.A00	56 mm	11,3 mm	500

further number of poles on request

[1] To be fitted after reflow soldering process

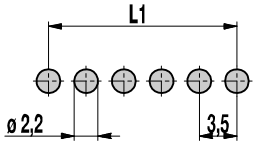
Technical modification reserved

Pin strip for SMD
931-SLR-SMD-1,1
Plug-in area ø 1,1 mm



L1 = (No. of poles - 1) x pitch

PCB Layout



Solder paste thickness: 0,15 - 0,2 mm

The pin strip 931-SLR-SMD-1,1 for the application in a reflow soldering process in genuine SMD technology and with a pitch of 3,5 mm is available in 2 to 16 pole design.
It comes with a constant pin diameter of 1,1 mm at the plug-in area.
Contrary to the pin strips 931-SLR-THR and 931-SLR-THR-1,1, for which holes in the PCB are necessary, the SMD types of WECO base on true surface assembly. Soldering expanses at the end of the pins guarantee optimal retention force on the printed circuit board.
Just like all THR versions of WECO, also the housings of the SMD series are made out of high temperature resistant plastic material and exhibit a very high CTI value.
For the automatic assembling all pin strips of this series are packed in Tape-on-Reel and equipped with high temperature resistant Pick Caps, which can easily be removed after the soldering process.

Part Numbers

No. of poles	931-SLR-SMD-1,1	Length	PU
2	12.893.732	6,50	1000
3	13.893.732	10,00	1000
4	14.893.732	13,50	500
5	15.893.732	17,00	500
6	16.893.732	20,50	500
8	18.893.732	27,50	250
10	20.893.732	34,50	200
12	22.893.732	41,50	200
16	26.893.732	55,50	200

further number of poles on request

General Information

Pitch	3,5 mm
No. of poles	2 - 16
Usable with	plug connector 930-FL(-DS)
Additonal Information	Also, please take into consideration the pin strips 931-SLS for wave soldering and series 931-SLR-THR for Through-Hole-Reflow.

Technical Data

Overvoltage Category	III	III	II
Pollution Severity Level	3	2	2
Rated Voltage	160 V	160 V	320 V
Rated Impulse Voltage	2,5 kV	2,5 kV	2,5 kV
Rated Insulation Voltage	130 V acc. to EN 60998-1		
Rated Current	6 A		
Soldering process	Reflow solder		

Material

Moulding	PA HT, black, V-0
Comparative Tracking Index	CTI ≥ 600
Insulating Group	I
Temperature Range	-40°C up to 120°C; reflow solder temperature (Peak) max. 260°C (15-30 s)
Solder pin	ø 1,1 mm (plug-in area); tin plated brass

Approvals

	Current	Voltage	Group	AWG	Nm
	6	150	B		
	6	300	D		
	6	150	B		
	6	300	D		

Options / Accessories

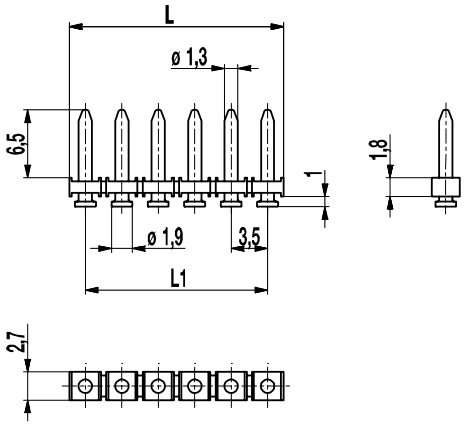
- Other plug pin lengths on request
- Other solder pin surfaces on request

Part Numbers: Tape-on-Reel

No. of poles	931-SLR-SMD-1,1	Tape Width	Tape Height	PU
3	13.893.732.A00	32 mm	14,6 mm	500
4	14.893.732.A00	32 mm	14,6 mm	500
5	15.893.732.A00	32 mm	14,6 mm	500
6	16.893.732.A00	56 mm	14,6 mm	500
7	17.893.732.A00	56 mm	14,6 mm	500
8	18.893.732.A00	56 mm	14,6 mm	500
9	19.893.732.A00	56 mm	14,6 mm	500
10	20.893.732.A00	56 mm	14,6 mm	500
11	21.893.732.A00	56 mm	14,6 mm	500
12	22.893.732.A00	72 mm	14,9 mm	500
13	23.893.732.A00	72 mm	14,9 mm	500
14	24.893.732.A00	72 mm	14,9 mm	500

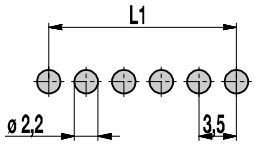
further number of poles on request

Pin strip for SMD
931-SLR-SMD-1,3
Plug-in area ø 1,3 mm



L1 = (No. of poles - 1) x pitch

PCB Layout



Solder paste thickness: 0,15 - 0,2 mm

The pin strip 931-SLR-SMD-1,3 for the application in a reflow soldering process in genuine SMD technology and with a pitch of 3,5 mm is available in 2 to 16 pole design.
It comes with a constant pin diameter of 1,3 mm at the plug-in area.
Contrary to the pin strips 931-SLR-THR and 931-SLR-THR-1,3, for which holes in the PCB are necessary, the SMD types of WECO base on true surface assembly. Soldering expanses at the end of the pins guarantee optimal retention force on the printed circuit board.
Just like all THR versions of WECO, also the housings of the SMD series are made out of high temperature resistant plastic material and exhibit a very high CTI value.
For the automatic assembling all pin strips of this series are packed in Tape-on-Reel and equipped with high temperature resistant Pick Caps, which can easily be removed after the soldering process.

Part Numbers

No. of poles	931-SLR-SMD-1,3	Length	PU
2	12.893.731	6,50	1000
3	13.893.731	10,00	1000
4	14.893.731	13,50	500
6	16.893.731	20,50	500
8	18.893.731	27,50	250
10	20.893.731	34,50	200
12	22.893.731	41,50	200
16	26.893.731	55,50	200

further number of poles on request

General Information

Pitch	3,5 mm
No. of poles	2 - 16
Usable with	plug connector 938-FLDS
Additonal Information	Also, please take into consideration the pin strips 931-SLS for wave soldering and series 931-SLR-THR for Through-Hole-Reflow.

Technical Data

Overvoltage Category	III	III	II
Pollution Severity Level	3	2	2
Rated Voltage	160 V	160 V	320 V
Rated Impulse Voltage	2,5 kV	2,5 kV	2,5 kV
Rated Insulation Voltage	130 V acc. to EN 60998-1		
Rated Current	6 A		
Soldering process	Reflow solder		

Material

Moulding	PA HT, black, V-0
Comparative Tracking Index	CTI ≥ 600
Insulating Group	I
Temperature Range	-40°C up to 120°C; reflow solder temperature (Peak) max. 260°C (15-30 s)
Solder pin	ø 1,3 mm (plug-in area); tin plated brass

Approvals

	Current	Voltage	Group	AWG	Nm
	6	150	B		
	6	300	D		
	6	150	B		
	6	300	D		

Options / Accessories

- Plug pin length 11,3 mm with mating area 8,5 mm (instead of 6.5 mm) available
- Other plug pin lengths on request
- Other solder pin surfaces on request

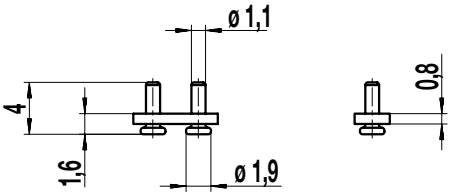
Part Numbers: Tape-on-Reel

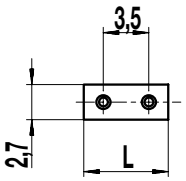
No. of poles	931-SLR-SMD-1,3	Tape Width	Tape Height	PU
3	13.893.731.A00	32 mm	14,6 mm	500
4	14.893.731.A00	32 mm	14,6 mm	500
5	15.893.731.A00	32 mm	14,6 mm	500
6	16.893.731.A00	56 mm	14,6 mm	500
7	17.893.731.A00	56 mm	14,6 mm	500
8	18.893.731.A00	56 mm	14,6 mm	500
9	19.893.731.A00	56 mm	14,6 mm	500
10	20.893.731.A00	56 mm	14,6 mm	500
11	21.893.731.A00	56 mm	14,6 mm	500
12	22.893.731.A00	72 mm	14,9 mm	500
13	23.893.731.A00	72 mm	14,9 mm	500
14	24.893.731.A00	72 mm	14,9 mm	500

further number of poles on request

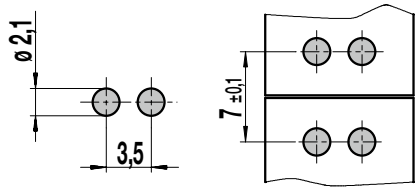
Technical modification reserved

Pin strip for SMD
931-SLT-SMD-1,1-L4
Low profile, 4 mm height





Recommended PCB Layout



Solder paste thickness: 0,15 - 0,2 mm

The pin strip 931-SLR-SMD-1,1-L4 with only 4 mm height is the perfect solution to connect in combination with the PCB connector 930-LC-111 two adjacent LED boards with each other.
With this product, the height on the board is kept as small as possible at the same time.
The pin strip is suitable for surface mounting and is delivered in Tape-on-Reel with Pick Cap.

Part Numbers

No. of poles	931-SLT-SMD-1,1-L4	Length	PU
2	12.893.719	6,5	250
3	13.893.719	10,0	500

General Information

Pitch	3,5 mm
No. of poles	2 + 3
Usable with	930-LC-111, 930-LP-111
Areas of application	LED Panel bridging

Technical Data

Overvoltage Category	III	III	II
Pollution Severity Level	3	2	2
Rated Voltage	160 V	160 V	320 V
Rated Impulse Voltage	2,5 kV	2,5 kV	2,5 kV
Rated Insulation Voltage	130 V acc. to EN 60998-1		
Rated Current	6 A		
Soldering process	Reflow solder		

Material

Moulding	PA HT, black, V-0
Comparative Tracking Index	CTI ≥ 600 V
Insulating Group	I
Temperature Range	-40°C up to 120°C; Reflow solder temperature (Peak) max. 260°C (15-30 s)
Solder pin	ø 1,1 mm; tin plated brass

Approvals

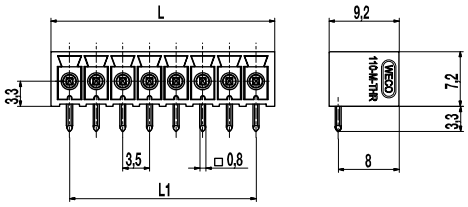
	Current	Voltage	Group	AWG	Nm
c UL us	6 [1]	250			

[1] Acc. to UL 1977 and C22.2 No. 182.3

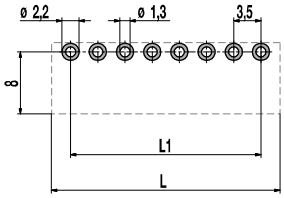
Part Numbers: Tape-on-Reel

No. of poles	931-SLT-SMD-1,1-L4	Tape Width	Tape Height	PU
2	12.893.719.A00	24 mm	6,6 mm	900
3	13.893.719.A00	24 mm	6,6 mm	900

Pin strip for THR
110-M-211-THR
Plug-in direction parallel to PCB



PCB Layout



L1 = (No. of poles - 1) x pitch
Solder paste thickness: 0,15 - 0,2 mm

The 110-M-211-THR is a pin strip, suitable for the reflow soldering process, in horizontal design with a pitch of 3,5 mm and available from 2 to 12 poles. It is compatible to all standard plugs of the series 110 as well as to the Insulation Displacement Connector 110-A-IDC.
The housing of the pin strips correspond to the requirements of the increased soldering temperatures in the lead free soldering process. Spacers, so-called stand-offs, ensure a better hot-air circulation during the reflow soldering process in the convection oven and allow an improved visual control of the solder joint.
All THR pin strips of this series are packed Tape-on-Reel for the assembling with pick & place machines.

Part Numbers

No. of poles	110-M-211-THR	Length	PU
2	10.841.302	8,40	200
3	10.841.303	11,90	200
4	10.841.304	15,40	100
5	10.841.305	18,90	100
6	10.841.306	22,40	100
7	10.841.307	25,90	50
8	10.841.308	29,40	50
9	10.841.309	32,90	50
10	10.841.310	36,40	50
11	10.841.311	39,90	50
12	10.841.312	43,40	50

General Information

Pitch	3,5 mm
No. of poles	2 - 12
Usable with	all plug connectors of series 110
Additonal Information	Version with connecting flanges see also 110-M-215-THR

Technical Data

Overvoltage Category	III	III	II
Pollution Severity Level	3	2	2
Rated Voltage	160 V	160 V	320 V
Rated Impulse Voltage	2,5 kV	2,5 kV	2,5 kV
Rated Insulation Voltage	130 V acc. to EN 60998-1		
Rated Current	8 A		
Soldering process	Wave solder & reflow solder		
Hole in PCB	ø 1,3 mm		
PCB thickness	Wave solder max. 1,6 mm; reflow solder 1,6 - 3,2 mm		

Material

Moulding	PA HT, black, V-0
Comparative Tracking Index	CTI ≥ 600
Insulating Group	I
Temperature Range	-40°C up to 120°C; reflow solder temperature (Peak) max. 260°C (15-30 s)
Solder pin	0,8 x 0,8 mm; tin plated brass

Approvals

	Current	Voltage	Group	AWG	Nm
	8	300	B, D		
	8	300	B		

Options / Accessories

- Consecutive numbering
- Special marking according to drawing
- Self-adhesive marking strip BST-3,50 [1]
- Coding elements 120-K-HT-WS

Part Numbers: Tape-on-Reel

No. of poles	110-M-211-THR	Tape Width	Tape Height	PU
2	10.841.302.A00	32 mm	11,8 mm	500
3	10.841.303.A00	32 mm	11,8 mm	500
4	10.841.304.A00	32 mm	11,8 mm	500
5	10.841.305.A00	32 mm	11,8 mm	500

further number of poles on request

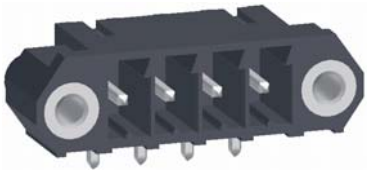
[1] To be fitted after reflow soldering process

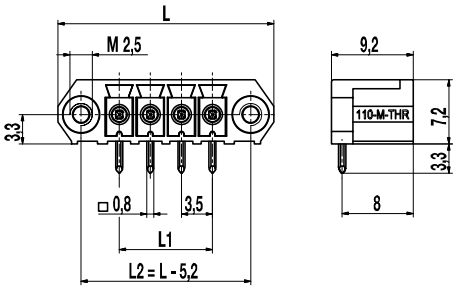
Technical modification reserved

Pin strip for THR

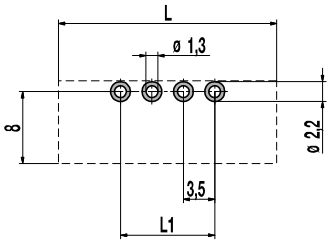
110-M-215-THR

Plug-in direction parallel to PCB, with connecting flanges





PCB Layout



L1 = (No. of poles - 1) x pitch
Solder paste thickness: 0,15 - 0,2 mm

The 110-M-215-THR is a pin strip, suitable for the reflow soldering process, in horizontal design with a pitch of 3,5 mm and available in 2- to 12-pole design.
It is compatible to all standard plugs of the series 110 as well as to the Insulation Displacement Connector 110-A-IDC.
This version has connecting flanges with thread inserts M2,5 (<0,3 Nm) on both sides of the connector which extend the range of applications additionally.
The housing of the pin strips correspond to the requirements of the increased soldering temperatures in the lead free soldering process. Spacers, so-called stand-offs, ensure a better hot-air circulation during the reflow soldering process in the convection oven and allow an improved visual control of the solder joint.
All THR pin strips of this series are packed in Tape-on-Reel for automatic pick & place and are equipped with high temperature resistant pick caps which can easily be removed after the soldering process.

Part Numbers

No. of poles	110-M-215-THR	Length	PU
2	10.841.352	17,30	100
3	10.841.353	20,80	100
4	10.841.354	24,30	100
5	10.841.355	27,80	50
6	10.841.356	31,30	50
8	10.841.358	38,30	50
10	10.841.360	45,30	50
11	10.841.361	48,80	50
12	10.841.362	52,30	50

General Information

Pitch	3,5 mm
No. of poles	2 - 12
Usable with	all plug connectors of series 110 with connecting flanges

Technical Data

Overvoltage Category	III	III	II
Pollution Severity Level	3	2	2
Rated Voltage	160 V	160 V	320 V
Rated Impulse Voltage	2,5 kV	2,5 kV	2,5 kV
Rated Insulation Voltage	130 V acc. to EN 60998-1		
Rated Current	8 A		
Soldering process	Wave solder & reflow solder		
Hole in PCB	ø 1,3 mm		
PCB thickness	Wave solder max. 1,6 mm; reflow solder 1,6 mm - 3,2 mm		

Material

Moulding	PA HT, black, V-0
Comparative Tracking Index	CTI ≥ 600
Insulating Group	I
Temperature Range	-40°C up to 120°C; reflow solder temperature (Peak) max. 260°C (15-30 s)
Solder pin	0,8 x 0,8 mm; tin plated brass

Approvals

	Current	Voltage	Group	AWG	Nm
	8	300	B, D		
	8	300	B		

Options / Accessories

- Consecutive numbering
- Special marking according to drawing
- Self-adhesive marking strip BST-3,50 [1]
- Coding elements 120-K-HT-WS

Part Numbers: Tape-on-Reel

No. of poles	110-M-215-THR	Tape Width	Tape Height	PU
2	10.841.352.A00	32 mm	11,8 mm	500
3	10.841.353.A00	32 mm	11,8 mm	500

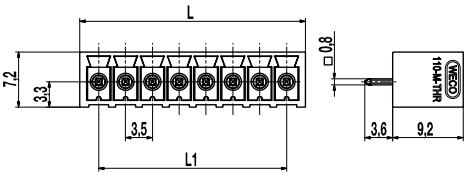
further number of poles on request

[1] To be fitted after reflow soldering process

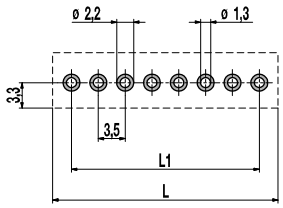
Pin strip for THR

110-M-221-THR

Plug-in direction vertical to PCB



PCB Layout



L1 = (No. of poles - 1) x pitch
Solder paste thickness: 0,15 - 0,2 mm

The 110-M-221-THR is a pin strip, suitable for the reflow soldering process, in vertical design with a pitch of 3,5 mm and available from 2 to 12 poles. It is compatible to all standard plugs of the series 110 as well as to the Insulation Displacement Connector 110-A-IDC.
The housing of the pin strips correspond to the requirements of the increased soldering temperatures in the lead free soldering process. Spacers, so-called stand-offs, ensure a better hot-air circulation during the reflow soldering process in the convection oven and allow an improved visual control of the solder joint.
All THR pin strips of this series are packed Tape-on-Reel for the assembling with pick & place machines. They are equipped with high temperature resistant Pick Caps (see picture), which can be comfortably removed after the soldering process.

Part Numbers

No. of poles	110-M-221-THR	Length	PU
2	20.841.302	8,40	200
3	20.841.303	11,90	200
4	20.841.304	15,40	100
5	20.841.305	18,90	100
6	20.841.306	22,40	100
7	20.841.307	25,90	50
8	20.841.308	29,40	50
9	20.841.309	32,90	50
10	20.841.310	36,40	50
11	20.841.311	39,90	50
12	20.841.312	43,40	50

General Information

Pitch	3,5 mm
No. of poles	2 - 12
Usable with	all plug connectors of series 110
Additonal Information	Version with connecting flanges see also 110-M-225-THR

Technical Data

Overvoltage Category	III	III	II
Pollution Severity Level	3	2	2
Rated Voltage	160 V	160 V	320 V
Rated Impulse Voltage	2,5 kV	2,5 kV	2,5 kV
Rated Insulation Voltage	130 V acc. to EN 60998-1		
Rated Current	8 A		
Soldering process	Wave solder & reflow solder		
Hole in PCB	ø 1,3 mm		
PCB thickness	Wave solder max. 1,6 mm; reflow solder 1,6 mm - 3,2 mm		

Material

Moulding	PA HT, black, V-0
Comparative Tracking Index	CTI ≥ 600
Insulating Group	I
Temperature Range	-40°C up to 120°C; reflow solder temperature (Peak) max. 260°C (15-30 s)
Solder pin	0,8 x 0,8 mm; tin plated brass

Approvals

	Current	Voltage	Group	AWG	Nm
	8	300	B, D		
	8	300	B		

Options / Accessories

- Consecutive numbering
- Special marking according to drawing
- Self-adhesive marking strip BST-3,50 [1]
- Coding elements 120-K-HT-WS

Part Numbers: Tape-on-Reel

No. of poles	110-M-221-THR	Tape Width	Tape Height	PU
5	20.841.305.A00	56 mm	14,9 mm	300
6	20.841.306.A00	56 mm	14,9 mm	300
7	20.841.307.A00	56 mm	14,9 mm	300
8	20.841.308.A00	56 mm	14,9 mm	300
9	20.841.309.A00	56 mm	14,9 mm	300
10	20.841.310.A00	56 mm	14,9 mm	300

further number of poles on request

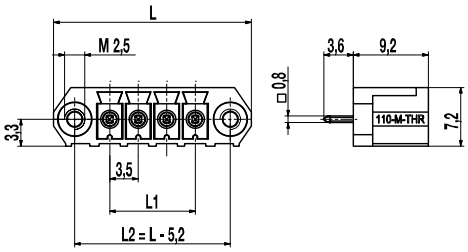
[1] To be fitted after reflow soldering process

Technical modification reserved

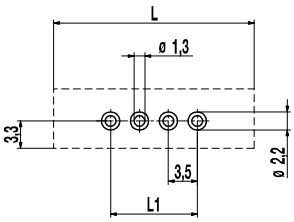
Pin strip for THR

110-M-225-THR

Plug-in direction vertical to PCB, with connecting flanges



PCB Layout



L1 = (No. of Poles - 1) x pitch
Solder paste thickness: 0,15 - 0,2 mm

The 110-M-225-THR is a pin strip, suitable for the reflow soldering process, in vertical design with a pitch of 3,5 mm and available in 2- to 12-pole design.
It is compatible to all standard plugs of the series 110 as well as to the Insulation Displacement Connector 110-A-IDC.
This version has connecting flanges with thread inserts M2,5 (<0,3 Nm) on both sides of the connector which extend the range of applications additionally.
The housing of the pin strips correspond to the requirements of the increased soldering temperatures in the lead free soldering process. Spacers, so-called stand-offs, ensure a better hot-air circulation during the reflow soldering process in the convection oven and allow an improved visual control of the solder joint.
All THR pin strips of this series are packed in Tape-on-Reel for automatic pick & place and are equipped with high temperature resistant pick caps which can easily be removed after the soldering process.

Part Numbers

No. of poles	110-M-225-THR	Length	PU
2	20.841.352	17,30	100
3	20.841.353	20,80	100
4	20.841.354	24,30	100
5	20.841.355	27,80	50
6	20.841.356	31,30	50
8	20.841.358	38,30	50
10	20.841.360	45,30	50
11	20.841.361	48,80	50
12	20.841.362	52,30	50

General Information

Pitch	3,5 mm
No. of poles	2 - 12
Usable with	all plug connectors of series 110 with connecting flanges

Technical Data

Overvoltage Category	III	III	II
Pollution Severity Level	3	2	2
Rated Voltage	160 V	160 V	320 V
Rated Impulse Voltage	2,5 kV	2,5 kV	2,5 kV
Rated Insulation Voltage	130 V acc. to EN 60998-1		
Rated Current	8 A		
Soldering process	Wave solder & reflow solder		
Hole in PCB	ø 1,3 mm		
PCB thickness	Wave solder max. 1,6 mm; reflow solder 1,6 mm - 3,2 mm		

Material

Moulding	PA HT, black, V-0
Comparative Tracking Index	CTI ≥ 600
Insulating Group	I
Temperature Range	-40°C up to 120°C; reflow solder temperature (Peak) max. 260°C (15-30 s)
Solder pin	0,8 x 0,8 mm; tin plated brass

Approvals

	Current	Voltage	Group	AWG	Nm
	8	300	B, D		
	8	300	B		

Options / Accessories

- Consecutive numbering
- Special marking according to drawing
- Self-adhesive marking strip BST-3,50 [1]
- Coding elements 120-K-HT-WS

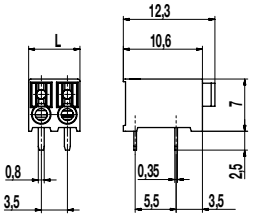
Part Numbers: Tape-on-Reel

No. of poles	110-M-225-THR	Tape Width	Tape Height	PU
3	20.841.353.A00	56 mm	14,9 mm	300
4	20.841.354.A00	56 mm	14,9 mm	300
5	20.841.355.A00	56 mm	14,9 mm	300
6	20.841.356.A00	56 mm	14,9 mm	300
7	20.841.357.A00	56 mm	14,9 mm	300
8	20.841.358.A00	56 mm	14,9 mm	300

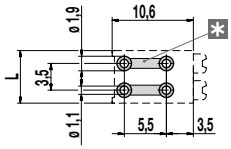
further number of poles on request

[1] To be fitted after reflow soldering process

PCB connector for SMD
830-A-111-THR
Push-In connection



PCB Layout (Recommendation)



L = (No. of poles) x pitch
L1 = (No. of poles - 1) x pitch
Solder paste thickness: 0,15 - 0,2 mm
solder pad, outside diameter: ø 1,9 mm

✱ = Both solder pads of each pole can be connected together.

The PCB terminal block 830-A-111-THR with the pitch of 3,5 mm offers strong performance in the smallest space. The position of the entries in parallel to the printed circuit board enables the advantageous application within housings with external connection. Due to the very small space requirement and the white colour it is ideally suited to various applications in the lighting industry.

The front of the terminal is equipped with pushers to be handled with standard screwdrivers for the removal of the parallel connected conductors.

The easy to use spring system allows beside the use of 1 mm² solid wires also the connection of 0,75 mm² flexible by use of the pushers.

The advanced design of this high temperature resistant terminal allows in the area of the solder pins the free circulation of hot air in the convection oven during the reflow soldering process.

Part Numbers

No. of poles	830-A-111-THR		Length	PU
2	10.813.052		6,90	250
3	10.813.053		10,40	250
2	10.813.052.B00	(2 bar mag.)	6,90	150
3	10.813.053.B00	(2 bar mag.)	10,40	100

General Information

Pitch	3,5 mm
No. of poles	2 + 3
Areas of application	Lighting technology, devices

Technical Data

Clamping Range	*solid / flexible / AWG*		
	0,2 - 1,0 mm² / 0,2 - 0,75 mm² / 24 - 18 AWG		
Rated Cross Section	1 mm² (starr / solid) / 0,75 mm²		
Wire Stripping Length	7,5 mm ± 0,5 mm		
Overvoltage Category	III	III	II
Pollution Severity Level	3	2	2
Rated Voltage	160 V	160 V	320 V
Rated Impulse Voltage	2,5 kV	2,5 kV	2,5 kV
Rated Insulation Voltage	130 V acc. to EN 60998-1		
Rated Current	13,5 A apply to 1 mm² solid 9 A apply to 0,75 mm²		
Soldering process	Reflow solder		
Hole in PCB	ø 1,1 mm		

Material

Moulding	PA HT, white, V-0
Comparative Tracking Index	CTI ≥ 600
Insulating Group	I
Temperature Range	-40°C up to 120°C; reflow solder temperature (Peak) max. 260°C (15-30 s)
Terminal body	Tin plated copper alloy
Spring	Stainless steel

Approvals

	Current	Voltage	Group	AWG	Nm
cULus	6	300	B	24 - 18	

Options / Accessories

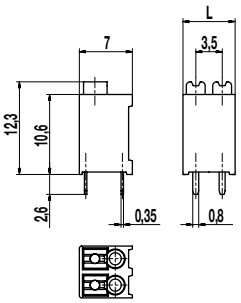
- Consecutive numbering
- Special marking according to drawing
- Black colour on request
- Tape-on-Reel on request

Technical modification reserved

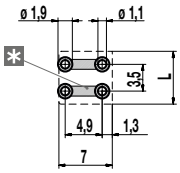
PCB connector for SMD

830-A-121-THR

Push-In connection vertical to PCB



PCB Layout (Recommendation)



L = (No. of poles) x pitch
L1 = (No. of poles - 1) x pitch
Solder paste thickness: 0,15 - 0,2 mm
solder pad, outside diameter: ø 1,9 mm

✱ = Both solder pads of each pole can be connected together.

The PCB terminal block 830-A-121-THR with the pitch of 3,5 mm offers strong performance in the smallest space. It is available in 2- and 3-pole design.
The position of the entries vertical to the printed circuit board enables the advantageous application within housings with external connection. Due to the very small space requirement and the white colour it is ideally suited to various applications in the lighting industry.

The front of the terminal is equipped with pushers to be handled with standard screwdrivers for the removal of the parallel connected conductors.

The easy to use spring system allows beside the use of 1 mm² solid wires also the connection of 0,75 mm² flexible by use of the pushers.

The advanced design of this high temperature resistant terminal allows in the area of the solder pins the free circulation of hot air in the convection oven during the reflow soldering process.

Part Numbers

No. of poles	830-A-121-THR		Length	PU
2	10.813.082		6,90	250
3	10.813.083		10,40	250
2	10.813.082.B00	(1 bar mag.)	6,90	75
3	10.813.083.B00	(1 bar mag.)	10,40	50

General Information

Pitch	3,5 mm
No. of poles	2 + 3
Areas of application	Lighting technology, devices

Technical Data

Clamping Range	*solid / flexible / AWG*		
	0,2 - 1,0 mm² / 0,2 - 0,75 mm² / 24 - 18 AWG		
Rated Cross Section	1 mm² (starr / solid) / 0,75 mm²		
Wire Stripping Length	7,5 mm ± 0,5 mm		
Overvoltage Category	III	III	II
Pollution Severity Level	3	2	2
Rated Voltage	160 V	160 V	320 V
Rated Impulse Voltage	2,5 kV	2,5 kV	2,5 kV
Rated Insulation Voltage	130 V acc. to EN 60998-1		
Rated Current	13,5 A apply to 1 mm² solid 9 A apply to 0,75 mm²		
Soldering process	Wave solder & reflow solder		
Hole in PCB	ø 1,1 mm		

Material

Moulding	PA HT, white, V-0
Comparative Tracking Index	CTI ≥ 600
Insulating Group	I
Temperature Range	-40°C up to 120°C; reflow solder temperature (Peak) max. 260°C (15-30 s)
Terminal body	Tin plated copper alloy
Spring	Stainless steel

Approvals

	Current	Voltage	Group	AWG	Nm
cULus	6	300	B	24 - 18	

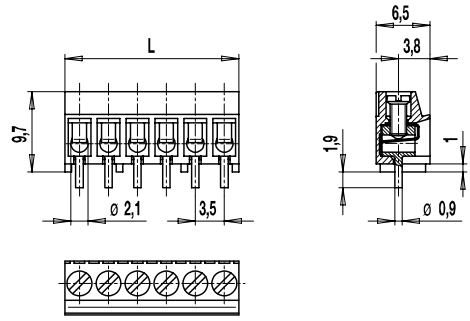
Options / Accessories

- Black colour on request
- Tape-on-Reel on request

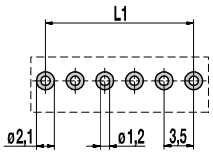
Part Numbers: Tape-on-Reel

No. of poles	830-A-121-THR	Tape Width	Tape Height	PU
2	10.813.082.A00	24 mm	17,2 mm	300
3	10.813.083.A00	24 mm	17,2 mm	300

PCB connector for THR
930-THR(-DS)
Screw connection



PCB Layout



L1 = (No. of poles - 1) x pitch
Solder paste thickness: 0,15 - 0,2 mm
Solder pad diameter: ø 2,1 mm

This product based on our established 930 series have been designed for the soldering process in Through-Hole-Reflow technology.
The soldering paste is applied to the plated through holes and the pins are placed in the circuit board and soldered by a reflow oven.
The terminal mouldings are made of heat-resistant material. The stand-offs on the base ensures there is enough room for the soldering paste and facilitates good heat circulation for optimum soldering and enables the soldering joint to be visually inspected.
The solder pin projects very slightly with a circuit board thickness of 1,6 mm and creates a solder point on both sides and thus guarantees a secure mounting. The position of the solder pins enables an equally minimal allocation area on the circuit board as with wave soldering.

Part Numbers

No. of poles	930-THR	930-THR-DS	Length	PU
2	10.879.002	20.879.002	7,40	250
3	10.879.003	20.879.003	10,90	250
4	10.879.004	20.879.004	14,40	250
5	10.879.005	20.879.005	17,90	200
6	10.879.006	20.879.006	21,40	200
7	10.879.007	20.879.007	24,90	100
8	10.879.008	20.879.008	28,40	100
9	10.879.009	20.879.009	31,90	100
10	10.879.010	20.879.010	35,40	100
11	10.879.011	20.879.011	38.90	100
12	10.879.012	20.879.012	42,40	100
15	10.879.015	20.879.015	52,90	100

General Information

Pitch	3,5 mm
No. of poles	2 - 12, 15

Technical Data

Clamping Range	*solid / flexible / AWG*		
without wire protector	0,75 - 1,5 mm² / 0,75 - 1,5 mm² / 18 - 16 AWG		
with wire protector	0,34 - 1,5 mm² / 0,34 - 1 mm² / 22 - 16 AWG		
Rated Cross Section	1 mm²		
Wire Stripping Length	5 mm ± 0,5 mm		
Overvoltage Category	III	III	II
Pollution Severity Level	3	2	2
Rated Voltage	160 V	160 V	320 V
Rated Impulse Voltage	2,5 kV	2,5 kV	2,5 kV
Rated Insulation Voltage	130 V acc. to EN 60998-1		
Rated Current	13,5 A		
Soldering process	Wave solder & reflow solder		
Hole in PCB	ø 1,2 mm		
PCB thickness	Wave solder max. 1,6 mm; reflow solder 0,8-1,6 mm		
Torque	0,2 Nm		

Material

Moulding	PA HT, black, V-0
Comparative Tracking Index	CTI ≥ 600
Insulating Group	I
Temperature Range	-40°C up to 120°C; reflow solder temperature (Peak) max. 260°C (15-30 s)
Terminal body	Tin plated brass
Screw	M2; zinc plated steel, blue passivated
Solder pin	ø 0,9 mm; tin plated brass
Wire protector	German silver

Approvals

	Current	Voltage	Group	AWG	Nm
	10	300	B	26 - 16	0,23
	10	300	B	26 - 16	0,2

Options / Accessories

- Special marking according to drawing
- Self-adhesive marking strip BST-3,50 [1]
- Other solder pin lengths on request
- Large conductor space on request

Part Numbers: Tape-on-Reel

No. of poles	930-THR	930-THR-DS	Tape Width	Tape Height	PU
3		20.879.003.A00	32 mm	13 mm	500
6		20.879.006.A00	56 mm	13 mm	500
12		20.879.012.A00	56 mm	13 mm	500

further number of poles on request

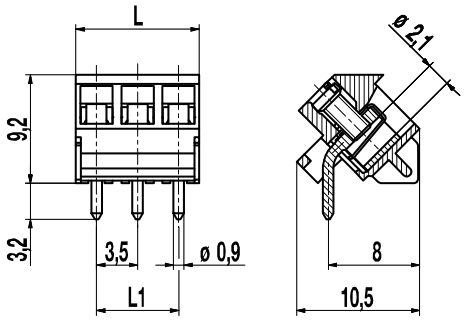
[1] To be fitted after reflow soldering process

Technical modification reserved

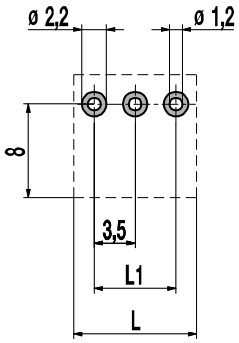
PCB connector for THR

934-THR-DS

Screw connection 45°-angle to PCB



PCB Layout



L1 = (No. of poles - 1) x pitch
Solder paste thickness: 0,15 - 0,2 mm
Solder pad diameter: ø 2,2 mm

934-THR-DS is a PCB connector for the reflow soldering process with a pitch of 3,5 mm. It is available in 2- to 12-pole design.
The wire entry has a connection angle of 45° to the PCB. This offers the advantage that terminal rows can be located space saving one directly behind the other. Additionally, the connectors can be arranged side by side without a change of the pitch.
The housing material consists of high temperature resistant plastic. Spacers, so-called "Stand-offs" on the base assure an improved hot-air circulation during the reflow soldering process in the convection oven.
The PCB connector 934-THR-DS is standardly equipped with captive screws and wire protectors.
This connector is packed Tape-on-Reel for the automatic assembling. It has a flat roof design on the housing at the middle poles in order to create a flat surface for the vacuum pipette.

Part Numbers

No. of poles	934-THR-DS	Length	PU
2	20.879.302	7,00	250
4	20.879.304	14,00	250
6	20.879.306	21,00	200
12	20.879.312	42,00	100

further number of poles on request

General Information

Pitch	3,5 mm
No. of poles	2 - 12
Areas of application	Devices with space critical applications or multi-row connections

Technical Data

Clamping Range	*solid / flexible / AWG*		
	0,25 - 1,5 mm² / 0,25 - 1 mm² / 24 - 16 AWG		
Rated Cross Section	1 mm²		
Wire Stripping Length	5 mm ± 0,5 mm		
Overvoltage Category	III	III	II
Pollution Severity Level	3	2	2
Rated Voltage	160 V	160 V	320 V
Rated Impulse Voltage	2,5 kV	2,5 kV	2,5 kV
Rated Insulation Voltage	130 V acc. to EN 60998-1		
Rated Current	10 A		
Soldering process	Wave solder & reflow solder		
Hole in PCB	ø 1,2 mm		
PCB thickness	Wave solder max. 1,6 mm; reflow solder 1,6 mm - 3,2 mm		
Torque	0,2 Nm		

Material

Moulding	PA HT, black, V-0
Comparative Tracking Index	CTI ≥ 600
Insulating Group	I
Temperature Range	-40°C up to 120°C; reflow solder temperature (Peak) max. 260°C (15-30 s)
Terminal body	Tin plated brass
Screw	M2; zinc plated steel, blue passivated
Solder pin	ø 0,9 mm; tin plated brass
Wire protector	German silver

Approvals

	Current	Voltage	Group	AWG	Nm
	10	300	B	26 - 16	0,23
	10	300	B	26 - 16	0,2

Options / Accessories

- Consecutive numbering
- Special marking according to drawing
- Self-adhesive marking strip BST-3,50 [1]
- Other plug pin lengths on request

Part Numbers: Tape-on-Reel

No. of poles	934-THR-DS	Tape Width	Tape Height	PU
2	20.879.302.A00	32 mm	15,2 mm	300
5	20.879.305.A00	32 mm	15,2 mm	300

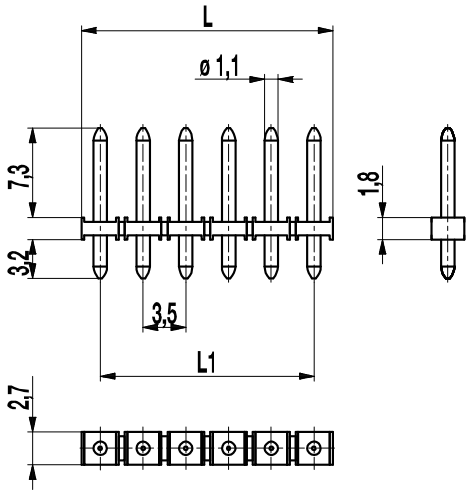
further number of poles on request

[1] To be fitted after reflow soldering process

Pin strip for THR

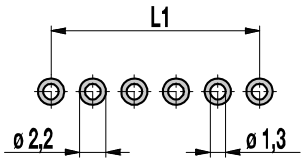
931-SLR-THR-1,1

Soldering/plug-in area ø 1,1 mm



L1 = (No. of poles - 1) x pitch

PCB Layout



Solder paste thickness: 0,15 - 0,2 mm
Solder pad diameter: ø 2,2 mm

The pin strip 931-SLR-THR-1,1 for the application in a reflow soldering process and with a pitch of 3,5 mm is available in 2 to 16 pole design.
It comes with a constant pin diameter of 1,1 mm in the solder and plug-in area.
The high temperature resistant plastic housing has a very high CTI value and is equipped with spacers, so-called "Stand-offs", which ensure a better hot-air circulation during the reflow soldering process in the convection oven. Beyond this, they assure an improved optical control of the solder joints.
For the automatic assembling process, all pin strip versions are packed Tape-on-Reel and are equipped with high temperature resistant Pick Caps, which can comfortably be removed after the soldering process.

Part Numbers

No. of poles	931-SLR-THR-1,1	Length	PU
2	32.893.727	6,50	1000
3	33.893.727	10,00	1000
4	34.893.727	13,50	500
5	35.893.727	17,00	500
6	36.893.727	20,50	500
8	38.893.727	27,50	250
10	40.893.727	34,50	200
12	42.893.727	41,50	200
16	46.893.727	55,50	200

further number of poles on request

General Information

Pitch	3,5 mm
No. of poles	2 - 16
Usable with	plug connector 930-FL(DS)
Additonal Information	Also, please take into consideration the pin strips 931-SLR-THR, 931-SLR-THR-1,3 and 931-SLR-SMD-1,3 in genuine surface mount technology.

Technical Data

Overvoltage Category	III	III	II
Pollution Severity Level	3	2	2
Rated Voltage	160 V	160 V	320 V
Rated Impulse Voltage	2,5 kV	2,5 kV	2,5 kV
Rated Insulation Voltage	130 V acc. to EN 60998-1		
Rated Current	6 A		
Soldering process	Wave solder & reflow solder		
Hole in PCB	ø 1,3 mm		
PCB thickness	Wave solder max. 1,6 mm; reflow solder 1,6 - 3,2 mm		

Material

Moulding	PA HT, black, V-0
Comparative Tracking Index	CTI ≥ 600
Insulating Group	I
Temperature Range	-40°C up to 120°C; reflow solder temperature (Peak) max. 260°C (15-30 s)
Solder pin	ø 1,1 mm; tin plated brass

Approvals

	Current	Voltage	Group	AWG	Nm
	6	300	B, D		
	6	300	B, D		

Options / Accessories

- Other plug pin lengths on request
- Other solder pin surfaces on request

Part Numbers: Tape-on-Reel

No. of poles	931-SLR-THR-1,1	Tape Width	Tape Height	PU
3	33.893.727.A00	32 mm	14,6 mm	500
4	34.893.727.A00	32 mm	14,6 mm	500
5	35.893.727.A00	32 mm	14,6 mm	500
6	36.893.727.A00	56 mm	14,6 mm	500
7	37.893.727.A00	56 mm	14,6 mm	500
8	38.893.727.A00	56 mm	14,6 mm	500
9	39.893.727.A00	56 mm	14,6 mm	500
10	40.893.727.A00	56 mm	14,6 mm	500
11	41.893.727.A00	56 mm	14,6 mm	500
12	42.893.727.A00	72 mm	14,9 mm	500
13	43.893.727.A00	72 mm	14,9 mm	500
14	44.893.727.A00	72 mm	14,9 mm	500

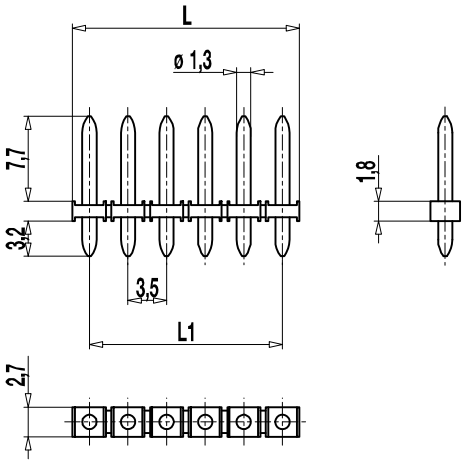
further number of poles on request

Technical modification reserved

Pin strip for THR

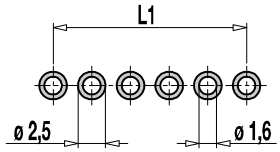
931-SLR-THR-1,3

Soldering/plug-in area ø 1,3 mm



L1 = (No. of poles - 1) x pitch

PCB Layout



Solder paste thickness: 0,15 - 0,2 mm
Solder pad diameter: ø 2,5 mm

The pin strip 931-SLR-THR-1,3 for the application in a reflow soldering process and with a pitch of 3,5 mm is available in 2 to 16 pole design.
It comes with a constant pin diameter of 1,3 mm in the solder and plug-in area.
The high temperature resistant plastic housing has a very high CTI value and is equipped with spacers, so-called "Stand-offs", which ensure a better hot-air circulation during the reflow soldering process in the convection oven. Beyond this, they assure an improved optical control of the solder joints.
For the automatic assembling process, all pin strip versions are packed Tape-on-Reel and are equipped with high temperature resistant Pick Caps, which can comfortably be removed after the soldering process.

Part Numbers

No. of poles	931-SLR-THR-1,3	Length	PU
2	12.893.726	6,50	1000
3	13.893.726	10,00	1000
4	14.893.726	13,50	500
5	15.893.726	17,00	500
6	16.893.726	20,50	500
8	18.893.726	27,50	250
10	20.893.726	34,50	200
12	22.893.726	41,50	200
16	26.893.726	55,50	200

further number of poles on request

General Information

Pitch	3,5 mm
No. of poles	2 - 16
Usable with	plug connector 938-FLDS
Additonal Information	Also, please take into consideration the pin strips 931-SLR-SMD-1,3 in genuine surface mount technology.

Technical Data

Overvoltage Category	III	III	II
Pollution Severity Level	3	2	2
Rated Voltage	160 V	160 V	320 V
Rated Impulse Voltage	2,5 kV	2,5 kV	2,5 kV
Rated Insulation Voltage	130 V acc. to EN 60998-1		
Rated Current	6 A		
Soldering process	Wave solder & reflow solder		
Hole in PCB	ø 1,6 mm		
PCB thickness	Wave solder max. 1,6 mm; reflow solder 1,6 - 3,2 mm		

Material

Moulding	PA HT, black, V-0
Comparative Tracking Index	CTI ≥ 600
Insulating Group	I
Temperature Range	-40°C up to 120°C; reflow solder temperature (Peak) max. 260°C (15-30 s)
Solder pin	ø 1,3 mm; tin plated brass

Approvals

	Current	Voltage	Group	AWG	Nm
	6	150	B		
	6	300	D		
	6	150	B		
	6	300	D		

Options / Accessories

- Other plug pin lengths on request
- Other solder pin surfaces on request

Part Numbers: Tape-on-Reel

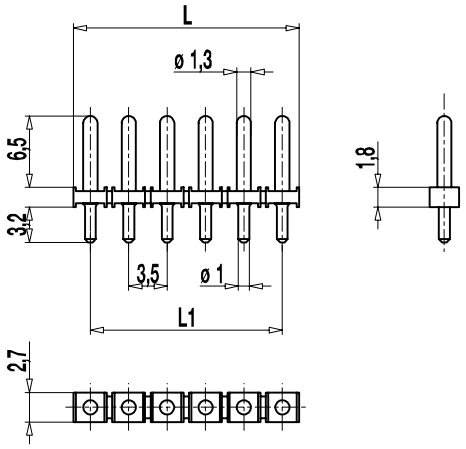
No. of poles	931-SLR-THR-1,3	Tape Width	Tape Height	PU
3	13.893.726.A00	32 mm	14,6 mm	500
4	14.893.726.A00	32 mm	14,6 mm	500
5	15.893.726.A00	32 mm	14,6 mm	500
6	16.893.726.A00	56 mm	14,6 mm	500
7	17.893.726.A00	56 mm	14,6 mm	500
8	18.893.726.A00	56 mm	14,6 mm	500
9	19.893.726.A00	56 mm	14,6 mm	500
10	20.893.726.A00	56 mm	14,6 mm	500
11	21.893.726.A00	56 mm	14,6 mm	500
12	22.893.726.A00	72 mm	14,9 mm	500
13	23.893.726.A00	72 mm	14,9 mm	500
14	24.893.726.A00	72 mm	14,9 mm	500

further number of poles on request

Pin strip for THR

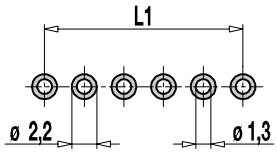
931-SLR-THR

Soldering area ø 1 mm; plug-in area ø 1,3 mm



L1 = (No. of poles - 1) x pitch

PCB Layout



Solder paste thickness: 0,15 - 0,2 mm
Solder pad diameter: ø 2,2 mm

931-SLR-THR is a pin strip with a pitch of 3,5 mm for the application in a reflow soldering process. The high temperature resistant plastic housing has a very high CTI value and is equipped with spacers, so-called stand-offs, which ensure a better hot-air circulation during the reflow soldering process in the convection oven. Beyond this, they assure an improved optical control of the solder joints.
The pin strips of the series 931-SLR-THR comes with a stepped pin, ø 1,3 mm in the plug-in area and ø 1 mm in the soldering area.
For the automatic assembling all pin strips of this series are packed in Tape-on-Reel and equipped with high temperature resistant Pick Caps, which can easily be removed after the soldering process.

General Information

Pitch	3,5 mm
No. of poles	2 - 16
Usable with	plug connector 938-FLDS
Additonal Information	Also, please take into consideration the pin strips 931-SLR-SMD-1,3 in genuine surface mount technology.

Technical Data

Overvoltage Category	III	III	II
Pollution Severity Level	3	2	2
Rated Voltage	160 V	160 V	320 V
Rated Impulse Voltage	2,5 kV	2,5 kV	2,5 kV
Rated Insulation Voltage	130 V acc. to EN 60998-1		
Rated Current	6 A		
Soldering process	Wave solder & reflow solder		
Hole in PCB	ø 1,3 mm		
PCB thickness	Wave solder max. 1,6 mm; reflow solder 1,6 - 3,2 mm		

Material

Moulding	PA HT, black, V-0
Comparative Tracking Index	CTI ≥ 600
Insulating Group	I
Temperature Range	-40°C up to 120°C; reflow solder temperature (Peak) max. 260°C (15-30 s)
Solder pin	ø 1,3 mm (plug-in area) / ø 1,0 mm (soldering area); tin plated brass

Approvals

	Current	Voltage	Group	AWG	Nm
	6	150	B		
	6	300	D		
	6	150	B		
	6	300	D		

Options / Accessories

- Other plug pin lengths on request
- Other solder pin surfaces on request

Part Numbers

No. of poles	931-SLR-THR	Length	PU
2	12.893.721	6,50	1000
3	13.893.721	10,00	1000
4	14.893.721	13,50	500
5	15.893.721	17,00	500
6	16.893.721	20,50	500
8	18.893.721	27,50	250
10	20.893.721	34,50	200
12	22.893.721	41,50	200
16	26.893.721	55,50	200

further number of poles on request

Part Numbers: Tape-on-Reel

No. of poles	931-SLR-THR	Tape Width	Tape Height	PU
3	13.893.721.A00	32 mm	14,6 mm	500
4	14.893.721.A00	32 mm	14,6 mm	500
5	15.893.721.A00	32 mm	14,6 mm	500
6	16.893.721.A00	56 mm	14,6 mm	500
7	17.893.721.A00	56 mm	14,6 mm	500
8	18.893.721.A00	56 mm	14,6 mm	500
9	19.893.721.A00	56 mm	14,6 mm	500
10	20.893.721.A00	56 mm	14,6 mm	500
11	21.893.721.A00	56 mm	14,6 mm	500
12	22.893.721.A00	72 mm	14,9 mm	500
13	23.893.721.A00	72 mm	14,9 mm	500
14	24.893.721.A00	72 mm	14,9 mm	500

further number of poles on request

Technical modification reserved

Visual Guide: 5 mm pitch

Visual Guide for all SMD & THR products with a pitch of 5 mm

SMD

120-M-211-SMD
Page 34

120-M-221-SMD
Page 35

120-M-227-SMD
Page 36

140-A-SMD
Page 37

140-A-126-SMD
Page 38

950-A-SMD
Page 39

950-D-SMD-DS
Page 40

974-D-SMD-DS
Page 41

971-SLR-SMD-1,1
Page 42

971-SLR-SMD-1,3
Page 43

971-SLT-SMD
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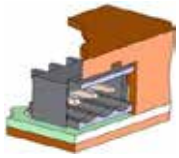
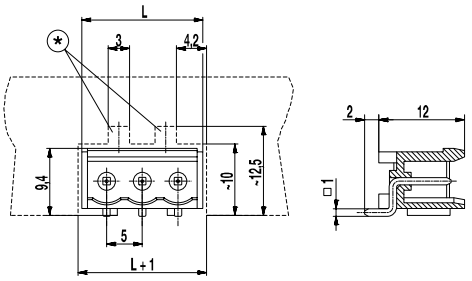
Pin strip for SMD

120-M-211-SMD

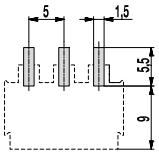
Plug-in direction parallel to PCB, with side walls





(*) Please plan for two gaps in the measures of 3 x 2.5 mm in the cut-out of the control panel for the snap-in device of the counterpart

PCB Layout



Solder paste thickness: 0,2 mm

L-shape exposed leads confer an extremely reliable retention force to PCB. This characteristics allows reliable soldering to PCB approaching zero defects for this characteristic and its effects. The top surface of the connector ensures automated Pick&Place-ability for both odd and even pole versions.
Material will handle reflow temperatures well without deforming or melting.
Product shall be mounted on PCB to expose connector entry in the cut-off window of the metal or plastic enclosure. This installation mode prevents vertical peel-off stress against the L-shape solder joints during plug-in installation test. Standoffs underneath the molding ensure that connector housing keeps its horizontal position relative to PCB plane.
Packed in magazines, this genuine SMD terminal is suitable for the automatic assembly.

Part Numbers

No. of poles	120-M-211-SMD	Length	PU
2	30.806.352	12,00	774
3	30.806.353	17,00	540
4	30.806.354	22,00	414
5	30.806.355	27,00	342
6	30.806.356	32,00	288
8	30.806.358	42,00	216

further number of poles on request

General Information

Pitch	5 mm
No. of poles	2 - 12
Usable with	all plug connectors of series 120

Technical Data

Overvoltage Category	III	III	II
Pollution Severity Level	3	2	2
Rated Voltage	250 V	320 V	630 V
Rated Impulse Voltage	4 kV	4 kV	4 kV
Rated Insulation Voltage	250 V acc. to EN 60998-1		
Rated Current	12 A		
Soldering process	Reflow solder		

Material

Moulding	PA HT, black, V-0
Comparative Tracking Index	CTI ≥ 600
Insulating Group	I
Temperature Range	-40°C up to 120°C; reflow solder temperature (Peak) max. 260°C (15-30 s)
Solder pin	1,0 x 1,0 mm; tin plated brass

Approvals

	Current	Voltage	Group	AWG	Nm
	15	300	B		
	10	300	D, E		
	15	300	B		
	10	300	D, E		

Options / Accessories

- Consecutive numbering
- Special marking according to drawing
- Self-adhesive marking strip BST-5,00 [1]
- Tape-on-Reel on request

Part Numbers: Tape-on-Reel

No. of poles	120-M-211-SMD	Tape Width	Tape Height	PU
2	30.806.352.A00	24	10,4	375
3	30.806.353.A00	44	10,4	375
4	30.806.354.A00	44	10,4	375
5	30.806.355.A00	44	10,4	375

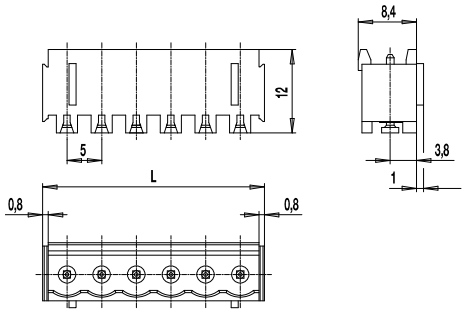
[1] To be fitted after reflow soldering process

Technical modification reserved

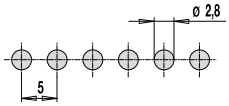
Pin strip for SMD

120-M-221-SMD

Plug-in direction vertical to PCB, with side walls



PCB Layout



Solder paste thickness: 0,15 - 0,2 mm
Solder pad diameter: ø 2,8 mm

The PCB terminals for surface mounting comprise several types for reflow-soldering processes.
Housings out of temperature resistant plastic material and solder pins in round shape with soldering foot form the pin strips of the series of 120-M-221-SMD.
The pins are movable in vertical direction and this ensures plane positioning of the soldering feet on the soldering pads. Thus, 100% coplanarity is guaranteed.
For the automatic assembling process, all pin strip versions are packed Tape-on-Reel and are equipped with high temperature resistant Pick Caps, which can comfortably be removed after the soldering process.

Part Numbers

No. of poles	120-M-221-SMD	Length	PU
2	40.806.352	12,00	200
3	40.806.353	17,00	200
4	40.806.354	22,00	100
5	40.806.355	27,00	100
6	40.806.356	32,00	100
8	40.806.358	42,00	50
10	40.806.360	52,00	50
12	40.806.362	62,00	50

further number of poles on request

General Information

Pitch	5 mm
No. of poles	2 - 12
Usable with	all plug connectors of series 120

Technical Data

Overvoltage Category	III	III	II
Pollution Severity Level	3	2	2
Rated Voltage	160 V	160 V	250 V
Rated Impulse Voltage	2,5 kV	2,5 kV	2,5 kV
Rated Insulation Voltage	130 V acc. to EN 60998-1		
Rated Current	12 A		
Soldering process	Reflow solder		

Material

Moulding	PA HT, black, V-0
Comparative Tracking Index	CTI 250
Insulating Group	IIIa
Temperature Range	-40°C up to 105°C; reflow solder temperature (Peak) max. 250°C (15-30 s)
Solder pin	ø 1,1 mm (plug-in area); tin plated brass

Approvals

	Current	Voltage	Group	AWG	Nm
	15	300	B		
	10	300	D		
	15	300	B		
	10	300	D, E		

Options / Accessories

- Consecutive numbering
- Special marking according to drawing
- Self-adhesive marking strip BST-5,00 [1]

Part Numbers: Tape-on-Reel

No. of poles	120-M-221-SMD	Tape Width	Tape Height	PU
2	40.806.352.A00	32 mm	17,4 mm	225
3	40.806.353.A00	32 mm	17,4 mm	225
4	40.806.354.A00	56 mm	17,4 mm	225
5	40.806.355.A00	56 mm	17,4 mm	225
6	40.806.356.A00	56 mm	17,4 mm	225
7	40.806.357.A00	56 mm	17,4 mm	225

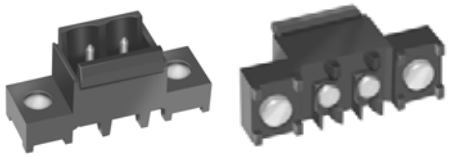
further number of poles on request

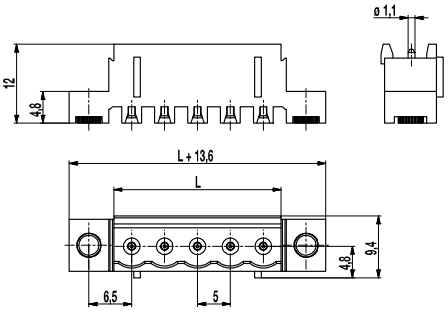
[1] To be fitted after reflow soldering process

Pin strip for SMD

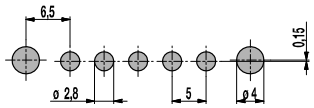
120-M-227-SMD

Plug-in direction vertical to PCB, with solder flanges





PCB Layout



Solder paste thickness: 0,15 - 0,2 mm

120-M-227-SMD is a pin strip with a pitch of 5 mm for surface mount technology and suitable for all plugs of the plug connector system of series of 120 and available in lengths from 2 to 22 poles.
The solder retention devices (SMT anchors) on either side of the terminal housing provide an exceptionally high retention force for the terminal block to the PCB.
The most significant benefit of this design is the protection it provides to the solder joints against stresses encountered in field-installations. The product eliminates completely CTE mismatch (Coefficient of thermal expansion) and provide total coplanarity by the position adapting pins.
For the automatic assembling process, all pin strip versions are packed Tape on Reel and are equipped with high temperature resistant pick caps, which can comfortably be removed after the soldering process.
Plug-In direction vertical to PCB and wire entrance parallel to PCB when plugged with 120-D-111, 120-D-121
Plug-In direction and wire entrance vertical to PCB when plugged with 120-A-111.

Part Numbers

No. of poles	120-M-227-SMD	Length	PU
2	27.498.104	10,00	100
5	50.494.001	25,00	100

further number of poles on request

General Information

Pitch	5 mm
No. of poles	2 - 22
Usable with	all plug connectors of series 120

Technical Data

Overvoltage Category	IIII	III	II
Pollution Severity Level	3	2	2
Rated Voltage	160 V	160 V	250 V
Rated Impulse Voltage	2,5 kV	2,5 kV	2,5 kV
Rated Insulation Voltage	130 V acc. to EN 60998-1		
Rated Current	12 A		
Soldering process	Reflow solder		

Material

Moulding	PA HT, grey, V-0
Comparative Tracking Index	CTI 250
Insulating Group	IIIa
Temperature Range	-40°C up to 105°C; reflow solder temperature (Peak) max. 250°C (15-30 s)
Solder pin	ø 1,1 mm (plug-in area); tin plated brass

Approvals

	Current	Voltage	Group	AWG	Nm
	15	300	B		
	10	300	D		
	15	300	B		
	10	300	D, E		

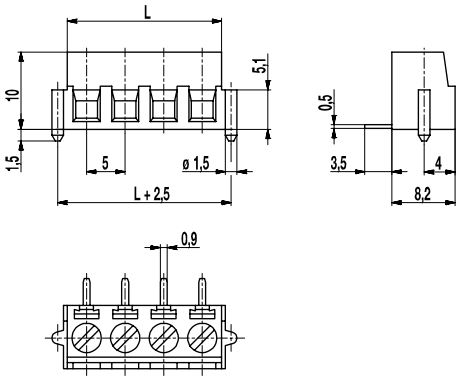
Options / Accessories

- Consecutive numbering
- Special marking according to drawing
- Self-adhesive marking strip BST-5,00 [1]
- Special packaging on request: Tape-on-Reel - Tray - Bar magazine

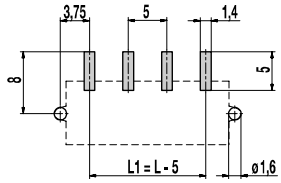
[1] To be fitted after reflow soldering process

Technical modification reserved

PCB connector for SMD
140-A-SMD
Screw connection, with anti-twist peg



PCB Layout



Solder paste thickness: 0,2 mm

The 2 to 8 pole terminal 140-A-SMD with a pitch of 5 mm has a screw connection with elevator clamping system and is equipped with M3 captive screws. The wire clamp and soldering tag are manufactured as a single unit and permanently engaged in the housing. The solder pins are exactly aligned parallel to the printed circuit board in order to create a coplanar connection after the reflow soldering process.
The moulding is made of heat resistant thermoplastic material and equipped with plastic pegs on both sides to prevent twisting.

This article is only available in bar magazines or in Tape-on-Reel. When delivered in Tape-on-Reel, this product is equipped with a Pick Discs that can be easily removed after the soldering process.

Part Numbers

No. of poles	140-A-SMD	Length	PU
2	10.801.602	10,00	1036
3	10.801.603	15,00	756
4	10.801.604	20,00	588
5	10.801.605	25,00	504
6	10.801.606	30,00	420
7	10.801.607	35,00	364
8	10.801.608	40,00	308

General Information

Pitch	5 mm
No. of poles	2 - 8

Technical Data

Clamping Range	*solid / flexible / AWG*		
	0,14 - 2,5 mm² / 0,14 - 1,5 mm² / 26 - 16 AWG		
Rated Cross Section	1,5 mm²		
Wire Stripping Length	6 mm ± 0,5 mm		
Overvoltage Category	III	III	II
Pollution Severity Level	3	2	2
Rated Voltage	200 V	320 V	500 V
Rated Impulse Voltage	4 kV	4 kV	4 kV
Rated Insulation Voltage	250 V acc. to EN 60998-1		
Rated Current	16 A		
Soldering process	Reflow solder		
Torque	0,5 Nm		

Material

Moulding	PA HT, black, V-0
Comparative Tracking Index	CTI ≥ 600
Insulating Group	I
Temperature Range	-40°C up to 120°C; reflow solder temperature (Peak) max 260°C (15-30 s)
Terminal body	Nickle plated brass
Pressure clamp	Tin plated tin bronze
Screw	M3; zinc plated steel, blue passivated
Solder pin	0,5 x 0,9 mm; tin plated tin bronze

Approvals

	Current	Voltage	Group	AWG	Nm
	10 [1]	300	B, D	30 - 14	0,51
	15	300	B	30 - 14	0,51

Options / Accessories

- Consecutive numbering
- Special marking according to drawing
- Self-adhesive marking strip BST-5,00 [2]
- Version without anti-twist peg or with other fastening flanges

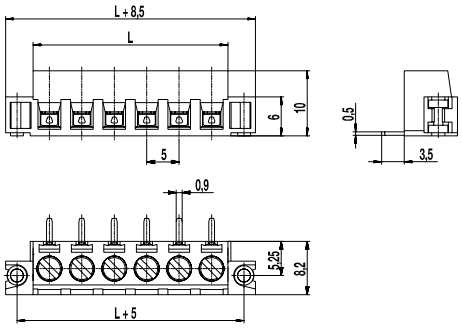
Part Numbers: Tape-on-Reel

No. of poles	140-A-SMD	Tape Width	Tape Height	PU
2	10.801.602.A00	32 mm	13 mm	375
3	10.801.603.A00	56 mm	13 mm	375
4	10.801.604.A00	56 mm	13 mm	375
5	10.801.605.A00	56 mm	13 mm	375
6	10.801.606.A00	56 mm	13 mm	375

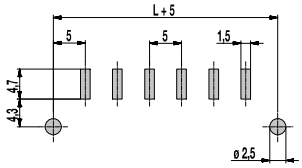
further number of poles on request

[1] 20 A max for factory-wiring applications only
[2] To be fitted after reflow soldering process

PCB connector for SMD
140-A-126-SMD
Screw connection, with solder flanges



PCB Layout



Solder paste thickness: 0,2 mm

The 2 to 8 pole terminal 140-A-126-SMD with a pitch of 5 mm has a screw connection with elevator clamping system and is equipped with M3 captive screws. The wire clamp and soldering tag are manufactured as a single unit and permanently engaged in the casing.
Soldering cylinders on either side of the housingare movable in vertical direction (floating anchors), and thereby they obtain 100% coplanarity between solder pins and soldering cylinders. They are transferred more to the front in comparison to the connector centre in order to keep the retaining strength, where the wires are connected. Thus, the force, acting on the solder pins, is reduced in a very important way.

This article is only available in bar magazines or in Tape-on-Reel. When delivered in Tape-on-Reel, this product is equipped with a Pick Discs that can be easily removed after the soldering process.

Part Numbers

No. of poles	140-A-126-SMD	Length	PU
2	20.801.632	10,00	784
3	20.801.633	15,00	616
4	20.801.634	20,00	504
5	20.801.635	25,00	420
6	20.801.636	30,00	364
7	20.801.637	35,00	336
8	20.801.638	40,00	280

General Information

Pitch	5 mm
No. of poles	2 - 8
Areas of application	Systems for measurement and control

Technical Data

Clamping Range	*solid / flexible / AWG*		
	0,14 - 2,5 mm² / 0,14 - 1,5 mm² / 26 - 16 AWG		
Rated Cross Section	1,5 mm²		
Wire Stripping Length	6 mm ± 0,5 mm		
Overvoltage Category	III	III	II
Pollution Severity Level	3	2	2
Rated Voltage	200 V	320 V	500 V
Rated Impulse Voltage	4 kV	4 kV	4 kV
Rated Insulation Voltage	250 V acc. to EN 60998-1		
Rated Current	16 A		
Soldering process	Reflow solder		
Torque	0,5 Nm		

Material

Moulding	PA HT, black, V-0
Comparative Tracking Index	CTI ≥ 600
Insulating Group	I
Temperature Range	-40°C up to 120°C; reflow solder temperature (Peak) max. 260°C (15-30 s)
Terminal body	Nickel plated brass
Pressure clamp	Tin plated tin bronze
Screw	M3; zinc plated steel, blue passivated
Solder pin	0,9 x 0,5 mm; tin plated tin bronze
Solder cylinder	Tin plated brass

Approvals

	Current	Voltage	Group	AWG	Nm
	10 [1]	300	B, D	30 - 14	0,51
	15	300	B	30 - 14	0,51

Options / Accessories

- Consecutive numbering
- Special marking according to drawing
- Self-adhesive marking strip BST-5,00 [2]

Part Numbers: Tape-on-Reel

No. of poles	140-A-126-SMD	Tape Width	Tape Height	PU
2	20.801.632.A00	32 mm	13 mm	375
3	20.801.633.A00	56 mm	13 mm	375
4	20.801.634.A00	56 mm	13 mm	375
5	20.801.635.A00	56 mm	13 mm	375
6	20.801.636.A00	56 mm	13 mm	375

further number of poles on request

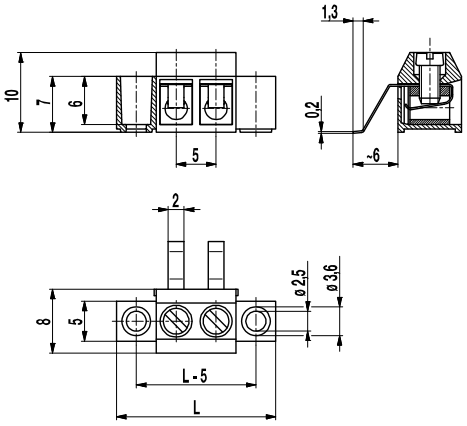
[1] 20 A max for factory-wiring applications only
[2] To be fitted after reflow soldering process

Technical modification reserved

PCB connector for SMD

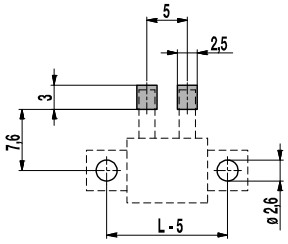
950-A-SMD

Screw connection, with solder tags



L = No. of poles x pitch + 10 mm

PCB Layout



Solder paste thickness: 0,2 mm

Screw connections with wire protection are used on versions 950-A-SMD with a pitch of 5 mm.
This wire protection is extended beyond the rear panel of the housing and bent downwards for connection to the soldering pads. When the terminal strip is fitted, the preloaded soldering tags push against the soldering pads. This assures current transfer with high contact stability.
The housings have mounting flanges at either side, for reliable mechanical fastening on the circuit board. This terminals are packed in tube magazines.

Part Numbers

No. of poles	950-A-SMD	Length	PU
2	20.871.266	20,00	624
3	20.871.267	25,00	504
4	20.871.268	30,00	408
5	20.871.269	35,00	360
6	20.871.270	40,00	312
7	20.871.271	45,00	264
8	20.871.272	50,00	240
9	20.871.273	55,00	216
10	20.871.274	60,00	192
11	20.871.275	65,00	192
12	20.871.276	70,00	168

General Information

Pitch	5 mm
No. of poles	2 - 12

Technical Data

Clamping Range	*solid / flexible / AWG*		
	0,34 - 2,5 mm² / 0,34 - 2,5 mm² / 22 - 14 AWG		
Rated Cross Section	1,5 mm²		
Wire Stripping Length	6 mm ± 0,5 mm		
Overvoltage Category	III	III	II
Pollution Severity Level	3	2	2
Rated Voltage	160 V	160 V	320 V
Rated Impulse Voltage	2,5 kV	2,5 kV	2,5 kV
Rated Insulation Voltage	130 V acc. to EN 60998-1		
Rated Current	6 A		
Soldering process	Reflow solder		
Torque	0,4 Nm		

Material

Moulding	PA HT, black, V-0
Comparative Tracking Index	CTI ≥ 600
Insulating Group	I
Temperature Range	-40°C up to 120°C; reflow solder temperature (Peak) max. 260°C (15-30 s)
Terminal body	Nickel plated brass
Screw	M2,6; zinc plated steel, blue passivated
Wire protector	Tin plated tin bronze

Approvals

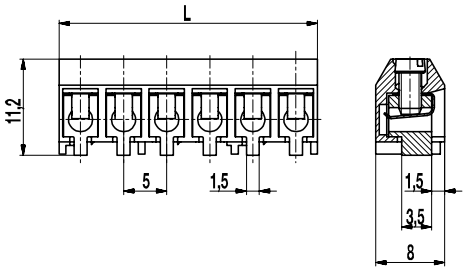
	Current	Voltage	Group	AWG	Nm
	15	300	B	26 - 14	0,4
	15	300	B	26 - 14	0,4

Options / Accessories

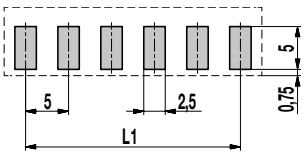
- Consecutive numbering
- Special marking according to drawing
- Self-adhesive marking strip BST-5,00 [1]
- Tape-on-Reel on request

[1] To be fitted after reflow soldering process

PCB connector for SMD
950-D-SMD-DS
Screw connection



PCB Layout



L1 = (No. of poles - 1) x pitch
Solder paste thickness: 0,15 - 0,2 mm

The reflow solderable PCB connector 950-D-SMD-DS for true surface mounting with a pitch of 5 mm is available in 2 to 12 pole design.
The geometry of the terminal body creates enough space for the solder paste and it also enables a good heat circulation for flawless soldering and an optical solder joint inspection.
The housing is made of high temperature material. Its design ensures a good hot-air circulation during the reflow soldering process in a convection oven.
The connection side of this product should be positioned in the direction of passage.

Part Numbers

No. of poles	950-D-SMD-DS	Length	PU
2	20.879.502	10,00	250
3	20.879.503	15,00	250
4	20.879.504	20,00	100
5	20.879.505	25,00	100
6	20.879.506	30,00	100
7	20.879.507	35,00	100
8	20.879.508	40,00	100
9	20.879.509	45,00	100
10	20.879.510	50,00	100
11	20.879.511	55,00	100
12	20.879.512	60,00	100

General Information

Pitch	5 mm
No. of poles	2 - 12

Technical Data

Clamping Range	*solid / flexible / AWG*		
with wire protector	0,34 - 2,5 mm² / 0,34 - 2,5 mm² / 22 - 14 AWG		
Rated Cross Section	1,5 mm²		
Wire Stripping Length	6 mm ± 0,5 mm		
Overvoltage Category	III	III	II
Pollution Severity Level	3	2	2
Rated Voltage	160 V	160 V	320 V
Rated Impulse Voltage	2,5 kV	2,5 kV	2,5 kV
Rated Insulation Voltage	130 V acc. to EN 60998-1		
Rated Current	17,5 A		
Soldering process	Reflow solder		
Torque	0,4 Nm		

Material

Moulding	PA HT, black, V-0
Comparative Tracking Index	CTI ≥ 600
Insulating Group	I
Temperature Range	-40°C up to 120°C; reflow solder temperature (Peak) max. 260°C (15-30 s)
Terminal body	Tin plated brass
Screw	M2,6; zinc plated steel, blue passivated
Wire protector	Tin plated tin bronze

Approvals

	Current	Voltage	Group	AWG	Nm
	15	300	B	26 - 14	0,4
	15	300	B	26 - 14	0,4

Options / Accessories

- Consecutive numbering
- Special marking according to drawing
- Self-adhesive marking strip BST-5,00 [1]
- Special packaging on request: Tape-on-Reel - Tray - Bar magazine

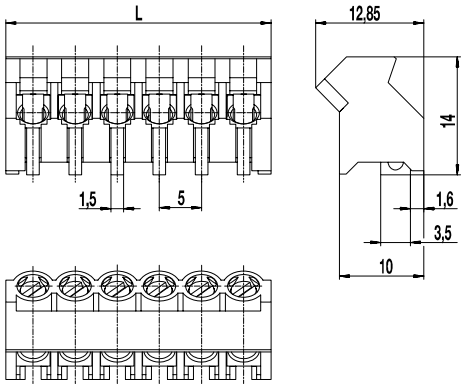
Part Numbers: Tape-on-Reel

No. of poles	950-D-SMD-DS	Tape Width	Tape Height	PU
2	20.879.502.A00	32 mm	12,3 mm	500
3	20.879.503.A00	44 mm	12,0 mm	500
4	20.879.504.A00	44 mm	12,0 mm	500
5	20.879.505.A00	44 mm	12,0 mm	500
6	20.879.506.A00	56 mm	12,0 mm	500
7	20.879.507.A00	56 mm	12,0 mm	500
8	20.879.508.A00	56 mm	12,0 mm	500

[1] To be fitted after reflow soldering process

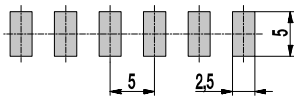
Technical modification reserved

PCB connector for SMD
974-D-SMD-DS
Screw connection 45°-angle to PCB



L = pole length x pitch + 1,5 mm

PCB Layout



Solder paste thickness: 0,2 - 0,25 mm

By creating the 974-D-SMD-DS, WECO offers a PCB terminal for the reflow soldering process with a pitch of 5 mm in true surface mount technology.
The wire entry has a connection angle of 45° to the PCB. This offers the advantage that terminal rows can be located space savingly one behind the other.
The housing material consists of high temperature resistant plastic and is specially designed in order to assure a good hot-air circulation during the reflow soldering process in the convection oven. The wire entry side of the terminal has to be placed in flowing direction.

The screws are turned in to the optimal length of engagement by the factory. It is not to be excluded that the position of the screws may change by transport. Therefore it can be necessary that the screw has to be turned back for using the maximum permissible wire cross-section.

Part Numbers

No. of poles	974-D-SMD-DS	Length	PU
2	20.874.402	11,5	250
3	20.874.403	16,5	250
4	20.874.404	21,5	200
5	20.874.405	26,5	100
6	20.874.406	31,5	100

further number of poles on request

General Information

Pitch	5 mm
No. of poles	2 - 6

Technical Data

Clamping Range	*solid / flexible / AWG*		
	0,75 - 4 mm² / 0,75 - 2,5 mm² / 18 - 12 AWG		
Rated Cross Section	2,5 mm²		
Wire Stripping Length	6 mm ± 0,5 mm		
Overvoltage Category	III	III	II
Pollution Severity Level	3	2	2
Rated Voltage	250 V	320 V	630 V
Rated Impulse Voltage	4 kV	4 kV	4 kV
Rated Insulation Voltage	250 V acc. to EN 60998-1		
Rated Current	24 A		
Torque	0,4 Nm		

Material

Moulding	PA HT, black, V-0
Comparative Tracking Index	CTI ≥ 600
Insulating Group	I
Temperature Range	-40°C up to 120°C; Reflow solder temperature (Peak) max. 260°C (15-30 s)
Terminal body	Tin plated brass
Screw	M3; zink plated steel, clear passivated
Wire protector	Tin plated tin bronze

Approvals

	Current	Voltage	Group	AWG	Nm
	20	300	B	18 - 12	0,4
	10	300	D	18 - 12	0,4
	20	300	B	18 - 12	0,4
	10	300	D	18 - 12	0,4

Options / Accessories

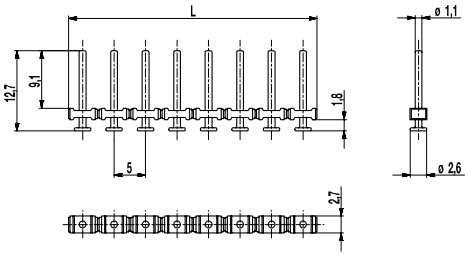
- Consecutive numbering
- Special marking according to drawing
- Self-adhesive marking strip BST-5,00 [1]

Part Numbers: Tape-on-Reel

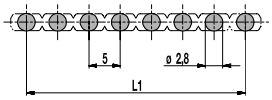
No. of poles	974-D-SMD-DS	Tape Width	Tape Height	PU
2	20.874.402.A00	56 mm	14,7 mm	250
3	20.874.403.A00	56 mm	14,7 mm	250
4	20.874.404.A00	56 mm	14,7 mm	250
5	20.874.405.A00	56 mm	14,7 mm	250
6	20.874.406.A00	56 mm	14,7 mm	250

[1] To be fitted after reflow soldering process

Pin strip for SMD
971-SLR-SMD-1,1
Plug-in area ø 1,1 mm



PCB Layout



L1 = (No. of poles - 1) x pitch
Solder paste thickness: 0,15 - 0,2 mm

971-SLR-SMD is a pin strip with a pitch of 5 mm for the application in a reflow soldering process.
In contrary to the well-known pin rows 971-SLR and 971-SLR-THR, for which holes in the PCB are necessary, the SMD types of WECO base on true surface assembly.
Soldering expanses at the end of the pins guarantee optimal retention force on the printed circuit board.
We recommend this pin strip with a diamter of 1,1 in the mating area for higher numbers of poles, in order to minimize the plug-in and withdrawal forces here.
Just like all THR versions of WECO also the housings of the SMD series are made out of high temperature resistant plastic material and exhibit a very high CTI value.
For the automatic assembling all pin strips of this series are packed in Tape-on-Reel and equipped with high temperature resistant Pick Caps, which can easily be removed after the soldering process.

Part Numbers

No. of poles	971-SLR-SMD-1,1	Length	PU
2	12.893.822	9,50	1000
3	13.893.822	14,50	500
4	14.893.822	19,50	500
5	15.893.822	24,50	250
6	16.893.822	29,50	250
10	20.893.822	49,50	100
12	22.893.822	59,50	100

further number of poles on request

General Information

Pitch	5 mm
No. of poles	2 - 12
Usable with	plug connectors of series 115-F-.../..-1,1-SW; 950-FL-DS, 950-TFL-DS, 950-NAF-DS, 950-GFL-DS, 950-NLFL-DS, 950-RFL-DS
Additonal Information	Also, please take into consideration the pin strips 971-SLR for wave soldering and 971-SLR-THR for Through-Hole-Reflow.

Technical Data

Overvoltage Category	III	III	II
Pollution Severity Level	3	2	2
Rated Voltage	160 V	160 V	320 V
Rated Impulse Voltage	2,5 kV	2,5 kV	2,5 kV
Rated Insulation Voltage	130 V acc. to EN 60998-1		
Rated Current	10 A		
Soldering process	Reflow solder		

Material

Moulding	PA HT, black, V-0
Comparative Tracking Index	CTI ≥ 600
Insulating Group	I
Temperature Range	-40°C up to 120°C; reflow solder temperature (Peak) max. 260°C (15-30 s)
Solder pin	ø 1,1 mm (plug-in area); tin plated brass

Approvals

	Current	Voltage	Group	AWG	Nm
	10	300	B		
	10	300	B		

Options / Accessories

- Other plug pin lengths on request
- Other solder pin surfaces on request

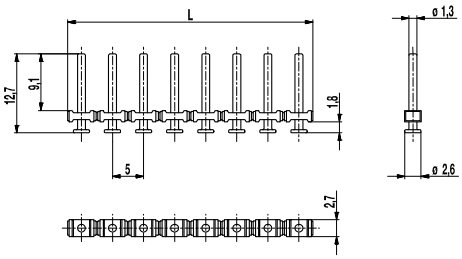
Part Numbers: Tape-on-Reel

No. of poles	971-SLR-SMD-1,1	Tape Width	Tape Height	PU
2	12.893.822.A00	32 mm	15,9 mm	500
3	13.893.822.A00	32 mm	15,9 mm	500
4	14.893.822.A00	56 mm	15,9 mm	500
5	15.893.822.A00	56 mm	15,9 mm	500
6	16.893.822.A00	56 mm	15,9 mm	500
7	17.893.822.A00	56 mm	15,9 mm	500
8	18.893.822.A00	72 mm	14,9 mm	500
9	19.893.822.A00	72 mm	14,9 mm	500
10	20.893.822.A00	72 mm	14,9 mm	500
11	21.893.822.A00	88 mm	15,8 mm	500
12	22.893.822.A00	88 mm	15,8 mm	500

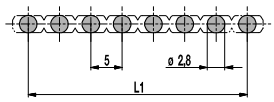
further number of poles on request

Technical modification reserved

Pin strip for SMD
971-SLR-SMD-1,3
Plug-in area ø 1,3 mm



PCB Layout



L1 = (No. of poles - 1) x pitch
Solder paste thickness: 0,15 - 0,2 mm

971-SLR-SMD is a pin strip with a pitch of 5 mm for the application in a reflow soldering process. In contrary to the well-known pin rows 971-SLR and 971-SLR-THR, for which holes in the PCB are necessary, the SMD types of WECO base on true surface assembly. Soldering expanses at the end of the pins guarantee optimal retenion force on the printed circuit board.
The pin strip 971-SLR-SMD-1,3 with the pin diameter of 1,3 mm at the plug-in area, is rather suitable for the small numbers of poles of the plug connector (see general information). The obtained plug-in and pull-out forces are comfortable.
Just like all THR versions of WECO also the housings of the SMD series are made out of high temperature resistant plastic material and exhibit a very high CTI value.
For the automatic assembling all pin strips of this series are packed in Tape-on-Reel and equipped with high temperature resistant Pick Caps, which can easily be removed after the soldering process.

Part Numbers

No. of poles	971-SLR-SMD-1,3	Length	PU
2	12.893.821	9,50	1.000
3	13.893.821	14,50	500
4	14.893.821	19,50	500
5	15.893.821	24,50	250
6	16.893.821	29,50	250
10	20.893.821	49,50	100
12	22.893.821	59,50	100

further number of poles on request

General Information

Pitch	5 mm
No. of poles	2 - 12
Usable with	plug connectors of series 115-F, 950-FL-DS, 950-TFL-DS, 950-NAF-DS, 950-GFL-DS, 950-NLFL-DS, 950-RFL-DS
Additonal Information	Also, please take into consideration the pin strips 971-SLR for wave soldering and 971-SLR-THR for Through-Hole-Reflow.

Technical Data

Overvoltage Category	III	III	II
Pollution Severity Level	3	2	2
Rated Voltage	160 V	160 V	320 V
Rated Impulse Voltage	2,5 kV	2,5 kV	2,5 kV
Rated Insulation Voltage	130 V acc. to EN 60998-1		
Rated Current	10 A		
Soldering process	Reflow solder		

Material

Moulding	PA HT, black, V-0
Comparative Tracking Index	CTI ≥ 600
Insulating Group	I
Temperature Range	-40°C up to 120°C; reflow solder temperature (Peak) max. 260°C (15-30 s)
Solder pin	ø 1,3 mm (plug-in area); tin plated brass

Approvals

	Current	Voltage	Group	AWG	Nm
	10 [1]	300	B		
	10 [1]	300	B		

Options / Accessories

- Other plug pin lengths on request
- Other solder pin surfaces on request

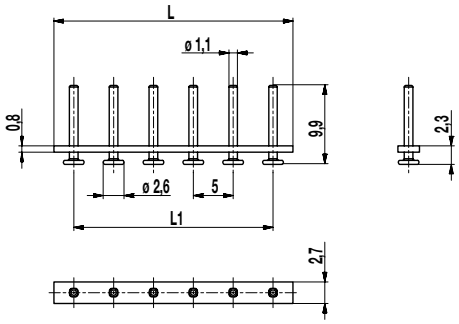
Part Numbers: Tape-on-Reel

No. of poles	971-SLR-SMD-1,3	Tape Width	Tape Height	PU
2	12.893.821.A00	32 mm	15,9 mm	500
3	13.893.821.A00	32 mm	15,9 mm	500
4	14.893.821.A00	56 mm	15,9 mm	500
5	15.893.821.A00	56 mm	15,9 mm	500
6	16.893.821.A00	56 mm	15,9 mm	500
7	17.893.821.A00	56 mm	15,9 mm	500
8	18.893.821.A00	72 mm	14,9 mm	500
9	19.893.821.A00	72 mm	14,9 mm	500
10	20.893.821.A00	72 mm	14,9 mm	500

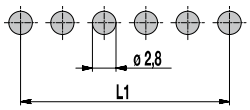
further number of poles on request

[1] By using 115-F current of 12 A possible

Pin strip for SMD
971-SLT-SMD
Low profile



PCB Layout



L1 = (No. of poles - 1) x pitch
Solder paste thickness: 0,15 - 0,2 mm

971-SLT-SMD is a pin strip with a pitch of 5 mm for the application in a reflow soldering process with low profile for space critical applications.
Contrary to the well-known pin strips of 971-SLR and 971-SLR-THR, for which holes in the PCB are necessary, the SMD types of WECO base on true surface assembly.
Soldering expanses at the end of the pins guarantee optimal retention force on the printed circuit board.
We recommend this pin strip with pin diameter of 1,1 mm in the mating area for higher numbers of poles, in order to minimize the plug-in and withdrawal forces here.
Just like all THR versions of WECO, also the housings of the SMD series are made out of high temperature resistant plastic material.
For the automatic assembling all pin strips of this series are packed in Tape-on-Reel and equipped with high temperature resistant Pick Caps, which can easily be removed after the soldering process.

General Information

Pitch	5 mm
No. of poles	2 - 12
Usable with	plug connectors of series 115-F-.../..-1,1-SW; 950-FL-DS, 950-TFL-DS, 950-NAF-DS, 950-GFL-DS, 950-NLFL-DS, 950-RFL-DS
Additonal Information	Also, please take into consideration the pin strips 971-SLR for wave soldering and 971-SLR-THR for Through-Hole-Reflow.

Technical Data

Overvoltage Category	III	III	II
Pollution Severity Level	3	2	2
Rated Voltage	160 V	160 V	250 V
Rated Impulse Voltage	2,5 kV	2,5 kV	2,5 kV
Rated Insulation Voltage	130 V acc. to EN 60998-1		
Rated Current	10 A		
Soldering process	Reflow solder		

Material

Moulding	PA HT, black, V-0
Comparative Tracking Index	CTI 250
Insulating Group	IIIa
Temperature Range	-40°C up to 105°C; reflow solder temperature (Peak) max. 250°C (15-30 s)
Solder pin	ø 1,1 mm (plug-in area); tin plated brass

Approvals

	Current	Voltage	Group	AWG	Nm
	10	300	B		

Options / Accessories

- Other plug pin lengths on request
- Other solder pin surfaces on request

Part Numbers

No. of poles	971-SLT-SMD	Length	PU
2	12.893.656	10,00	1000
3	13.893.656	15,00	500
4	14.893.656	20,00	500
5	15.893.656	25,00	250
6	16.893.656	30,00	250
10	20.893.656	50,00	100

further number of poles on request

Part Numbers: Tape-on-Reel

No. of poles	971-SLT-SMD	Tape Width	Tape Height	PU
2	12.893.656.A00	32 mm	14,6 mm	500
4	14.893.656.A00	44 mm	15,0 mm	500
6	16.893.656.A00	44 mm	15,0 mm	500
10	20.893.656.A00	72 mm	14,9 mm	500

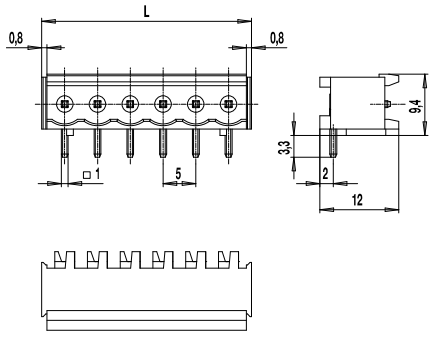
further number of poles on request

Technical modification reserved

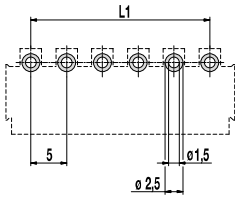
Pin strip for THR

120-M-211-THR

Plug-in direction parallel to PCB, with side walls



PCB Layout



L1 = (No. of poles - 1) x pitch
Solder paste thickness: 0,15 - 0,2 mm
Solder pad diameter: ø 2,5 mm

The products based on our established 120 series (conecta) have been designed for the soldering process in Through-Hole-Reflow technology.
The soldering paste is applied to the plated through holes and the pins are placed in the circuit board and soldered by a reflow oven.
The terminal mouldings are made of heat-resistant material. The stand-offs on the base ensures there is enough room for the soldering paste and facilitates good heat circulation for optimum soldering and enables the soldering joint to be visually inspected.
The solder pin projects very slightly with a circuit board thickness of 1,6 mm, creates a solder point on both sides, and thus guarantees a secure mounting. The position of the solder pins enables an equally minimal allocation area on the circuit board as with wave soldering.

Part Numbers

No. of poles	120-M-211-THR	Length	PU
2	10.806.352	12,00	200
3	10.806.353	17,00	200
4	10.806.354	22,00	100
5	10.806.355	27,00	100
6	10.806.356	32,00	100
8	10.806.358	42,00	50
10	10.806.360	52,00	50
12	10.806.362	62,00	50

further number of poles on request

General Information

Pitch	5 mm
No. of poles	2 - 12
Usable with	all plug connectors of series 120
Additonal Information	The 120-M-THR pin strips are, like the conventional products, available with straight or angled soldering pins for vertical or parallel plugging of the mating parts, whereby all plugs of the conecta series 120-A, -D, and -F can be used.

Technical Data

Overvoltage Category	III	III	II
Pollution Severity Level	3	2	2
Rated Voltage	250 V	320 V	630 V
Rated Impulse Voltage	4 kV	4 kV	4 kV
Rated Insulation Voltage	250 V acc. to EN 60998-1		
Rated Current	12 A		
Soldering process	Wave solder & reflow solder		
Hole in PCB	ø 1,5 mm		
PCB thickness	Wave solder max. 1,6 mm; reflow solder 1,6 - 3,2 mm		

Material

Moulding	PA HT, black, V-0
Comparative Tracking Index	CTI ≥ 600
Insulating Group	I
Temperature Range	-40°C up to 120°C; reflow solder temperature (Peak) max. 260°C (15-30 s)
Solder pin	1,0 x 1,0 mm; tin plated brass

Approvals

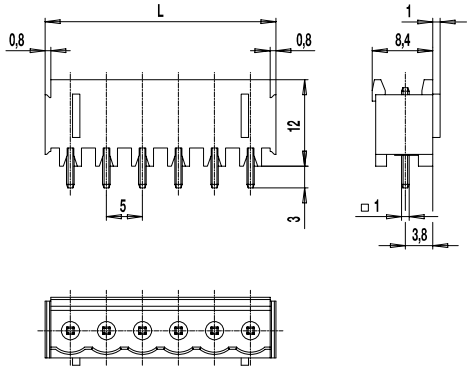
	Current	Voltage	Group	AWG	Nm
	15	300	B		
	10	300	D		
	15	300	B		
	10	300	D, E		

Options / Accessories

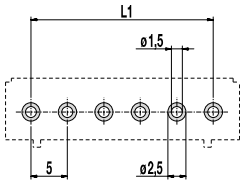
- Consecutive numbering
- Special marking according to drawing
- Self-adhesive marking strip BST-5,00 [1]
- Special packaging on request: Tape-on-Reel - Tray - Bar magazine

[1] To be fitted after reflow soldering process

Pin strip for THR
120-M-221-THR
Plug-in direction vertical to PCB, with side walls



PCB Layout



L1 = (No. of poles - 1) x pitch
Solder paste thickness: 0,15 - 0,2 mm
Solder pad diameter: ø 2,5 mm

The products based on our established 120-M series (conecta) have been designed for the soldering process in Through-Hole-Reflow technology.
The soldering paste is applied to the plated through holes and the pins are placed in the circuit board and soldered by a reflow oven.
The terminal mouldings are made of heat-resistant material. The stand-offs on the base ensures there is enough room for the soldering paste and facilitates good heat circulation for optimum soldering and enables the soldering joint to be visually inspected.
The solder pin projects very slightly with a circuit board thickness of 1,6 mm, creates a solder point on both sides, and thus guarantees a secure mounting. The position of the solder pins enables an equally minimal allocation area on the circuit board as with wave soldering.
The 120-M-THR pin strips are, like the conventional products, available with straight or angled soldering pins for vertical or parallel plugging of the mating parts, whereby all plugs of the conecta series 120-A, -D, and -F can be used.

Part Numbers

No. of poles	120-M-221-THR	Length	PU
2	20.806.352	12,00	200
3	20.806.353	17,00	200
4	20.806.354	22,00	100
6	20.806.356	32,00	100
8	20.806.358	42,00	50
10	20.806.360	52,00	50
12	20.806.362	62,00	50

further number of poles on request

General Information

Pitch	5 mm
No. of poles	2 - 12
Usable with	all plug connectors of series 120
Additonal Information	For the automatic assembling process, all pin strip versions are packed Tape-on-Reel and are equipped with high temperature resistant Pick Caps, which can comfortably be removed after the soldering process.

Technical Data

Overvoltage Category	III	III	II
Pollution Severity Level	3	2	2
Rated Voltage	250 V	320 V	630 V
Rated Impulse Voltage	4 kV	4 kV	4 kV
Rated Insulation Voltage	250 V acc. to EN 60998-1		
Rated Current	12 A		
Soldering process	Wave solder & reflow solder		
Hole in PCB	ø 1,5 mm		
PCB thickness	Wave solder max. 1,6 mm; reflow solder 1,6 - 3,2 mm		

Material

Moulding	PA HT, black, V-0
Comparative Tracking Index	CTI ≥ 600
Insulating Group	I
Temperature Range	-40°C up to 120°C; reflow solder temperature (Peak) max. 260°C (15-30 s)
Solder pin	1,0 x 1,0 mm; tin plated brass

Approvals

	Current	Voltage	Group	AWG	Nm
	15	300	B		
	10	300	D		
	15	300	B		
	10	300	D, E		

Options / Accessories

- Consecutive numbering
- Special marking according to drawing
- Self-adhesive marking strip BST-5,00 [1]

Part Numbers: Tape-on-Reel

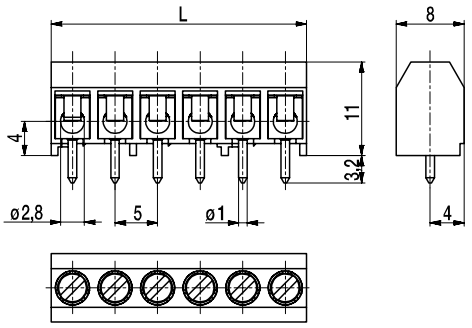
No. of poles	120-M-221-THR	Tape Width	Tape Height	PU
2	20.806.352.A00	32 mm	17,4 mm	225
3	20.806.353.A00	32 mm	17,4 mm	225
4	20.806.354.A00	56 mm	17,4 mm	225
5	20.806.355.A00	56 mm	17,4 mm	225
6	20.806.356.A00	56 mm	17,4 mm	225
7	20.806.357.A00	56 mm	17,4 mm	225

further number of poles on request

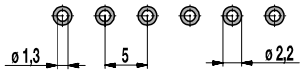
[1] To be fitted after reflow soldering process

Technical modification reserved

PCB connector for THR
950-THR(-DS)
Screw connection



PCB Layout



Solder paste thickness: 0,15 - 0,2 mm
Solder pad diameter: ø 2,2 mm

The PCB connector 950-THR with a pitch of 5 mm, designed for the soldering process in Through-Hole-Reflow technology, is available in 2- to 12-pole design.
The terminal housing is made of heat-resistant material. The stand-offs on the base ensures there is enough room for the soldering paste and facilitates good heat circulation for optimum soldering and enables the soldering joint to be visually inspected.
The solder pin projects very slightly with a circuit board thickness of 1,6 mm and creates a solder point on both sides and thus guarantees a secure mounting. The position of the solder pins enables an equally minimal allocation area on the circuit board as with wave soldering.
This connector is also available with enlarged clamping size (958-THR).

Part Numbers

No. of poles	950-THR	950-THR-DS	Length	PU
2	10.879.102	20.879.102	10,00	250
3	10.879.103	20.879.103	15,00	250
4	10.879.104	20.879.104	20,00	100
5	10.879.105	20.879.105	25,00	100
6	10.879.106	20.879.106	30,00	100
7	10.879.107	20.879.107	35,00	100
8	10.879.108	20.879.108	40,00	100
9	10.879.109	20.879.109	45,00	100
10	10.879.110	20.879.110	50,00	100
11	10.879.111	20.879.111	55,00	100
12	10.879.112	20.879.112	60,00	100

General Information

Pitch	5 mm
No. of poles	2 - 12

Technical Data

Clamping Range	*solid / flexible / AWG*		
without wire protector	0,75 - 4 mm² / 0,75 - 2,5 mm² / 18 - 12 AWG		
with wire protector	0,34 - 2,5 mm² / 0,34 - 2,5 mm² / 22 - 14 AWG		
Rated Cross Section	1,5 mm²		
Wire Stripping Length	6 mm ± 0,5 mm		
Overvoltage Category	III	III	II
Pollution Severity Level	3	2	2
Rated Voltage	160 V	160 V	320 V
Rated Impulse Voltage	2,5 kV	2,5 kV	2,5 kV
Rated Insulation Voltage	130 V acc. to EN 60998-1		
Rated Current	17,5 A		
Soldering process	Wave solder & reflow solder		
Hole in PCB	ø 1,3 mm		
PCB thickness	Wave solder max. 1,6 mm; reflow solder 1,6 - 3,2 mm		
Torque	0,4 Nm		

Material

Moulding	PA HT, black, V-0
Comparative Tracking Index	CTI ≥ 600
Insulating Group	I
Temperature Range	-40°C up to 120°C; reflow solder temperature (Peak) max. 260°C (15-30 s)
Terminal body	Tin plated brass
Screw	M2,6; zinc plated steel, blue passivated
Solder pin	ø 1 mm; tin plated brass
Wire protector	Tin plated tin bronze

Approvals

	Current	Voltage	Group	AWG	Nm
	15	300	B	26 - 14	0,4
	15	300	B	26 - 14	0,4

Options / Accessories

- Consecutive numbering
- Special marking according to drawing
- Self-adhesive marking strip BST-5,00 [1]
- Other solder pin lengths on request

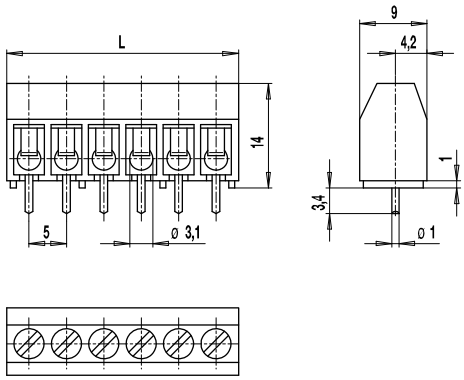
Part Numbers: Tape-on-Reel

No. of poles	950-THR	950-THR-DS	Tape Width	Tape Height	PU
2		20.879.102.A00	32 mm	15,7 mm	300
6		20.879.106.A00	56 mm	15,7 mm	300

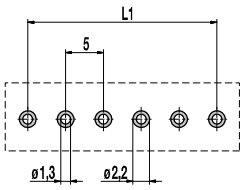
further number of poles on request

[1] To be fitted after reflow soldering process

PCB connector for THR
970-THR(-DS)
Screw connection



PCB Layout



L1 = (No. of poles - 1) x pitch
Solder paste thickness: 0,15 - 0,2 mm
Solder pad diameter: ø 2,2 mm

The PCB connector 970-THR with a pitch of 5 mm is available in 2- to 12-pole design.
Is has been designed for the soldering process in Through-Hole-Reflow technology.
The soldering paste is applied to the plated through holes and the pins are placed in the circuit board and soldered by a reflow oven.
The terminal mouldings are made of heat-resistant material. The stand-offs on the base ensures there is enough room for the soldering paste and facilitates good heat circulation for optimum soldering and enables the soldering joint to be visually inspected.
The solder pin projects very slightly with a circuit board thickness of 1,6 mm and creates a solder point on both sides and thus guarantees a secure mounting. The position of the solder pins enables an equally minimal allocation area on the circuit board as with wave soldering.
This connector is also available with enlarged clamping size.

Part Numbers

No. of poles	970-THR	970-THR-DS	Length	PU
2	10.879.202	20.879.202	11,00	250
3	10.879.203	20.879.203	16,00	250
4	10.879.204	20.879.204	21,00	200
5	10.879.205	20.879.205	26,00	100
6	10.879.206	20.879.206	31,00	100
8	10.879.208	20.879.208	41,00	100
10	10.879.210	20.879.210	51,00	100
12	10.879.212	20.879.212	61,00	100

further number of poles on request

General Information

Pitch	5 mm
No. of poles	2 - 12

Technical Data

Clamping Range	*solid / flexible / AWG*		
without wire protector	1 - 6 mm² / 1 - 2,5 mm² / 16 - 12 AWG		
with wire protector	0,75 - 4 mm² / 0,75 - 2,5 mm² / 18 - 12 AWG		
Rated Cross Section	2,5 mm²		
Wire Stripping Length	6,5 mm ± 0,5 mm		
Overvoltage Category	III	III	II
Pollution Severity Level	3	2	2
Rated Voltage	250 V	320 V	630 V
Rated Impulse Voltage	4 kV	4 kV	4 kV
Rated Insulation Voltage	250 V acc. to EN 60998-1		
Rated Current	24 A		
Soldering process	Wave solder & reflow solder		
Hole in PCB	ø 1,3 mm		
PCB thickness	Wave solder max. 1,6 mm; reflow solder 1,6 - 3,2 mm		
Torque	0,5 Nm		

Material

Moulding	PA HT, black, V-0
Comparative Tracking Index	CTI ≥ 600
Insulating Group	I
Temperature Range	-40°C up to 120°C; reflow solder temperature (Peak) max. 260°C (15-30 s)
Terminal body	Tin plated brass
Screw	M3; zinc plated steel, blue passivated
Solder pin	ø 1 mm; tin plated copper
Wire protector	Tin plated tin bronze

Approvals

	Current	Voltage	Group	AWG	Nm
	20	300	B	22-12 [1]	0,51
	10	300	D	22-12 [1]	0,51
	20	300	B	26 - 12	0,51
	10	300	D, E	26 - 12	0,51

Options / Accessories

- Consecutive numbering / Special marking according to drawing
- Self-adhesive marking strip BST-5,00 [2]
- Other solder pin lengths on request

Part Numbers: Tape-on-Reel

No. of poles	970-THR	970-THR-DS	Tape Width	Tape Height	PU
2		20.879.202.A00	32 mm	18,8 mm	225
4		20.879.204.A00	32 mm	18,8 mm	225

further number of poles on request

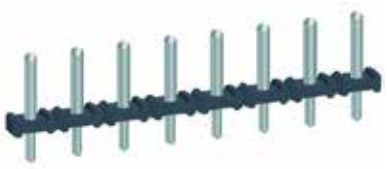
[1] No. 26 AWG min for factory-wiring only
[2] To be fitted after reflow soldering process

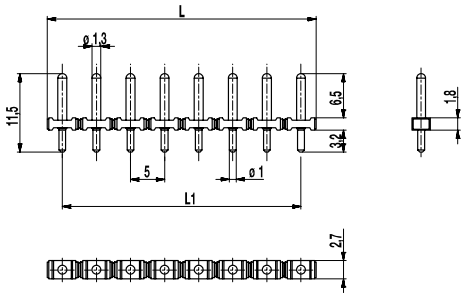
Technical modification reserved

Pin strip for THR

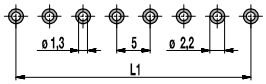
971-SLR-THR

Soldering area ø 1 mm; plug-in area ø 1,3 mm





PCB Layout



L1 = (No. of poles - 1) x pitch
Solder paste thickness: 0,15 - 0,2 mm
Solder pad diameter: ø 2,2 mm

971-SLR-THR is a pin strip with a pitch of 5 mm for the application in a reflow soldering process. The high temperature resistant plastic housing has a very high CTI value and is equipped with spacers, so-called "Stand-offs", which ensure a better hot-air circulation during the reflow soldering process in the convection oven. Beyond this, they assure an improved optical control of the solder joints.
The pin strips of the series 971-SLR-THR comes with a stepped pin, ø of 1,3 mm in the plug-in area and ø of 1,0 mm in the soldering area, and is usable with all WECO plug connectors (see general information). Furthermore we recommend this pin strip for small numbers of poles and for the series of 115-F for all numbers of poles. The obtained plug-in and pullout forces are comfortable. For the automatic assembling all pin strips of this series are packed in Tape-on-Reel and equipped with high temperature resistant Pick Caps, which can easily be removed after the soldering process.

Part Numbers

No. of poles	971-SLR-THR	Length	PU
2	12.893.801	9,50	1000
3	13.893.801	14,50	500
4	14.893.801	19,50	500
5	15.893.801	24,50	250
6	16.893.801	29,50	250
8	18.893.801	39,50	250
10	20.893.801	49,50	100
12	22.893.801	59,50	100

further number of poles on request

General Information

Pitch	5 mm
No. of poles	2 - 12
Usable with	plug connectors of series 115-F, 950-FL-DS, 950-TFL-DS, 950-NAF-DS, 950-GFL-DS, 950-NLFL-DS, 950-RFL-DS, 970-FBW-FU(-DS)
Additonal Information	Also, please take into consideration the pin strips 971-SLR for wave soldering and 971-SLR-SMD in genuine surface mount technology.

Technical Data

Overvoltage Category	III	III	II
Pollution Severity Level	3	2	2
Rated Voltage	250 V	320 V	630 V
Rated Impulse Voltage	4 kV	4 kV	4 kV
Rated Insulation Voltage	250 V acc. to EN 60998-1		
Rated Current	10 A		
Soldering process	Wave solder & reflow solder		
Hole in PCB	ø 1,3 mm		
PCB thickness	Wave solder max. 1,6 mm; reflow solder 1,6 - 3,2 mm		

Material

Moulding	PA HT, black, V-0
Comparative Tracking Index	CTI ≥ 600
Insulating Group	I
Temperature Range	-40°C up to 120°C; reflow solder temperature (Peak) max. 260°C (15-30 s)
Solder pin	ø 1,3 mm (plug-in area) / ø 1,0 mm (soldering area); tin plated brass

Approvals

	Current	Voltage	Group	AWG	Nm
	10 [1]	300	B		
	10 [1]	300	B		

Options / Accessories

- Other plug pin lengths on request
- Other solder pin surfaces on request

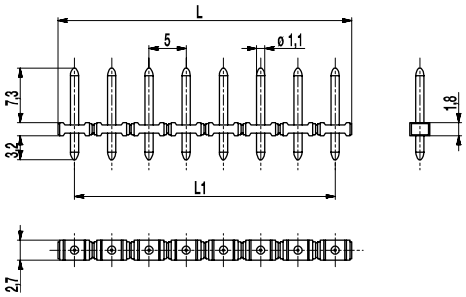
Part Numbers: Tape-on-Reel

No. of poles	971-SLR-THR	Tape Width	Tape Height	PU
2	12.893.801.A00	32 mm	15,9 mm	500
3	13.893.801.A00	32 mm	15,9 mm	500
4	14.893.801.A00	56 mm	15,9 mm	500
6	16.893.801.A00	56 mm	15,9 mm	500
7	17.893.801.A00	56 mm	15,9 mm	500
8	18.893.801.A00	72 mm	14,9 mm	500
10	20.893.801.A00	72 mm	14,9 mm	500

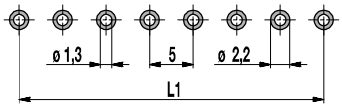
further number of poles on request

[1] By using 115-F current of 12 A possible

Pin strip for THR
971-SLR-THR-1,1
Soldering/plug-in area ø 1,1 mm



PCB Layout



L1 = (number of poles - 1) x pitch
Solder paste thickness: 0,15 - 0,2 mm
Solder pad diameter: ø 2,2 mm

971-SLR-THR-1.1 is a pin strip with a pitch of 5,0 mm for the application in a reflow soldering process. The high temperature resistant plastic housing has a very high CTI value and is equipped with spacers, so-called "Stand-offs", which ensure a better hot-air circulation during the reflow soldering process in the convection oven. Beyond this, they assure an improved optical control of the solder joints.
The pin strip 971-SLR-THR-1,1 comes with a constant pin ø of 1,1 mm in the mating and solder area.
We recommend this pin strip for higher numbers of poles, in order to minimize the plug-in and withdrawal forces here.
For the automatic assembling all pin strips of this series are packed in Tape-on-Reel and equipped with high temperature resistant Pick Caps, which can easily be removed after the soldering process.

Part Numbers

No. of poles	971-SLR-THR-1,1	Length	PU
2	12.893.802	9,50	1000
3	13.893.802	14,50	500
4	14.893.802	19,50	500
6	16.893.802	29,50	250
8	18.893.802	39,50	250
12	22.893.802	59,50	100

further number of poles on request

General Information

Pitch	5 mm
No. of poles	2 - 12
Usable with	plug connectors 115-F-.../..-1,1-SW; 950-FL-DS, 950-TFL-DS, 950-NAF-DS, 950-GFL-DS, 950-NLFL-DS, 950-RFL-DS
Additonal Information	Also please consider the pin strips 971-SLR for wave soldering and 971-SLR-SMD in genuine surface mount technology.

Technical Data

Overvoltage Category	III	III	II
Pollution Severity Level	3	2	2
Rated Voltage	250 V	320 V	630 V
Rated Impulse Voltage	4 kV	4 kV	4 kV
Rated Insulation Voltage	250 V acc. to EN 60998-1		
Rated Current	10 A		
Soldering process	Wave solder & reflow solder		
Hole in PCB	ø 1,3 mm		
PCB thickness	Wave solder max. 1,6 mm; reflow solder 1,6 - 3,2 mm		

Material

Moulding	PA HT, black, V-0
Comparative Tracking Index	CTI ≥ 600
Insulating Group	I
Temperature Range	-40°C up to 120°C; reflow solder temperature (Peak) max. 260°C (15-30 s)
Solder pin	ø 1,1 mm; tin plated brass

Approvals

	Current	Voltage	Group	AWG	Nm
	10	300	B		
	10	300	B		

Options / Accessories

- Other plug pin lengths on request
- Other solder pin surfaces on request

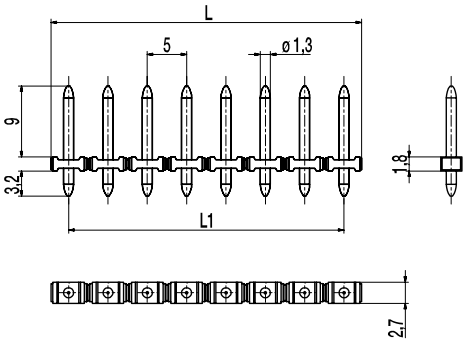
Part Numbers: Tape-on-Reel

No. of poles	971-SLR-THR-1,1	Tape Width	Tape Height	PU
8	18.893.802.A00	72 mm	14,9 mm	500

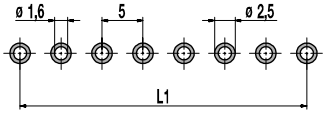
further number of poles on request

Technical modification reserved

Pin strip for THR
971-SLR-THR-1,3
Soldering/plug-in area ø 1,3 mm



PCB Layout



L1 = (No. of poles - 1) x pitch
Solder paste thickness: 0,15 - 0,2 mm
Solder pad diameter: ø 2,5 mm

971-SLR-THR-1,3 is a pin strip with a pitch of 5 mm for the application in a reflow soldering process. The high temperature resistant plastic housing has a very high CTI value and is equipped with spacers, so-called "Stand-offs", which ensure a better hot-air circulation during the reflow soldering process in the convection oven. Beyond this, they assure an improved optical control of the solder joints.
The pin strip 971-SLR-THR-1,3 comes with a constant pin ø of 1,3 mm and is usable with all WECO plug connectors (see general information). Furthermore we recommend this pin strip for small numbers of poles and for the series of 115-F for all numbers of poles. The obtained plug-in and pull-out forces are comfortable. For the automatic assembling all pin strips of this series are packed in Tape-on-Reel and equipped with high temperature resistant Pick Caps, which can easily be removed after the soldering process.

Part Numbers

No. of poles	971-SLR-THR-1,3	Length	PU
2	12.893.805	9,50	1000
3	13.893.805	14,50	500
4	14.893.805	19,50	500
5	15.893.805	24,50	250
6	16.893.805	29,50	250
8	18.893.805	39,50	250
10	20.893.805	49,50	100
11	21.893.805	54,50	100
12	22.893.805	59,50	100

General Information

Pitch	5 mm
No. of poles	2 - 12
Usable with	plug connectors of series 115-F, 950-FL-DS, 950-TFL-DS, 950-NAF-DS, 950-GFL-DS, 950-NLFL-DS, 950-RFL-DS
Additonal Information	Also please consider the pin strips 971-SLR for wave soldering and 971-SLR-SMD in genuine surface mount technology.

Technical Data

Overvoltage Category	III	III	II
Pollution Severity Level	3	2	2
Rated Voltage	250 V	320 V	630 V
Rated Impulse Voltage	4 kV	4 kV	4 kV
Rated Insulation Voltage	250 V acc. to EN 60998-1		
Rated Current	10 A		
Soldering process	Wave solder & reflow solder		
Hole in PCB	ø 1,6 mm		
PCB thickness	Wave solder max. 1,6 mm; reflow solder 1,6 - 3,2 mm		

Material

Moulding	PA HT, black, V-0
Comparative Tracking Index	CTI ≥ 600
Insulating Group	I
Temperature Range	-40°C up to 120°C; reflow solder temperature (Peak) max. 260°C (15-30 s)
Solder pin	ø 1,3 mm; tin plated brass

Approvals

	Current	Voltage	Group	AWG	Nm
	10 [1]	300	B		
	10 [1]	300	B		

Options / Accessories

- Other plug pin lengths on request
- Other solder pin surfaces on request

Part Numbers: Tape-on-Reel

No. of poles	971-SLR-THR-1,3	Tape Width	Tape Height	PU
2	12.893.805.A00	32 mm	15,9 mm	500
3	13.893.805.A00	32 mm	15,9 mm	500
4	14.893.805.A00	56 mm	15,9 mm	500
5	15.893.805.A00	56 mm	15,9 mm	500
6	16.893.805.A00	56 mm	15,9 mm	500
7	17.893.805.A00	56 mm	15,9 mm	500
10	20.893.805.A00	72 mm	15,9 mm	500
12	22.893.805.A00	88 mm	15,9 mm	500

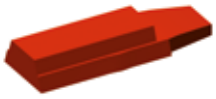
further number of poles on request

[1] By using 115-F current of 12 A possible

Coding systems

Coding element 120-K

Coding elements 120-K can be used for the conecta series 110, 120, 121, and 122.
All pin strips and plug connectors of those series (except for series 110, please refer to coding examples) feature one trapezoidal coding groove per pole, in which the coding elements can be inserted.
This simple solution guarantees error-free plugging.
In their standard design, coding elements are of bright red colour making them clearly visible in plugged condition.
Alternatively, they are also available in light grey and white. Red and light grey versions are delivered in strips of 12 coding keys. White coding elements are delivered loosely in a bag.



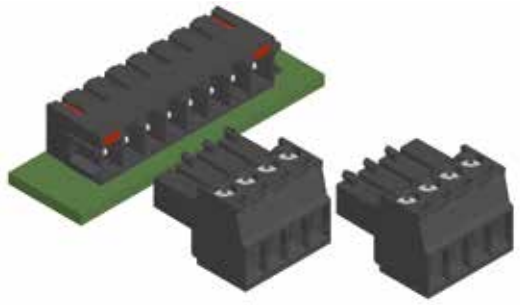
Part number	*Type*	*Colour*	*PU*
20.496.025	120-K/12 KODIEREL.	red	120
17.496.025	120-K/12 KODIEREL. LG	light grey	120
30.496.026	120-K/01-HT-WS-KOD.EL. (Lose)	white	100

Usable with:

Plug connectors: 120-A-.., 120-D-.., 120-F-..
121-A-.., 121-C-.., 121-D-.., 121-F-..
122-A-.., 122-D-.., 122-F-..
Pin strips: 110-M-.., 110-P-.., 110-S-.., 110-V-..
120-M-..
121-M-..
122-M-..

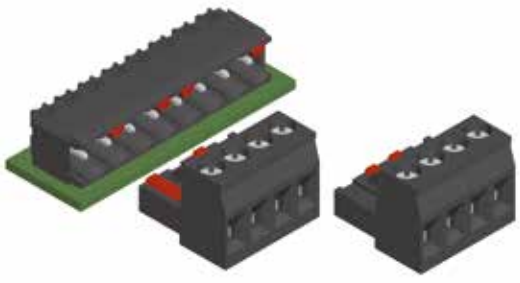
Coding examples

As standard, terminal strips of series 110 come with coding elements, which can be cut off, if necessary. The pin strips feature slots to accommodate coding elements 120-K.



110-M-211/08 with 2 coding elements and 2 x 110-A-111/04 with cut off coding elements.

Plug connectors and terminal strips of series 120, 121 and 122 feature grooves to attach coding elements 120-K. Upon request, fixed-coded plug connectors are available.
For such plug connectors and pin strips, the coding element geometry is formed by the injection moulding.



120-M-211/08 and 2 x 120-A-111/04; each provided with coding elements

Marking

WECO offers marking of individual connections for nearly all terminals and products.

Marking strips

Self-adhesive marking strips consist of polyester with black print on silver background. They are scratch-proof and surface-sealed with Mylar.

The numbering begins with 1. The last digit represents the indicated number of poles.
The marking strips withstand PC board cleaning processes using water and soap, Freon, fluorinated or chlorinated cleaning agents. However, they are not reflow-capable and should therefore only be mounted after the reflow soldering process.
Marking strips are delivered in ten strips per sheet.

Part number	Type	Marking	Pitch	Length (L)	Width (a)	PU
24.499.013	BST-3,50/24	1 2 3 ... 24	3,50 mm	84 mm	3 mm	100
24.499.009	BST-5,00/12	1 2 3 ... 12	5,00 mm	60 mm	3,5 mm	100
24.499.010	BST-5,00/32	1 2 3 ... 32	5,00 mm	160 mm	3,5 mm	100
24.499.006	BST-5,08/12	1 2 3 ... 12	5,08 mm	61 mm	3,5 mm	100
24.499.007	BST-5,08/32	1 2 3 ... 32	5,08 mm	162 mm	3,5 mm	100
24.499.012	BST-7,50/19	1 2 3 ... 19	7,50 mm	141 mm	3,5 mm	100
24.499.011	BST-10,00/16	1 2 3 ... 16	10,00 mm	155 mm	3,5 mm	100
24.499.008	BST-10,16/16	1 2 3 ... 16	10,16 mm	157 mm	3,5 mm	100

InkJet printing

As an alternative to self-adhesive marking strips, we also offer markings according to your specific requirements. Our products are marked by means of inkjet printers. Micro-sized ink droplets are shot accurately to the point and guided by an electric field thus creating the high-precision print – very much like a printed pattern generated by a common matrix printer. This process is fast, easy-to-use and reprogrammable. However, this printing process comprises of the contour precision of the print.
In addition to numbers and letters, special characters can also be printed. The inkjet print features tried and tested scratch- and wipe-resistance.

Standard marking for PCB connectors comes in either black or white - depending on the housing colour. The marking is printed on given surfaces.

Markings for our connectors featured in catalogue 7 are printed in black. Markings may be printed in two locations: either on or between the screw guides (for series 302 only on the screw guides).

Alternatively, WECO offers for special colours pad printed markings. Due to the elaborate handling it makes this printing method, however, significantly more expensive.

InkJet printing (graphic illustration)

Packaging

As standard, we deliver our products packaged in eco-friendly folding boxes made of cardboard or corrugated board.

In order to ensure efficient automated assembly and subsequent soldering of our components, WECO offers various component packaging systems, such as

Tape-on-Reel

These carrier tapes on reels are suitable for most SMD and THR components. They feature blisters and are sealed with a cover film.

WECO offer reels in different widths of 24 mm, 32 mm, 44 mm, 56 mm, 72 mm or 88 mm.

Trays

WECO also offers trays as another option for automated component assembly. The flat trays feature component pockets, they are stackable and ensure sufficiently large component supply.

Bar magazines

Our 550 mm bar magazines have various geometries which are tailored to the individual component size and shape. Both magazine ends are closed with a plug that is easy to remove.

Delivered in cardboard folding boxes, bar magazines are easy to unpack.

When assembling components from tape-on-reels or trays, the placement head vacuum-picks the component from the tape or the tray, verifies the position by means of a camera system, calculates angle and position offset to the nominal position and places the component onto the PC board. After all components have been placed, a conveyor system transports the assembled PC board downstream.

All three component packaging types use anti-static materials to avoid problems with electrostatic discharges (ESD).

Other options

Moulding colours

WECO offers a multitude of various moulding colours.
In addition to our standard colours charcoal grey, black, vermilion and natural other moulding colours are also possible.

Please contact us for further information, we look forward to assisting you.

Standard colours

- Charcoal grey (similar to RAL U706)
- Black (similar to RAL 9011)
- Vermilion (similar to RAL 2002)
- Natural

Special colours

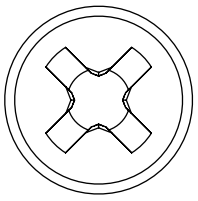
- Red orange (similar to RAL 2001)
- Heather violet (similar to RAL 4003)
- Zinc yellow (similar to RAL 1018)
- Brilliant blue (similar to RAL 5007)
- Yellow green (similar to RAL 6018)
- Light grey (similar to RAL 7035)
- White (similar to RAL 9010)

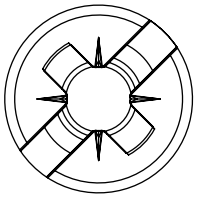
Screws

We use standard slotted-head screws for our products.

Upon inquiry and specific customer request, we also offer screws with Phillips/ Pozidriv or +/- screw heads.

Other materials:
Our products are predominantly equipped with steel screws. Upon request, screws made of alternative materials, such as brass, are also available.





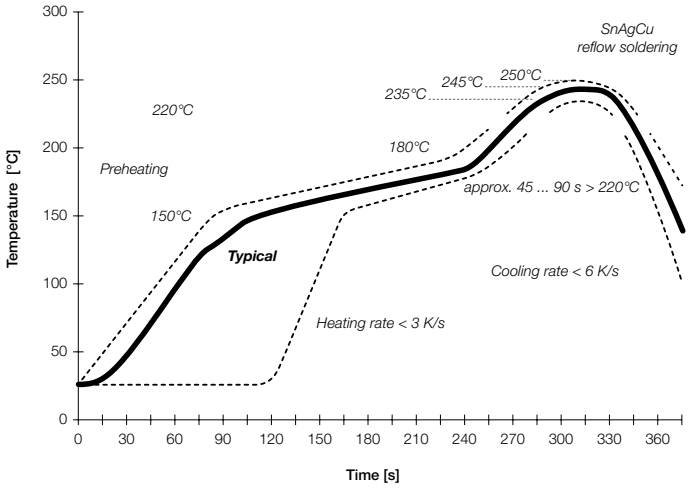
Soldering processes

As a principle, soldering electrically and mechanically connects electronic components to printed circuits forming a subassembly.

The solder contributes essentially to the operational reliability of an assembly. Among the various soldering methods, such as reflow soldering and wave soldering, Surface-Mount-Technology (SMT) using reflow soldering is the most common and cost-efficient process.

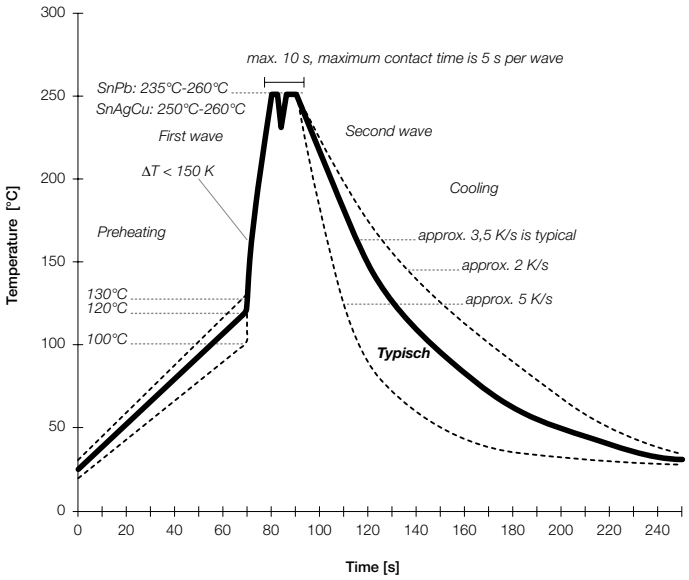
Reflow soldering

During the reflow soldering process, printed circuit boards assembled with SMD and THR components, are passed at a constant speed through various heating zones of a furnace (preheating, reflow soldering and furnace cooling).
In contrast to wave soldering, components and their plastic packages are exposed to the same temperatures as the metallic contacts to be soldered.
Electrical components, printed circuit boards and solder joints are heated either by infrared, convection or a vapor phase processes. In order to avoid oxidation of the solder pads on the printed circuit, this process can also be conducted under inert atmosphere.



Wave soldering

Wave soldering processes are suitable for soldering conventional components.
A conveyor system moves the PCB through the soldering system at a constant speed. Upstream in the wave soldering system, the PCB and its components pass through the fluxer. Downstream in the preheating zone, the solvents contained in the fluxer are vaporized thus activating the flux.
Liquid solder is continuously pumped flowing over edges, through holes or into gaps, forming a wave of solder. This solder wave conveys and wets the underside of the printed circuit. Capillary forces raise the solder through the space between hole and component lead (solder pin) forming the characteristic solder meniscus.



The shown tables represents two solder temperature profiles compliant with EN 61760-1. Due to the various customer-specific parameters (e.g. soldering system, solder paste, component arrangement and orientation) the profiles are only recommendations and should be used accordingly.

Technical Information

Rating of clearance and creepage distances according to DIN EN 60664-1 (VDE 0110-1)

The rating of clearance and creepage distances depends on the expected electrical surge, the characteristic values of the electronic protection measures as well as the contamination at the place of installation.
Clearance distances are dimensioned in accordance with the rated impulse voltage (see table F.1), which results out of the overvoltage category and phase-to-earth voltage.
The minimum clearance in air is stated at altitudes of less than 2000 m above sea level and ascertained in accordance with the impulse voltage and the contamination level, see table F.2.
Creepage distances are measured by the operating voltage, the characteristic of the insulants (CTI value), the expected contamination level as well as the preventive measures against contamination.
Basis of the creepage distance is the rated voltage derived from the operating and / or system voltage.
The minimum creepage distance (depending on the respective degree of contamination) are assigned to the rated voltage, see table F.4.

F.4 DIN EN 60664-1 (VDE 0110-1), table F.4 (extract) Creepage distance for the avoidance of the failure by tracking

Voltage r.m.s. [1]	Minimum creepage distances								
	Printed wiring material								
	Pollution degree								
	1	2	1	2			3		
	All material groups	All material groups except IIIb	All material groups	Material group I	Material group II	Material group III	Material group I	Material group II	Material group III [2]
V	mm	mm	mm	mm	mm	mm	mm	mm	mm
25	0,025	0,040	0,125	0,500	0,500	0,500	1,250	1,250	1,250
32	0,025	0,040	0,14	0,53	0,53	0,53	1,30	1,30	1,30
40	0,025	0,040	0,16	0,56	0,80	1,10	1,40	1,60	1,80
50	0,025	0,040	0,18	0,60	0,85	1,20	1,50	1,70	1,90
63	0,040	0,063	0,20	0,63	0,90	1,25	1,60	1,80	2,00
80	0,063	0,100	0,22	0,67	0,95	1,30	1,70	1,90	2,10
100	0,100	0,160	0,25	0,71	1,00	1,40	1,80	2,00	2,20
125	0,160	0,250	0,28	0,75	1,05	1,50	1,90	2,10	2,40
160	0,250	0,400	0,32	0,80	1,10	1,60	2,00	2,20	2,50
200	0,400	0,630	0,42	1,00	1,40	2,00	2,50	2,80	3,20
250	0,560	1,000	0,56	1,25	1,80	2,50	3,20	3,60	4,00
320	0,75	1,60	0,75	1,60	2,20	3,20	4,00	4,50	5,00
400	1,0	2,0	1,0	2,0	2,8	4,0	5,0	5,6	6,3
500	1,3	2,5	1,3	2,5	3,6	5,0	6,3	7,1	8,0
630	1,8	3,2	1,8	3,2	4,5	6,3	8,0	9,0	10,0
800	2,4	4,0	2,4	4,0	5,6	8,0	10,0	11,0	12,5
1000	3,2	5,0	3,2	5,0	7,1	10,0	12,5	14,0	16,0

[1] This voltage is
- for functional insulation, the working voltage,
- for basic and supplementary insulation of the circuit energized directly from the supply mains (see 4.3.2.2.1), the voltage rationalized through Table F.3a or Table F.3b, based on the rated voltage of the equipment, or the rated insulation voltage,
- for basic and supplementary insulation of systems, equipment and internal circuits not energized directly from the mains (see 4.3.2.2.2), the highest r.m.s. voltage which can occur in the system, equipment or internal circuit when supplied at rated voltage and under the most onerous combination of conditions of operation within equipment rating.

[2] Material group IIIb is no not recommended for application in pollution degree 3 above 630 V.

Overvoltage categories

Overvoltage category IV

Electrical equipments for the use at the connection point of the installation e.g. electricity meter and primary over-current protection devices.

Overvoltage category III

Electrical equipment in firm installations and for such cases in which special demands are made against the reliability and the availability of the electrical equipment, e.g. switches in firm installations and devices for industrial use with continuing connection to the firm installation.

Overvoltage category II

Energy using electrical equipment, which is energised by a firm installation e.g. household appliances, portable tools and other domestic appliances as well as similar devices.

Overvoltage category I

Electrical equipment for the connection to electric circuits, in which measures are taken for the delimitation of the transient overvoltages to a suitable low value, e.g. devices with electronic circuits and appropriate protection level.

F.1 DIN EN 60664-1 (VDE 0110-1), table F.1 (extract) Rated impulse voltages for electrical equipments, which are energised directly by a low-voltage system

Nominal voltage of the supply system [1] based on IEC 60038 [3]		Rated impulse voltage [2]			
		Overvoltage catagory [4]			
Three phase	Single phase	I	II	III	IV
V	V	V	V	V	V
	120-240	800	1 500	2 500	4 000
230/400 277/480		1 500	2 500	4 000	6 000
400/690		2 500	4 000	6 000	8 000
1 000		4 000	6 000	8 000	12 000

[1] See Annex B for application to existing different low-voltage mains and their nominal voltages.
[2] Equipment with these rated impulse voltages can be used in installations in accordance with IEC 60364-4-44.
[3] The / mark indicates a four-wire three-phase distribution system. The lower value is the voltage line-to-neutral, while the higher value is the voltage line-to-line. Where only one value is indicated, it refers to three-wire, three-phase systems and specifies the value line-to-line.
[4] See 4.3.3.2.2 for an explanation of the overvoltage catagories.

Technical Information

Degree of contamination

The micro environment determines the influence of the contamination on the isolation.
However the macro environment must be considered with the view of the micro environment.
Resources to achieve a reduction of the contamination on the regarded isolation can be planned by the effective employment of casings (housings), encapsulations or hermetic sealings.
The influence of the contamination is considered with the calculation of air and creepage distances by degrees of pollution.

Four degrees of contamination levels are defined for the micro environment:

Contamination level 1
No contamination or only dry, non-conductive contamination occurs. The contamination has no influence;

Contamination level 2
Only non-conductive contamination occurs. However, occasional temporary conductivity must be expected as a result of moisture condensation;

Contamination level 3
Conductive contamination occurs; dry, non-conductive contamination which becomes conductive as a result of moisture condensation may also occur;

Contamination level 4
Impurities in the form of conductive dust, rain or humidity result in permanent conductivity.

F.2 DIN EN 60664-1 (VDE 0110-1), table F.2 (extract)
Clearance for transient overvoltages

Required impulse withstand voltage [1) 5)]	Mimimum clearence in air up to 2 000 m above sea level		
	Case A Inhomogeneous field (see 3.15)		
	Pollution degree		
	1	2	3
kV	mm	mm	mm
1,2	0,25	0,25	0,8 [4)]
1,5 [2)]	0,5	0,5	
2,0	1,0	1,0	1,0
2,5 [2)]	1,5	1,5	1,5
3,0	2,0	2,0	2,0
4,0 [2)]	3,0	3,0	3,0
5,0	4,0	4,0	4,0
6,0 [2)]	5,5	5,5	5,5
8,0 [2)]	8,0	8,0	8,0

1) This voltage is
- for functional insulation, the maximum impulse voltage expected to occur accross the clearence (see 5.1.5),
- for basic insulation directly exposed to or significantly influenced by transient overvoltages from the low-voltage mains (see 4.3.3.3, 4.3.3.4.1 and 5.1.6), the rated impulse voltage of the equipment,
- for other basic insulation (see 4.3.3.4.2), the highest impulse voltage that can occur in the circuit.

2) Prefered values as specified in 4.2.3.

4) The minimum clearences given for pollution degrees 2 and 3 are based on the reduced withstand characteristics of the associated creepage distance under humidity conditions (see IEC 60664-5).

5) For parts or circuits within equipment subject to impulse voltages according to 4.3.3.4.2, interpolation of values is allowed. However, standardization is achieved by using the preferred series of impulse voltage values in 4.2.3.

Insulant

DIN EN 60664-1 (VDE 0110-1) divides the insulants according to their CTI values in four groups. These are:

Insulant I: $600 \leq CTI$
Insulant II: $400 \leq CTI < 600$
Insulant IIIa: $175 \leq CTI < 400$
Insulant IIIb: $100 \leq CTI < 175$

The check numbers of the tracking must be determined according to IEC 60112 at an examination body using test solution A. The check number of the tracking is used as a proof of the creepage characteristics of insulants.

Technical Information

Rated cross section

The current carrying capacity depends not only on the terminal design, but also on the application of the terminals. The appropriate specifications for the devices, e.g. DIN EN 60335-1 (VDE 0700-1), should be taken into account.
According to DIN EN 60999-1 / VDE 0609 part 1, the current cross section and respectively the rated connection ability of a connection referres to the wire cross section indicated by the manufacturer, to which determined thermal, mechanical and electrical requirements apply to.
The relationship between rated connection abilities and diameters of the wires is represented in table 1.
If nothing else is specified in the product standard, each connection point must be able to take up not only its rated cross section (rated connection ability) but also the next two lower cross sections.
Connecting points must be able to take up unprepared wires.
Regarded as unprepared wires are all cables stripped at their ends, whose form is adjusted before insertion or whose wires are twisted for the purpose of the solidification.
In the USA and Canada an identification is used by leader sizes (AWG) instead of the cross section indicated in mm².

T1 DIN EN 60999-1, table 1 (extract)
Relation between rated connection abilities and wires

Rated cross section	Theoretical diameter of the largest conductor						
	metric			AWG			
	solid		flexible	solid			flexible
	single wire	multi-stranded wire			b) single wire	b) Class B multi-stranded wire	c) Class I, K, M multi-stranded wire
mm²	mm	mm	mm	No.	mm	mm	mm
0,2	0,51	0,53	0,61	24	0,54	0,61	0,64
0,34	0,63	0,66	0,8	22	0,68	0,71	0,80
0,5	0,9	1,1	1,1	20	0,85	0,97	1,02
0,75	1,0	1,2	1,3	18	1,07	1,23	1,28
1,0	1,2	1,4	1,5	–	–	–	–
1,5	1,5	1,7	1,8	16	1,35	1,55	1,60
2,5	1,9	2,2	2,3 a)	14	1,71	1,95	2,08
4,0	2,4	2,7	2,9 a)	12	2,15	2,45	2,70
6,0	2,9	3,3	3,9 a)	10	2,72	3,09	3,36
10,0	3,7	4,2	5,1	8	3,34	3,89	4,32
16,0	4,6	5,3	6,3	6	4,32	4,91	5,73
25,0	–	6,6	7,8	4	5,45	6,18	7,26
35	–	7,9	9,2	2	6,87	7,78	9,02

NOTE The diameter of the largest solid and flexible wire is based on Table 1 according to IEC 60228A and IEC 60344 and for AWG conductors on ASTM B 172-71 [4], ICEA-Publication S-19-81 [5], ICEA-Publication S-66-524 [6] and ICEA-Publication S-66-516 [7].

a) Information only for flexible wires in class 5 of IEC 60228A.
b) Nominal + 5 %.
c) Largest diameter for each of the three classes I, K, M + 5 %.

Current carrying-capacity

Technical data state a maximum rated current at which no thermal damage or malfunctions occur, if a certain ambient temperature and rated cross-section is provided. The rated current is a current which the terminal or connector can carry simultaneously at all contacts without exceeding the maximum permissible temperature limit.

Appropriate test currents are applied to the rated cross sections (see table T2). Depending on the connection type, the maximum permissible heating of the clamping unit is limited to 45 K (acc. to DIN 60998-1, Temperature Rise Test for PCB Connectors) and to 30 K (acc. to DIN 60512-5-1, Temperature Rise Test for Plug Connectors)
Based on the results of the temperature rise test acc. to DIN EN 60512-5-2 and the rated cross-section, a current carrying curve (base curve) is generated under consideration of the upper temperature limit for the insulating material and depending on the ambient temperature.

This base curve is used to determine the current carrying capacity of PCB connectors. For plug connectors, the base curve is corrected by factor 0.8 (derating curve). The permissible current carrying capacity not only depends on the terminal design but also the final application of the terminal. The corresponding equipment specifications, e.g. DIN EN 60335-1 (VDE 0700-1) must be observed.

T2 DIN EN 60998-1, table 2 (extract)
Relation between rated connection abilities and testing current

Rated Cross-section	Load capacity
mm²	A
0,2	4
0,34	5
0,5	6
0,75	9
1	13,5
1,5	17,5
2,5	24
4	32
6	41
10	57
16	76
25	101
35	125

What is SMD?

„SMD“ is the abbreviation for Surface Mounted Devices and reunite all surface-assembled components on one circuit board. Often certain manufacturers of electronic and electrical components also use the term “SMD” for THR (Through Hole Reflow) components, but unlike thru hole devices that require drilling holes through which the pins go through the board and are soldered underneath, SMD components are positioned on the PCB surface and soldered afterwards. No more need for holes in the printed circuit board.

History of the SMD

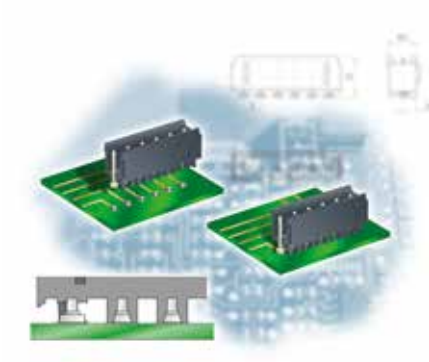
The beginnings of surface mount technology go back to the 1960s, but only became widely used in the 1980s. Mid 1980s, the production of conventional leaded devices soldered directly on the circuit path became a standard.

Surface mounted devices (SMD) made it possible to increase the number of components and therefore contributed to many more connections per component. Furthermore, SMD components can be placed on both sides of a printed circuit board. Components are usually secured temporarily with adhesive on the lower side of the PCB, and as soon as the adhesive is hardened, the printed circuit board can be turned upwards to populate the other side. This is followed by the soldering process.

WECO SMD terminals and plug connectors

To fully take advantage of a pure SMD production, the customer needs a wide product range of SMD components. This should include terminals and plug connectors. SMD terminal blocks and plug connectors are undoubtedly a good deal more difficult to achieve than components which are not exposed to a mechanical load, as for example resistors and condensers.

The most important criterion is good and durable soldering at the printed circuit board level. A terminal block or a plug connector has a substantially larger volume than conventional „chip components“ and offers a much larger attack region in order to lever the component off the PCB surface. Therefore soldering connections only at the pins would not be sufficient, and additional reinforcement would be required. Often the problem is resolved by providing additional support with lugs or with separate screw fixation. From our point of view, this is not an ideal solution because using pure SMD technology drillings in a printed circuit board should be avoided. WECO’s range of SMD terminal blocks and plug connectors (pin-strips) are equipped with lateral soldering cylinders, which are placed off-center in order to create a counter anchoring to the pins. Thus, the pins do not have to carry the entire departure load. In addition, these soldering cylinders create a larger soldering surface and achieve a reliable adhesive force on the printed circuit board.



A further challenge in SMD technology for terminal blocks and plug connectors starting at sizes of 3.5 mm pitch and larger, is to ensure an accurate soldering connection of the pins over the entire length of the component. Deviations of the components, within given tolerances, linear extensions under thermal load during the soldering process and unevenness of the PCB surface, all contribute to factors of mismatch.

To correct this problem, WECO developed the patented principle of movable soldering elements. WECO’s line of SMD terminals and plug connector are equipped with soldering pins and anchor elements, called “floating anchors”. This ensures a freedom of movement in both lateral and vertical directions, which in turn ensures excellent co-planarity performance.

What is THR?

Through hole technology became popular in the 1950s with the resurgence of the second generation computer and continued its popularity until surface mount technology was developed. Surface mount technology then gained popularity over the through hole technology and became a standard thereafter.

In the beginning, every printed circuit board was assembled using Through Hole Technology. All components were inserted through holes drilled in the circuit boards and soldered either by hand or on the wave.

Over the years, the process was automated and the reflow soldering method with automated assembling (Pick & Place) became widely accepted especially with the enforcement of lead free soldering (RoHS).

Nowadays many electronic components are already surface mounted. A much higher density of components and many more connections per component are possible on a printed circuit board without holes.

Some components, such as terminal blocks, plug connectors, switches or electrolytic capacitors, still had to be soldered on the wave or by hand on the printed circuit board, because they were not suitable for the high mechanical and thermal load.
Due to a mixture of through hole and surface mount components, the soldering process could not be automated completely and therefore incurred greater production costs. To rectify the problem, the components, which were not suitable for this kind of processing, had to be made compatible for the reflow soldering method.

This gave rise to the SMarTconn family of products through which WECO was able to identify and subsequently invent technical solutions to successfully resolve these problems:

1. The through hole reflow technology (THR) was steadily developed and addressed the through-hole reflow applications.

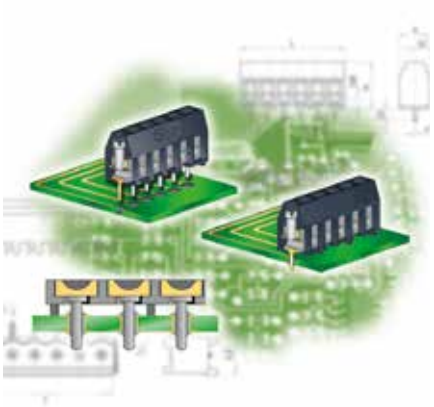
2. The patented product program in genuine SMD technology was invented. Terminal blocks and plug connectors from a size of 3.5 mm pitch and larger could now be surface-mounted.

The Through Hole Reflow Process ...

The through hole reflow process enables the automated assembling and the reflow soldering technique normally used on surface mount components to be applied to THR components as well.

... or the “Pin-in-Paste”-Method

The basis for the integration of THR components in the reflow soldering process is the pin in paste procedure. Precondition for the use of THR components is a printed circuit board with drillings and a correctly cut out and positioned template. Soldering paste is laid via a screen printing system in order to receive an appropriate borehole filling. The arising amount of pushed through



solder paste is intended. The components are then placed on the PCB. The pins of the components dip into the holes and push the solder paste through the holes to the other side of the PCB. The action of pushing the solder paste through the holes forms a characteristic match head around each pin. This is followed by the reflow soldering process. The solder joints created are mechanically and electrically comparable to the classical wave soldering process.

Conclusion

With THR devices, the integration of electrical components into the reflow soldering process enables the production of a single soldering process. This approach is beneficial in substantially reducing production cost and results in process optimisation. In addition, the THR device high-temperature-resistant thermoplastic body is configured for RoHS-compliant production, resulting in the possibility of variant reductions.

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Catalogue overview

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#5: Pitch >10 mm
#6: SMD & THR

Electrical

#7: Europe type connectors
#8: Tab connectors & Screw connectors
#9: Unisolated terminals & ceramic components

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Europe type connectors

WECONNECT

WECO - making contacts

Catalogue 7

Electrical

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302

322-SVW

324-STFB

Symbols on data sheets

These symbols can be found on our data sheets on the right side of the product image.

RoHS COMPLIANT

RoHS compliant

These articles comply with the RoHS regulations.

„no flame“ after glow-wire test according to household appliance standard DIN EN/IEC 60335-1

The housing materials used are VDE-tested and approved according to the glow-wire tests specified in DIN EN/IEC 60335-1. They meet the requirements of the household appliance standard.

pottable

Through its geometry, this product is specially suitable for potting.

We reserve the right to make technical as well as changes to measurements, colours and formats after print. Only the values given in our written confirmations will be binding for us. Please take notice that it is not allowed to use our photos, drawings or catalogue pages for your own applications without having our written agreement.

Overview

Connectors for printed circuit boards

WECO PCB connectors always offer a good solution for almost any connection problem by its big variety of types. The screw connections are available in socket terminal style, in elevator clamping style or as head contact terminals. The plug connectors are especially designed for the connection of components or peripheral devices. Tab connectors and screwless types complete the product program.

Plug-In connector systems

The series of conecta are plug-in connector systems consisting of plug connectors with screw and their corresponding pin strips.
Due to four different pitch sizes, lateral flange executions, tier versions and different plug directions, this product serie suit almost every application on the PCB. All connectors offer coding possibilities to avoid incorrect plugging.

SMD & THR

“SMarTconn” covers terminals and plug connectors for surface mount and reflow soldering technique. Apart from the proven Through-Hole-Technology (THR) we focus on genuine SMD - Surface Mount Devices – in this product serie. With their reliable adhesive forces and their good reflow soldering capabilities, we offer products, which are a worthy replacement for the conventional soldering technique. All products of this series are packed in tape-on-reel or tube magazines for the automatic assembling with a pick & place machine.

Terminal strips

This group contains socket terminals, plug-in connectors, screwless types and additionally the combination of screw and solder tag for the wire-to-wire connection. All types are available for different cross sections, with and without wire protectors. The used Polyamide plastic material pass the ball pressure test with 125°C according to VDE 0470, which is demanded in many IEC and VDE regulations for insulants.

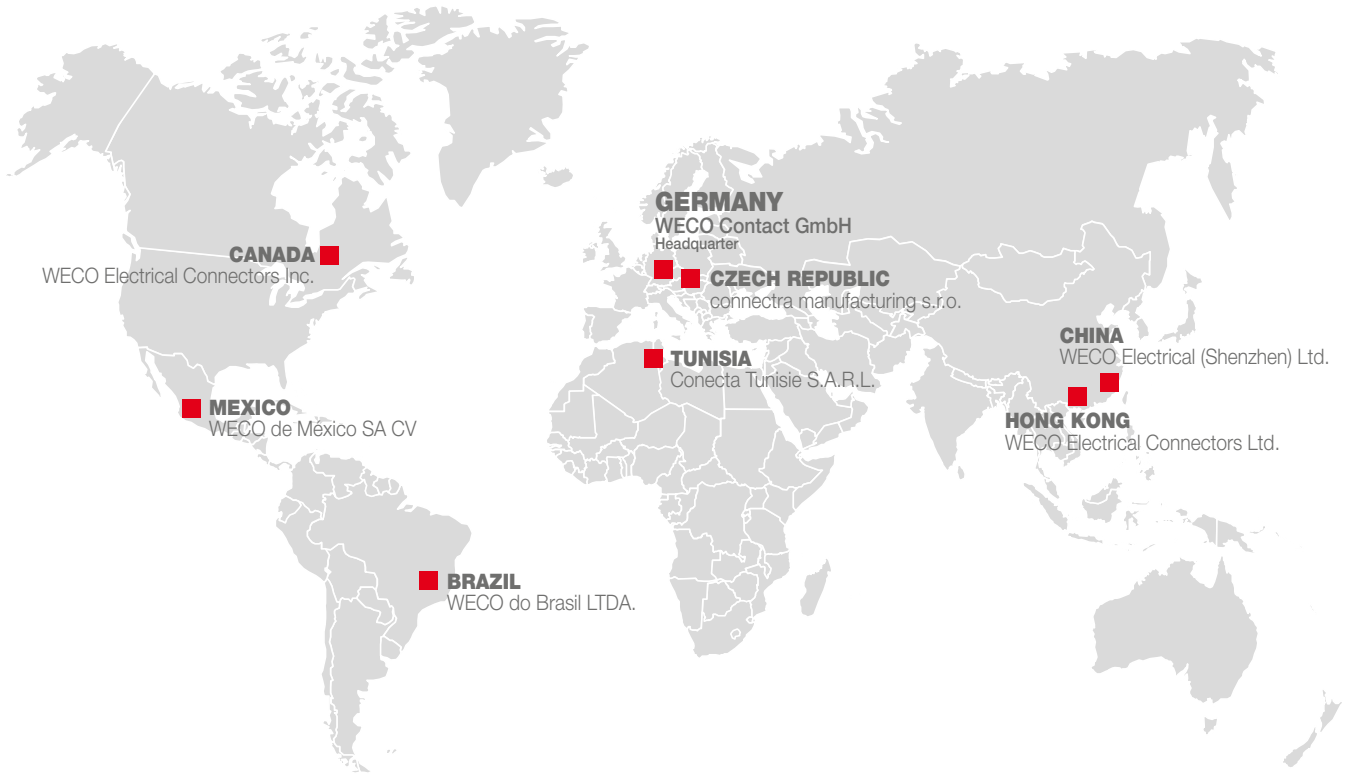
Tab connectors

These connectors are equipped with receptacles in different sizes and styles. Mixed arrangements per terminal block as well as per pole (Multi-Point Tab Connectors) are possible. Combinations of tab / solder connectors, flat plug couplers and space saving tier versions increase the density of connections. The tab connectors offer a wide spectrum of possible combinations, whereby many connection problems can be solved.

Ceramic terminal blocks

This group covers mantle terminals, ceramic terminal strips and terminals for explosion and firedamp-hazard areas. Various sizes and designs permit them to be used for wire cross sections up to 120 mm² and including applications in furnace construction and ship building, for engines and intrinsically safe electrical equipment. The terminal blocks with ceramic insulator can be used at increased temperatures.

The WECO Group



We, WECO Contact GmbH, are a German manufacturer of high reputation for connectors in the field of electronics and electrical engineering. Our headquarter is located in Hanau and has own assembly and sales companies in Canada, Brazil, China, Hong Kong, Mexico, Tunisia and Czech Republic. With over 450 employees and a worldwide distribution network in 56 countries, we speak the language of our customers.

Our wide product range includes nearly 17,000 different articles.

We are well known for innovation which is particularly evident in the patented SMD series for the genuine surface mounting technology. Hereby, the user experiences real cost savings in the manufacturing process, especially if the terminal is the last component of the customer to be soldered on the board.

Another strength are the customer-specific developments and a fast and flexible project implementation with which we respond to the increasing engineering demands of the middle class customers.

The entire WECO Group is a reliable partner for our customers, and the customers' satisfaction is one of our main goals to achieve.

www.wecogroup.com

Household Appliance Standard DIN EN/IEC 60335-1

What is the household appliance standard all about?

The household appliance standard DIN EN/IEC 60335-1:2012-10 standardizes the safety features of electrical appliances for household and commercial use whose rated voltages do not exceed 250 V for single-phase appliances and 480 V for other appliances.

Which aspects of the household appliance standard are particularly important for WECO products?

Chapter 30: Heat- and flame-resistance. Components made of non-metallic materials holding active components (e.g. connection elements) in position must be resistant against ignition and fire propagation.
Electrical appliances are divided into several classes. Depending on their application, they are tested according to different methods.
Most WECO products meet the requirements for unattended appliances with currents > 0.2 A. These requirements stipulate the glow-wire resistance test for non-metallic materials and refer to other glow-wire tests.

These flame-resistance requirements shall prevent self-ignition of unattended appliances. On the market, they are designated as “no flame”.

Who is affected by this household appliance standard?

The standard is applicable for manufacturers of electric and electronic components in household appliances, such as terminals and switches, e.g. in:

- Dishwashers, washing machines, refrigerators
- Kitchen stoves, microwaves
- Small household appliances, such as mixers, coffee machines

Also affected is unattended equipment used in small and medium-sized enterprises, particularly:

- Pump components
- Illuminant components
- Industrial and commercial cleaning equipment
- Hair salon equipment etc.

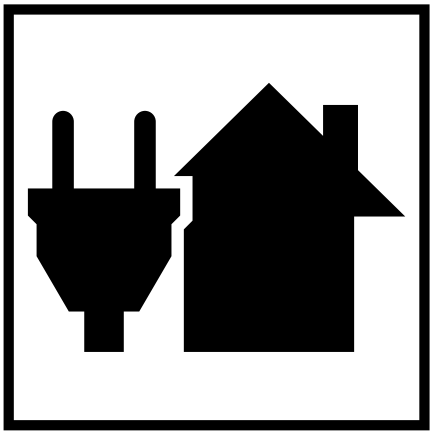
WECO products are compliant with the glow-wire test of the household appliance standard!

For the white goods market segment, WECO Contact GmbH offers an extensive range of PC board terminals and PC board plug connectors which meet the flame-resistance requirements of the Household Appliance Standard DIN EN/IEC 60335-1.

Molding materials used by WECO are tested and VDE-approved according to the glow-wire test requirements specified in DIN EN/IEC 60335-1. This applies for all standard WECO colors!

WECO products made of these molding materials are:

- All products with PC board connection technology, except for versions with higher number of poles such as series 95.., 96.. and 97…,
- terminal strips (catalogue 7), if purchased made of V-0 molding material (for unprinted versions, the part number ends with “EN6”),
- other products. Feasibility must be checked individually.



WECO “no flame” products are designated with a small symbol on our label:

Our customer service

WECO takes technical support and after-sale service for our customers very seriously.
For your information, we have therefore compiled a list of all manufacturer products affected by the household appliance standard on our website. At a glance, you can gather information on whether your appliances are affected or not.

The list is also a valuable tool for both our sales staff and our field reps, helping them to resolve unclear issues in project meetings, and enabling them to optimally support the customer.

RoHS - Restriction of Hazardous Substances

Declaration

The directive 2002/95/EC (RoHS 1) on the restriction of the use of certain hazardous substances in electrical and electronic equipment controls since 1st July 2006 the use of hazardous substances in devices and components. The directive is generally named with the short term RoHS (Restriction of Hazardous Substances). It affects manufacturers, sellers, distributors and recyclers of electrical and electronic equipment containing mercury, cadmium, lead, chromium VI, polybrominated biphenyls (PBB) and polybrominated diphenyl ethers (PBDE).

This directive has been replaced on 3rd January 2013 by the revised version 2011/65/EU (RoHS 2). Thus, the ranges of validity of the RoHS have been extended. Earlier given exceptions are reduced step by step.

WECO Contact is a responsible manufacturer of components for electrical connection technology and thus

RoHS COMPLIANT

provides products in RoHS - compliant versions since the implementation of the EU Directive 2002/95/EC in 2006. All products are now RoHS compliant since the recast 2011/65/EU.

Labeling of our products

Customers can clearly see the RoHS Compliance of the product on the right bottom of our product labels, marked with a little icon:

Products, which have been produced before 14th October 2013, do not have this icon, but even here RoHS Compliance is guaranteed and marked - albeit somewhat hidden. These products bear the letters „GP“ at the end of the line with the product type name.

Frequently Asked Questions

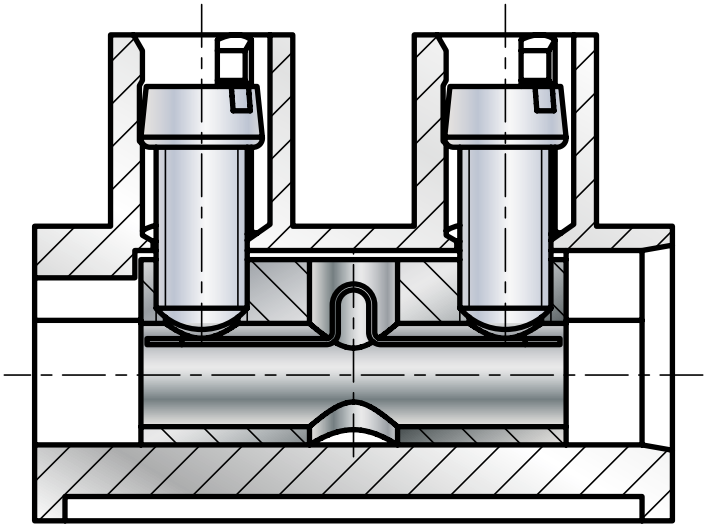
Which technical solutions does WECO provide?

- Matt pure tin as a surface for solder elements,
- Thick layer passivated screws,
- Temperature-resistant housing

What should be considered for the use of the products?

Particular attention should be paid to the storage life of the solder pins. For this, WECO offers a comfortable delivery-on-demand procedure by means of our supply agreements. The customer just sends a preview call for our production planning and always receives „fresh“ products.

Socket terminal strips



The following pages list our terminal strips whose clamping units are shaped as socket terminals.

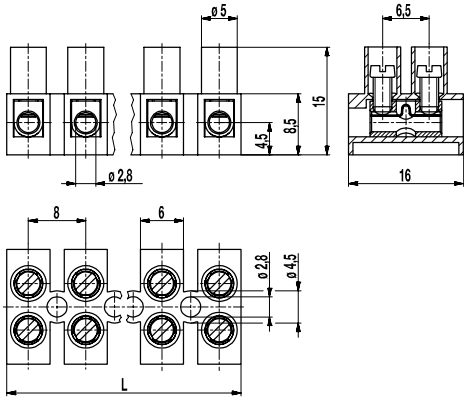
The screw connections are available for various cross-sections both with and without wire protection.

The terminal strips are designed according to all pertinent international requirements. They comply with VDE Standards and are certified according to UL, CSA and VDE.

Our socket terminal strips are available in a variety of different designs with rated connection capacities of 1,5 mm² to 16 mm², and rated insulation voltages up to 750V.

Our connector portfolio offers versions in the common pitches 8 mm, 10 mm, 11,5 mm and 14,5 mm. All versions are available with 1 to 12 poles.
There is one fixing hole between every two poles and the flexible polyamide moulding allows for mounting on curved surfaces.

Socket terminal strip
302(-HDS)
Screw connection



The socket terminal strip 302 is one of our smallest socket terminal strips. It is available in 8 mm pitch with 1- to 12-pole design and can be easily cut to the desired number of poles.
The flexible polyamide moulding can even be mounted on curved surfaces.

The wire protector of the “HDS”-version reliably prevents damage to multi-wire flexible conductors by the turning screw.

Part Numbers

No. of poles	302	302-HDS	Length	PU
1	11.820.007	31.820.008	7,00	5000
2	12.820.007	32.820.008	15,00	2000
3	13.820.007	33.820.008	23,00	1000
4	14.820.007	34.820.008	31,00	1000
5	15.820.007	35.820.008	39,00	1000
6	16.820.007	36.820.008	47,00	100
7	17.820.007	37.820.008	55,00	70
8	18.820.007	38.820.008	63,00	70
9	19.820.007	39.820.008	71,00	60
10	20.820.007	40.820.008	79,00	50
11	21.820.007	41.820.008	87,00	50
12	22.820.007	42.820.008	94,00	50

further number of poles on request

Part Numbers: "no flame" acc. to glow-wire test

No. of poles	302	302-HDS	Length	PU
2	12.820.051.EN6	32.820.051.EN6	15,00	2000
3		33.820.051.EN6	23,00	1000
4		34.820.051.EN6	31,00	1000
6		36.820.051.EN6	47,00	100
8		38.820.051.EN6	63,00	70
9		39.820.051.EN6	71,00	60
12	22.820.051.EN6	42.820.051.EN6	94,00	50

further number of poles on request

General Information

Pitch	8 mm
No. of poles	1 - 12
Areas of application	For lightning applications and similar electrical equipment.

Technical Data

Clamping Range	*solid / flexible / AWG*		
without wire protector	0,5 - 4 mm² / 0,5 - 2,5 mm² / 20 - 12 AWG		
with wire protector	0,34 - 2,5 mm² / 0,34 - 2,5 mm² / 22 - 14 AWG		
Rated Cross Section	1,5 mm²		
Wire Stripping Length	5 mm ± 0,5 mm		
Overvoltage Category	III	III	II
Pollution Severity Level	3	2	2
Rated Voltage	320 V	320 V	630 V
Rated Impulse Voltage	4 kV	4 kV	4 kV
Rated Insulation Voltage	450 V acc. to EN 60998-1		
Rated Current	17,5 A		
Torque	0,4 Nm		

Material

Moulding	PA, natural, V-2 (PA, white, V-0) Details in brackets for "no flame" products
Comparative Tracking Index	CTI ≥ 600
Insulating Group	I
Temperature Range	-40°C up to 100°C
Terminal Body	Nickel plated brass
Screw	M2,6; zinc plated steel, blue passivated
Wire protector	Stainless steel strip

Approvals

	Current	Voltage	Group	AWG	Nm
	20	300	B	20 - 12	0,4
	10	300	D	20 - 12	0,4
	20	300	B	26 - 12	0,4 [1]
	10	300	D,E	26 - 12	0,4 [1]

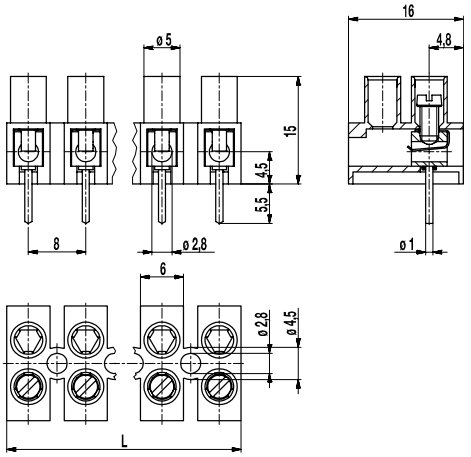
	Current	Voltage	mm²
	17,5	450	1,5

[1] 302-HDS: 26 - 14 AWG

Options / Accessories

- Marking options on the screw guides
- Marking strips BST-302
- Jumpers 302-J
- Moulding made of special polyamide for e.g. household appliances
- Screws made out of brass
- With pegs at the base for saving assembly time
- Up to 26 poles possible
- Socket with blind hole

Socket terminal strip
302-G(-DS)
Screw connection, with solder pin



The socket terminal strip 302-G is one of our smallest socket terminal strips. It is available in 8 mm pitch with 2- to 12-pole design and can be easily stripped to the desired number of poles.
The flexible polyamide moulding can even be mounted on curved surfaces.

This version features reliable contact protection and long clearance and creepage distances. The captive screws are vibration-proof and secured against self-loosening. In addition to be soldered in with solder pins, the terminal strips can be screw-mounted onto the PCB.

The wire protector of the “DS”-version reliably prevents damage to multi-wire flexible conductors by the turning screw.
The terminal lead insertion depth is not limited.

Part Numbers

No. of poles	302-G	302-G-DS	Length	PU
2	12.820.010	32.820.010	15,00	250
3	13.820.010	33.820.010	23,00	250
4	14.820.010	34.820.010	31,00	250
5	15.820.010	35.820.010	39,00	80
6	16.820.010	36.820.010	47,00	80
7	17.820.010	37.820.010	55,00	50
8	18.820.010	38.820.010	63,00	50
9	19.820.010	39.820.010	71,00	50
10	20.820.010	40.820.010	79,00	50
11	21.820.010	41.820.010	87,00	40
12	22.820.010	42.820.010	94,00	40

General Information

Pitch	8 mm
No. of poles	2 - 12

Technical Data

Clamping Range	*solid / flexible / AWG*		
without wire protector	0,75 - 4 mm² / 0,75 - 2,5 mm² / 18 - 12 AWG		
with wire protector	0,34 - 2,5 mm² / 0,34 - 2,5 mm² / 22 - 14 AWG		
Rated Cross Section	1,5 mm²		
Wire Stripping Length	8 mm ± 0,5 mm		
Overvoltage Category	III	III	II
Pollution Severity Level	3	2	2
Rated Voltage	630 V	630 V	1000 V
Rated Impulse Voltage	6 kV	6 kV	6 kV
Rated Insulation Voltage	450 V acc. to EN 60998-1		
Rated Current	15 A		
Torque	0,4 Nm		

Material

Moulding	PA, white, V-0
Comparative Tracking Index	CTI ≥ 600
Insulating Group	I
Temperature Range	-40°C up to 100°C
Terminal Body	Tin plated brass
Screw	M2,6; zinc plated steel, blue passivated
Solder pin	ø 1 mm; tin plated copper
Wire protector	Tin plated tin bronze

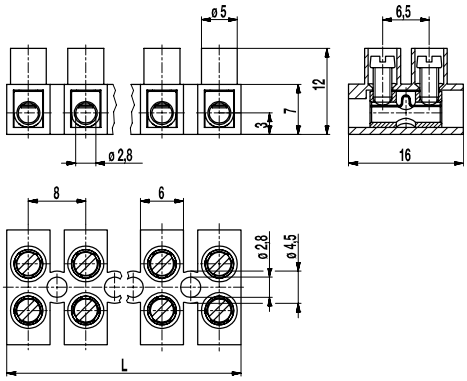
Approvals

	Current	Voltage	Group	AWG	Nm
	15	300	B	26 - 14	0,4
	10	300	D,E	26 - 14	0,4

Options / Accessories

- Marking strips BST-302
- Jumper 302-J
- Longer solder pins up to 75 mm

Socket terminal strip
302-N(-HDS)
Screw connection, low profile version



The socket terminal strip 302-N, low version in 8 mm pitch, is available with 1 to 12 poles.
The lower version (by 3 mm) is well suited for applications where mounting space is limited (e.g. in plastic boxes where longer clearance and creepage distances are not required).
The flexible polyamide moulding can even be mounted on curved surfaces.

The wire protector of the “HDS”-version reliably prevents damage to multi-wire flexible conductors by the turning screw.

Part Numbers

No. of poles	302-N	302-N-HDS	Length	PU
1	11.820.043	31.820.043	7,00	5000
2	12.820.043	32.820.043	15,00	2000
3	13.820.043	33.820.043	23,00	2000
4	14.820.043	34.820.043	31,00	1000
5	15.820.043	35.820.043	39,00	1000
6	16.820.043	36.820.043	47,00	100
7	17.820.043	37.820.043	55,00	70
8	18.820.043	38.820.043	63,00	70
9	19.820.043	39.820.043	71,00	60
10	20.820.043	40.820.043	79,00	50
11	21.820.043	41.820.043	87,00	50
12	22.820.043	42.820.043	94,00	50

further number of poles on request

Part Numbers: "no flame" acc. to glow-wire test

No. of poles	302-N	302-N-HDS	Length	PU
2	12.820.044.EN6	32.820.044.EN6	15,00	2000
4	14.820.044.EN6	34.820.044.EN6	31,00	1000
5	15.820.044.EN6		39,00	1000
12	22.820.044.EN6	42.820.044.EN6	94,00	50

further number of poles on request

General Information

Pitch	8 mm
No. of poles	1 - 12
Areas of application	For household appliances or lightning applications and similar electrical equipment.

Technical Data

Clamping Range	*solid / flexible / AWG*		
without wire protector	0,5 - 4 mm² / 0,5 - 2,5 mm² / 20 - 12 AWG		
with wire protector	0,34 - 2,5 mm² / 0,34 - 2,5 mm² / 22 - 14 AWG		
Rated Cross Section	1,5 mm²		
Wire Stripping Length	5 mm ± 0,5 mm		
Overvoltage Category	III	III	II
Pollution Severity Level	3	2	2
Rated Voltage	250 V	320 V	320 V
Rated Impulse Voltage	4 kV	4 kV	4 kV
Rated Insulation Voltage	250 V acc. to EN 60998-1		
Rated Current	17,5 A		
Torque	0,4 Nm		

Material

Moulding	PA, natural, V-2 (PA, natural, V-0) Details in brackets for "no flame" products
Comparative Tracking Index	CTI ≥ 600
Insulating Group	I
Temperature Range	-40°C up to 100°C
Terminal Body	Nickel plated brass
Screw	M2,6; zinc plated steel, blue passivated
Wire protector	Stainless steel strip

Approvals

	Current	Voltage	Group	AWG	Nm
	10	300	B,D	20 - 12	0,4
	20 10	300 300	B D,E	26 - 12 26 - 12	0,4 [1] 0,4 [1]

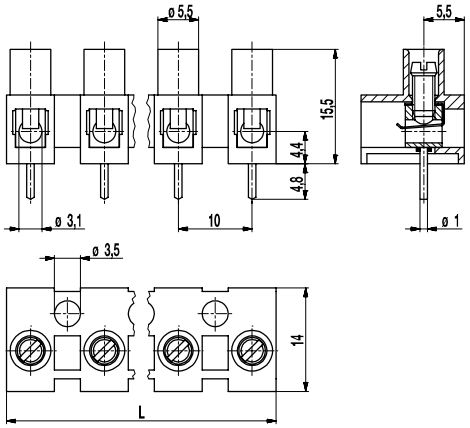
	Current	Voltage	mm²
	17,5	250	1,5

[1] 302-N-HDS: 26 - 14 AWG

Options / Accessories

- Marking options on the screw guides
- Marking strips BST-302
- Jumper 302-J
- Moulding made of special polyamide for e.g. household appliances
- Screws made out of brass
- Up to 26 poles possible
- Socket with blind hole

Socket terminal strip
322-G(-DS)
Screw connection, with solder pin



The socket terminal strip 322-G is available in 10 mm pitch with 1- to 12-pole design and can be easily stripped to the desired number of poles.
The flexible polyamide moulding can even be mounted on curved surfaces.

Due to large pitch and moulding shape, this version is also well suited for applications using higher voltages. The 322-G version features reliable contact protection and long clearance and creepage distances. The captive screws are vibration-proof and secured against self-loosening. In addition to be soldered in with solder pins, the terminal strips can be screw-mounted onto the PCB.

The wire protector of the “DS”-version reliably prevents damage to multi-wire flexible conductors by the turning screw.
The terminal lead insertion depth is not limited.

Part Numbers

No. of poles	322-G	322-G-DS	Length	PU
2	12.821.003	32.821.003	17,00	250
3	13.821.003	33.821.003	27,00	250
4	14.821.003	34.821.003	37,00	200
5	15.821.003	35.821.003	47,00	100
6	16.821.003	36.821.003	57,00	100
7	17.821.003	37.821.003	67,00	50
8	18.821.003	38.821.003	77,00	50
9	19.821.003	39.821.003	87,00	50
10	20.821.003	40.821.003	97,00	50
11	21.821.003	41.821.003	107,00	50
12	22.821.003	42.821.003	117,00	50

General Information

Pitch	10 mm
No. of poles	2 - 12

Technical Data

Clamping Range	*solid / flexible / AWG*		
without wire protector	1 - 6 mm² / 1 - 2,5 mm² / 16 - 12 AWG		
with wire protector	0,75 - 4 mm² / 0,75 - 2,5 mm² / 18 - 12 AWG		
Rated Cross Section	2,5 mm²		
Wire Stripping Length	8 mm ± 0,5 mm		
Overvoltage Category	III	III	II
Pollution Severity Level	3	2	2
Rated Voltage	1000 V	1000 V	1000 V
Rated Impulse Voltage	8 kV	8 kV	6 kV
Rated Insulation Voltage	750 V acc. to EN 60998-1		
Rated Current	15 A		
Torque	0,5 Nm		

Material

Moulding	PA, natural, V-2
Comparative Tracking Index	CTI ≥ 600
Insulating Group	I
Temperature Range	-40°C up to 100°C
Terminal Body	Tin plated brass
Screw	M3, zinc plated steel, blue passivated
Solder pin	ø 1 mm; tin plated copper
Wire protector	Tin plated tin bronze

Approvals

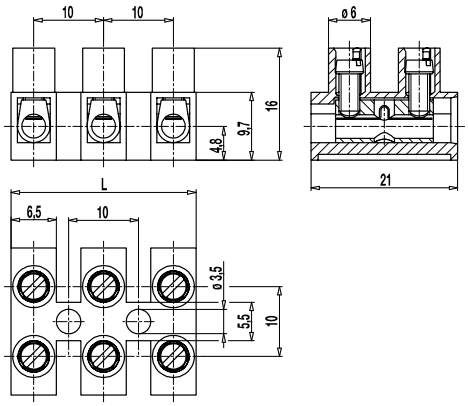
	Current	Voltage	Group	AWG	Nm
	20	300	B	18 - 12	0,51
	20	300	B	26-10 [1]	0,51
	10	300	D,E	26-10 [1]	0,51

[1] for 322-G-DS: 26 - 12 AWG

Options / Accessories

- Marking strips BST-322
- Jumper 322-J
- Longer solder pins up to 75 mm
- Large conductor space up to 4 mm²

Socket terminal strip
323(-HDS)
Screw connection



The socket terminal strip 323 is available in 10 mm pitch with 1- to 12-pole design and can be easily stripped to the desired number of poles.
The flexible polyamide moulding can even be mounted on curved surfaces.

The wire protector of the “HDS”-version reliably prevents damage to multi-wire flexible conductors by the turning screw.

Part Numbers

No. of poles	323	323-HDS	Length	PU
1	11.822.010	31.822.008	8,00	2500
2	12.822.010	32.822.008	18,00	1000
3	13.822.010	33.822.008	28,00	1000
4	14.822.010	34.822.008	38,00	800
5	15.822.010	35.822.008	48,00	500
6	16.822.010	36.822.008	58,00	100
7	17.822.010	37.822.008	68,00	70
8	18.822.010	38.822.008	78,00	70
9	19.822.010	39.822.008	88,00	60
10	20.822.010	40.822.008	98,00	50
11	21.822.010	41.822.008	108,00	50
12	22.822.010	42.822.008	117,00	50

Part Numbers: "no flame" acc. to glow-wire test

No. of poles	323	323-HDS	Length	PU
1	11.822.038.EN6	31.822.038.EN6	8,00	2500
2	12.822.038.EN6	32.822.038.EN6	18,00	1000
3	13.822.038.EN6	33.822.038.EN6	28,00	1000
4	14.822.038.EN6	34.822.038.EN6	38,00	800
5	15.822.038.EN6	35.822.038.EN6	48,00	500
6	16.822.038.EN6	36.822.038.EN6	58,00	100
7	17.822.038.EN6	37.822.038.EN6	68,00	70
8	18.822.038.EN6	38.822.038.EN6	78,00	70
9	19.822.038.EN6	39.822.038.EN6	88,00	60
10	20.822.038.EN6	40.822.038.EN6	98,00	50
11	21.822.038.EN6	41.822.038.EN6	108,00	50
12	22.822.038.EN6	42.822.038.EN6	117,00	50

General Information

Pitch	10 mm
No. of poles	1 - 12
Areas of application	For household appliances or lightning applications and similar electrical equipment.

Technical Data

Clamping Range	*solid / flexible / AWG*		
without wire protector	0,75 - 6 mm² / 0,75 - 4 mm² / 18 - 10 AWG		
with wire protector	0,5 - 4 mm² / 0,5 - 2,5 mm² / 20 - 12 AWG		
Rated Cross Section	2,5 mm²		
Wire Stripping Length	6,5 mm ± 0,5 mm		
Overvoltage Category	III	III	II
Pollution Severity Level	3	2	2
Rated Voltage	400 V	630 V	1000 V
Rated Impulse Voltage	6 kV	6 kV	6 kV
Rated Insulation Voltage	450 V acc. to EN 60998-1		
Rated Current	24 A		
Torque	0,5 Nm		

Material

Moulding	PA, natural, V-2 (PA, white, V-0) Details in brackets for "no flame" products
Comparative Tracking Index	CTI ≥ 600
Insulating Group	I
Temperature Range	-40°C up to 100°C
Terminal Body	Nickel plated brass
Screw	M3; zinc plated steel, blue passivated
Wire protector	Stainless steel strip

Approvals

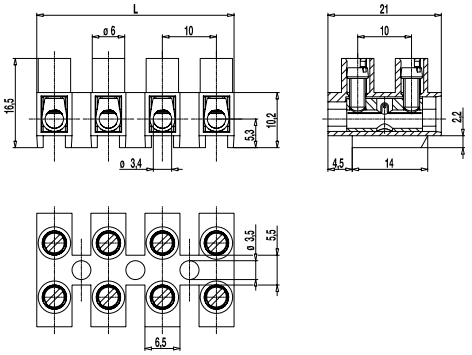
	Current	Voltage	Group	AWG	Nm
	30	300	B	22 - 10	0,51
	10	300	D	22 - 10	0,51
	25	300	B	26 - 10	0,51
	10	300	D,E	26 - 10	0,51

	Current	Voltage	mm²
	24	450	2,5

Options / Accessories

- Marking options on and between the screw guides
- Marking strips BST-323
- Jumper 323-J
- Moulding made of special polyamide for e.g. household appliances
- Crosshead screws
- Cover caps A-323 und base plate B-323 for additional contact protection
- Integrated wire stop (323-V(-HDS))

Socket terminal strip
323-FU-16,5(-HDS)
Screw connection, with 16,5 mm raised base



The socket terminal strip 323-FU-16,5 with raised foot is available in 10 mm pitch and with 1 to 12 poles.
The raised foot increases the creepage distance between terminal body and mounting surface.
The flexible polyamide moulding can even be mounted on curved surfaces.

The wire protector of the “HDS”-version reliably prevents damage to multi-wire flexible conductors by the turning screw.

Part Numbers

No. of poles	323-FU-16,5	323-FU-16,5-HDS	Length	PU
1	11.822.048	31.822.048	8,00	5000
2	12.822.048	32.822.048	18,00	1000
3	13.822.048	33.822.048	28,00	1000
4	14.822.048	34.822.048	38,00	500
5	15.822.048	35.822.048	48,00	500
6	16.822.048	36.822.048	58,00	100
7	17.822.048	37.822.048	68,00	70
8	18.822.048	38.822.048	78,00	70
9	19.822.048	39.822.048	88,00	60
10	20.822.048	40.822.048	98,00	50
11	21.822.048	41.822.048	108,00	50
12	22.822.048	42.822.048	117,00	50

General Information

Pitch	10 mm
No. of poles	1 - 12
Areas of application	For lightning applications and similar electrical equipment.

Technical Data

Clamping Range	*solid / flexible / AWG*		
without wire protector	0,75 - 6 mm² / 0,75 - 4 mm² / 18 - 10 AWG		
with wire protector	0,5 - 4 mm² / 0,5 - 2,5 mm² / 20 - 12 AWG		
Rated Cross Section	2,5 mm²		
Wire Stripping Length	6,5 mm ± 0,5 mm		
Overvoltage Category	III	III	II
Pollution Severity Level	3	2	2
Rated Voltage	630 V	630 V	1000 V
Rated Impulse Voltage	6 kV	6 kV	6 kV
Rated Insulation Voltage	750 V acc. to EN 60998-1		
Rated Current	24 A		
Torque	0,5 Nm		

Material

Moulding	PA, natural, V-2
Comparative Tracking Index	CTI ≥ 600
Insulating Group	I
Temperature Range	-40°C up to 100°C
Terminal Body	Tin plated brass
Screw	M3; zinc plated steel, blue passivated
Wire protector	Stainless steel strip

Approvals

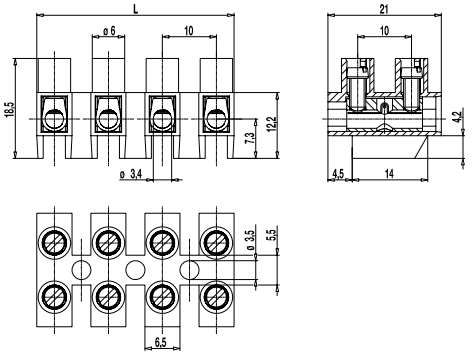
	Current	Voltage	Group	AWG	Nm
	30	300	B	22 - 10	0,51
	30	150	C	22 - 10	0,51
	10	300	D	22 - 10	0,51
	25	300	B	26 - 10	0,51
	25	150	C	26 - 10	0,51
	10	300	D,E	26 - 10	0,51

	Current	Voltage	mm²
	24	750	2,5

Options / Accessories

- Marking options on and between the screw guides
- Marking strips BST-323
- Jumper 323-J
- Moulding made of special polyamide for e.g. household appliances
- Screws made out of brass
- Crosshead screws
- Cover caps A-323 und base plate B-323 for additional contact protection
- Integrated wire stop (323-V-FU-16,5(-HDS))

Socket terminal strip
323-FU-18,5(-HDS)
Screw connection, with 18,5 mm raised base



The socket terminal strip 323-FU-18,5 with tall foot is available in 10 mm pitch and with 1 to 12 poles.
The raised foot increases the creepage distance between terminal body and mounting surface. This terminal can be used for applications with higher voltages without an additional insulating pad.
The flexible polyamide moulding can even be mounted on curved surfaces.

The wire protector of the “HDS”-version reliably prevents damage to multi-wire flexible conductors by the turning screw.

Part Numbers

No. of poles	323-FU-18,5	323-FU-18,5-HDS	Length	PU
1	11.822.049	31.822.049	8,00	3000
2	12.822.049	32.822.049	18,00	1000
3	13.822.049	33.822.049	28,00	1000
4	14.822.049	34.822.049	38,00	500
5	15.822.049	35.822.049	48,00	500
6	16.822.049	36.822.049	58,00	80
7	17.822.049	37.822.049	68,00	65
8	18.822.049	38.822.049	78,00	50
9	19.822.049	39.822.049	88,00	50
10	20.822.049	40.822.049	98,00	40
11	21.822.049	41.822.049	108,00	40
12	22.822.049	42.822.049	117,00	40

Part Numbers: "no flame" acc. to glow-wire test

No. of poles	323-FU-18,5	323-FU-18,5-HDS	Length	PU
3		33.822.021.EN6	28,00	1000
12		42.822.021.EN6	117,00	40

further number of poles on request

General Information

Pitch	10 mm
No. of poles	1 - 12
Areas of application	For lightning applications and similar electrical equipment.

Technical Data

Clamping Range	*solid / flexible / AWG*		
without wire protector	0,75 - 6 mm² / 0,75 - 4 mm² / 18 - 10 AWG		
with wire protector	0,5 - 4 mm² / 0,5 - 2,5 mm² / 20 - 12 AWG		
Rated Cross Section	2,5 mm²		
Wire Stripping Length	6,5 mm ± 0,5 mm		
Overvoltage Category	III	III	II
Pollution Severity Level	3	2	2
Rated Voltage	630 V	1000 V	1000 V
Rated Impulse Voltage	8 kV	8 kV	6 kV
Rated Insulation Voltage	750 V acc. to EN 60998-1		
Rated Current	24 A		
Torque	0,5 Nm		

Material

Moulding	PA, natural, V-2 (PA, white, V-0) Details in braquets for "no flame" products
Comparative Tracking Index	CTI ≥ 600
Insulating Group	I
Temperature Range	-40°C up to 100°C
Terminal Body	Nickel plated brass
Screw	M3; zinc plated steel, blue passivated
Wire protector	Stainless steel strip

Approvals

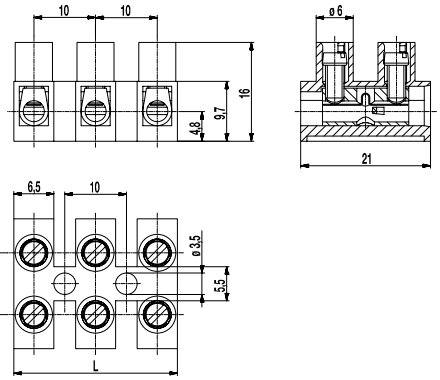
	Current	Voltage	Group	AWG	Nm
	30	300	B	22 - 10	0,51
	10	300	D	22 - 10	0,51
	25	300	B,C,D,E	26 - 10	0,51
	5	600	D,E	26 - 10	0,51

	Current	Voltage	mm²
	24	750	2,5

Options / Accessories

- Marking options on and between the screw guides
- Marking strips BST-323
- Jumper 323-J
- Moulding made of special polyamide for e.g. household appliances
- Screws made out of brass
- Crosshead screws
- Cover caps A-323 und base plate B-323 for additional contact protection
- Integrated wire stop (323-V-FU-18,5(-HDS))

Socket terminal strip
323-V(-HDS)
Screw connection, integrated wire stop



General Information

Pitch	10 mm
No. of poles	1 - 12
Areas of application	For household appliances or lightning applications and similar electrical equipment.

Technical Data

Clamping Range	*solid / flexible / AWG*		
without wire protector	0,75 - 6 mm² / 0,75 - 4 mm² / 18 - 10 AWG		
with wire protector	0,5 - 4 mm² / 0,5 - 2,5 mm² / 20 - 12 AWG		
Rated Cross Section	2,5 mm²		
Wire Stripping Length	5 mm ± 0,5 mm		
Overvoltage Category	III	III	II
Pollution Severity Level	3	2	2
Rated Voltage	400 V	630 V	1000 V
Rated Impulse Voltage	6 kV	6 kV	6 kV
Rated Insulation Voltage	450 V acc. to EN 60998-1		
Rated Current	24 A		
Torque	0,5 Nm		

Material

Moulding	PA, natural, V-2 (PA, white, V-0) Details in brackets for "no flame" products
Comparative Tracking Index	CTI ≥ 600
Insulating Group	I
Temperature Range	-40°C up to 100°C
Terminal Body	Nickel plated brass
Screw	M3; zinc plated steel, blue passivated
Wire protector	Stainless steel strip

Approvals

	Current	Voltage	Group	AWG	Nm
	30 10	300 300	B D	22 - 10 22 - 10	0,51 0,51
	25 10	300 300	B D,E	26 - 10 26 - 10	0,51 0,51

	Current	Voltage	mm²
	24	450	2,5

Part Numbers

No. of poles	323-V	323-V-HDS	Length	PU
1	11.822.010	31.822.008	8,00	2500
2	12.822.010	32.822.008	18,00	1000
3	13.822.010	33.822.008	28,00	1000
4	14.822.010	34.822.008	38,00	800
5	15.822.010	35.822.008	48,00	500
6	16.822.010	36.822.008	58,00	100
7	17.822.010	37.822.008	68,00	70
8	18.822.010	38.822.008	78,00	70
9	19.822.010	39.822.008	88,00	60
10	20.822.010	40.822.008	98,00	50
11	21.822.010	41.822.008	108,00	50
12	22.822.010	42.822.008	117,00	50

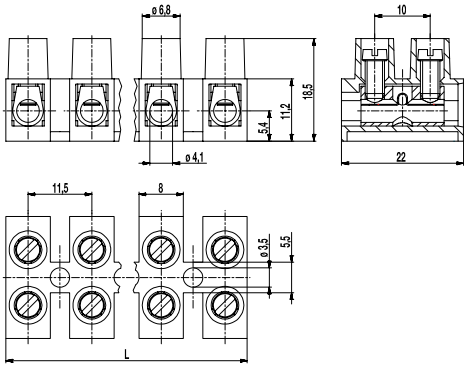
Part Numbers: "no flame" acc. to glow-wire test

No. of poles	323-V	323-V-HDS	Length	PU
1	11.822.038.EN6	31.822.038.EN6	8,00	2500
2	12.822.038.EN6	32.822.038.EN6	18,00	1000
3	13.822.038.EN6	33.822.038.EN6	28,00	1000
4	14.822.038.EN6	34.822.038.EN6	38,00	800
5	15.822.038.EN6	35.822.038.EN6	48,00	500
6	16.822.038.EN6	36.822.038.EN6	58,00	100
7	17.822.038.EN6	37.822.038.EN6	68,00	70
8	18.822.038.EN6	38.822.038.EN6	78,00	70
9	19.822.038.EN6	39.822.038.EN6	88,00	60
10	20.822.038.EN6	40.822.038.EN6	98,00	50
11	21.822.038.EN6	41.822.038.EN6	108,00	50
12	22.822.038.EN6	42.822.038.EN6	117,00	50

Options / Accessories

- Consecutive numbering
- Special marking accord. drawing
- Self-adhesive marking strip
- Moulding made of special polyamide for e.g. household appliances
- Crosshead screws
- Cover caps A-323 und base plate B-323 for additional contact protection

Socket terminal strip
324(-HDS)
Screw connection



The socket terminal strip 324 is available in 11,5 mm pitch with 1- to 12-pole design and can be easily stripped to the desired number of poles.
One fixing hole is located between every two poles.
The flexible polyamide moulding can even be mounted on curved surfaces.

The wire protector of the “HDS”-version reliably prevents damage to multi-wire flexible conductors by the turning screw.

Part Numbers

No. of poles	324	324-HDS	Length	PU
1	11.823.003	31.823.012	9,00	3000
2	12.823.003	32.823.012	21,00	1000
3	13.823.003	33.823.012	32,00	800
4	14.823.003	34.823.012	44,00	500
5	15.823.003	35.823.012	55,00	250
6	16.823.003	36.823.012	67,00	100
7	17.823.003	37.823.012	78,00	75
8	18.823.003	38.823.012	90,00	75
9	19.823.003	39.823.012	101,00	50
10	20.823.003	40.823.012	113,00	50
11	21.823.003	41.823.012	124,00	50
12	22.823.003	42.823.012	135,00	50

further number of poles on request

Part Numbers: "no flame" acc. to glow-wire test

No. of poles	324	324-HDS	Length	PU
4		34.823.022.EN6	44,00	500
12		42.823.022.EN6	135,00	50

further number of poles on request

General Information

Pitch	11,5 mm
No. of poles	1 - 12
Areas of application	For lightning applications and similar electrical equipment.

Technical Data

Clamping Range	*solid / flexible / AWG*		
without wire protector	1 - 10 mm² / 1 - 6 mm² / 16 - 10 AWG		
with wire protector	0,75 - 6 mm² / 0,75 - 4 mm² / 18 - 12 AWG		
Rated Cross Section	4 mm²		
Wire Stripping Length	7 mm ± 0,5 mm		
Overvoltage Category	III	III	II
Pollution Severity Level	3	2	2
Rated Voltage	320 V	500 V	800 V
Rated Impulse Voltage	6 kV	6 kV	6 kV
Rated Insulation Voltage	450 V acc. to EN 60998-1		
Rated Current	32 A		
Torque	0,8 Nm		

Material

Moulding	PA, natural, V-2 (PA, white, V-0) Details in braquets for "no flame" products
Comparative Tracking Index	CTI ≥ 600
Insulating Group	I
Temperature Range	-40°C up to 100°C
Terminal Body	Nickel plated brass
Screw	M3,5; zinc plated steel, blue passivated
Wire protector	Stainless steel strip

Approvals

	Current	Voltage	Group	AWG	Nm
	35	300	B	22 - 8	0,8
	10	300	D	22 - 8	0,8
	40	300	B	22-10 [1]	0,8
	10	300	D,E	22-10 [1]	0,8

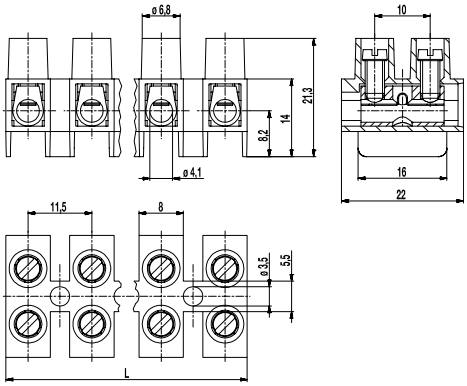
	Current	Voltage	mm²
	32	450	4,0

[1] 26 - 10 AWG for 324-HDS

Options / Accessories

- Marking options on and between the screw guides
- Marking strips BST-324
- Jumper 324-J
- Moulding made of special polyamide for e.g. household appliances
- Screws made out of brass
- Crosshead screws
- Sockets with blind hole
- Up to 24 poles possible

Socket terminal strip
324-FU(-HDS)
Screw connection, with raised base



The socket terminal strip 324-FU with a pitch of 11,5 mm is available in 1- to 12-pole design and can easily be cut into the required number of poles.
The raised base of the FU-Type extends the creepage distance to the ground to 12,7 mm which allows 600 V in accordance with CSA without an additional insulating base.
The flexible polyamide moulding can even be mounted on curved surfaces.

The wire protector of the “HDS”-version reliably prevents damage to multi-wire flexible conductors by the turning screw.

Part Numbers

No. of poles	324-FU	324-FU-HDS	Length	PU
1	11.823.013	31.823.013	9,00	3000
2	12.823.013	32.823.013	21,00	1000
3	13.823.013	33.823.013	32,00	500
4	14.823.013	34.823.013	44,00	500
5	15.823.013	35.823.013	55,00	500
6	16.823.013	36.823.013	67,00	100
7	17.823.013	37.823.013	78,00	70
8	18.823.013	38.823.013	90,00	50
9	19.823.013	39.823.013	101,00	50
10	20.823.013	40.823.013	113,00	50
11	21.823.013	41.823.013	124,00	50
12	22.823.013	42.823.013	135,00	50

General Information

Pitch	11,5 mm
No. of poles	1 - 12
Areas of application	For lightning applications and similar electrical equipment.

Technical Data

Clamping Range	*solid / flexible / AWG*		
without wire protector	1 - 10 mm² / 1 - 6 mm² / 16 - 10 AWG		
with wire protector	0,75 - 6 mm² / 0,75 - 4 mm² / 18 - 12 AWG		
Rated Cross Section	4 mm²		
Wire Stripping Length	7 mm ± 0,5 mm		
Overvoltage Category	III	III	II
Pollution Severity Level	3	2	2
Rated Voltage	800 V	1000 V	1000 V
Rated Impulse Voltage	8 kV	8 kV	6 kV
Rated Insulation Voltage	750 V acc. to EN 60998-1		
Rated Current	32 A		
Torque	0,8 Nm		

Material

Moulding	PA, natural, V-2
Comparative Tracking Index	CTI ≥ 600
Insulating Group	I
Temperature Range	-40°C up to 100°C
Terminal Body	Tin plated brass
Screw	M3,5; zinc plated steel, blue passivated
Wire protector	Stainless steel strip

Approvals

	Current	Voltage	Group	AWG	Nm
	35	300	B	14 - 8	0,8
	10	300	D	14 - 8	0,8
	40	300	B,C	22 - 10	0,8 [1]
	5	600	D,E	22 - 10	0,8 [1]

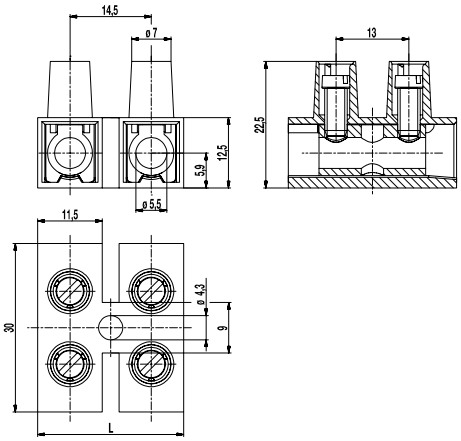
	Current	Voltage	mm²
	32	750	4,0

[1] for 324-FU-HDS does apply 26 - 10 AWG

Options / Accessories

- Marking options on the screw guides
- Marking strips BST-324
- Jumper 324-J
- Moulding made of special polyamide for e.g. household appliances
- Screws made out of brass
- Crosshead screws
- Sockets with blind hole

Socket terminal strip
326(-HDS)
Screw connection



The socket terminal strip 326 is available in 14,5 mm pitch with 1- to 12-pole design and can be easily stripped to the desired number of poles.
This version has a large terminal space and a creepage distance of more than 7 mm measured from terminal body to mounting surface. That is why this terminal strip is suitable for voltages up to 750 V.

One fixing hole is located between every two poles.
The flexible polyamide moulding can even be mounted on curved surfaces.

The wire protector of the “HDS”-version reliably prevents damage to multi-wire flexible conductors by the turning screw.

Part Numbers

No. of poles	326	326-HDS	Length	PU
1	11.824.006.EN6	31.824.006.EN6	14,50	1000
2	12.824.006.EN6	32.824.006.EN6	29,00	500
3	13.824.006.EN6	33.824.006.EN6	43,50	400
4	14.824.006.EN6	34.824.006.EN6	58,00	250
5	15.824.006.EN6	35.824.006.EN6	72,50	200
6	16.824.006.EN6	36.824.006.EN6	87,00	200
7	17.824.006.EN6	37.824.006.EN6	101,50	160
8	18.824.006.EN6	38.824.006.EN6	116,00	160
9	19.824.006.EN6	39.824.006.EN6	130,50	130
10	20.824.006.EN6	40.824.006.EN6	145,00	100
11	21.824.006.EN6	41.824.006.EN6	159,50	100
12	22.824.006.EN6	42.824.006.EN6	171,00	100

General Information

Pitch	14,5 mm
No. of poles	1 - 12
Areas of application	For lightning applications and similar electrical equipment.

Technical Data

Clamping Range	*solid / flexible / AWG*		
without wire protector	2,5 - 16 mm² / 2,5 - 10 mm² / 14 - 8 AWG		
with wire protector	1,5 - 10 mm² / 1,5 - 6 mm² / 16 - 8 AWG		
Rated Cross Section	10 mm²		
Wire Stripping Length	9 mm ± 1 mm		
Overvoltage Category	III	III	II
Pollution Severity Level	3	2	2
Rated Voltage	500 V	630 V	1000 V
Rated Impulse Voltage	6 kV	6 kV	6 kV
Rated Insulation Voltage	750 V acc. to EN 60998-1		
Rated Current	57 A		
Torque	1,2 Nm		

Material

Moulding	PA, white, V-0
Comparative Tracking Index	CTI ≥ 600
Insulating Group	I
Temperature Range	-40°C up to 100°C
Terminal Body	Nickel plated brass
Screw	M4; zinc plated steel, blue passivated
Wire protector	Stainless steel strip

Approvals

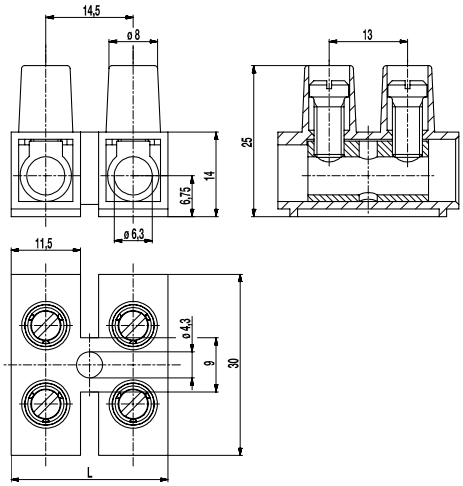
	Current	Voltage	Group	AWG	Nm
	50	300	B	14 - 8	1,13
	50	150	C	14 - 8	1,13
	10	300	D	14 - 8	1,13
	55	300	B	14 - 8	1,2
	55	150	C	14 - 8	1,2
	10	300	D,E	14 - 8	1,2

	Current	Voltage	mm²
	57	750	10

Options / Accessories

- Marking options on and between the screw guides
- Marking strips BST-326
- Jumper 327-J

Socket terminal strip
327(-HDS)
Screw connection



The socket terminal strip 327 is available in 14,5 mm pitch with 1- to 12-pole design and can be easily stripped to the desired number of poles.
Due to the M5 screw, the socket hole diameter of 6,3 mm and a creepage distance of more than 9 mm between terminal body and mounting surface, this version is well suited for large cross-sections, high currents and voltages.

One fixing hole is located between every two poles.
The flexible polyamide moulding can even be mounted on curved surfaces.

The wire protector of the “DS”-version reliably prevents damage to multi-wire flexible conductors by the turning screw.

Part Numbers

No. of poles	327	327-HDS	Length	PU
1	11.825.001.EN6	31.825.001.EN6	14,50	1000
2	12.825.001.EN6	32.825.001.EN6	29,00	500
3	13.825.001.EN6	33.825.001.EN6	43,50	250
4	14.825.001.EN6	34.825.001.EN6	58,00	250
5	15.825.001.EN6	35.825.001.EN6	72,50	200
6	16.825.001.EN6	36.825.001.EN6	87,00	180
7	17.825.001.EN6	37.825.001.EN6	101,50	160
8	18.825.001.EN6	38.825.001.EN6	116,00	160
9	19.825.001.EN6	39.825.001.EN6	130,50	130
10	20.825.001.EN6	40.825.001.EN6	145,00	100
11	21.825.001.EN6	41.825.001.EN6	159,50	100
12	22.825.001.EN6	42.825.001.EN6	171,00	90

General Information

Pitch	14,5 mm
No. of poles	1 - 12
Areas of application	For lightning applications and similar electrical equipment.

Technical Data

Clamping Range	*solid / flexible / AWG*		
without wire protector	4 - 16 mm² / 4 - 16 mm² / 12 - 4 AWG		
with wire protector	4 - 16 mm² / 4 - 10 mm² / 12 - 6 AWG		
Rated Cross Section	16 mm² [1]		
Wire Stripping Length	9 mm ± 1 mm		
Overvoltage Category	III	III	II
Pollution Severity Level	3	2	2
Rated Voltage	630 V	630 V	1000 V
Rated Impulse Voltage	6 kV	6 kV	6 kV
Rated Insulation Voltage	750 V acc. to EN 60998-1		
Rated Current	76 A		
Torque	2 Nm		

Material

Moulding	PA, white, V-0
Comparative Tracking Index	CTI ≥ 600
Insulating Group	I
Temperature Range	-40°C up to 100°C
Terminal Body	Nickel plated brass
Screw	M5; zinc plated steel, blue passivated
Wire protector	Stainless steel strip

Approvals

	Current	Voltage	Group	AWG	Nm
	80	300	B,C	14 - 4	1,8
	80	300	B	14 - 6	1,8
	80	150	C	14 - 6	1,8
	10	300	D,E	14 - 6	1,8

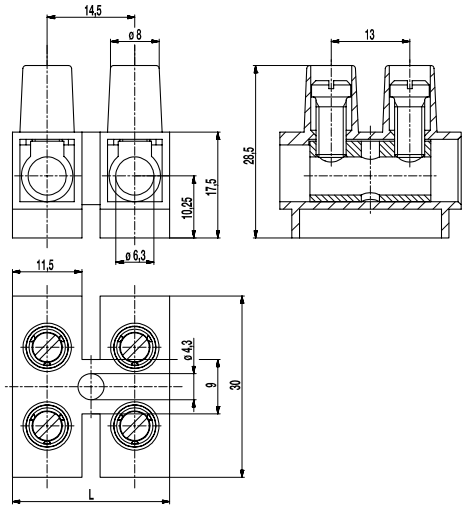
	Current	Voltage	mm²
	76	750	16

Options / Accessories

- Marking options on and between the screw guides
- Marking strips BST-327
- Jumper 327-J
- Version with raised base: please see 327-FU

[1] multi-wire

Socket terminal strip
327-FU(-HDS)
Screw connection, with raised base



The socket terminal strip 327-FU with raised base and a pitch of 14,5 mm is available in 1 to 12 pole design.
The raised base extends the creepage distance to the ground which allows 600 V in accordance with UL and CSA regulations without an additional insulating base.

One fixing hole is located between every two poles.
The flexible polyamide moulding can even be mounted on curved surfaces.

The wire protector of the “HDS”-version reliably prevents damage to multi-wire flexible conductors by the turning screw.

Part Numbers

No. of poles	327-FU	327-FU-HDS	Length	PU
1	11.825.004.EN6	31.825.004.EN6	14,50	1000
2	12.825.004.EN6	32.825.004.EN6	29,00	500
3	13.825.004.EN6	33.825.004.EN6	43,50	250
4	14.825.004.EN6	34.825.004.EN6	58,00	250
5	15.825.004.EN6	35.825.004.EN6	72,50	200
6	16.825.004.EN6	36.825.004.EN6	87,00	100
7	17.825.004.EN6	37.825.004.EN6	101,50	100
8	18.825.004.EN6	38.825.004.EN6	116,00	160
9	19.825.004.EN6	39.825.004.EN6	130,50	70
10	20.825.004.EN6	40.825.004.EN6	145,00	100
11	21.825.004.EN6	41.825.004.EN6	159,50	100
12	22.825.004.EN6	42.825.004.EN6	171,00	50

General Information

Pitch	14,5 mm
No. of poles	1 - 12
Areas of application	For lightning applications and similar electrical equipment.

Technical Data

Clamping Range	*solid / flexible / AWG*		
without wire protector	4 - 16 mm² / 4 - 16 mm² / 12 - 4 AWG		
with wire protector	4 - 16 mm² / 4 - 10 mm² / 12 - 6 AWG		
Rated Cross Section	16 mm² [1]		
Wire Stripping Length	9 mm ± 1 mm		
Overvoltage Category	III	III	II
Pollution Severity Level	3	2	2
Rated Voltage	1000 V	1000 V	1000 V
Rated Impulse Voltage	8 kV	8 kV	6 kV
Rated Insulation Voltage	750 V acc. to EN 60998-1		
Rated Current	76 A		
Torque	2 Nm		

Material

Moulding	PA, white, V-0
Comparative Tracking Index	CTI ≥ 600
Insulating Group	I
Temperature Range	-40°C up to 100°C
Terminal Body	Nickel plated brass
Screw	M5; zinc plated steel, blue passivated
Wire protector	Stainless steel strip

Approvals

	Current	Voltage	Group	AWG	Nm
	65	600	B,C	14 - 6	1,8
	80	600	B,C,D,E	14 - 6	1,8

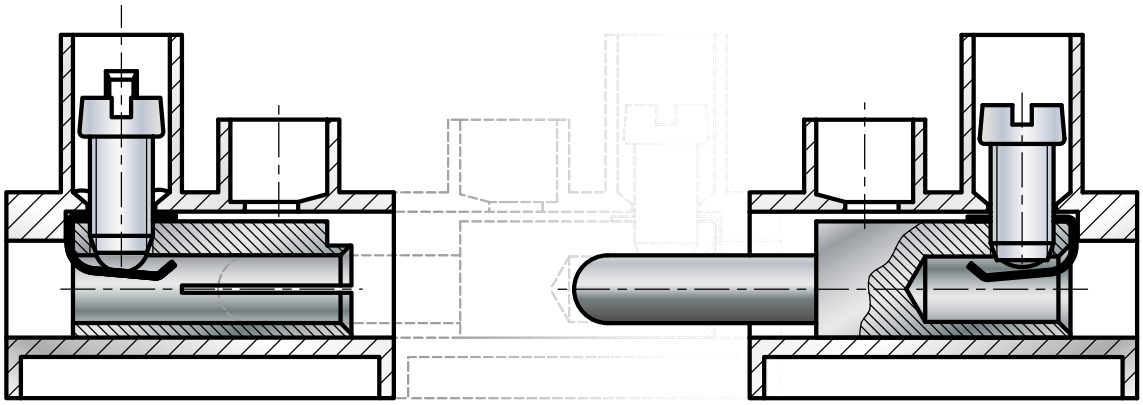
	Current	Voltage	mm²
	76	750	16

Options / Accessories

- Marking options on and between the screw guides
- Marking strips BST-327
- Jumper 327-J

[1] multi-wire

Plug-in terminal strips



The following pages list our range of plug-in terminal strips.
Pre-wiring of various equipment components ensures quick and easy connection during final assembly and prevents confusing the wires.

Various sizes and contact systems are available for the respective application.

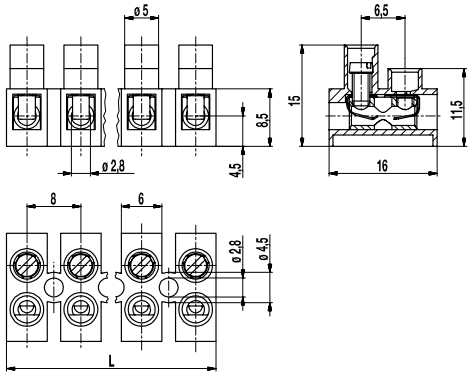
All –S and –NS types can be equipped with leading plugs and sockets for the earth lead upon request. That way, the protective earth is in contact first when plugging and last when unplugging.

Plug-in connector combinations are protected against accidental contact at their wire entrances. The user is responsible to take the appropriate measures to prevent false or offset insertion of multi-pole plug-in connectors.

Plug-in terminal strip

302-FB(-DS)

Screw connection & socket with clamping spring



The plug-in connector strip 302-FB is available in 8 mm pitch with 2 to 12 poles. It is well suited for applications where space is limited.
It has one screw connection per pole and one plug-in connection for a terminal strip with pins.

Plug-in terminal strips 302-SV or 302-SVG create a plug connection where both lead terminals are located parallel to the PCB. The contact pressure is applied by a stainless-steel spring.

The wire protector of the “DS”-version reliably prevents damage to multi-wire flexible conductors by the turning screw.
These terminals strips can be screw-mounted on a substrate.

Part Numbers

No. of poles	302-FB	302-FB-DS	Length	PU
2	72.820.029	84.820.029	15,00	250
3	73.820.029	85.820.029	23,00	250
4	74.820.029	86.820.029	31,00	250
5	75.820.029	87.820.029	39,00	80
6	76.820.029	88.820.029	47,00	80
7	77.820.029	89.820.029	55,00	50
8	78.820.029	90.820.029	63,00	50
9	79.820.029	91.820.029	71,00	50
10	80.820.029	92.820.029	79,00	40
11	81.820.029	93.820.029	87,00	40
12	82.820.029	94.820.029	94,00	40

General Information

Pitch	8 mm
No. of poles	2 - 12
Usable with	302-SV(-DS), 302-SVG
Areas of application	Applications that require to easily open and close not energised circuits.

Technical Data

Clamping Range	*solid / flexible / AWG*		
without wire protector	0,5 - 4 mm² / 0,5 - 2,5 mm² / 20 - 12 AWG		
with wire protector	0,34 - 2,5 mm² / 0,34 - 1,5 mm² / 22 - 14 AWG		
Rated Cross Section	1,5 mm²		
Wire Stripping Length	5 mm ± 0,5 mm		
Overvoltage Category	III	III	II
Pollution Severity Level	3	2	2
Rated Voltage	160 V	160 V	320 V
Rated Impulse Voltage	2,5 kV	2,5 kV	2,5 kV
Rated Insulation Voltage	130 V acc. to EN 60998-1		
Rated Current	6 A		
Torque	0,4 Nm		
Other specifications	Rated values apply to use in combination with 302-SV(-DS) and without insulated substrates.		

Material

Moulding	PA, natural, V-2
Comparative Tracking Index	CTI ≥ 600
Insulating Group	I
Temperature Range	-40°C up to 100°C
Terminal Body	Nickel plated brass
Screw	M2,6; zinc plated steel, blue passivated
Wire protector	Tin plated tin bronze
Spring	Stainless steel strip

Approvals

	Current	Voltage	Group	AWG	Nm
	6	300	B,D	20 - 14	0,4 [1]
	6	300	B,D,E	26 - 12	0,4 [1]

[1] When mounted on a suitable insulated surface, on standoffs or equivalent means.

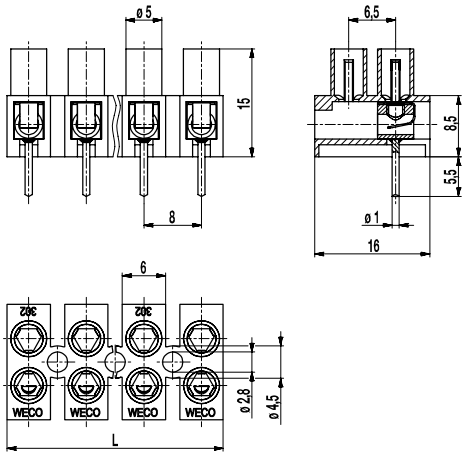
Options / Accessories

- Marking options on the screw guides
- Marking strips BST-302
- Jumper 302-J
- Moulding made of special polyamide for e.g. household appliances

Plug-in terminal strip

302-FBG

Socket with clamping spring, with solder pin



The plug-in terminal strip 302-FBG is equipped with a solder pin and designed for the use on PCBs. Due to the small 8 mm pitch, this design is well suited for applications where space is limited.

Used in combination with a plug-in terminal strip 302-SV, the contact pressure is applied by a stainless-steel spring.

In plugged condition, all metal components are protected against accidental contact, except for the solder pins.
The screws are captive, vibration-proof and secured against self-loosening.
In addition, the terminal strips can be screw-mounted onto the PCB.

Part Numbers

No. of poles	302-FBG	Length	PU
2	72.820.030	15,00	250
3	73.820.030	23,00	250
4	74.820.030	31,00	250
5	75.820.030	39,00	80
6	76.820.030	47,00	80
7	77.820.030	55,00	50
8	78.820.030	63,00	50
9	79.820.030	71,00	50
10	80.820.030	79,00	50
11	81.820.030	87,00	40
12	82.820.030	94,00	40

General Information

Pitch	8 mm
No. of poles	2 - 12
Usable with	302-SV

Technical Data

Rated Cross Section	1,5 mm²		
Wire Stripping Length	6 mm ± 0,5 mm		
Overvoltage Category	III	III	II
Pollution Severity Level	3	2	2
Rated Voltage	500 V	630 V	1000 V
Rated Impulse Voltage	6 kV	6 kV	6 kV
Rated Insulation Voltage	450 V acc. to EN 60998-1		
Rated Current	6 A		
Hole in PCB	ø 1,3 mm		
Other specifications	Rated values apply to use in combination with 302-SV(-DS).		

Material

Moulding	PA, white, V-0
Comparative Tracking Index	CTI ≥ 600
Insulating Group	I
Temperature Range	-40°C up to 100°C
Terminal Body	Nickel plated brass
Solder pin	ø 1 mm; tin plated copper
Spring	Stainless strip steel

Approvals

	Current	Voltage	Group	AWG	Nm
	7	300	B,D	20 - 14	
	10	300	B,D,E	26-12 [1]	

[1] in combination with 302-SV-DS: 26-14 AWG

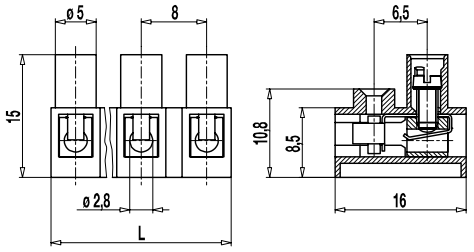
Options / Accessories

- Marking strips BST-302
- Longer solder pins up to 75 mm

Plug-in terminal strip

302-FLW-DS

Screw connection & socket with clamping spring, Plug-in direction vertical



The plug-in terminal strip 302-FLW-DS in 8 mm pitch is available with 2 to 12 poles. It is well suited for applications where space is limited.
It has one screw connection per pole and one vertical plug connection for a terminal strip with pins.
302-FLW-DS terminal strips unite contact spring with wire protector which offers good connection performance for applications requiring small plugging and pulling forces and low contact resistance. The wire protection reliably prevents damage to flexible wires by the turning screw.
The funnel-shaped insertion bushings guarantee perfect pin guidance and optimum contact protection.

Plug-in terminal strips 302-SV or 302-SVG create a plug connection where the connection leads are located in a 90° angle to each other. That way, challenges of limited mounting space can be resolved.
These terminals strips can be screw-mounted on a substrate.

Part Numbers

No. of poles	302-FLW-DS	Length	PU
2	32.820.041	15,00	250
3	33.820.041	23,00	250
4	34.820.041	31,00	250
6	36.820.041	47,00	80
8	38.820.041	63,00	50
11	41.820.041	87,00	40
12	42.820.041	94,00	40

further number of poles on request

General Information

Pitch	8 mm
No. of poles	2 - 12
Usable with	302-SV(-DS), 302-SVG(-DS)
Areas of application	This plug connector is well suited for applications that require to easily open and close not energised circuits.

Technical Data

Clamping Range	*solid / flexible / AWG*		
	0,34 - 2,5 mm² / 0,34 - 1,5 mm² / 22 - 14 AWG		
Rated Cross Section	1,5 mm²		
Wire Stripping Length	7 mm ± 0,5 mm		
Overvoltage Category	III	III	II
Pollution Severity Level	3	2	2
Rated Voltage	160 V	160 V	320 V
Rated Impulse Voltage	2,5 kV	2,5 kV	2,5 kV
Rated Insulation Voltage	130 V acc. to EN 60998-1		
Rated Current	6 A		
Torque	0,4 Nm		
Other specifications	Rated values apply to use in combination with 302-SV(-DS).		

Material

Moulding	PA, natural, V-2
Comparative Tracking Index	CTI ≥ 600
Insulating Group	I
Temperature Range	-40°C up to 100°C
Terminal Body	Tin plated brass
Screw	M2,6; zinc plated steel, blue passivated
Wire protector	Tin plated tin bronze
Plug	Tin plated brass

Approvals

	Current	Voltage	Group	AWG	Nm
	10	300	B,D	22 - 14	0,4
	10	300	B,D,E	26 - 14	0,4

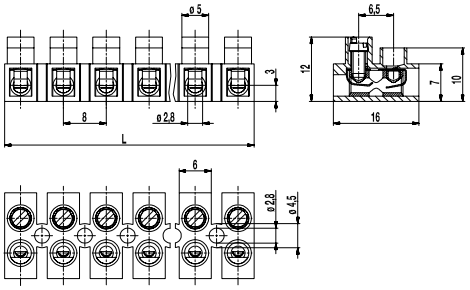
Options / Accessories

- Marking options on the screw guides
- Jumper 302-J

Plug-in terminal strip

302-NFB(-DS)

Screw connection & socket with clamping spring, low profile version



The plug-in connector strip 302-NFB, lower version, is available in 8 mm pitch with 1 to 12 poles.

The “N”-variant only differs from the standard 302-FB version by the 12 mm overall height (i.e. the moulding height is 3 mm lower). Note the shortened clearance and creepage distances.

The wire protector of the “DS”-version reliably prevents damage to multi-wire flexible conductors by the turning screw.
These terminals strips can be screw-mounted on a substrate.

Part Numbers

No. of poles	302-NFB	302-NFB-DS	Length	PU
2	12.820.045	52.820.045	15,00	250
3	13.820.045	53.820.045	23,00	250
4	14.820.045	54.820.045	31,00	200
5	15.820.045	55.820.045	39,00	100
6	16.820.045	56.820.045	47,00	80
7	17.820.045	57.820.045	55,00	80
8	18.820.045	58.820.045	63,00	80
9	19.820.045	59.820.045	71,00	60
10	20.820.045	60.820.045	79,00	50
11	21.820.045	61.820.045	87,00	50
12	22.820.045	62.820.045	94,00	40

General Information

Pitch	8 mm
No. of poles	2 - 12
Usable with	302-NSV(-DS)
Areas of application	This plug connector is well suited for applications that require to easily open and close not energised circuits.

Technical Data

Clamping Range	*solid / flexible / AWG*		
without wire protector	0,5 - 4 mm² / 0,5 - 2,5 mm² / 20 - 12 AWG		
with wire protector	0,34 - 2,5 mm² / 0,34 - 1,5 mm² / 22 - 14 AWG		
Rated Cross Section	1,5 mm²		
Wire Stripping Length	5 mm ± 0,5 mm		
Overvoltage Category	III	III	II
Pollution Severity Level	3	2	2
Rated Voltage	160 V (40V)	160 V (100V)	320 V (160V)
Rated Impulse Voltage	2,5 kV (1,5kV)	2,5 kV (1,5kV)	2,5 kV (1,5kV)
Rated Insulation Voltage	250 V acc. to EN 60998-1		
Rated Current	6 A		
Torque	0,4 Nm		
Other specifications	Rated values apply to use in combination with 302-NSV(-DS). Values in parentheses apply to use without insulated substrates.		

Material

Moulding	PA, natural, V-2
Comparative Tracking Index	CTI ≥ 600
Insulating Group	I
Temperature Range	-40°C up to 100°C
Terminal Body	Nickel plated brass
Screw	M2,6; zinc plated steel, blue passivated
Wire protector	Tin plated tin bronze
Spring	Stainless steel strip

Approvals

	Current	Voltage	Group	AWG	Nm
	10	300	B,D	22 - 14	0,4 [2]
	6	300	B,D,E	26 - 12	0,4 [1] [2]

[1] for 302-NFB-DS: 26 - 14 AWG
[2] When mounted on a suitable insulated surface, on standoffs or equivalent means.

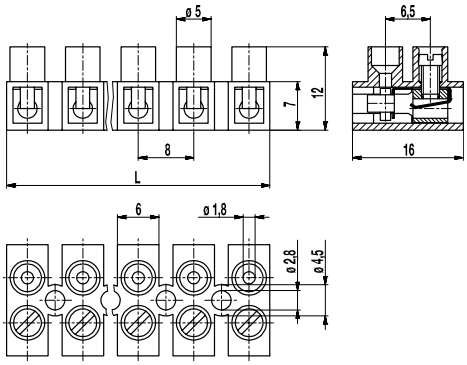
Options / Accessories

- Marking options on the screw guides
- Jumper 302-J

Plug-in terminal strip

302-NFLP-DS

Screw connection & socket with clamping spring, low profile version, Plug-in direction vertical, two screw guides of



The plug-in terminal strip 302-NFLP-DS, low version, is available in 8 mm pitch with 2 to 12 poles.
It has one screw connection per pole and one vertical plug connection to a terminal strip with pins.

Contact spring and wire protector form one unit. The wire protection reliably prevents damage to flexible wires by the turning screw.
The funnel-shaped insertion bushings guarantee perfect pin guidance and optimum contact protection.

The plug-in terminal strip 302-NSLP creates a plug connection where both terminal strips are located on top of each other and therefore require little mounting space. The leads remain in parallel position.
This arrangement does not allow for the connection of an earth lead.
These terminals strips can be screw-mounted on a substrate.

Part Numbers

No. of poles	302-NFLP-DS	Length	PU
2	52.820.048	15,00	250
3	53.820.048	23,00	250
4	54.820.048	31,00	200
5	55.820.048	39,00	100
6	56.820.048	47,00	80
7	57.820.048	55,00	80
8	58.820.048	63,00	80
9	59.820.048	71,00	60
10	60.820.048	79,00	50
11	61.820.048	87,00	50
12	62.820.048	94,00	40

General Information

Pitch	8 mm
No. of poles	2 - 12
Usable with	302-NSLP(-HDS)
Areas of application	This plug connector is well suited for applications that require to easily open and close not energised circuits.

Technical Data

Clamping Range	*solid / flexible / AWG*		
	0,34 - 2,5 mm² / 0,34 - 2,5 mm² / 22 - 14 AWG		
Rated Cross Section	1,5 mm²		
Wire Stripping Length	7 mm ± 0,5 mm		
Overvoltage Category	III	III	II
Pollution Severity Level	3	2	2
Rated Voltage	200 V	320 V	630 V
Rated Impulse Voltage	4 kV	4 kV	4 kV
Rated Insulation Voltage	250 V acc. to EN 60998-1		
Rated Current	6 A		
Torque	0,4 Nm		
Other specifications	Rated values apply to use in combination with 302-NSLP(-HDS) and without insulated substrates.		

Material

Moulding	PA, natural, V-2
Comparative Tracking Index	CTI ≥ 600
Insulating Group	I
Temperature Range	-40°C up to 100°C
Terminal Body	Nickel plated brass
Screw	M2,6; zinc plated steel, blue passivated
Wire protector	Tin plated tin bronze
Spring	Tin plated tin bronze

Approvals

	Current	Voltage	Group	AWG	Nm
CSA	10	300	B,D,E	26 - 14	0,4

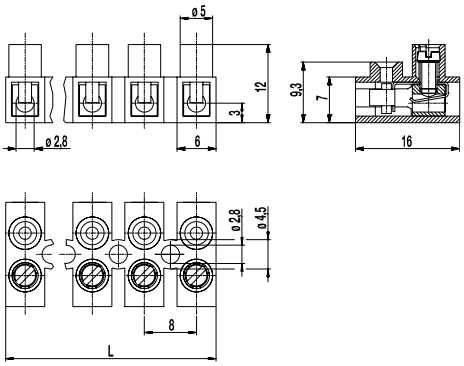
Options / Accessories

- Marking options on the screw guides
- Jumper 302-J

Plug-in terminal strip

302-NFLW-DS

Screw connection & socket with clamping spring, low profile version



The plug-in terminal strip 302-NFLW-DS, low version, is available in 8 mm pitch with 2 to 12 poles.
It has one screw connection per pole and one vertical plug connection to a terminal strip with pins.

Contact spring and wire protector form one unit and offers good connection performance for applications requiring small plugging and pulling forces and low contact resistance. The wire protection reliably prevents damage to flexible wires by the turning screw.
The funnel-shaped insertion bushings guarantee perfect pin guidance and optimum contact protection.

The "N"-variant only differs from the standard 302-FLW-DS version by the 12 mm overall height (i.e. the moulding height is 3 mm lower). This allows for a more compact angular plug connection to the 302-NSV terminal strip. Note the shortened clearance and creepage distances.

Plug-in terminal strip 302-NSLW creates a plug connection with wire entrances located parallel on top of each other which requires relatively little mounting space. That is why tensile forces on the wires have no direct effect on the contact performance.
This arrangement does not allow for the connection of an earth lead.

Part Numbers

No. of poles	302-NFLW-DS	Length	PU
2	32.820.038	15,00	250
3	33.820.038	23,00	250
4	34.820.038	31,00	200
5	35.820.038	39,00	100
6	36.820.038	47,00	80
7	37.820.038	55,00	80
8	38.820.038	63,00	80
9	39.820.038	71,00	60
10	40.820.038	79,00	50
11	41.820.038	87,00	50
12	42.820.038	94,00	40

General Information

Pitch	8 mm
No. of poles	2 - 12
Usable with	302-NSV(-DS), 302-NSLW(-HDS)
Areas of application	This plug connector is well suited for applications that require to easily open and close not energised circuits.

Technical Data

Clamping Range	*solid / flexible / AWG*		
	0,75 - 2,5 mm² / 0,75 - 1,5 mm² / 18 - 16 AWG		
Rated Cross Section	1,5 mm²		
Wire Stripping Length	7 mm ± 0,5 mm		
Overvoltage Category	III	III	II
Pollution Severity Level	3	2	2
Rated Voltage	250 V	320 V	630 V
Rated Impulse Voltage	4 kV	4 kV	4 kV
Rated Insulation Voltage	250 V acc. to EN 60998-1		
Rated Current	6 A		
Torque	0,4 Nm		
Other specifications	Rated values apply to use in combination with 302-NSLW(-HDS).		

Material

Moulding	PA, natural, V-2
Comparative Tracking Index	CTI ≥ 600
Insulating Group	I
Temperature Range	-40°C up to 100°C
Terminal Body	Nickel plated brass
Screw	M2,6; zinc plated steel, blue passivated
Wire protector	Tin plated tin bronze
Spring	Tin plated tin bronze

Approvals

	Current	Voltage	Group	AWG	Nm
	10	300	B,D	22 - 14	0,4
	10	300	B,D,E	26 - 14	0,4

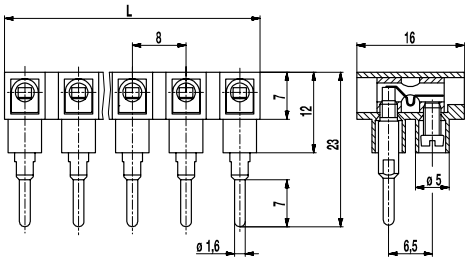
Options / Accessories

- Marking options on the screw guides
- Jumper 302-J

Plug-in terminal strip

302-NSLP(-HDS)

Screw connection & pin, wire entrance vertical to pin, low profile version



The plug-in terminal strip 302-NSLP, low version, is available in 8 mm pitch with 2 to 12 poles.
It has one screw connection per pole and one vertical pin for the connection to the female clamping unit.

Plug-in terminal strip 302-NFLP creates a plug-in connection where the wire entrances are located parallel on top of each other. This combination of plug-in terminal strips requires relatively little mounting space. That is why tensile forces on the conductors have no direct effect on the contact performance.
This arrangement does not allow for the connection of an earth lead.

The wire protector of the “HDS”-version reliably prevents damage to multi-wire flexible conductors by the turning screw.
These terminals strips can be screw-mounted on a substrate.

Part Numbers

No. of poles	302-NSLP	302-NSLP-HDS	Length	PU
2	72.820.039	52.820.039	15,00	250
3	73.820.039	53.820.039	23,00	250
4	74.820.039	54.820.039	31,00	200
5	75.820.048	55.820.039	39,00	100
6	76.820.039	56.820.039	47,00	80
7	77.820.039	57.820.039	55,00	80
8	78.820.039	58.820.039	63,00	80
9	79.820.039	59.820.039	71,00	60
10	80.820.039	60.820.039	79,00	40
11	81.820.039	61.820.039	87,00	40
12	82.820.039	62.820.039	94,00	40

General Information

Pitch	8 mm
No. of poles	2 - 12
Usable with	302-NFLP-DS
Areas of application	This plug connector is well suited for applications that require to easily open and close not energised circuits.

Technical Data

Clamping Range	*solid / flexible / AWG*		
without wire protector	0,5 - 4 mm² / 0,5 - 2,5 mm² / 20 - 12 AWG		
with wire protector	0,34 - 2,5 mm² / 0,34 - 1,5 mm² / 22 - 14 AWG		
Rated Cross Section	1,5 mm²		
Wire Stripping Length	7 mm ± 0,5 mm		
Overvoltage Category	III	III	II
Pollution Severity Level	3	2	2
Rated Voltage	200 V	320 V	630 V
Rated Impulse Voltage	4 kV	4 kV	4 kV
Rated Insulation Voltage	250 V acc. to EN 60998-1		
Rated Current	6 A		
Torque	0,4 Nm		
Other specifications	Rated values apply to use in combination with 302-NFLP-DS and without insulated substrates.		

Material

Moulding	PA, natural, V-2
Comparative Tracking Index	CTI ≥ 600
Insulating Group	I
Temperature Range	-40°C up to 100°C
Terminal Body	Nickel plated brass
Screw	M2,6; zinc plated steel, blue passivated
Wire protector	Stainless steel strip
Plug	Nickel plated brass

Approvals

	Current	Voltage	Group	AWG	Nm
	10	300	B,D,E	26 - 12	0,4 [1]

[1] for 302-NSLP-HDS: 26 - 14 AWG

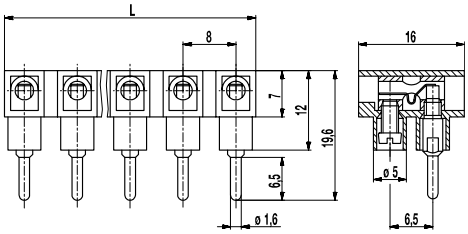
Options / Accessories

- Marking options on the screw guides
- Jumper 302-J

Plug-in terminal strip

302-NSLW(-HDS)

Screw connection & short pin, wire entrance vertical to pin, low profile version



The plug-in terminal strip 302-NSLW, low version, is available in 8 mm pitch with 2 to 12 poles.
It has one screw connection per pole and one vertical pin for the connection to the female clamping unit.

Plug-in terminal strip 302-NFLW creates a plug-in connection with wire entrances from opposite directions. This plug-in terminal strip combination requires relatively little mounting space. Since the plug-in direction is designed parallel to the screw axes, the tensile forces on the leads have no direct effect on the contact performance.
This arrangement does not allow for the connection of an earth lead.

The wire protector of the “HDS”-version reliably prevents damage to multi-wire flexible conductors by the turning screw.
These terminals strips can be screw-mounted on a substrate.

Part Numbers

No. of poles	302-NSLW	302-NSLW-HDS	Length	PU
2	12.820.039	32.820.039	15,00	250
3	13.820.039	33.820.039	23,00	250
4	14.820.039	34.820.039	31,00	200
5	15.820.039	35.820.039	39,00	100
6	16.820.039	36.820.039	47,00	80
7	17.820.039	37.820.039	55,00	80
8	18.820.039	38.820.039	63,00	80
9	19.820.039	39.820.039	71,00	60
10	20.820.039	40.820.039	79,00	40
11	21.820.039	41.820.039	87,00	40
12	22.820.039	42.820.039	94,00	40

General Information

Pitch	8 mm
No. of poles	2 - 12
Usable with	302-NFLW-DS
Areas of application	This plug connector is well suited for applications that require to easily open and close not energised circuits.

Technical Data

Clamping Range	*solid / flexible / AWG*		
without wire protector	0,5 - 4 mm² / 0,5 - 2,5 mm² / 20 - 12 AWG		
with wire protector	0,34 - 2,5 mm² / 0,34 - 2,5 mm² / 22 - 14 AWG		
Rated Cross Section	1,5 mm²		
Wire Stripping Length	7 mm ± 0,5 mm		
Overvoltage Category	III	III	II
Pollution Severity Level	3	2	2
Rated Voltage	250 V	320 V	630 V
Rated Impulse Voltage	4 kV	4 kV	4 kV
Rated Insulation Voltage	250 V acc. to EN 60998-1		
Rated Current	6 A		
Torque	0,4 Nm		
Other specifications	Rated values apply to use in combination with 302-NFLW-DS.		

Material

Moulding	PA, natural, V-2
Comparative Tracking Index	CTI ≥ 600
Insulating Group	I
Temperature Range	-40°C up to 100°C
Terminal Body	Nickel plated brass
Screw	M2,6; zinc plated steel, blue passivated
Wire protector	Stainless steel strip
Plug	Tin plated brass

Approvals

	Current	Voltage	Group	AWG	Nm
	10	300	B,D	22 - 14	0,4
	10	300	B,D,E	26 - 12	0,4 [1]

[1] for 302-NSLW-HDS: 26 - 14 AWG

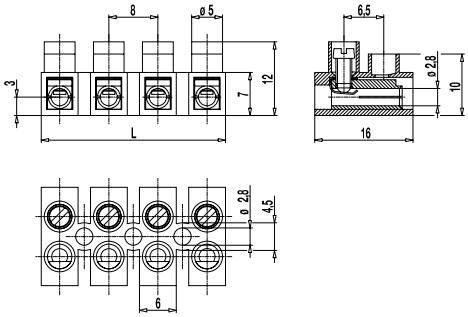
Options / Accessories

- Marking options on the screw guides
- Jumper 302-J

Plug-in terminal strip

302-NSTB(-DS)

Screw connection & socket, low profile version



The plug-in terminal strip 302-NSTB, lower version, is available in 8 mm pitch with 2 to 12 poles.
It has one screw connection per pole and one plug connection for a terminal strip with pins.

The slotted pins and slotted sockets of 302-NSTS plug-in terminal strip create appropriate contact pressure. Due to the small 8 mm pitch, this version is well suited for applications where space is limited.

The “N”-variant only differs from the standard 302-STB version by the 12 mm overall height (i.e. the moulding height is 3 mm lower). Note the shortened clearance and creepage distances.

The wire protector of the “DS”-version reliably prevents damage to multi-wire flexible conductors by the turning screw.
These terminals strips can be screw-mounted on a substrate.

Part Numbers

No. of poles	302-NSTB	302-NSTB-DS	Length	PU
2	32.820.046	52.820.046	15,00	250
3	33.820.046	53.820.046	23,00	250
4	34.820.046	54.820.046	31,00	200
5	35.820.046	55.820.046	39,00	100
6	36.820.046	56.820.046	47,00	80
7	37.820.046	57.820.046	55,00	80
8	38.820.046	58.820.046	63,00	80
9	39.820.046	59.820.046	71,00	60
10	40.820.046	60.820.046	79,00	50
11	41.820.046	61.820.046	87,00	50
12	42.820.046	62.820.046	94,00	40

General Information

Pitch	8 mm
No. of poles	2 - 12
Usable with	302-NSTS(-DS)
Areas of application	Applications that require to easily open and close not energised circuits.

Technical Data

Clamping Range	*solid / flexible / AWG*		
without wire protector	0,5 - 4 mm² / 0,5 - 2,5 mm² / 20 - 12 AWG		
with wire protector	0,34 - 2,5 mm² / 0,34 - 1,5 mm² / 22 - 14 AWG		
Rated Cross Section	1,5 mm²		
Wire Stripping Length	6 mm ± 0,5 mm		
Overvoltage Category	III	III	II
Pollution Severity Level	3	2	2
Rated Voltage	160 V	160 V	320 V
Rated Impulse Voltage	2,5 kV	2,5 kV	2,5 kV
Rated Insulation Voltage	130 V acc. to EN 60998-1		
Rated Current	6 A		
Torque	0,4 Nm		
Other specifications	Rated values apply to use in combination with 302-NSTS(-DS).		

Material

Moulding	PA, natural, V-2
Comparative Tracking Index	CTI ≥ 600
Insulating Group	I
Temperature Range	-40°C up to 100°C
Terminal Body	Nickel plated brass
Screw	M2,6; zinc plated steel, blue passivated
Wire protector	Tin plated tin bronze

Approvals

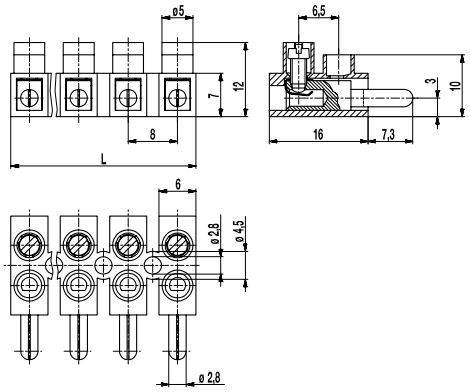
	Current	Voltage	Group	AWG	Nm
	10	300	B,D	22 - 14	0,4 [2]
	10	300	B,D,E	26 - 12	0,4 [1][2]

[1] for 302-NSTB-DS: 26 - 14 AWG
[2] When mounted on a suitable insulated surface, on standoffs or equivalent means.

Options / Accessories

- Marking options on the screw guides
- Jumper 302-J
- Moulding made of special polyamide for e.g. household appliances
- Screws made out of brass
- Leading socket for the protective conductor pole

Plug-in terminal strip
302-NSTS(-DS)
Screw connection & pin, low profile version



The plug-in terminal strip 302-NSTS, lower version, is available in 8 mm pitch with 2 to 12 poles.
It has one screw connection per pole and one vertical pin for the connection to the socket of the female counterpart.

The slotted pins and slotted sockets of plug-in terminal strip 302-NSTB create appropriate contact pressure. Due to the small 8 mm pitch, this version is well suited for applications where space is limited.

The "N"-variant only differs from the standard 302-STS version by the 12 mm overall height (i.e. the moulding height is 3 mm lower). Note the shortened clearance and creepage distances.

The wire protector of the "DS"-version reliably prevents damage to multi-wire flexible conductors by the turning screw.
These terminals strips can be screw-mounted on a substrate.

Part Numbers

No. of poles	302-NSTS	302-NSTS-DS	Length	PU
2	12.820.046	72.820.046	15,00	250
3	13.820.046	73.820.046	23,00	250
4	14.820.046	74.820.046	31,00	200
5	15.820.046	75.820.046	39,00	100
6	16.820.046	76.820.046	47,00	80
7	17.820.046	77.820.046	55,00	80
8	18.820.046	78.820.046	63,00	80
9	19.820.046	79.820.046	71,00	60
10	20.820.046	80.820.046	79,00	50
11	21.820.046	81.820.046	87,00	50
12	22.820.046	82.820.046	94,00	40

General Information

Pitch	8 mm
No. of poles	2 - 12
Usable with	302-NSTB(-DS)
Areas of application	This terminal strip is well suited for applications that require to easily open and close not energised circuits.

Technical Data

Clamping Range	*solid / flexible / AWG*		
without wire protector	0,5 - 4 mm² / 0,5 - 2,5 mm² / 20 - 12 AWG		
with wire protector	0,34 - 2,5 mm² / 0,34 - 1,5 mm² / 22 - 14 AWG		
Rated Cross Section	1,5 mm²		
Wire Stripping Length	6 mm ± 0,5 mm		
Overvoltage Category	III	III	II
Pollution Severity Level	3	2	2
Rated Voltage	160 V	160 V	320 V
Rated Impulse Voltage	2,5 kV	2,5 kV	2,5 kV
Rated Insulation Voltage	130 V acc. to EN 60998-1		
Rated Current	6 A		
Torque	0,4 Nm		
Other specifications	Rated values apply to use in combination with 302-NSTB(-DS).		

Material

Moulding	PA, natural, V-2
Comparative Tracking Index	CTI ≥ 600
Insulating Group	I
Temperature Range	-40°C up to 100°C
Terminal Body	Nickel plated brass
Screw	M2,6; zinc plated steel, blue passivated
Wire protector	Tin plated tin bronze
Plug	Nickel plated brass

Approvals

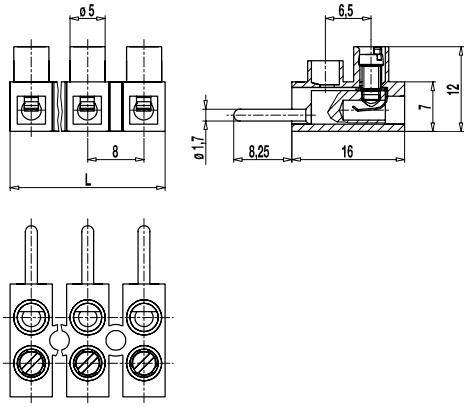
	Current	Voltage	Group	AWG	Nm
	10	300	B,D	22 - 14	0,4 [2]
	10	300	B,D,E	26 - 12	0,4 [1][2]

[1] for 302-NSTS-DS: 26 - 14 AWG
[2] When mounted on a suitable insulated surface, on standoffs or equivalent means.

Options / Accessories

- Marking options on the screw guides
- Jumper 302-J
- Moulding made of special polyamide for e.g. household appliances
- Screws made out of brass

Plug-in terminal strip
302-NSV(-DS)
Screw connection & pin, low profile version



The plug-in terminal strip 302-NSV, lower version, is available in 8 mm pitch with 2 to 12 poles.
It has one screw connection per pole and one vertical pin for the connection to the socket of the female counterpart.

The “N”-variant only differs from the standard 302-SV version by the 12 mm overall height (i.e. the moulding height is 3 mm lower). Note the shortened clearance and creepage distances.

The wire protector of the “DS”-version reliably prevents damage to multi-wire flexible conductors by the turning screw.
These terminals strips can be screw-mounted on a substrate.

Part Numbers

No. of poles	302-NSV	302-NSV-DS	Length	PU
2	32.820.045	72.820.045	15,00	250
3	33.820.045	73.820.045	23,00	250
4	34.820.045	74.820.045	31,00	200
5	35.820.045	75.820.045	39,00	100
6	36.820.045	76.820.045	47,00	80
7	37.820.045	77.820.045	55,00	80
8	38.820.045	78.820.045	63,00	80
9	39.820.045	79.820.045	71,00	60
10	40.820.045	80.820.045	79,00	50
11	41.820.045	81.820.045	87,00	50
12	42.820.045	82.820.045	94,00	40

General Information

Pitch	8 mm
No. of poles	2 - 12
Usable with	302-NFB(-DS), 302-NFLW-DS
Areas of application	Applications that require to easily open and close not energised circuits.

Technical Data

Clamping Range	*solid / flexible / AWG*		
without wire protector	0,5 - 4 mm² / 0,5 - 2,5 mm² / 20 - 12 AWG		
with wire protector	0,34 - 2,5 mm² / 0,34 - 1,5 mm² / 22 - 14 AWG		
Rated Cross Section	1,5 mm²		
Wire Stripping Length	5 mm ± 0,5 mm		
Rated Voltage			
Overvoltage Category	III	III	II
Pollution Severity Level	3	2	2
Rated Voltage	160 V (40V)	160 V (100V)	320 V (160V)
Rated Impulse Voltage	2,5 kV (1,5kV)	2,5 kV (1,5kV)	2,5 kV (1,5kV)
Rated Insulation Voltage	250 V acc. to EN 60998-1		
Rated Current	6 A		
Torque	0,4 Nm		
Other specifications	Rated values apply to use in combination with 302-NFB(-DS). Values in parentheses apply to use without insulated substrates.		

Material

Moulding	PA, natural, V-2
Comparative Tracking Index	CTI ≥ 600
Insulating Group	I
Temperature Range	-40°C up to 100°C
Terminal Body	Tin plated brass
Screw	M2,6; zinc plated steel, blue passivated
Wire protector	Tin plated tin bronze
Plug	Tin plated brass

Approvals

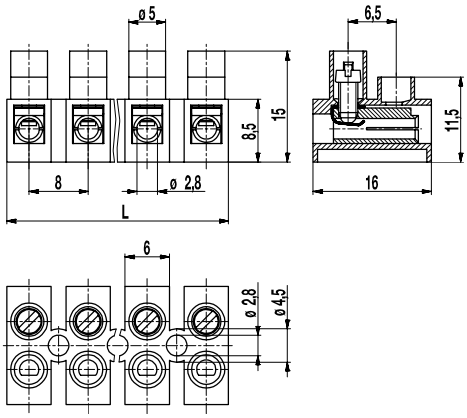
	Current	Voltage	Group	AWG	Nm
	10	300	B,D	22 - 14	0,4 [2]
	10	300	B,D,E	26 - 12	0,4 [1][2]

Options / Accessories

- Marking options on the screw guides
- Jumper 302-J

[1] for 302-NSV-DS: 26 - 14 AWG
[2] When mounted on a suitable insulated surface, on standoffs or equivalent means.

Plug-in terminal strip
302-STB(-DS)
Screw connection & socket



The plug-in terminal strip 302-STB is available in 8 mm pitch with 1 to 12 poles.
It has one screw connection per pole and one plug connection for a terminal strip with pins.

The slotted pins and slotted sockets of plug-in terminal strip 302-STS create appropriate contact pressure. Due to the small 8 mm pitch, this version is well suited for applications where space is limited.

The wire protector of the “DS”-version reliably prevents damage to multi-wire flexible conductors by the turning screw.
These terminals strips can be screw-mounted on a substrate.

Part Numbers

No. of poles	302-STB	302-STB-DS	Length	PU
2	32.820.009	52.820.009	15,00	1000
3	33.820.009	53.820.009	23,00	1000
4	34.820.009	54.820.009	31,00	500
5	35.820.009	55.820.009	39,00	500
6	36.820.009	56.820.009	47,00	80
7	37.820.009	57.820.009	55,00	60
8	38.820.009	58.820.009	63,00	70
9	39.820.009	59.820.009	71,00	60
10	40.820.009	60.820.009	79,00	40
11	41.820.009	61.820.009	87,00	40
12	42.820.009	62.820.009	94,00	40

General Information

Pitch	8 mm
No. of poles	2 - 12
Usable with	302-STS(-DS)
Areas of application	This terminal strip is well suited for applications that require to easily open and close not energised circuits.

Technical Data

Clamping Range	*solid / flexible / AWG*		
without wire protector	0,5 - 4 mm² / 0,5 - 2,5 mm² / 20 - 12 AWG		
with wire protector	0,34 - 2,5 mm² / 0,34 - 1,5 mm² / 22 - 14 AWG		
Rated Cross Section	1,5 mm²		
Wire Stripping Length	6 mm ± 0,5 mm		
Overvoltage Category	III	III	II
Pollution Severity Level	3	2	2
Rated Voltage	200 V	320 V	630 V
Rated Impulse Voltage	4 kV	4 kV	4 kV
Rated Insulation Voltage	450 V acc. to EN 60998-1		
Rated Current	6 A		
Torque	0,4 Nm		
Other specifications	Rated values apply to use in combination with 302-STS(-DS) and without insulated substrates.		

Material

Moulding	PA, natural, V-2
Comparative Tracking Index	CTI ≥ 600
Insulating Group	I
Temperature Range	-40°C up to 100°C
Terminal Body	Nickel plated brass
Screw	M2,6; zinc plated steel, blue passivated
Wire protector	Tin plated tin bronze

Approvals

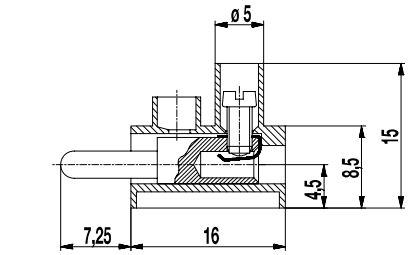
	Current	Voltage	Group	AWG	Nm
	6	300	B,D	20 - 14	0,4
	10	300	B,D,E	26 - 12	0,4 [1]

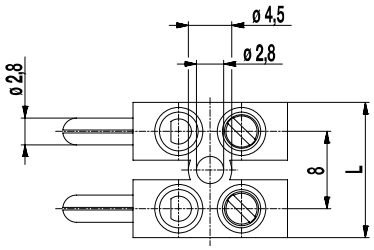
[1] for 302-STB-DS: 26 - 14 AWG

Options / Accessories

- Marking options on the screw guides
- Jumper 302-J
- Moulding made of special polyamide for e.g. household appliances
- Screws made out of brass
- Leading socket for the protective conductor pole
- With pegs at the base for saving assembly time

Plug-in terminal strip
302-STS(-DS)
Screw connection & pin





The plug-in terminal strip 302-STS is available in 8 mm pitch with 1 to 12 poles.
It has one screw connection per pole and one vertical pin for the connection to the socket of the female counterpart.

The slotted pins and slotted sockets of plug-in terminal strip 302-STB create appropriate contact pressure. Due to the small 8 mm pitch, this version is well suited for applications where space is limited.

The wire protector of the “DS”-version reliably prevents damage to multi-wire flexible conductors by the turning screw. These terminals strips can be screw-mounted on a substrate.

Part Numbers

No. of poles	302-STS	302-STS-DS	Length	PU
2	12.820.009	72.820.009	15,00	1000
3	13.820.009	73.820.009	23,00	1000
4	14.820.009	74.820.009	31,00	500
5	15.820.009	75.820.009	39,00	500
6	16.820.009	76.820.009	47,00	80
7	17.820.009	77.820.009	55,00	60
8	18.820.009	78.820.009	63,00	70
9	19.820.009	79.820.009	71,00	60
10	20.820.009	80.820.009	79,00	40
11	21.820.009	81.820.009	87,00	40
12	22.820.009	82.820.009	94,00	40

General Information

Pitch	8 mm
No. of poles	2 - 12
Usable with	302-STB(-DS)
Areas of application	Applications that require to easily open and close not energised circuits.

Technical Data

Clamping Range	*solid / flexible / AWG*		
without wire protector	0,5 - 4 mm² / 0,5 - 2,5 mm² / 20 - 12 AWG		
with wire protector	0,34 - 2,5 mm² / 0,34 - 1,5 mm² / 22 - 14 AWG		
Rated Cross Section	1,5 mm²		
Wire Stripping Length	6 mm ± 0,5 mm		
Overvoltage Category	III	III	II
Pollution Severity Level	3	2	2
Rated Voltage	200 V	320 V	630 V
Rated Impulse Voltage	4 kV	4 kV	4 kV
Rated Insulation Voltage	450 V acc. to EN 60998-1		
Rated Current	6 A		
Torque	0,4 Nm		
Other specifications	Rated values apply to use in combination with 302-STB(-DS) and without insulated substrates.		

Material

Moulding	PA, natural, V-2
Comparative Tracking Index	CTI ≥ 600
Insulating Group	I
Temperature Range	-40°C up to 100°C
Terminal Body	Nickel plated brass
Screw	M2,6; zinc plated steel, blue passivated
Wire protector	Tin plated tin bronze
Plug	Nickel plated brass

Approvals

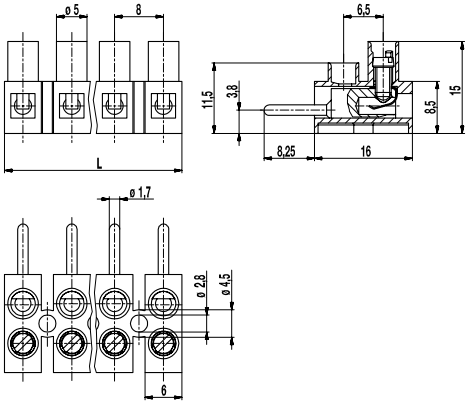
	Current	Voltage	Group	AWG	Nm
	6	300	B,D	20 - 14	0,4
	10	300	B,D,E	26 - 12	0,4 [1]

[1] for 302-STS-DS: 26 - 14 AWG

Options / Accessories

- Marking options on the screw guides
- Jumper 302-J
- Moulding made of special polyamide for e.g. household appliances
- Screws made out of brass
- With pegs at the base for saving assembly time

Plug-in terminal strip
302-SV(-DS)
Screw connection & pin



The plug-in terminal strip 302-SV is available in 8 mm pitch with 1 to 12 poles.
It has one screw connection per pole and one vertical pin for the connection to the socket of the female counterpart.

In combination with the plug-in terminal strip 302-FB, this connector provides the contact pressure via a stainless steel spring which ensures good electrical contact. Plug-in direction is parallel to each other.

In combination with the plug-in terminal strip 302-FBG, this connector can be used especially on a printed circuit board.

Plug-in terminal strips 302-SV or 302-SVG create a plug connection where the connection leads are located in a 90° angle to each other. That way, challenges of limited mounting space can be resolved. Due to the small 8 mm pitch, this version is well suited for applications where space is limited.

The wire protector of the “DS”-version reliably prevents damage to multi-wire flexible conductors by the turning screw.
These terminals strips can be screw-mounted on a substrate.

Part Numbers

No. of poles	302-SV	302-SV-DS	Length	PU
2	60.820.029	48.820.029	15,00	250
3	61.820.029	49.820.029	23,00	250
4	62.820.029	50.820.029	31,00	250
5	63.820.029	51.820.029	39,00	80
6	64.820.029	52.820.029	47,00	80
7	65.820.029	53.820.029	55,00	50
8	66.820.029	54.820.029	63,00	50
9	67.820.029	55.820.029	71,00	50
10	68.820.029	56.820.029	79,00	40
11	69.820.029	57.820.029	87,00	40
12	70.820.029	58.820.029	94,00	40

General Information

Pitch	8 mm
No. of poles	2 - 12
Usable with	302-FB(-DS), 302-FBG, 302-FLW-DS
Areas of application	Applications that require to easily open and close not energised circuits.

Technical Data

Clamping Range	*solid / flexible / AWG*		
without wire protector	0,5 - 4 mm² / 0,5 - 2,5 mm² / 20 - 12 AWG		
with wire protector	0,34 - 2,5 mm² / 0,34 - 1,5 mm² / 22 - 14 AWG		
Rated Cross Section	1,5 mm²		
Wire Stripping Length	5 mm ± 0,5 mm		
Overvoltage Category	III	III	II
Pollution Severity Level	3	2	2
Rated Voltage	160 V	160 V	320 V
Rated Impulse Voltage	2,5 kV	2,5 kV	2,5 kV
Rated Insulation Voltage	130 V acc. to EN 60998-1		
Rated Current	6 A		
Torque	0,4 Nm		
Other specifications	Rated values apply to use in combination with 302-FB(-DS) and without insulated substrates.		

Material

Moulding	PA, natural, V-2
Comparative Tracking Index	CTI ≥ 600
Insulating Group	I
Temperature Range	-40°C up to 100°C
Terminal Body	Tin plated brass
Screw	M2,6; zinc plated steel, blue passivated
Wire protector	Tin plated tin bronze
Plug	Tin plated brass

Approvals

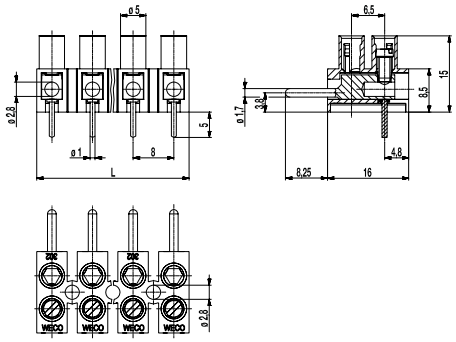
	Current	Voltage	Group	AWG	Nm
	6	300	B,C,D	20 - 14	0,4 [2]
	10	300	B,D,E	26 - 12	0,4 [1][2]

[1] for 302-SV-DS: 26 - 14 AWG
[2] When mounted on a suitable insulated surface, on standoffs or equivalent means.

Options / Accessories

- Marking options on the screw guides
- Jumper 302-J
- Moulding made of special polyamide for e.g. household appliances

Plug-in terminal strip
302-SVG
Screw connection & pin, with solder pin



The plug-in terminal strip 302-SVG is equipped with a solder pin and designed for the use on PCBs. Due to the small 8 mm pitch, this design is well suited for applications where space is limited.
The flexible polyamide moulding can even be mounted on curved surfaces.

Used in combination with a plug-in terminal strip 302-FB plug-in terminal strip, the contact pressure is applied by a stainless-steel spring. Plug-in direction is parallel to each other. The wire entrance is located in plug direction.

The combination with 302-FLW-DS creates an angular plug connection which is well suited of resolving even challenging mounting conditions. The angular plug-in connector type 302-FLW-DS has a contact spring which forms a unit with the wire protector.
The direction of insertion is in a 90° angle. The wire entrance is perpendicular to the direction of insertion.

In plugged condition, all metal components are protected against accidental contact, except for the solder pins. The screws are captive, vibration-proof and secured against self-loosening. The strips have fixing holes to attach the screws between the poles.
The plug-in connector can be used as three-way contact.

Part Numbers

No. of poles	302-SVG	Length	PU
2	60.820.030	15,00	250
3	61.820.030	23,00	100
4	62.820.030	31,00	250
5	63.820.030	39,00	80
6	64.820.030	47,00	80
7	65.820.030	55,00	50
8	66.820.030	63,00	50
9	67.820.030	71,00	50
10	68.820.030	79,00	40
11	69.820.030	87,00	40
12	70.820.030	94,00	40

General Information

Pitch	8 mm
No. of poles	2 - 12
Usable with	302-FB, 302-FLW-DS

Technical Data

Clamping Range	*solid / flexible / AWG*		
	0,34 - 2,5 mm² / 0,34 - 2,5 mm² / 22 - 14 AWG		
Rated Cross Section	1,5 mm²		
Wire Stripping Length	5 mm ± 0,5 mm		
Overvoltage Category	III	III	II
Pollution Severity Level	3	2	2
Rated Voltage	400 V	630 V	1000 V
Rated Impulse Voltage	6 kV	6 kV	6 kV
Rated Insulation Voltage	450 V acc. to EN 60998-1		
Rated Current	6 A		
Hole in PCB	ø 1,3 mm		
Other specifications	Rated values apply to use in combination with 302-FB(-DS) or 302-FLW-DS.		

Material

Moulding	PA, white, V-0
Comparative Tracking Index	CTI ≥ 600
Insulating Group	I
Temperature Range	-40°C up to 100°C
Terminal Body	Tin plated brass
Screw	M2,6; zinc plated steel, blue passivated
Solder pin	ø 1 mm; tin plated copper
Plug	Tin plated brass

Approvals

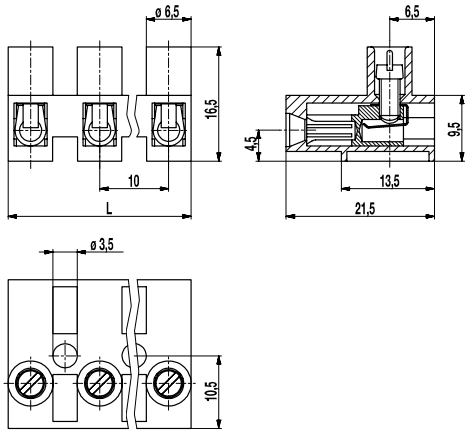
	Current	Voltage	Group	AWG	Nm
CSA	10	300	B,D,E	26 - 12	0,4 [1]

[1] in combination with 302-FB

Options / Accessories

- Marking strips BST-302
- Longer solder pins up to 75 mm

Plug-in terminal strip
321-B(-DS)
Screw connection & socket



The plug-in terminal strip 321-B is available in 10 mm pitch with 1 to 12 poles.
It has one screw connection per pole and one plug connection for a terminal strip with pins.

The special moulding houses a spring-loaded terminal body with six slots and is protected against accidental contact.
A funnel guides the solid male plug 321-S. This combination provides permanent annular contact.

The wire protector of the “DS”-version reliably prevents damage to multi-wire flexible conductors by the turning screw.
These terminals strips can be screw-mounted on a substrate.

Part Numbers

No. of poles	321-B	321-B-DS	Length	PU
2	12.821.006	32.821.006	18,00	1000
3	13.821.006	33.821.006	28,00	1000
4	14.821.006	34.821.006	38,00	500
5	15.821.006	35.821.006	48,00	500
6	16.821.006	36.821.006	58,00	100
7	17.821.006	37.821.006	68,00	100
8	18.821.006	38.821.006	78,00	80
9	19.821.006	39.821.006	88,00	80
10	20.821.006	40.821.006	98,00	50
11	21.821.006	41.821.006	108,00	50
12	22.821.006	42.821.006	117,00	50

General Information

Pitch	10 mm
No. of poles	2 - 12
Usable with	321-S(-DS)
Areas of application	Applications that require to easily open and close not energised circuits.

Technical Data

Clamping Range	*solid / flexible / AWG*		
without wire protector	0,75 - 6 mm² / 0,75 - 4 mm² / 18 - 12 AWG		
with wire protector	0,5 - 4 mm² / 0,5 - 2,5 mm² / 20 - 12 AWG		
Rated Cross Section	2,5 mm²		
Wire Stripping Length	6 mm ± 0,5 mm		
Overvoltage Category	III	III	II
Pollution Severity Level	3	2	2
Rated Voltage	320 V	320 V	630 V
Rated Impulse Voltage	4 kV	4 kV	4 kV
Rated Insulation Voltage	450 V acc. to EN 60998-1 [1]		
Rated Current	16 A		
Torque	0,5 Nm		
Other specifications	Rated values apply to use in combination with 321-S(-DS) and insulated substrates.		

Material

Moulding	PA, natural, V-2
Comparative Tracking Index	CTI ≥ 600
Insulating Group	I
Temperature Range	-40°C up to 100°C
Terminal Body	Nickel plated brass
Screw	M3; zinc plated steel, blue passivated
Wire protector	Tin plated tin bronze

Approvals

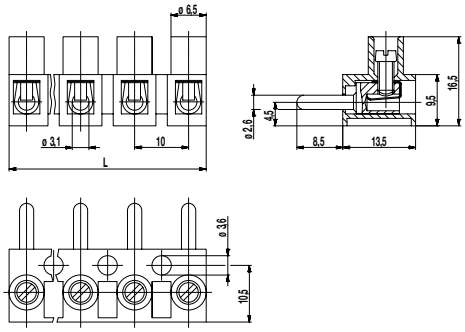
	Current	Voltage	Group	AWG	Nm
	20	300	B	18 - 12	0,51
	15	300	B	26 - 10	0,51 [2]
	10	300	D,E	26 - 10	0,51 [2]

Options / Accessories

- Marking options on the screw guides

[1] with insulating base
[2] for 321-B-DS: 26 - 12 AWG

Plug-in terminal strip
321-S(-DS)
Screw connection & pin



The plug-in terminal strip 321-S is available in 10 mm pitch with 1 to 12 poles.
It has one screw connection per pole and one vertical pin for the connection to the socket of the female counterpart.

The plug-in terminal strip was designed with a solid pin in order provide permanent annular contact to the socket of 321-B.

The wire protector of the “DS”-version reliably prevents damage to multi-wire flexible conductors by the turning screw.
These terminals strips can be screw-mounted on a substrate.

Part Numbers

No. of poles	321-S	321-S-DS	Length	PU
2	12.821.007	32.821.007	18,00	1000
3	13.821.007	33.821.007	28,00	1000
4	14.821.007	34.821.007	38,00	500
5	15.821.007	35.821.007	48,00	500
6	16.821.007	36.821.007	58,00	100
7	17.821.007	37.821.007	68,00	100
8	18.821.007	38.821.007	78,00	80
9	19.821.007	39.821.007	88,00	80
10	20.821.007	40.821.007	98,00	50
11	21.821.007	41.821.007	108,00	50
12	22.821.007	42.821.007	118,00	50

General Information

Pitch	10 mm
No. of poles	2 - 12
Usable with	321-B(-DS)
Areas of application	Applications that require to easily open and close not energised circuits.

Technical Data

Clamping Range	*solid / flexible / AWG*		
without wire protector	0,75 - 6 mm² / 0,75 - 2,5 mm² / 18 - 12 AWG		
with wire protector	0,5 - 4 mm² / 0,5 - 2,5 mm² / 20 - 12 AWG		
Rated Cross Section	2,5 mm²		
Wire Stripping Length	6 mm ± 0,5 mm		
Overvoltage Category	III	III	II
Pollution Severity Level	3	2	2
Rated Voltage	320 V	320 V	630 V
Rated Impulse Voltage	4 kV	4 kV	4 kV
Rated Insulation Voltage	450 V acc. to EN 60998-1 [1]		
Rated Current	16 A		
Torque	0,5 Nm		
Other specifications	Rated values apply to use in combination with 321-B(-DS) and insulated substrates.		

Material

Moulding	PA, natural, V-2
Comparative Tracking Index	CTI ≥ 600
Insulating Group	I
Temperature Range	-40°F up to 100°C
Terminal Body	Nickel plated brass
Screw	M3; zinc plated steel, blue passivated
Wire protector	Tin plated tin bronze
Plug	Nickel plated brass

Approvals

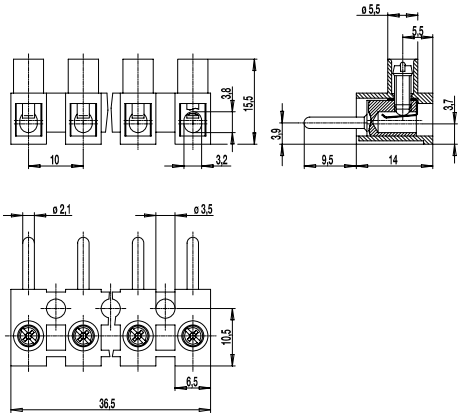
	Current	Voltage	Group	AWG	Nm
	20	300	B	18 - 12	0,51
	15	300	B	26 - 10	0,51 [2]
	10	300	D,E	26 - 10	0,51 [2]

Options / Accessories

- Marking options on the screw guides
- Leading plug for the protective conductor pole

[1] with insulating base
[2] for 321-S-DS: 26 - 12 AWG

Plug-in terminal strip
322-D-SV(-DS)
Screw connection, large conductor space



The 322-D-SV is based on our established plug-in terminal strip 322-SV. The clamping space is enlarged for 2x2,5 mm² solid wire without wire protector or 2x1,5 mm² with wire protector. Therefore, this version is most suitable when connections of two wires per pole are required.
With the exception of the clamping system, the measurements conform to the standard design.
The screws have a slotted, as well as a cross slot (plus-minus screw)

In combination with the plug-in terminal strip 323-FB, this connector provides the contact pressure via a stainless steel spring which ensures good electrical contact. Plug-in direction is parallel to each other.

The wire protector of the “DS”-version reliably prevents damage to multi-wire flexible conductors by the turning screw.
These terminals strips can be screw-mounted on a substrate.

Part Numbers

No. of poles	322-D-SV	322-D-SV-DS	Length	PU
2	12.821.036	32.821.036	16,50	1000
3	13.821.036	33.821.036	26,50	1000
4	14.821.036	34.821.036	36,50	800
5	15.821.036	35.821.036	46,50	500
6	16.821.036	36.821.036	56,50	100
8	18.821.036	38.821.036	76,50	70
10	20.821.036	40.821.036	96,50	50
12	22.821.036	42.821.036	116,50	50

further number of poles on request

General Information

Pitch	10 mm
No. of poles	2 - 12
Usable with	323-FB(-HDS)
Areas of application	Power supply units

Technical Data

Clamping Range	*solid / flexible / AWG*		
without wire protector	1 - 2x2,5 mm² / 1 - 2x1,5 mm² / 2x16 AWG		
with wire protector	0,75 - 2x1,5 mm² / 0,75 - 2x1,5 mm² / 2x16 AWG		
Rated Cross Section	2 x 2,5 mm²		
Wire Stripping Length	7 mm ± 0,5 mm		
Overvoltage Category	III	III	II
Pollution Severity Level	3	2	2
Rated Voltage	500 V (160V)	630 V (160V)	1000 V (320V)
Rated Impulse Voltage	6 kV (2,5 kV)	6 kV (2,5 kV)	6 kV (2,5 kV)
Rated Insulation Voltage	750 V acc. to EN 60998-1 [1]		
Rated Current	16 A, with ambient temperature up to 30°C		
Torque	0,5 Nm		
Other specifications	Rated values apply to use in combination with 323-FB(-HDS). Values in parentheses apply to use without insulated substrates.		

Material

Moulding	PA, natural, V-2
Comparative Tracking Index	CTI ≥ 600
Insulating Group	I
Temperature Range	-40°C up to 100°C
Terminal Body	Tin plated brass
Screw	M3; zinc plated steel, blue passivated
Wire protector	Tin plated tin bronze
Plug	Tin plated brass

Options / Accessories

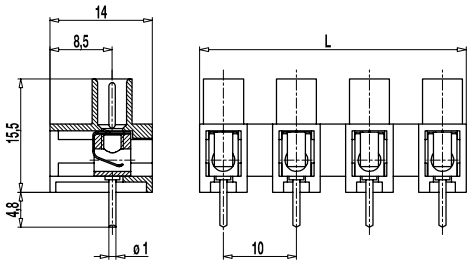
- Marking options on and between the screw guides
- Jumper 323-J

[1] with insulating base

Plug-in terminal strip

322-FBG

Socket with clamping spring, with solder pin



The plug-in terminal strip 322-FBG with a pitch of 10 mm is equipped with a solder pin and designed for the use on PCBs. Due to large pitch and moulding shape, this version is also well suited for applications using higher voltages.

Used in combination with a plug-in terminal strip 322-SVW, the contact pressure is applied by a stainless-steel spring.

In plugged condition, all metal components are protected against accidental contact, except for the solder pins.
The screws are captive, vibration-proof and secured against self-loosening.
In addition, these terminals strips can be screw-mounted on the PCB.

Part Numbers

No. of poles	322-FBG	Length	PU
2	60.821.013	18,00	200
3	61.821.013	28,00	250
4	62.821.013	38,00	200
5	63.821.013	48,00	100
6	64.821.013	58,00	100
7	65.821.013	68,00	70
8	66.821.013	78,00	70
9	67.821.013	88,00	60
10	68.821.013	98,00	50
11	69.821.013	108,00	50
12	70.821.013	117,00	50

General Information

Pitch	10 mm
No. of poles	2 - 12
Usable with	322-SVW(-DS)

Technical Data

Overvoltage Category	III	III	II
Pollution Severity Level	3	2	2
Rated Voltage	630 V (500 V)	1000V (630V)	1000V (1000V)
Rated Impulse Voltage	8 kV (6 kV)	8 kV (6 kV)	6 kV (6 kV)
Rated Insulation Voltage	750 V acc. to EN 60998-1		
Rated Current	10 A		
Hole in PCB	ø 1,3 mm		
Other specifications	Rated values in parentheses apply to use with 322-SVW(-DS).		

Material

Moulding	PA, natural, V-2
Comparative Tracking Index	CTI ≥ 600
Insulating Group	I
Temperature Range	-40°C up to 100°C
Terminal Body	Tin plated brass
Solder pin	ø 1 mm; tin plated copper
Spring	Stainless strip steel

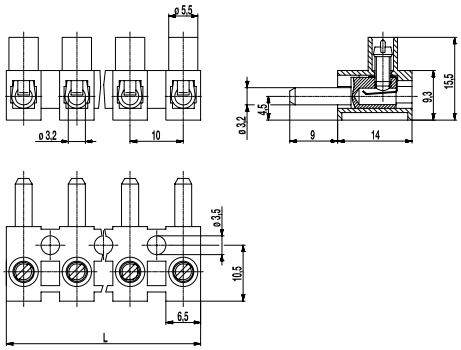
Approvals

	Current	Voltage	Group	AWG	Nm
	20	300	B	18 - 12	
	15 10	300 300	B D,E	26 - 10 26 - 10	

Options / Accessories

- Marking strips BST-322
- Longer solder pins up to 75 mm

Plug-in terminal strip
322-STFS(-DS)
Screw connection & pin



The plug-in terminal strip 322-STFS is available in 10 mm pitch with 2 to 12 poles. It has one screw connection per pole and one vertical pin for the connection to the socket of the female counterpart.

This plug-in terminal strip was designed with a solid pin in order to provide reliable permanent contact to the socket of 323-STFB.

The wire protector of the “DS”-version reliably prevents damage to multi-wire flexible conductors by the turning screw.
These terminals strips can be screw-mounted on a substrate.

Part Numbers

No. of poles	322-STFS	322-STFS-DS	Length	PU
2	72.821.002	12.821.032	18,00	1000
3	73.821.002	13.821.032	28,00	1000
4	74.821.002	14.821.032	38,00	500
5	75.821.002	15.821.032	48,00	500
6	76.821.002	16.821.032	58,00	100
7	77.821.002	17.821.032	68,00	100
8	78.821.002	18.821.032	78,00	80
9	79.821.002	19.821.032	88,00	80
10	80.821.002	20.821.032	98,00	50
11	81.821.002	21.821.032	108,00	50
12	82.821.002	22.821.032	117,00	50

General Information

Pitch	10 mm
No. of poles	2 - 12
Usable with	323-STFB(-DS)
Areas of application	Applications that require to easily open and close not energised circuits.

Technical Data

Clamping Range	*solid / flexible / AWG*		
without wire protector	0,75 - 6 mm² / 0,75 - 4 mm² / 18 - 10 AWG		
with wire protector	0,5 - 4 mm² / 0,5 - 2,5 mm² / 20 - 12 AWG		
Rated Cross Section	2,5 mm²		
Wire Stripping Length	6 mm ± 0,5mm		
Overvoltage Category	III	III	II
Pollution Severity Level	3	2	2
Rated Voltage	400 V	630 V	1000 V
Rated Impulse Voltage	6 kV	6 kV	6 kV
Rated Insulation Voltage	450 V acc. to EN 60998-1 [1]		
Rated Current	16 A		
Torque	0,5 Nm		
Other specifications	Rated values apply to use in combination with 323-STFB and insulated substrates.		

Material

Moulding	PA, natural, V-2
Comparative Tracking Index	CTI ≥ 600
Insulating Group	I
Temperature Range	-40°C up to 100°C
Terminal Body	Nickel plated brass
Screw	M3; zinc plated steel, blue passivated
Wire protector	Tin plated tin bronze
Plug	Nickel plated brass

Approvals

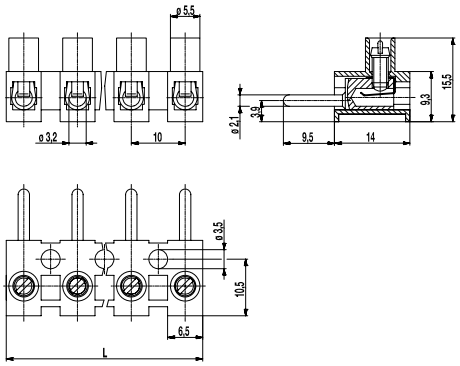
	Current	Voltage	Group	AWG	Nm
	15	300	B	26 - 10	0,51 [2]
	10	300	D,E	26 - 10	0,51 [2]

Options / Accessories

- Marking options on the screw guides
- Leading plug for the protective conductor pole

[1] with insulating base
[2] for 322-STFS-DS: 26 - 12 AWG

Plug-in terminal strip
322-SV(-DS)
Screw connection & pin



The plug-in terminal strip 322-SV is available in 10 mm pitch with 2 to 12 poles.
It has one screw connection per pole and one vertical pin for the connection to the socket of the female counterpart.

When used in combination with a plug-in terminal strip 323-FB plug-in terminal strip, the contact pressure is applied by a stainless-steel spring thus providing excellent electrical contact. The plugging direction is parallel to each other.

The wire protector of the “DS”-version reliably prevents damage to multi-wire flexible conductors by the turning screw.
These terminals strips can be screw-mounted on a substrate.

Part Numbers

No. of poles	322-SV	322-SV-DS	Length	PU
2	72.821.012	12.821.012	18,00	1000
3	73.821.012	13.821.012	28,00	1000
4	74.821.012	14.821.012	38,00	800
5	75.821.012	15.821.012	48,00	500
6	76.821.012	16.821.012	58,00	100
7	77.821.012	17.821.012	68,00	70
8	78.821.012	18.821.012	78,00	70
9	79.821.012	19.821.012	88,00	60
10	80.821.012	20.821.012	98,00	50
11	81.821.012	21.821.012	108,00	50
12	82.821.012	22.821.012	117,00	50

General Information

Pitch	10 mm
No. of poles	2 - 12
Usable with	323-FB(-HDS)
Areas of application	Applications that require to easily open and close not energised circuits.

Technical Data

Clamping Range	*solid / flexible / AWG*		
without wire protector	0,5 - 4 mm² / 0,5 - 2,5 mm² / 20 - 12 AWG		
with wire protector	0,34 - 2,5 mm² / 0,34 - 2,5 mm² / 22 - 14 AWG		
Rated Cross Section	2,5 mm²		
Wire Stripping Length	7 mm ± 0,5 mm		
Overvoltage Category	III	III	II
Pollution Severity Level	3	2	2
Rated Voltage	400 V	630 V	1000 V
Rated Impulse Voltage	6 kV	6 kV	6 kV
Rated Insulation Voltage	450 V acc. to EN 60998-1 [1]		
Rated Current	16 A		
Torque	0,5 Nm		
Other specifications	Rated values apply to use in combination with 323-FB(-HDS) and insulated substrates.		

Material

Moulding	PA, natural, V-2
Comparative Tracking Index	CTI ≥ 600
Insulating Group	I
Temperature Range	-40°C up to 100°C
Screw	M3, zinc plated steel, blue passivated
Wire protector	Tin plated tin bronze
Plug	Tin plated brass

Approvals

	Current	Voltage	Group	AWG	Nm
	20	300	B	18 - 12	0,51
	15	300	B	26 - 10	0,51 [2]
	10	300	D,E	26 - 10	0,51 [2]

Options / Accessories

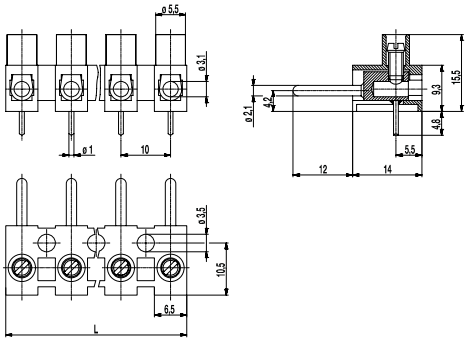
- Marking options on the screw guides
- Leading plug for the protective conductor pole

[1] with insulating base
[2] for 322-SV-DS: 26-12 AWG

Plug-in terminal strip

322-SVG

Screw connection & pin, with solder pin



The plug-in terminal strip 322-SVG with a pitch of 10 mm is equipped with a solder pin and designed for the use on PCBs. Due to large pitch and moulding shape, this version is also well suited for applications using higher voltages.

When used in combination with a plug-in terminal strip 323-FB, the contact pressure is applied by a stainless-steel spring thus providing excellent electrical contact.

In plugged condition, all metal components are protected against accidental contact, except for the solder pins.
The screws are captive, vibration-proof and secured against self-loosening.
In addition, the terminal strips can be screw-mounted onto the PCB.
The plug-in connector can be used as three-way contact.

Part Numbers

No. of poles	322-SVG	Length	PU
2	72.821.013	18,00	250
3	73.821.013	28,00	250
4	74.821.013	38,00	200
5	75.821.013	48,00	100
6	76.821.013	58,00	100
7	77.821.013	68,00	70
8	78.821.013	78,00	70
9	79.821.013	88,00	60
10	80.821.013	98,00	50
11	81.821.013	108,00	50
12	82.821.013	117,00	50

General Information

Pitch	10 mm
No. of poles	2 - 12
Usable with	323-FB(-HDS)

Technical Data

Clamping Range	*solid / flexible / AWG*		
	0,5 - 4 mm² / 0,5 - 2,5 mm² / 20 - 12 AWG		
Rated Cross Section	2,5 mm²		
Wire Stripping Length	5 mm ± 0,5 mm		
Overvoltage Category	III	III	II
Pollution Severity Level	3	2	2
Rated Voltage	500 V	630 V	1000 V
Rated Impulse Voltage	6 kV	6 kV	6 kV
Rated Insulation Voltage	750 V acc. to EN 60998-1		
Rated Current	10 A		
Hole in PCB	ø 1,3 mm		
Other specifications	Rated values apply to use in combination with 323-FB(-HDS).		

Material

Moulding	PA, natural, V-2
Comparative Tracking Index	CTI ≥ 600
Insulating Group	I
Temperature Range	-40°C up to 100°C
Terminal Body	Tin plated brass
Screw	M3; zinc plated steel, blue passivated
Solder pin	ø 1 mm; tin plated copper
Spring	Stainless strip steel

Approvals

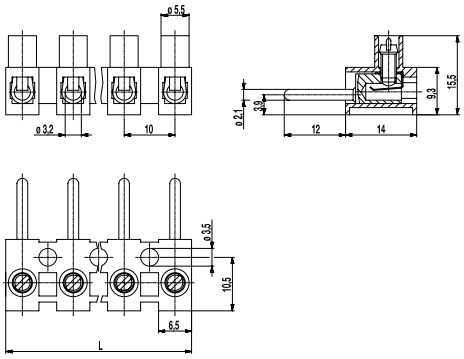
	Current	Voltage	Group	AWG	Nm
	20	300	B	18 - 12	0,51
	15	300	B	26-10 [1]	0,51
	10	150	D,E	26-10 [1]	0,51

[1] in combination with 323-FB-HDS: 26 - 12 AWG

Options / Accessories

- Marking strips BST-322
- Longer solder pins up to 75 mm
- Leading plug for the protective conductor pole

Plug-in terminal strip
322-SVW(-DS)
Screw connection & pin, plug-in direction vertical, long pin



The plug-in terminal strip 322-SVW is available in 10 mm pitch with 2 to 12 poles. It has one screw connection per pole and one vertical pin for the connection to the socket of the female counterpart.

In combination with the 322-FBG plug-in terminal strip, this connector is particularly well suited for PCBs. The plug-in direction to the PCB is horizontal.

When used in combination with a type 323-FBW plug-in terminal strip, the contact pressure is applied by a stainless-steel spring thus providing excellent electrical contact. Due to the guided plug insertion from top, this angular plug-in connector combination is well suited for challenging mounting conditions.

The through-wiring for this angular plug-in connector with plug-in terminal strip 323-PHFBW is achieved by means of screw connections. The individual consumer is wired at the plug connection.

The wire protector of the “DS”-version reliably prevents damage to multi-wire flexible conductors by the turning screw.
These terminals strips can be screw-mounted on a substrate.

Part Numbers

No. of poles	322-SVW	322-SVW-DS	Length	PU
2	60.821.012	24.821.012	18,00	2000
3	61.821.012	25.821.012	28,00	1000
4	62.821.012	26.821.012	38,00	800
5	63.821.012	27.821.012	48,00	100
6	64.821.012	28.821.012	58,00	100
7	65.821.012	29.821.012	68,00	70
8	66.821.012	30.821.012	78,00	70
9	67.821.012	31.821.012	88,00	60
10	68.821.012	32.821.012	98,00	50
11	69.821.012	33.821.012	108,00	50
12	70.821.012	34.821.012	117,00	50

General Information

Pitch	10 mm
No. of poles	2 - 12
Usable with	322-FBG(-DS), 323-FBW(-DS), 323-PHFBW(-DS)
Areas of application	Applications that require to easily open and close not energised circuits.

Technical Data

Clamping Range	*solid / flexible / AWG*		
without wire protector	0,5 - 4 mm² / 0,5 - 2,5 mm² / 20 - 12 AWG		
with wire protector	0,34 - 2,5 mm² / 0,34 - 2,5 mm² / 22 - 14 AWG		
Rated Cross Section	2,5 mm²		
Wire Stripping Length	7 mm ± 0,5 mm		
Overvoltage Category	III	III	II
Pollution Severity Level	3	2	2
Rated Voltage	400 V (160 V)	630 V (160 V)	1000 V (320V)
Rated Impulse Voltage	6 kV (2,5kV)	6 kV (2,5 kV)	6 kV (2,5 kV)
Rated Insulation Voltage	450 V acc. to EN 60998-1		
Rated Current	10 A		
Torque	0,5 Nm		
Other specifications	Rated values apply to use in combination with 323-FBW(-DS) and insulated substrates. Values in parentheses apply to use without insulated substrates.		

Material

Moulding	PA, natural, V-2
Comparative Tracking Index	CTI ≥ 600
Insulating Group	I
Temperature Range	-40°C up to 100°C
Screw	M3; zinc plated steel, blue passivated
Wire protector	Tin plated tin bronze
Plug	Tin plated brass

Approvals

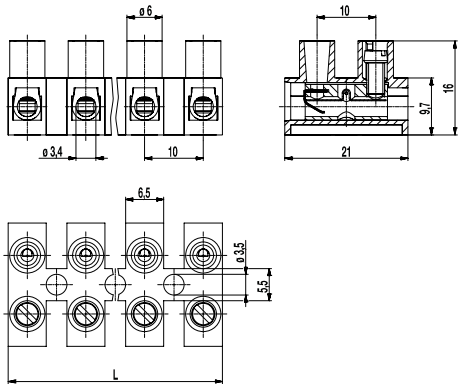
	Current	Voltage	Group	AWG	Nm
	20	300	B	18 - 12	0,51
	15 [2] 10 [2]	300 300	B D,E	26-10 [1] 26-10 [1]	0,51 0,51

[1] for 322-SVW-DS: 26 - 12 AWG
[2] in combination with 323-PHFBW(-DS): 20 A

Options / Accessories

- Marking options on the screw guides
- Leading plug for the protective conductor pole
- Moulding made of special polyamide for e.g. household appliances

Plug-in terminal strip
323-FB(-HDS)
Screw connection & socket with clamping spring



The plug-in terminal strip 323-FB is available in 10 mm pitch with 2 to 12 poles.
It has one screw connection per pole and one plug connection for a terminal strip with pins.

When using 322-SV plug-in terminal strips, the contact pressure is applied by a stainless-steel spring. The plugging direction is parallel to each other.

The wire protector of the “HDS”-version reliably prevents damage to multi-wire flexible conductors by the turning screw.
These terminals strips can be screw-mounted on a substrate.

Part Numbers

No. of poles	323-FB	323-FB-HDS	Length	PU
2	72.822.032	12.822.032	18,00	1000
3	73.822.032	13.822.032	28,00	1000
4	74.822.032	14.822.032	38,00	800
5	75.822.032	15.822.032	48,00	500
6	76.822.032	16.822.032	58,00	100
7	77.822.032	17.822.032	68,00	70
8	78.822.032	18.822.032	78,00	70
9	79.822.032	19.822.032	88,00	60
10	80.822.032	20.822.032	98,00	50
11	81.822.032	21.822.032	108,00	50
12	82.822.032	22.822.032	117,00	50

General Information

Pitch	10 mm
No. of poles	2 - 12
Usable with	322-SV(-DS)
Areas of application	Applications that require to easily open and close not energised circuits.

Technical Data

Clamping Range	*solid / flexible / AWG*		
without wire protector	0,75 - 6 mm² / 0,75 - 4 mm² / 18 - 10 AWG		
with wire protector	0,5 - 4 mm² / 0,5 - 2,5 mm² / 20 - 12 AWG		
Rated Cross Section	2,5 mm²		
Wire Stripping Length	5 mm ± 0,5 mm		
Overvoltage Category	III	III	II
Pollution Severity Level	3	2	2
Rated Voltage	400 V	630 V	1000 V
Rated Impulse Voltage	6 kV	6 kV	6 kV
Rated Insulation Voltage	450 V acc. to EN 60998-1 [1]		
Rated Current	16 A		
Torque	0,5 Nm		
Other specifications	Rated values apply to use in combination with 322-SV(-DS) and insulated substrates.		

Material

Moulding	PA, natural, V-2
Comparative Tracking Index	CTI ≥ 600
Insulating Group	I
Temperature Range	-40°C up to 100°C
Terminal Body	Nickel plated brass
Screw	M3; zinc plated steel, blue passivated
Wire protector	Tin plated tin bronze
Spring	Stainless steel strip

Approvals

	Current	Voltage	Group	AWG	Nm
	20	300	B	18 - 12	0,51
	15	300	B	26 - 10	0,51 [1]
	10	300	D,E	26 - 10	0,51 [1]

Options / Accessories

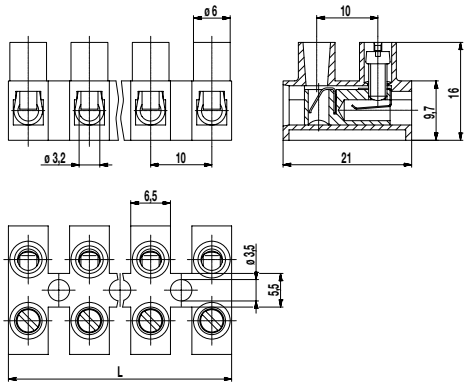
- Marking options on the screw guides
- Jumper 323-J

[1] with insulating base
[2] for 323-FB-HDS: 26 - 12 AWG

Plug-in terminal strip

323-FBW(-DS)

Screw connection & socket with clamping spring, plug-in direction vertical



The plug-in terminal strip 323-FBW is available in 10 mm pitch with 2 to 12 poles. It has one screw connection per pole and one plug connection pointing upwards for the connection of a terminal strip with pins.

When using a 322-SVW plug-in terminal strip, the contact pressure is applied by a stainless-steel spring thus providing excellent electrical contact. Due to the guided plug insertion from top, this angular plug-in connector combination is well suited for challenging mounting conditions.

The wire protector of the “DS”-version reliably prevents damage to multi-wire flexible conductors by the turning screw.
These terminals strips can be screw-mounted on a substrate.

Part Numbers

No. of poles	323-FBW	323-FBW-DS	Length	PU
2	60.822.032	12.822.011	18,00	2000
3	61.822.032	13.822.011	28,00	1000
4	62.822.032	14.822.011	38,00	800
5	63.822.032	15.822.011	48,00	500
6	64.822.032	16.822.011	58,00	100
7	65.822.032	17.822.011	68,00	70
8	66.822.032	18.822.011	78,00	70
9	67.822.032	19.822.011	88,00	60
10	68.822.032	20.822.011	98,00	50
11	69.822.032	21.822.011	108,00	50
12	70.822.032	22.822.011	117,00	50

Part numbers: "no flame" acc. to glow-wire-test

No. of poles	323-FBW	323-FBW-DS	Length	PU
2	60.822.032.EN6	12.822.011.EN6	18,00	2000
4	62.822.032.EN6	14.822.011.EN6	38,00	800
6	64.822.032.EN6	16.822.011.EN6	58,00	100
8	66.822.032.EN6	18.822.011.EN6	78,00	70
10	68.822.032.EN6	20.822.011.EN6	98,00	50
12	70.822.032.EN6	22.822.011.EN6	117,00	50

further number of poles on request

General Information

Pitch	10 mm
No. of poles	2 - 12
Usable with	322-SVW(-DS)
Areas of application	Applications that require to easily open and close not energised circuits.

Technical Data

Clamping Range	*solid / flexible / AWG*		
without wire protector	0,75 - 6 mm² / 0,75 - 4 mm² / 18 - 10 AWG		
with wire protector	0,5 - 4 mm² / 0,5 - 2,5 mm² / 20 - 12 AWG		
Rated Cross Section	2,5 mm²		
Wire Stripping Length	7 mm ± 0,5 mm		
Overvoltage Category	III	III	II
Pollution Severity Level	3	2	2
Rated Voltage	400 V	630 V	1000 V
Rated Impulse Voltage	6 kV	6 kV	6 kV
Rated Insulation Voltage	450 V acc. to EN 60998-1		
Rated Current	10 A		
Torque	0,5 Nm		
Other specifications	Rated values apply to use in combination with 322-SVW(-DS).		

Material

Moulding	PA, natural, V-2 (PA, white, V-0) Details in brackets for "no-flame" products
Comparative Tracking Index	CTI ≥ 600
Insulating Group	I
Temperature Range	-40°C up to 100°C
Terminal Body	Nickel plated brass
Screw	M3, zinc plated steel, passivated
Wire protector	Tin plated tin bronze
Spring	Stainless steel strip

Approvals

	Current	Voltage	Group	AWG	Nm
	20	300	B	18 - 12	0,51
	15	300	B	26 - 10	0,51 [1]
	10	300	D,E	26 - 10	0,51 [1]

[1] for 323-FBW-DS: 26 - 12 AWG

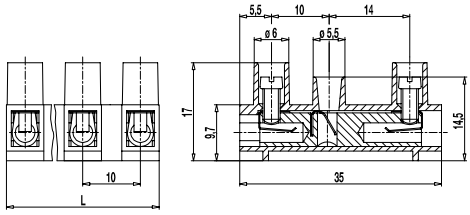
Options / Accessories

- Marking options on and between the screw guides
- Jumper 323-J
- Moulding made of special polyamide for e.g. household appliances

Plug-in terminal strip

323-PHFBW(-DS)

2 screw connections & socket with clamping spring, plug-in direction vertical



The plug-in terminal strip 323-PHFBW is available in 10 mm pitch with 2 to 12 poles.
It has two screw connections per pole and one plug connection pointing upwards for the connection of a terminal strip with pins.

When using a 322-SVW plug-in terminal strip, the through-wiring of the angular plug connection is achieved by means of screw connections. The individual consumer is wired at the plug connection.

The wire protector of the “DS”-version reliably prevents damage to multi-wire flexible conductors by the turning screw.
These terminals strips can be screw-mounted on a substrate.

Part Numbers

No. of poles	323-PHFBW	323-PHFBW-DS	Length	PU
2	12.822.031	32.822.031	18,00	500
3	13.822.031	33.822.031	28,00	500
4	14.822.031	34.822.031	38,00	500
5	15.822.031	35.822.031	48,00	100
6	16.822.031	36.822.031	58,00	100
7	17.822.031	37.822.031	68,00	70
8	18.822.031	38.822.031	78,00	70
9	19.822.031	39.822.031	88,00	60
10	20.822.031	40.822.031	98,00	50
11	21.822.031	41.822.031	108,00	50
12	22.822.031	42.822.031	117,00	25

General Information

Pitch	10 mm
No. of poles	2 - 12
Usable with	322-SVW(-DS)
Areas of application	Applications that require to easily open and close not energised circuits.

Technical Data

Clamping Range	*solid / flexible / AWG*		
without wire protector	0,75 - 6 mm² / 0,75 - 4 mm² / 18 - 10 AWG		
with wire protector	0,5 - 4 mm² / 0,5 - 2,5 mm² / 20 - 12 AWG		
Rated Cross Section	2,5 mm²		
Wire Stripping Length	6 mm ± 0,5 mm		
Overvoltage Category	III	III	II
Pollution Severity Level	3	2	2
Rated Voltage	400 V	630 V	1000 V
Rated Impulse Voltage	6 kV	6 kV	6 kV
Rated Insulation Voltage	750 V acc. to EN 60998-1		
Rated Current	Through (total) current 25 A max., Plug connection 10 A max.		
Torque	0,5 Nm		
Other specifications	Rated values apply to use in combination with 322-SVW(-DS) and without insulated substrates.		

Material

Moulding	PA, natur, V-2
Comparative Tracking Index	CTI ≥ 600
Insulating Group	I
Temperature Range	-40°C up to 100°C
Terminal Body	Nickel plated brass
Screw	M3, zinc plated steel, blue passivated
Wire protector	Tin plated tin bronze
Spring	Stainless steel strip

Approvals

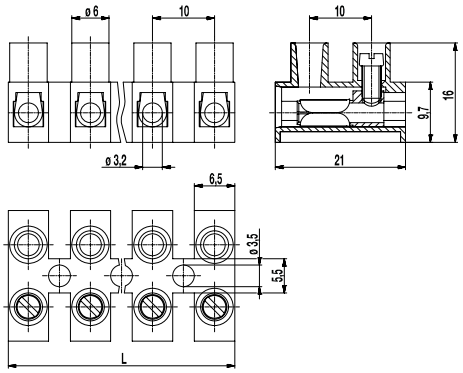
	Current	Voltage	Group	AWG	Nm
	20	300	B	18 - 12	0,51
	20	300	B	26 - 10	0,51 [1]
	20	150	C	26 - 10	0,51 [1]
	5	300	D,E	26 - 10	0,51 [1]

[1] for 323-PHFBW-DS: 26 - 12 AWG

Options / Accessories

- Marking options on and between the screw guides
- Jumper 323-J

Plug-in terminal strip
323-STFB(-DS)
Screw connection & socket



The plug-in terminal strip 323-STFB is available in 10 mm pitch with 2 to 12 poles. It has one screw connection per pole and one plug connection for a terminal strip with pins.

The cross-slotted socket of this version is jacketed with a spring sleeve which provides good permanent contact to the male 322-STFS.

The wire protector of the “DS”-version reliably prevents damage to multi-wire flexible conductors by the turning screw.

Part Numbers

No. of poles	323-STFB	323-STFB-DS	Length	PU
2	32.822.012	52.822.011	18,00	430
3	33.822.012	53.822.011	28,00	650
4	34.822.012	54.822.011	38,00	870
5	35.822.012	55.822.011	48,00	1080
6	36.822.012	56.822.011	58,00	1300
7	37.822.012	57.822.011	68,00	1500
8	38.822.012	58.822.011	78,00	1700
9	39.822.012	59.822.011	88,00	60
10	40.822.012	60.822.011	98,00	50
11	41.822.012	61.822.011	108,00	50
12	42.822.012	62.822.011	118,00	50

General Information

Pitch	10 mm
No. of poles	2 - 12
Usable with	322-STFS(-DS)
Areas of application	Applications that require to easily open and close not energised circuits.

Technical Data

Clamping Range	*solid / flexible / AWG*		
without wire protector	0,75 - 6 mm² / 0,75 - 4 mm² / 18 - 10 AWG		
with wire protector	0,5 - 4 mm² / 0,5 - 2,5 mm² / 20 - 12 AWG		
Rated Cross Section	2,5 mm²		
Wire Stripping Length	6 mm ± 0,5 mm		
Overvoltage Category	III	III	II
Pollution Severity Level	3	2	2
Rated Voltage	400 V	630 V	630 V
Rated Impulse Voltage	6 kV	6 kV	6 kV
Rated Insulation Voltage	450 acc. to EN 60998-1 [1]		
Rated Current	16 A		
Torque	0,5 Nm		
Other specifications	Rated values apply to use in combination with 322-STFS(-DS) and insulated substrates.		

Material

Moulding	PA, natural, V-2
Comparative Tracking Index	CTI ≥ 600
Insulating Group	I
Temperature Range	-40°C up to 100°C
Terminal Body	Nickel plated brass
Screw	M3; zinc plated steel, blue passivated
Wire protector	Tin plated tin bronze
Spring	Stainless steel strip

Approvals

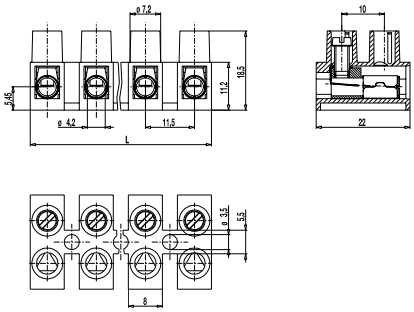
	Current	Voltage	Group	AWG	Nm
	15	300	B	26 - 10	0,51 [2]
	10	300	D,E	26 - 10	0,51 [2]

Options / Accessories

- Marking options on and between the screw guides
- Jumper 323-J
- Leading terminal body for the protective conductor pole

[1] with insulating base
[2] for 323-STFB-DS: 26 - 12 AWG

Plug-in terminal strip
324-STFB(-DS)
Screw connection & socket



The plug-in terminal strip 324-STFB is available in 11,5 mm pitch with 2 to 12 poles.
It has one screw connection per pole and one plug connection for a terminal strip with pins.

The cross-slotted socket of this version is jacketed with a spring sleeve which provides good permanent contact to the male 324-STFS.

The wire protector of the “DS”-version reliably prevents damage to multi-wire flexible conductors by the turning screw.
These terminals strips can be screw-mounted on a substrate.

Part Numbers

No. of poles	324-STFB	324-STFB-DS	Length	PU
2	32.823.004	32.823.017	21,00	1000
3	33.823.004	33.823.017	32,00	500
4	34.823.004	34.823.017	44,00	500
5	35.823.004	35.823.017	55,00	250
6	36.823.004	36.823.017	67,00	100
7	37.823.004	37.823.017	78,00	75
8	38.823.004	38.823.017	90,00	60
9	39.823.004	39.823.017	101,00	50
10	40.823.004	40.823.017	113,00	50
11	41.823.004	41.823.017	124,00	50
12	42.823.004	42.823.017	135,00	50

General Information

Pitch	11,5 mm
No. of poles	2 - 12
Usable with	324-STFS(-DS)
Areas of application	Applications that require to easily open and close not energised circuits.

Technical Data

Clamping Range	*solid / flexible / AWG*		
without wire protector	1 - 10 mm² / 1 - 6 mm² / 16 - 10 AWG		
with wire protector	0,75 - 6 mm² / 0,75 - 4 mm² / 18 - 12 AWG		
Rated Cross Section	4 mm²		
Wire Stripping Length	7 mm ± 0,5 mm		
Overvoltage Category	III	III	II
Pollution Severity Level	3	2	2
Rated Voltage	250 V (500 V)	320 V (630 V)	630V (1000V)
Rated Impulse Voltage	4 kV (6 kV)	4 kV (6 kV)	4 kV (6 kV)
Rated Insulation Voltage	250 V acc. to EN 60998-1		
Rated Current	25 A		
Torque	0,8 Nm		
Other specifications	Rated values apply to use in combination with 324-STFS(-DS). Values in parentheses apply to use without insulated substrates.		

Material

Moulding	PA, natural, V-2
Comparative Tracking Index	CTI ≥ 600
Insulating Group	I
Temperature Range	-40°C up to 100°C
Terminal Body	Nickel plated brass
Screw	M3,5; zinc plated steel, blue passivated
Wire protector	Tin plated tin bronze
Spring	Stainless steel strip

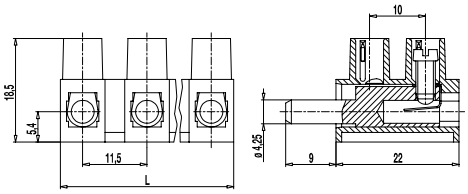
Approvals

	Current	Voltage	Group	AWG	Nm
	25	150	B,D	18 - 10	
	20	300	B	26 - 10	0,79
	10	300	D,E	26 - 10	0,79

Options / Accessories

- Marking options on and between the screw guides
- Jumper 324-J
- Leading socket for the protective conductor pole

Plug-in terminal strip
324-STFS(-DS)
Screw connection & pin



The plug-in terminal strip 324-STFS is available in 11,5 mm pitch with 2 to 12 poles.
It has one screw connection per pole and one vertical pin for the connection to the socket of the female counterpart.

This plug-in terminal strip was designed with a solid pin in order to provide reliable permanent contact to the socket of 324-STFB.

The wire protector of the “DS”-version reliably prevents damage to multi-wire flexible conductors by the turning screw.
These terminals strips can be screw-mounted on a substrate.

Part Numbers

No. of poles	324-STFS	324-STFS-DS	Length	PU
2	72.823.004	12.823.017	21,00	1000
3	73.823.004	13.823.017	32,00	500
4	74.823.004	14.823.017	44,00	500
5	75.823.004	15.823.017	55,00	250
6	76.823.004	16.823.017	67,00	100
7	77.823.004	17.823.017	78,00	75
8	78.823.004	18.823.017	90,00	60
9	79.823.004	19.823.017	101,00	50
10	80.823.004	20.823.017	113,00	50
11	81.823.004	21.823.017	124,00	50
12	82.823.004	22.823.017	135,00	50

General Information

Pitch	11,5 mm
No. of poles	2 - 12
Usable with	324-STFB(-DS)
Areas of application	Applications that require to easily open and close not energised circuits.

Technical Data

Clamping Range	*solid / flexible / AWG*		
without wire protector	1 - 10 mm² / 1 - 6 mm² / 16 - 10 AWG		
with wire protector	0,75 - 6 mm² / 0,75 - 4 mm² / 18 - 12 AWG		
Rated Cross Section	4 mm²		
Wire Stripping Length	7 mm ± 0,5 mm		
Overvoltage Category	III	III	II
Pollution Severity Level	3	2	2
Rated Voltage	250 V (500 V)	320 V (630 V)	630V (1000V)
Rated Impulse Voltage	4 kV (6 kV)	4 kV (6 kV)	4 kV (6 kV)
Rated Insulation Voltage	250 V acc. to EN 60998-1		
Rated Current	25 A		
Torque	0,8 Nm		
Other specifications	Rated values apply to use in combination with 324-STFB(-DS). Values in parentheses apply to use without insulated substrates.		

Material

Moulding	PA, natural, V-2
Comparative Tracking Index	CTI ≥ 600
Insulating Group	I
Temperature Range	-40°C up to 100°C
Screw	M3,5; zinc plated steel, blue passivated
Wire protector	Tin plated tin bronze
Plug	Nickel plated brass
Spring	Stainless steel strip

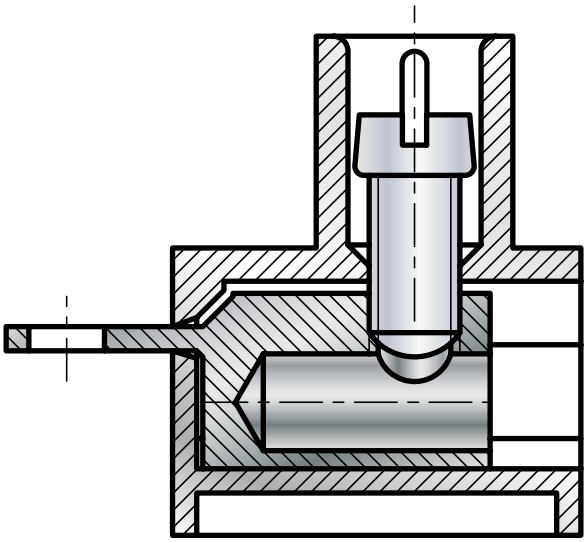
Approvals

	Current	Voltage	Group	AWG	Nm
	25	150	B,D	18 - 10	
	20	300	B	26 - 10	0,79
	10	300	D,E	26 - 10	0,79

Options / Accessories

- Marking options on and between the screw guides
- Jumper 324-J
- Leading plug for the protective conductor pole

Screw/solder terminal strips



The following pages list our range of screw/solder terminal strips.
They have a screw connection and their solder connection is formed as a solder tag.

Our screw/solder terminal strips are available in 3,5 mm, 5 mm, 8 mm and 10 mm pitch.
Due to the lateral mounting flanges, large cross-sections and compact size, they are suitable for every application

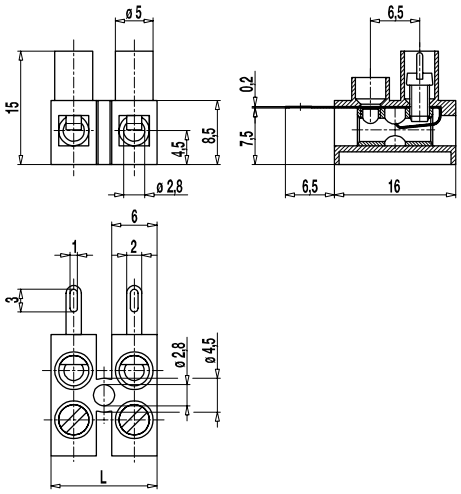
All versions use captive screws that are ready to be wired and secured against self-loosening.

Versions of the 300 series can also be combined with plug-in terminal strips 302-SV(-DS) and 322-SV(-DS). Their pins are pushed into the sockets and then screw-connected.

Screw/solder terminal strip

302-LF-DS

Screw/solder tag connection



The screw/solder terminal strip 302-LF-DS in 8 mm pitch is available with 1 to 12 poles. Due to the small pole spacing, it is well suited for applications where space is limited.

The solder tag is formed as a wire protector. The wire protection reliably prevents damage to multi-wire flexible conductors by the turning screw.
The screws are ready to be wired, secured against self-loosening and captive.

These strips can be combined with plug-in terminal strip 302-SV by plugging the pins into the sockets and screwing them tight.

These terminals strips can be screw-mounted on a substrate.

Part Numbers

No. of poles	302-LF-DS	Length	PU
2	36.820.029	15,00	500
3	37.820.029	23,00	200
4	38.820.029	31,00	100
5	39.820.029	39,00	100
6	40.820.029	47,00	80
7	41.820.029	55,00	60
8	42.820.029	63,00	60
12	46.820.029	94,00	40

further number of poles on request

General Information

Pitch	8 mm
No. of poles	1 - 12
Usable with	302-SV(-DS)

Technical Data

Clamping Range	*solid / flexible / AWG*		
	0,34 - 2,5 mm² / 0,34 - 1,5 mm² / 22 - 14 AWG		
Rated Cross Section	1,5 mm²		
Wire Stripping Length	5 mm ± 0,5 mm		
Overvoltage Category	III	III	II
Pollution Severity Level	3	2	2
Rated Voltage	320 V	320 V	630 V
Rated Impulse Voltage	4 kV	4 kV	4 kV
Rated Insulation Voltage	450 V acc. to EN 60998-1		
Rated Current	6 A		
Torque	0,4 Nm		

Material

Moulding	PA, natural, V-2
Comparative Tracking Index	CTI ≥ 600
Insulating Group	I
Temperature Range	-40°C up to 100°C
Terminal Body	Nickel plated brass
Screw	M2,6; zinc plated steel, blue passivated
Wire protector	Tin plated tin bronze

Approvals

	Current	Voltage	Group	AWG	Nm
	6	300	B,D	20 - 14	0,4
	10	300	B,D,E	26 - 14	0,4

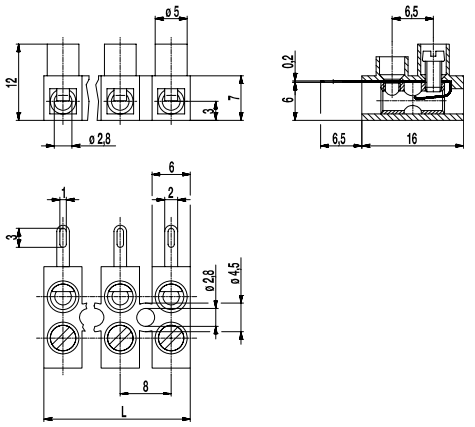
Options / Accessories

- Marking options on the screw guides
- Jumper 302-J
- Insulation receptacles ISO-110
- Screws made out of brass
- Moulding made of special polyamide for e.g. household appliances
- Up to 26 poles possible
- With pegs at the base for saving assembly time

Screw/solder terminal strip

302-NLF-DS

Screw/solder tag connection, low profile version



The screw/solder terminal strip 302-NLF-DS, lower version, is available in 8 mm pitch with 1 to 12 poles.
Due to the small pole spacing, it is well suited for applications where space is limited.

The solder tag is formed as a wire protector. The wire protection reliably prevents damage to multi-wire flexible conductors by the turning screw.
The screws are ready to be wired, secured against self-loosening and captive.

The “N”-variant only differs from the standard 302-LF-DS version by the 12 mm overall height (i.e. the moulding height is 3 mm lower). Note the shortened clearance and creepage distances.

These strips can be combined with plug-in 302-NSV terminal strips by plugging the pins into the sockets and screwing them tight.

These terminals strips can be screw-mounted on a substrate.

Part Numbers

No. of poles	302-NLF-DS	Length	PU
1	51.820.043	7,00	1000
2	52.820.043	15,00	500
3	53.820.043	23,00	200
4	54.820.043	31,00	100
5	55.820.043	39,00	100
6	56.820.043	47,00	80
7	57.820.043	55,00	60
8	58.820.043	63,00	60
9	59.820.043	71,00	50
10	60.820.043	79,00	50
11	61.820.043	87,00	40
12	62.820.043	94,00	40

General Information

Pitch	8 mm
No. of poles	1 - 12
Usable with	302-NSV(-DS)

Technical Data

Clamping Range	*solid / flexible / AWG*		
	0,34 - 2,5 mm² / 0,34 - 1,5 mm² / 22 - 14 AWG		
Rated Cross Section	1,5 mm²		
Wire Stripping Length	5 mm ± 0,5 mm		
Overvoltage Category	III	III	II
Pollution Severity Level	3	2	2
Rated Voltage	250 V	320 V	630 V
Rated Impulse Voltage	4 kV	4 kV	4 kV
Rated Insulation Voltage	250 V acc. to EN 60998-1		
Rated Current	6 A		
Torque	0,4 Nm		

Material

Moulding	PA, natural, V-2
Comparative Tracking Index	CTI ≥ 600
Insulating Group	I
Temperature Range	-40°C up to 100°C
Terminal Body	Nickel plated brass
Screw	M2,6; zinc plated steel, blue passivated
Wire protector	Tin plated tin bronze

Approvals

	Current	Voltage	Group	AWG	Nm
CSA	10	300	B,D,E	26 - 14	0,4

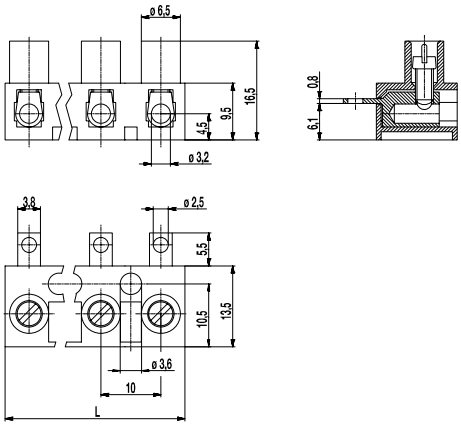
Options / Accessories

- Marking options on the screw guides
- Jumper 302-J
- Insulation receptacles ISO-110
- Screws made out of brass
- Moulding made of special polyamide for e.g. household appliances

Screw/solder terminal strip

321-LFS(-DS)

Screw/solder tag connection, side of solder tag closed, pottable



The screw/solder terminal strip 321-LFS in 10 mm pitch was designed for larger cross-sections than version 302-LF-DS. It is available with 1 to 12 poles.
Mouldings of this type are encapsulated on the solder tag side and therefore particularly well suited for potting.
Socket and solder tag are manufactured in one piece.

The screws are ready to be wired, secured against self-loosening and captive.

These strips can be combined with plug-in terminal strip 322-SV by plugging the pins into the sockets and screwing them tight.

The wire protector of the “DS”-version reliably prevents damage to multi-wire flexible conductors by the turning screw.
These terminals strips can be screw-mounted on a substrate.

Part Numbers

No. of poles	321-LFS	321-LFS-DS	Length	PU
1	11.821.020	31.821.020	8,00	3000
2	12.821.020	32.821.020	18,00	1000
3	13.821.020	33.821.020	28,00	200
4	14.821.020	34.821.020	38,00	200
5	15.821.020	35.821.020	48,00	100
6	16.821.020	36.821.020	58,00	100
7	17.821.020	37.821.020	68,00	70
8	18.821.020	38.821.020	78,00	70
9	19.821.020	39.821.020	88,00	60
10	20.821.020	40.821.020	98,00	50
11	21.821.020	41.821.020	108,00	50
12	22.821.020	42.821.020	117,00	50

further number of poles on request

General Information

Pitch	10 mm
No. of poles	1 - 12

Technical Data

Clamping Range	*solid / flexible / AWG*		
without wire protector	0,75 - 6 mm² / 0,75 - 4 mm² / 18 - 12 AWG		
with wire protector	0,5 - 4 mm² / 0,5 - 2,5 mm² / 20 - 12 AWG		
Rated Cross Section	2,5 mm²		
Wire Stripping Length	7 mm ± 0,5 mm		
Overvoltage Category	III	III	II
Pollution Severity Level	3	2	2
Rated Voltage	400 V	630 V	1000 V
Rated Impulse Voltage	6 kV	6 kV	6 kV
Rated Insulation Voltage	450 V acc. to EN 60998-1		
Rated Current	26 A		
Torque	0,5 Nm		

Material

Moulding	PA, natural, V-2
Comparative Tracking Index	CTI ≥ 600
Insulating Group	I
Temperature Range	-40°C up to 100°C
Terminal Body	Tin plated brass
Screw	M3; zinc plated steel, blue passivated
Wire protector	Tin plated tin bronze

Approvals

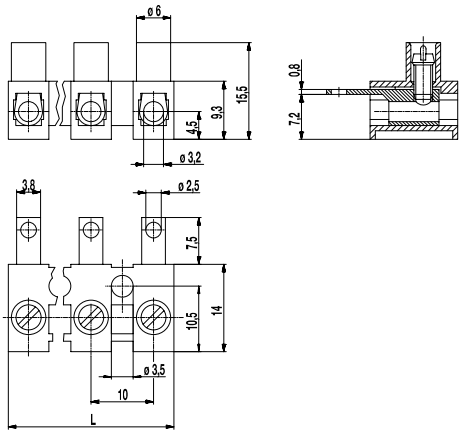
	Current	Voltage	Group	AWG	Nm
CSA	20	300	B	26-10 [1]	0,51
	10	300	D,E	26-10 [1]	0,51

[1] for 321-LFS-DS: 26-12 AWG

Options / Accessories

- Marking options on the screw guides
- Cover caps A-323 und base plate B-323 for additional contact protection
- Insulation receptacles ISO-110
- Moulding made of special polyamide for e.g. household appliances
- Up to 16 poles possible

Screw/solder terminal strip
322-LFS(-DS)
Screw/solder tag connection



The screw/solder terminal strip 322-LFS in 10 mm pitch was designed for larger cross-sections than version 302-LF-DS. It is available with 1 to 12 poles.
Mouldings of this type are open on the solder tag side but they can be connected safe-to-touch as 2- and 3-pole version with cover caps A-323 and base plates B-323. This will extend the creepage distance to the mounting surface.
Socket and solder tag are manufactured in one piece.

The screws are ready to be wired, secured against self-loosening and captive.

These strips can be combined with plug-in terminal strip 322-SV by plugging the pins into the sockets and screwing them tight.

The wire protector of the “DS”-version reliably prevents damage to multi-wire flexible conductors by the turning screw.
These terminals strips can be screw-mounted on a substrate.

Part Numbers

No. of poles	322-LFS	322-LFS-DS	Length	PU
1	10.821.002	23.821.002	8,00	3000
2	11.821.002	24.821.002	18,00	1000
3	12.821.002	25.821.002	28,00	1000
4	13.821.002	26.821.002	38,00	1000
5	14.821.002	27.821.002	48,00	500
6	15.821.002	28.821.002	58,00	140
7	16.821.002	29.821.002	68,00	90
8	17.821.002	30.821.002	78,00	90
9	18.821.002	31.821.002	88,00	80
10	19.821.002	32.821.002	98,00	70
11	20.821.002	33.821.002	108,00	70
12	21.821.002	34.821.002	117,00	70

General Information

Pitch	10 mm
No. of poles	1 - 12

Technical Data

Clamping Range	*solid / flexible / AWG*		
without wire protector	0,5 - 4 mm² / 0,5 - 2,5 mm² / 20 - 12 AWG		
with wire protector	0,34 - 2,5 mm² / 0,34 - 2,5 mm² / 22 - 14 AWG		
Rated Cross Section	2,5 mm²		
Wire Stripping Length	7 mm ± 0,5 mm		
Overvoltage Category	III	III	II
Pollution Severity Level	3	2	2
Rated Voltage	320 V	320 V	630 V
Rated Impulse Voltage	4 kV	4 kV	4 kV
Rated Insulation Voltage	450 V acc. to EN 60998-1		
Rated Current	24 A		
Torque	0,5 Nm		

Material

Moulding	PA, natural, V-2
Comparative Tracking Index	CTI ≥ 600
Insulating Group	I
Temperature Range	-40°C up to 100°C
Terminal Body	Tin plated brass
Screw	M3, zinc plated steel, blue passivated
Wire protector	Tin plated tin bronze

Approvals

	Current	Voltage	Group	AWG	Nm
	10	300	B,D	20 - 12	0,51
	20	300	B	22-10 [1]	0,51
	10	300	D,E	22-10 [1]	0,51

[1] for 322-LFS-DS: 26 - 12 AWG

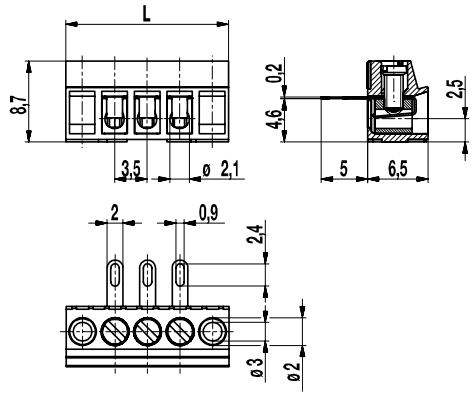
Options / Accessories

- Marking options on the screw guides
- Cover caps A-323 und base plate B-323 for additional contact protection
- Insulation receptacles ISO-110
- Lowered solder tag for larger creepage distances to the screw
- Solder tag with two holes
- Moulding made of special polyamide for e.g. household appliances

Screw/solder terminal strip

931-A-LFDS

Screw/solder tag connection



The screw/solder terminal strip 931-A-LFDS with a pitch of 3,5 mm is available in 2- to 12-pole design.
Due to the small pitch, it requires only little mounting space and is therefore well suited for low-voltage applications.

The solder tag is formed as a wire protector. The wire protection reliably prevents damage to multi-wire flexible conductors by the turning screw.

The moulding can also be mounted using the lateral flanges.

Part Numbers

No. of poles	931-A-LFDS	Length	PU
2	20.870.442	14,00	250
3	20.870.443	17,50	100
4	20.870.444	21,00	100
5	20.870.445	24,50	100
6	20.870.446	28,00	100
7	20.870.447	31,50	100
8	20.870.448	35,00	100
9	20.870.449	38,50	100
10	20.870.450	42,00	100
11	20.870.451	45,50	100
12	20.870.452	49,00	100

General Information

Pitch	3,5 mm
No. of poles	2 - 12

Technical Data

Clamping Range	*solid / flexible / AWG*		
	0,34 - 1,5 mm² / 0,34 - 1 mm² / 22 - 16 AWG		
Rated Cross Section	1 mm²		
Wire Stripping Length	5 mm ± 0,5 mm		
Overvoltage Category	III	III	II
Pollution Severity Level	3	2	2
Rated Voltage	100 V	160 V	320 V
Rated Impulse Voltage	2,5 kV	2,5 kV	2,5 kV
Rated Insulation Voltage	130 A acc. to EN 60998-1		
Rated Current	4 A		
Torque	0,25 Nm		

Material

Moulding	PA, grey, V-0
Comparative Tracking Index	CTI ≥ 600
Insulating Group	I
Temperature Range	-40°C up to 100°C
Terminal Body	Nickel plated brass
Screw	M2; zinc plated steel, blue passivated
Wire protector	Tin plated tin bronze

Approvals

	Current	Voltage	Group	AWG	Nm
	10	300	B	26 - 16	0,23
	10	300	B	26 - 16	0,2

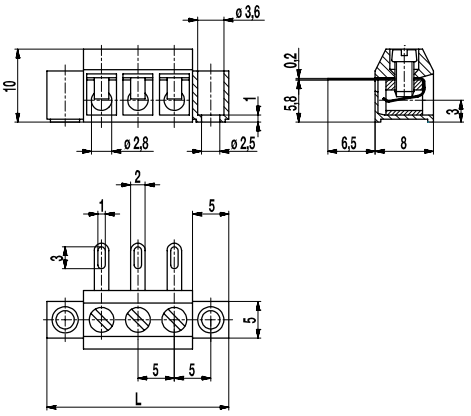
Options / Accessories

- Consecutive numbering
- Special marking according to drawing
- Self-adhesive marking strip BST-3,50
- Larger number of poles

Screw/solder terminal strip

951-A-LFDS

Screw/solder tag connection



The screw/solder terminal strip 951-A-LFDS with a pitch of 5 mm is available in 2- to 12-pole design.
It requires only little mounting space and is well suited for low-voltage applications.

The solder tag is formed as a wire protector. The wire protection reliably prevents damage to multi-wire flexible conductors by the turning screw.

The moulding can also be mounted using the lateral flanges.

General Information

Pitch	5 mm
No. of poles	2 - 12

Technical Data

Clamping Range	*solid / flexible / AWG*		
	0,34 - 2,5 mm² / 0,34 - 2,5 mm² / 22 - 14 AWG		
Rated Cross Section	1,5 mm²		
Wire Stripping Length	6 mm ± 0,5 mm		
Overvoltage Category	III	III	II
Pollution Severity Level	3	2	2
Rated Voltage	160 V	160 V	320 V
Rated Impulse Voltage	2,5 kV	2,5 kV	2,5 kV
Rated Insulation Voltage	130 V acc. to EN 60998-1		
Rated Current	6 A		
Torque	0,4 Nm		

Material

Moulding	PA, grey, V-0
Comparative Tracking Index	CTI ≥ 600
Insulating Group	I
Temperature Range	-40°C up to 100°C
Terminal Body	Nickel plated brass
Screw	M2,6; zinc plated steel, blue passivated
Wire protector	Tin plated tin bronze

Part Numbers

No. of poles	951-A-LFDS	Length	PU
2	20.871.252	20,00	250
3	20.871.253	25,00	250
4	20.871.254	30,00	200
5	20.871.255	35,00	100
6	20.871.256	4000	100
7	20.871.257	45,00	100
8	20.871.258	50,00	100
9	20.871.259	55,00	100
10	20.871.260	60,00	50
11	20.871.261	65,00	50
12	20.871.262	70,00	50

Approvals

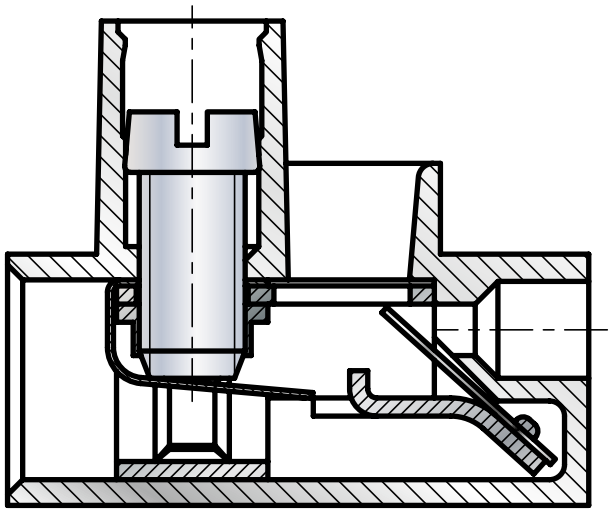
	Current	Voltage	Group	AWG	Nm
	15	300	B	26 - 14	0,4
	15	300	B	26 - 14	0,4

Options / Accessories

- Consecutive numbering
- Special marking according to drawing
- Self-adhesive marking strip BST-5,00
- Larger number of poles

Notes

Screw/plug terminal strips

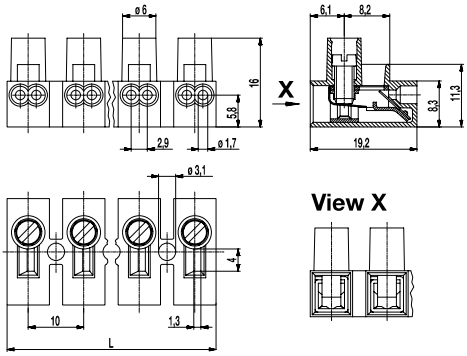


The page below lists our range of screw/plug terminal strips
Screw/plug terminal strips have one screw connection and a dual wire terminal for solid wires on the opposite side of the srew connection.
They are well suited for the quick connection of solid wires.

The screw connection allows for connecting solid and flexible wires. The version with wire protector offers additional protection to flexible wires from damage by the turning screw.

The screws are ready to be wired, secured against self-loosening and captive.

Screw/plug-in terminal strip
820(-DS)
Screw/screwless connection



The terminal strip 820 with pitch 10 mm has a dual wire terminal connector on one side. Here, the leads are inserted and clamped all the way to the stop. These terminal strips are designed for solid conductors.
The opposite side is equipped with screw connections with rectangular clamping spaces. The screws are ready to be wired, secured against self-loosening and captive.

The wire protector of the “DS”-version reliably prevents damage to multi-wire flexible conductors by the turning screw.
These terminals strips can be screw-mounted on a substrate.

Note: For the version without wire protector, flexible wires can only be connected with a ferrule.

Part Numbers

No. of poles	820	820-DS	Length	PU
1	11.815.202	31.815.202	8,50	4000
2	12.815.202	32.815.202	18,50	2000
3	13.815.202	33.815.202	28,50	1000
4	14.815.202	34.815.202	38,50	800
5	15.815.202	35.815.202	48,50	500
6	16.815.202	36.815.202	58,50	200
7	17.815.202	37.815.202	68,50	200
8	18.815.202	38.815.202	78,50	100
9	19.815.202	39.815.202	88,50	100
10	20.815.202	40.815.202	98,50	50
11	21.815.202	41.815.202	108,50	50
12	22.815.202	42.815.202	117,50	50

Part Numbers: "no flame" acc. to glow-wire test

No. of poles	820	820-DS	Length	PU
2		32.815.202.EN6	18,50	2000
3		33.815.202.EN6	28,50	1000
4		34.815.202.EN6	38,50	800
6		36.815.202.EN6	58,50	200
7		37.815.202.EN6	68,50	200
8		38.815.202.EN6	78,50	100
12		42.815.202.EN6	117,50	50

further number of poles on request

General Information

Pitch	10 mm
No. of poles	1 - 12
Areas of application	Terminal for the quick connection of solid wires.

Technical Data

Clamping Range	*solid / flexible / AWG*		
	0,75 - 1,5 mm² / --- / 18 - 16 AWG [1]		
without wire protector	0,75 - 6 mm² / 0,75 - 2,5 mm² / 18 - 12 AWG [2]		
with wire protector	0,75 - 6 mm² / 0,75 - 2,5 mm² / 18 - 12 AWG [2]		
Rated Cross Section	[1] 1,5 mm² / [2] 2,5 mm²		
Wire Stripping Length	7 mm ± 0,5 mm		
Overvoltage Category	3	2	2
Pollution Severity Level	III	III	II
Rated Voltage	320 V	320 V	630 V
Rated Impulse Voltage	4 kV	4 kV	4 kV
Rated Insulation Voltage	450 V acc. to EN 60998-1		
Rated Current	[1] 17,5 A / [2] 24 A		
Torque	0,8 Nm		

Material

Moulding	PA, natural, V-2 (PA, natural, V-0) Details in braquets for "no flame" products
Comparative Tracking Index	CTI ≥ 600
Insulating Group	I
Temperature Range	-40°C up to 100°C
Terminal Body	Tin plated brass
Screw	M3,5; zinc plated steel, blue passivated
Wire protector	Stainless steel strip
Spring	Stainless steel strip

Approvals

	Current	Voltage	Group	AWG	Nm
	10	300	B	16-10 [3]	0,51
	10	150	C	16-10 [3]	0,51
	10	300	B,D	20-10 [3]	0,51
	10	150	C	20-10 [3]	0,51

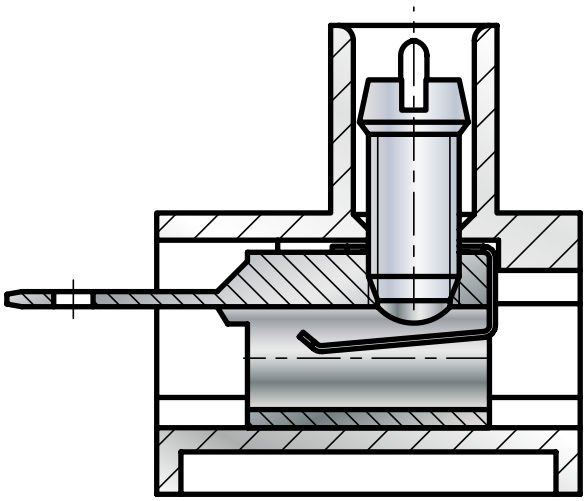
	Current	Voltage	mm²
	24	450	2,5/1,5

Options / Accessories

- Consecutive numbering
- Special marking according to drawing
- Self-adhesive marking strip BST-10,00
- Version with dovetail base (type 821)

[1] Plug connector
[2] Screw connector
[3] spring side 18 - 16 solid

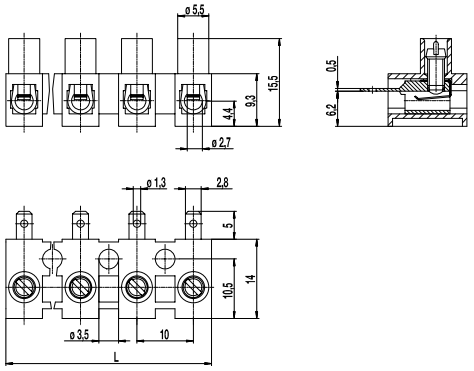
Tab and screw connector blocks



Tab and screw connector blocks are a combination of screw terminals and tab connector blocks.
They can be used to connect equipment to the grid and are well suited for many other applications.

Tab connectors excel with simple and low-cost assembly and are designed to connect components inside the equipment.
They feature screw connections for the connection to the grid.

Tab/screw connector
322-A-2,8(-DS)
with tab A 2,8



The tab connector block 322-A-2,8 in 10 mm pitch is available with 1 to 12 poles. These connector strips are a combination of screw and tab connectors. The can be used to connect equipment to the grid and are well suited for many other applications.

After slipping on the tab receptacles, their ends protrude approx. 12,5 mm from the moulding. The screws are ready to be wired, secured against self-loosening and captive.

This tab connector block can be combined with our plug-in terminal strip 322-SV - the plugs are simply inserted in the sockets and subsequently screwed tight.

The wire protector of the “DS”-version reliably prevents damage to multi-wire flexible conductors by the turning screw.
These terminals strips can be screw-mounted on a substrate.

Part Numbers

No. of poles	322-A-2,8	322-A-2,8-DS	Length	PU
1	11.821.014	31.821.014	8,00	2000
2	12.821.014	32.821.014	18,00	2000
3	13.821.014	33.821.014	28,00	1000
4	14.821.014	34.821.014	38,00	800
5	15.821.014	35.821.014	48,00	500
6	16.821.014	36.821.014	58,00	100
7	17.821.014	37.821.014	68,00	70
8	18.821.014	38.821.014	78,00	70
9	19.821.014	39.821.014	88,00	60
10	20.821.014	40.821.014	98,00	50
11	21.821.014	41.821.014	108,00	50
12	22.821.014	42.821.014	117,00	50

General Information

Pitch	10 mm
No. of poles	1 - 12
Accessories	322-SV

Technical Data

Clamping Range	*solid / flexible / AWG*		
without wire protector	0,5 - 4 mm² / 0,5 - 2,5 mm² / 20 - 12 AWG		
with wire protector	0,34 - 2,5 mm² / 0,34 - 2,5 mm² / 22 - 14 AWG		
Rated Cross Section	[1] 2,5 mm²; [2] 1 mm²		
Overvoltage Category	III	III	II
Pollution Severity Level	3	2	2
Rated Voltage	400 V	630 V	1000 V
Rated Impulse Voltage	6 kV	6 kV	6 KV
Rated Insulation Voltage	450 V acc. to EN 60998-1		
Rated Current	6 A compare DIN 46 249		
Torque	0,5 Nm		

Material

Moulding	PA, natural, V-2
Comparative Tracking Index	CTI ≥ 600
Insulating Group	I
Temperature Range	-40°C up to 100°C
Terminal Body	Nickel plated brass
Screw	M3; zinc plated steel, blue passivated
Wire protector	Tin plated tin bronze

Approvals

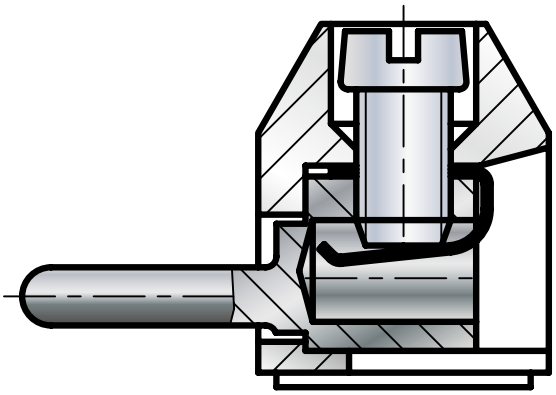
	Current	Voltage	Group	AWG	Nm
CSA	6	300	B,D,E	22 - 10	0,51

Options / Accessories

- Marking options on the screw guides
- Marking strips BST-322
- Cover caps A-323 und base plate B-323 for additional contact protection

[1] Screw side
[2] Plug-in side

Plug connectors



This section lists our plug connector combination 951-B-SV and 971-FBS in 5 mm pitch.

They offer a number of valuable benefits:

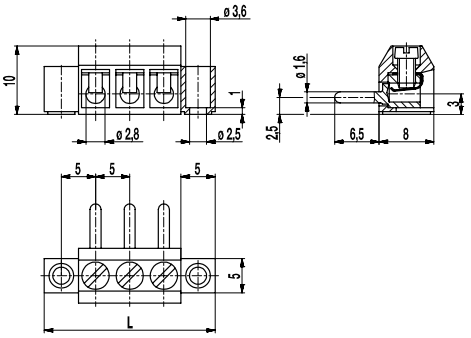
- decentralized part/component assembly,
- prevention of wiring errors
- easy disconnection for service and maintenance purposes
- easy connection in confined mounting space.

Due to the 5 mm pitch, it requires only little mounting space, and is therefore well suited for applications where space is limited.

For low voltage applications the combination is safe-to-touch and should be mounted on an insulating pad.

Mounting flanges on the pin strip 951-B-SV offer alternative mounting configurations.

Plug connector
951-B-SV(-DS)
Screw connection, with fastening flanges



The plug-in connector strip 951-B-SV in 5 mm pitch is available with 2 to 12 poles. Contrary to version 951-SV, the plug connector 951-B-SV has exterior mounting flanges and can be used in combination with version 971-FBS.

Due to the small pitch, this plug connection requires only little mounting space and is therefore well suited for applications (i.e. low-voltage) where space is limited. For low voltage applications, the combination is safe-to-touch and should be mounted on an insulating pad.

The wire protector of the “DS”-version reliably prevents damage to multi-wire flexible conductors by the turning screw.

Part Numbers

No. of poles	951-B-SV	951-B-SV-DS	Length	PU
2	10.871.532	20.871.532	10,00	200
3	10.871.533	20.871.533	15,00	200
4	10.871.534	20.871.534	20,00	100
5	10.871.535	20.871.535	25,00	100
6	10.871.536	20.871.536	30,00	50
7	10.871.537	20.871.537	35,00	50
8	10.871.538	20.871.538	40,00	50
9	10.871.539	20.871.539	45,00	50
10	10.871.540	20.871.540	50,00	50
11	10.871.541	20.871.541	55,00	50
12	10.871.542	20.871.542	60,00	50

General Information

Pitch	5 mm
No. of poles	2 - 12
Usable with	971-FBS(-DS)
Areas of application	Applications that require to easily open and close not energised circuits.

Technical Data

Clamping Range	*solid / flexible / AWG*		
without wire protector	0,75 - 4 mm² / 0,75 - 2,5 mm² / 18 - 12 AWG		
with wire protector	0,34 - 2,5 mm² / 0,34 - 2,5 mm² / 22 - 14 AWG		
Rated Cross Section	1,5 mm²		
Wire Stripping Length	5 mm ± 0,5 mm		
Rated Voltage			
Overvoltage Category	III	III	II
Pollution Severity Level	3	2	2
Rated Voltage	160 V (80V)	160 V	320 V
Rated Impulse Voltage	2,5 kV	2,5 kV	2,5 kV
Rated Insulation Voltage	130 V acc. to EN 60998-1		
Rated Current	6 A		
Torque	0,4 Nm		
Other specifications	Rated values in parentheses apply to use without insulated substrates. 2-8 poles types are "no-flame" acc. to glow-wire test.		

Material

Moulding	PA, grey, V-0
Comparative Tracking Index	2-8 poles: CTI ≥ 600; 9-12 poles: CTI 400
Insulating Group	2-8 poles: I; 9-12 poles: II
Temperature Range	-40°C up to 100°C
Terminal Body	Tin plated brass
Screw	M2,6; zinc plated steel, blue passivated
Wire protector	Tin plated tin bronze
Plug	Tin plated brass

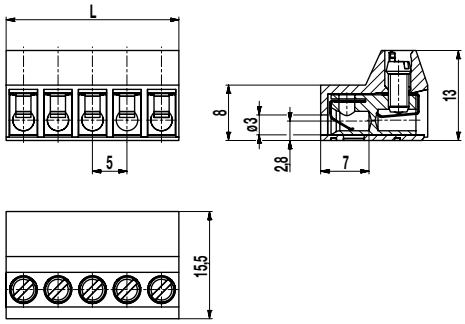
Approvals

	Current	Voltage	Group	AWG	Nm
	7	300	B	26 - 14	0,4
	7	300	B	26 - 14	0,4

Options / Accessories

- Consecutive numbering
- Special marking according to drawing
- Self-adhesive marking strip BST-5,00

Plug connector
971-FBS(-DS)
Screw connection, plugable from backside



Part Numbers

No. of poles	971-FBS	971-FBS-DS	Length	PU
2	10.873.102	20.873.102	10,00	200
3	10.873.103	20.873.102	15,00	200
4	10.873.104	20.873.104	20,00	100
5	10.873.105	20.873.105	25,00	100
6	10.873.106	20.873.106	30,00	50
7	10.873.107	20.873.107	35,00	50
8	10.873.108	20.873.108	40,00	50
9	10.873.109	20.873.109	45,00	50
10	10.873.110	20.873.110	50,00	50
11	10.873.111	20.873.111	55,00	50
12	10.873.112	20.873.112	60,00	50
13	10.873.113	20.873.112	65,00	50
14	10.873.114	20.873.114	70,00	50
15	10.873.115	20.873.115	75,00	50
16	10.873.116	20.873.116	80,00	50
17	10.873.117	20.873.117	85,00	50
18	10.873.118	20.873.118	90,00	50
19	10.873.119	20.873.119	95,00	50
20	10.873.120	20.873.120	100,00	50
21	10.873.121	20.873.121	105,00	50
22	10.873.122	20.873.122	110,00	50
23	10.873.123	20.873.123	115,00	50
24	10.873.124	20.873.124	120,00	50

General Information

Pitch	5 mm
No. of poles	2 - 24
Usable with	plug connectors 950-SVG, 971-FBSP, 951-B-SV

Technical Data

Clamping Range	*solid / flexible / AWG*		
without wire protector	1 - 6 mm² / 1 - 4 mm² / 16 - 10 AWG		
with wire protector	0,75 - 4 mm² / 0,75 - 2,5 mm² / 18 - 12 AWG		
Rated Cross Section	2,5 mm²		
Wire Stripping Length	5,5 mm ± 0,5 mm		
Overvoltage Category	III	III	II
Pollution Severity Level	3	2	2
Rated Voltage	250 V (200 V)	320 V	630 V (320 V)
Rated Impulse Voltage	4 kV	4 kV	4 kV
Rated Insulation Voltage	250 V acc. to EN 60998-1		
Rated Current	6 A		
Torque	0,5 Nm		
Other specifications	Rated voltage in parentheses apply to 13-24 poles types. 2-12 poles types are "no-flame" acc. to glow-wire test.		

Material

Moulding	PA, grey, V-0
Comparative Tracking Index	2-12 poles: CTI ≥ 600; 13-24 poles: CTI 250
Insulating Group	2-12 poles: I; 13-24 poles: IIIa
Temperature Range	-40°C up to 100°C
Terminal body	Tin plated brass
Screw	M3; zinc plated steel, blue passivated
Wire protector	Tin plated tin bronze
Spring	Stainless strip steel

Approvals

	Current	Voltage	Group	AWG	Nm
	20	300	B	22-12 [1]	0,51
	10	300	D	22-12 [1]	0,51
	20	300	B	26 - 12	0,4
	10	300	D, E	26 - 12	0,4
	Current	Voltage	mm²		
	13,5	250	2,5		

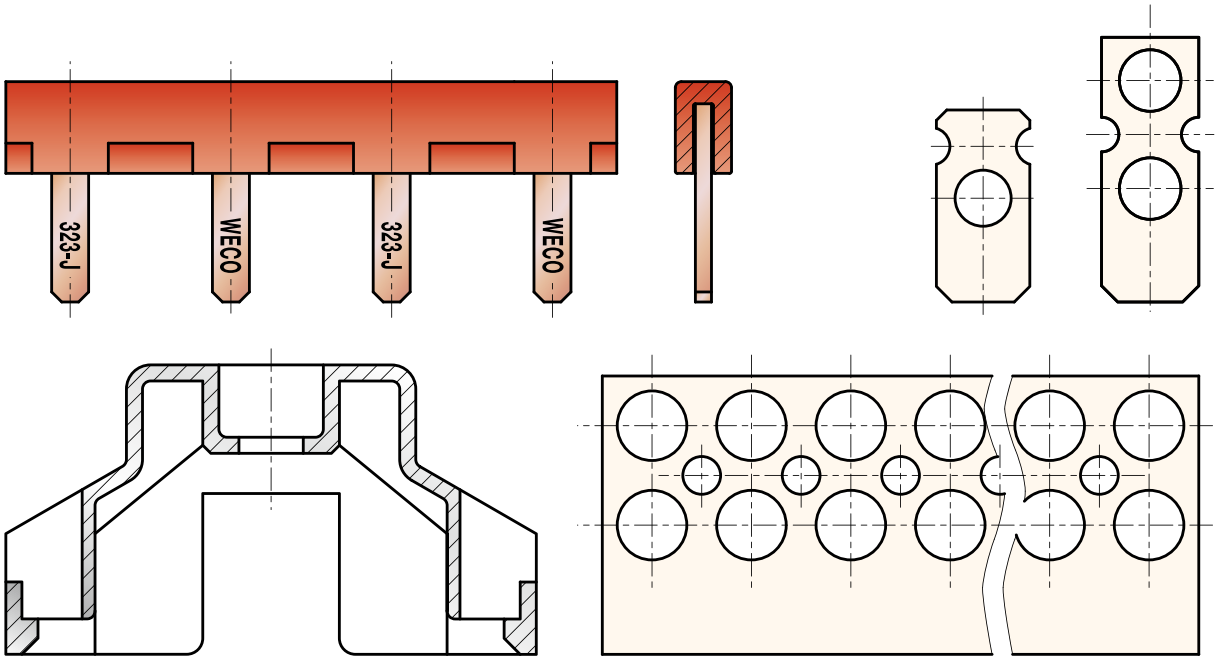
[1] Min No. 26 AWG for factory-wiring only

Options / Accessories

- Consecutive numbering
- Special marking according to drawing
- Self-adhesive marking strip BST-5,00
- Pitch of 10 mm for larger clearance and creepage distances
- Version with extended wire entrance
- Double wire protector as bridge

Notes

Accessories



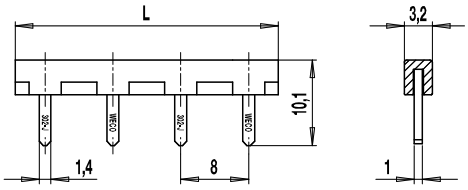
This section lists the accessories for the aforementioned products.

In addition to cover caps/base plates for 10 mm pitch and jumpers for 8 mm, 10 mm, 11,5 mm and 14,5 mm pitch, we offer a large number of diverse marking strips and marking signs.

The marking strips are mounted in combination with the terminal strip either above or below the moulding.
As a standard, marking strips and marking signs are delivered blank.
Upon request, we deliver our marking elements lettered to your specifications.

Subsequent lettering can be done by a felt pen, ink or stamp prior or after mounting the terminal strip.

Jumper
302-J
Accessories



The jumper 302-J electrically bridges adjacent poles of series 302 terminals.
It is available in 8 mm pitch with 2 to 12 poles.
Just like the lead, it is connected to the clamping units.
The jumper shell is insulated.

General Information

Pitch	8 mm
No. of poles	2 - 12
Usable with	for alles types of series 302, 302-N

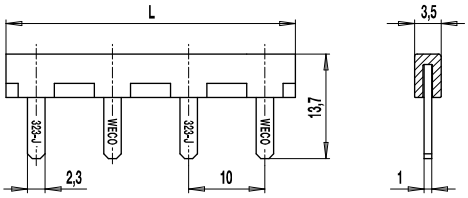
Material

Moulding	PVC, red
Jumpers	Copper alloy, bare

Part Numbers

No. of poles	302-J	Length	PU
2	12.451.302	15,00	100
3	13.451.302	23,00	100
4	14.451.302	31,00	100
5	15.451.302	39,00	100
6	16.451.302	47,00	100
7	17.451.302	55,00	50
8	18.451.302	63,00	50
9	19.451.302	71,00	50
10	20.451.302	79,00	50
11	21.451.302	87,00	50
12	22.451.302	95,00	50

Jumper
323-J
Accessories



The jumper 323-J electrically bridges adjacent poles of series 323 terminals.
It is available in 10 mm pitch with 2 to 12 poles.
Just like the lead, it is connected to the clamping units.
The jumper shell is insulated.

General Information

Pitch	10 mm
No. of poles	2 - 12
Usable with	all types of series 323, 323-FN, 323-FU

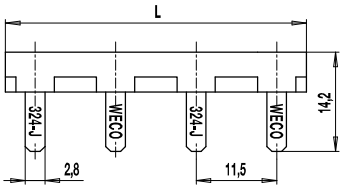
Material

Moulding	PVC, red
Jumpers	Copper alloy, bare

Part Numbers

No. of poles	323-J	Length	PU
2	12.451.323	18,00	250
3	13.451.323	28,00	100
4	14.451.323	38,00	100
5	15.451.323	48,00	100
6	16.451.323	58,00	100
7	17.451.323	68,00	50
8	18.451.323	78,00	50
9	19.451.323	88,00	50
10	20.451.323	98,00	50
11	21.451.323	108,00	50
12	22.451.323	118,00	50

Jumper
324-J
Accessories



The jumper 324-J electrically bridges adjacent poles of series 324 terminals.
It is available in 11,5 mm pitch with 2 to 12 poles.
Just like the lead, it is connected to the clamping units.
The jumper shell is insulated.

General Information

Pitch	11,5 mm
No. of poles	2 - 12
Usable with	all types of series 324, 324-FU

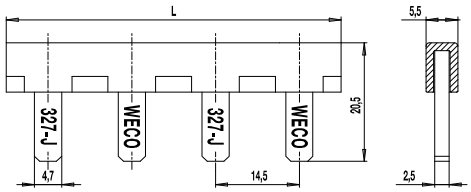
Material

Moulding	PVC, red
Jumpers	Copper alloy, bare

Part Numbers

No. of poles	324-J	Length	PU
2	12.451.324	20,00	250
3	13.451.324	31,50	100
4	14.451.324	43,00	100
5	15.451.324	54,50	100
6	16.451.324	66,00	100
7	17.451.324	77,50	50
8	18.451.324	89,00	50
9	19.451.324	100,50	50
10	20.451.324	112,00	50
11	21.451.324	123,50	50
12	22.451.324	135,00	50

Jumper
327-J
Accessories



The jumper 327-J electrically bridges adjacent poles of series 326 and 327 terminals.
It is available in 14 mm pitch with 2 to 12 poles.
Just like the lead, it is connected to the clamping units.
The jumper shell is insulated.

General Information

Pitch	14,5 mm
No. of poles	2 - 12
Usable with	all types of series 326, 327, 327-FU

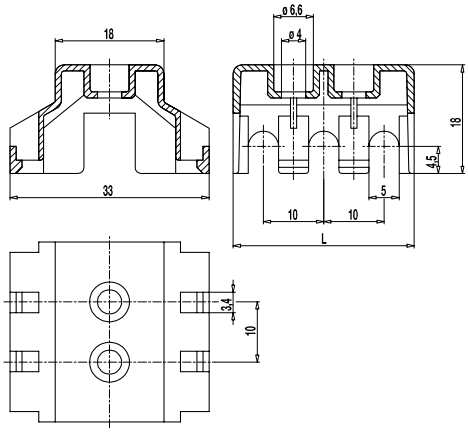
Material

Moulding	PVC, red
Jumpers	Copper alloy, bare

Part Numbers

No. of poles	327-J	Length	PU
2	12.451.327	29,00	100
3	13.451.327	43,50	100
4	14.451.327	58,00	100
5	15.451.327	72,50	100
6	16.451.327	87,00	100
7	17.451.327	101,50	50
8	18.451.327	116,00	50
9	19.451.327	130,50	50
10	20.451.327	145,00	50
11	21.451.327	159,50	50
12	22.451.327	174,00	50

Cover cap
A-323
Accessories



Cover caps A-323 are combined with base plates B-323 in order to ensure a safe-to-touch protection of the socket strip.
When cover caps are pushed onto the terminal strip, the lugs of the cover cap latch with those of the base plate. Cover caps can only be detached with a tool, e.g. a screwdriver.
Cover caps are available in 2- and 3-pole design and can be mounted side-by-side without pole loss.

If no base plate is used, the cap can be screwed to the terminal strip through the fixing holes or attached with plastic pins.

The tab/screw connector 322-A-2,8 and screw/solder terminal strip 322-LFS can only be equipped with base plate and/or cover cap as 2- or 3-pole terminal strip. They cannot be mounted side-by-side.

Since the cover cap latches in the base plate, the combination can be used unattached, as “flying lead” connection.

Part Numbers

No. of poles	A-323	Length	PU
2	12.891.102	19,00	1000
3	13.891.103	29,00	500

General Information

Pitch	10 mm
No. of poles	2 + 3
Usable with	322-A-2,8(-DS), 322-LFS(-DS), 323(-HDS), 323-FN(-HDS), 323-FU-16,5(-HDS)

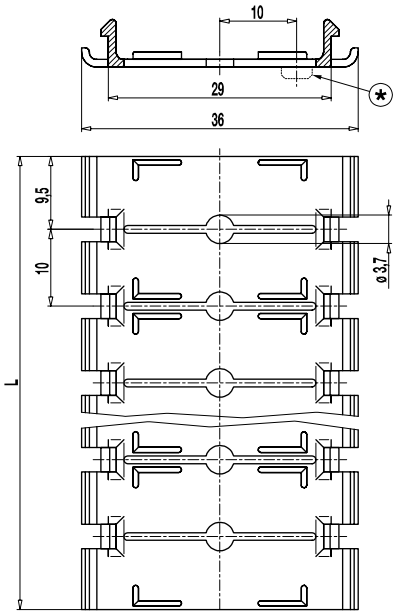
Material

Moulding	PA, natural, V-2
Comparative Tracking Index	CTI ≥ 600
Insulating Group	I
Temperature Range	-40°C up to 80°C

Options / Accessories

- Moulding "no flame" acc. to glow-wire-test

Base plate
B-323(-Z)
Accessories



* = peg only available for 2 and 3 poles

The base plates B-323 are combined with the cover caps A-323 in order to ensure a safe-to-touch protection of the socket strip. In this configuration, the base plate increases the creepage distance relative to the mounting surface.
Firstly, the base plate is attached to the terminal strip then the cover cap can be pushed on. During this process, the cover cap lugs latch in the base plate and can only be detached with a tool, e.g. a screwdriver.

Base plates are available with 2 to 12 poles.
The 2- and 3-pole base plates are also available with ø 4 mm fastening pin (version „B-323-Z“). This configuration allows for torsion-proof mounting with only one screw.

Since the cover cap latches in the base plate, the combination can be used unattached, as “flying lead” connection.

General Information

Pitch	10 mm
No. of poles	2 - 12
Usable with	322-A-2,8(-DS), 322-LFS(-DS), 323(-HDS), 323-FN(-HDS), 323-FU-16,5(-HDS)

Material

Moulding	PA, natural, V-2
Comparative Tracking Index	CTI ≥ 600
Insulating Group	I
Temperature Range	-40°C up to 80°C

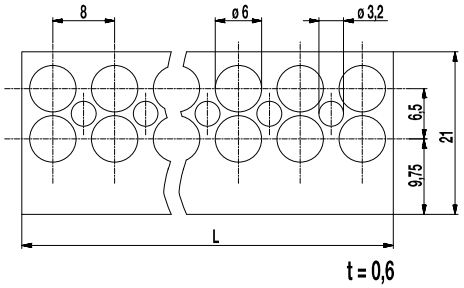
Options / Accessories

- Moulding "no flame" acc. to glow-wire-test

Part Numbers

No. of poles	B-323	B-323-Z	Length	PU
2	12.892.102	12.892.112	19,00	1000
3	13.892.103	13.892.113	29,00	1000
4	14.892.102	---	39,00	1000
5	15.892.102	---	49,00	1000
6	16.892.103	---	59,00	1000
7	17.892.102	---	69,00	1000
8	18.892.102	---	79,00	500
9	19.892.103	---	89,00	1000
10	20.892.102	---	99,00	1000
11	21.892.103	---	109,00	1000
12	10.892.122	---	119,00	1000

Marking strip
BST-302
Accessories



Marking strips BST-302 for our 302 series terminal strips are available in 2- to 12-pole and in 81-pole design (length: 648 mm). The customer can strip them easily to the desired pole number.

Marking strips are mounted in combination with the terminal strip, either above or below the moulding and are delivered blank, as standard. They can be lettered with a felt pen, ink or a stamp prior or after mounting the terminal strip.

Part Numbers

No. of poles	BST-302	Length	PU
2	11.495.016	16,00	100
3	13.495.016	24,00	100
4	14.495.016	32,00	100
5	15.495.016	40,00	100
6	16.495.016	48,00	100
7	17.495.016	56,00	100
8	18.495.016	64,00	100
9	19.495.016	72,00	100
10	20.495.016	80,00	100
11	21.495.016	88,00	100
12	12.495.016	96,00	100

further number of poles on request

General Information

Pitch	8 mm
No. of poles	2 - 12 / 81
Usable with	terminal strips of series 302

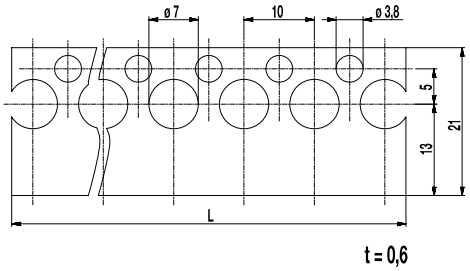
Material

Moulding	Hard PVC, white, matt
Temperature Range	approx. 80°C

Options / Accessories

- Consecutive numbering
- Special marking according to drawing
- Marking strip BST-302 in requested number of poles
- Marking strip BST-302 with double-sided marking space
- Marking signs BEZ (one pole)

Marking strip
BST-322
Accessories



Marking strips BST-322 for our 322 series terminal strips are available in 2- to 12-pole and in 65-pole design (length: 650 mm). The customer can strip them easily to the desired pole number.

Marking strips are mounted in combination with the terminal strip, either above or below the moulding and are delivered blank, as standard. They can be lettered with a felt pen, ink or a stamp prior or after mounting the terminal strip.

Part Numbers

No. of poles	BST-322	Length	PU
2	11.495.022	20,00	100
3	13.495.022	30,00	100
4	14.495.022	40,00	100
5	15.495.022	50,00	100
6	16.495.022	60,00	100
7	17.495.022	70,00	100
8	18.495.022	80,00	100
9	19.495.022	90,00	100
10	20.495.022	100,00	100
11	21.495.022	110,00	100
12	12.495.022	120,00	100

further number of poles on request

General Information

Pitch	10 mm
No. of poles	2 - 12 / 65
Usable with	terminal strips of series 322

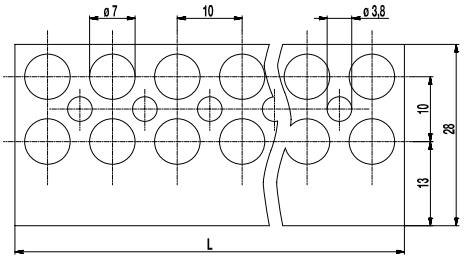
Material

Moulding	Hard PVC, white, matt
Temperature Range	approx. 80°C

Options / Accessories

- Consecutive numbering
- Special marking according to drawing
- Marking strip BST-322 in requested number of poles
- Marking strip BST-322 with double-sided marking space
- Marking signs BEZ (one pole)

Marking strip
BST-323
Accessories



Marking strips BST-323 for our 323 series terminal strips are available in 2- to 12-pole and in 65-pole design (length: 650 mm). The customer can strip them easily to the desired pole number.

Marking strips are mounted in combination with the terminal strip, either above or below the moulding and are delivered blank, as standard. They can be lettered with a felt pen, ink or a stamp prior or after mounting the terminal strip.

Part Numbers

No. of poles	BST-323	Length	PU
2	11.495.003	20,00	100
3	13.495.003	30,00	100
4	14.495.003	40,00	100
5	15.495.003	50,00	100
6	16.495.003	60,00	100
7	17.495.003	70,00	100
8	18.495.003	80,00	100
9	19.495.003	90,00	100
10	20.495.003	100,00	100
11	21.495.003	110,00	100
12	12.495.003	120,00	100

further number of poles on request

General Information

Pitch	10 mm
No. of poles	2 - 12 / 65
Usable with	terminal strips of series 323

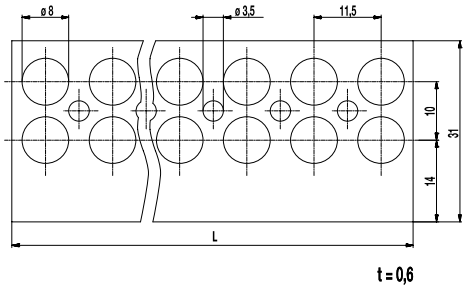
Material

Moulding	Hard PVC, white, matt
Temperature Range	approx. 80°C

Options / Accessories

- Consecutive numbering
- Special marking according to drawing
- Marking strip BST-323 in requested number of poles
- Marking strip BST-323-D with double-sided marking space
- Marking signs BEZ (one pole)

Marking strip
BST-324
Accessories



Marking strips BST-324 for our 324 series terminal strips are available in 2- to 12-pole and in 56-pole design (length: 643,50 mm). The customer can strip them easily to the desired pole number.

Marking strips are mounted in combination with the terminal strip, either above or below the moulding and are delivered blank, as standard. They can be lettered with a felt pen, ink or a stamp prior or after mounting the terminal strip.

Part Numbers

No. of poles	BST-324	Length	PU
2	11.495.060	23,00	100
3	13.495.060	34,50	100
4	14.495.060	46,00	100
5	15.495.060	57,50	100
6	16.495.060	69,00	100
7	17.495.060	80,50	100
8	18.495.060	92,00	100
9	19.495.060	103,50	100
10	20.495.060	115,00	100
11	21.495.060	126,50	100
12	12.495.060	138,00	100

further number of poles on request

General Information

Pitch	11,5 mm
No. of poles	2 - 12 / 56
Usable with	terminal strips of series 324

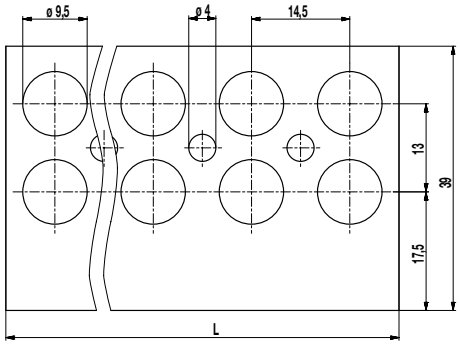
Material

Moulding	Hard PVC, white, matt
Temperature Range	approx. 80°C

Options / Accessories

- Consecutive numbering
- Special marking according to drawing
- Marking strip BST-324 in requested number of poles
- Marking strip BST-324 with double-sided marking space
- Marking signs BEZ (one pole)

Marking strip
BST-327
Accessories



Marking strips BST-327 for our 326 and 327 series terminal strips are available in 2- to 12-pole and in 44-pole design (length: 638 mm). The customer can strip them easily to the desired pole number.

Marking strips are mounted in combination with the terminal strip, either above or below the moulding and are delivered blank, as standard. They can be lettered with a felt pen, ink or a stamp prior or after mounting the terminal strip.

Part Numbers

No. of poles	BST-327	Length	PU
2	11.495.007	29,00	100
3	13.495.007	43,50	100
4	14.495.007	58,00	100
5	15.495.007	72,50	100
6	16.495.007	87,00	100
7	17.495.007	101,50	100
8	18.495.007	116,00	100
9	19.495.007	130,50	100
10	20.495.007	145,00	100
11	21.495.007	159,50	100
12	22.495.007	174,00	100

further number of poles on request

General Information

Pitch	14,5 mm
No. of poles	2 - 12 / 44
Usable with	terminal strips of series 326 and 327

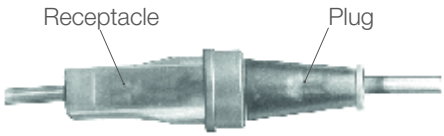
Material

Moulding	Hard PVC, white, matt
Temperature Range	approx. 80°C

Options / Accessories

- Consecutive numbering
- Special marking according to drawing
- Marking strip BST-327 in requested number of poles
- Marking strip BST-327 with double-sided marking space

Insulation receptacles
ISO
Accessories



ISO-25 ISO-23

RoHS COMPLIANT

Mounting example

The insulation receptacles, made of polyethylene, are available in various colours and sizes. Receptacles for tabs according to DIN 46 247 are fully insulated (including the crimped point) with insulation receptacles. Prior to crimping, they are pushed onto the wire end and are therefore captive. They can also be used to insulate crimped plug-in receptacles and cable sockets.

General Information

Additonal Information	By means of using both ISO-23 (tab connector side) and ISO-25 insulation receptacles, a 6,3 mm cross-section cable connection can be completely insulated (see figure).

Material

Moulding	PE, see table for colours
Temperature Range	approx. up to 50°C

Options / Accessories

- Insulation receptacles in other colours

Part numbers

Part numbers	Type	Colour	Nom. Size	Cross-section*	Length x width x height	Pcs
10.838.001	ISO-110-PEN	natural	2,8	up to 1 mm² (16 AWG)	19,5 x 5,5 x 3,5 mm	10 000
10.838.031	ISO-110-PEG	yellow	2,8	up to 1 mm² (16 AWG)	19,5 x 5,5 x 3,5 mm	10 000
10.838.034	ISO-110-PER	red	2,8	up to 1 mm² (16 AWG)	19,5 x 5,5 x 3,5 mm	10 000
10.838.021	ISO-110-PES	black	2,8	up to 1 mm² (16 AWG)	19,5 x 5,5 x 3,5 mm	10 000
10.838.011	ISO-187-PEN	natural	4,8	up to 1,5 mm² (16 AWG)	21 x 8 x 4,5 mm	10 000
10.838.005	ISO-187-PEG	yellow	4,8	up to 1,5 mm² (16 AWG)	21 x 8 x 4,5 mm	10 000
10.838.035	ISO-187-PER	red	4,8	up to 1,5 mm² (16 AWG)	21 x 8 x 4,5 mm	10 000
10.838.036	ISO-187-PES	black	4,8	up to 1,5 mm² (16 AWG)	21 x 8 x 4,5 mm	10 000
10.838.006	ISO-23-PEN	natural	6,3	up to 2,5 mm² (14 AWG)	23 x 12,5 x 8,5 mm	10 000
10.838.007	ISO-23-PEG	yellow	6,3	up to 2,5 mm² (14 AWG)	23 x 12,5 x 8,5 mm	10 000
10.838.017	ISO-23-PES	black	6,3	up to 2,5 mm² (14 AWG)	23 x 12,5 x 8,5 mm	10 000
10.838.013	ISO-25-PEN	natural	6,3	up to 2,5 mm² (14 AWG)	25 x 9,5 x 5 mm	10 000
10.838.014	ISO-25-PEG	yellow	6,3	up to 2,5 mm² (14 AWG)	25 x 9,5 x 5 mm	10 000
10.838.016	ISO-25-PES	black	6,3	up to 2,5 mm² (14 AWG)	25 x 9,5 x 5 mm	10 000
10.838.009	ISO-250-PEN	natural	6,3	up to 4 mm² (12 AWG)	25 x 9,5 x 6 mm	10 000
10.838.010	ISO-250-PEG	yellow	6,3	up to 4 mm² (12 AWG)	25 x 9,5 x 6 mm	10 000
10.838.018	ISO-250-PES	black	6,3	up to 4 mm² (12 AWG)	25 x 9,5 x 6 mm	10 000

* Since cable diameters vary, cross-sections are only reference values.

Marking

WECO offers marking of individual connections for nearly all terminals and products.
Marking can be carried out by either pre-fabricated self-adhesive marking strips or by tampon printing.

Marking strips

Self-adhesive marking strips consist of polyester with black print on silver background. They are scratch-proof and surface-sealed with Mylar.

The numbering begins with 1. The last digit represents the indicated number of poles.
The marking strips withstand PC board cleaning processes using water and soap, Freon, fluorinated or chlorinated cleaning agents. However, they are not reflow-capable and should therefore only be mounted after the reflow soldering process.
Marking strips are delivered in ten strips per sheet.

Part number	Type	Marking	Pitch	Length (L)	Width (a)	PU
24.499.013	BST-3,50/24	1 2 3 ... 24	3,50 mm	84 mm	3 mm	100
24.499.009	BST-5,00/12	1 2 3 ... 12	5,00 mm	60 mm	3,5 mm	100
24.499.010	BST-5,00/32	1 2 3 ... 32	5,00 mm	160 mm	3,5 mm	100
24.499.006	BST-5,08/12	1 2 3 ... 12	5,08 mm	61 mm	3,5 mm	100
24.499.007	BST-5,08/32	1 2 3 ... 32	5,08 mm	162 mm	3,5 mm	100
24.499.012	BST-7,50/19	1 2 3 ... 19	7,50 mm	141 mm	3,5 mm	100
24.499.011	BST-10,00/16	1 2 3 ... 16	10,00 mm	155 mm	3,5 mm	100
24.499.008	BST-10,16/16	1 2 3 ... 16	10,16 mm	157 mm	3,5 mm	100

Tampon printing

As an alternative to self-adhesive marking strips, we mark the lead connections of our terminal strips according to your individual specifications.
Individual marking is performed by means of tampon printing. In addition to digits and letters tampon printing offers special marking types.

Tampon printing is an indirect printing process which uses a tampon to apply the printing ink onto the component. This process ensures best contour accuracy plus high scratch and smear resistance. Depending on the moulding colour, our PCB connectors are printed on predefined surfaces in either white or black.

Terminal strips of catalogue 7 are printed in black.
For the marking position two options are available: on the screw guidance or in between the screw guidance (for series 302 only at the screw guidance).

Upon request, we offer lettering in special colours.

Packaging

As standard, we deliver our products packaged in eco-friendly folding boxes made of cardboard or corrugated board.

In order to ensure efficient automated assembly and subsequent soldering of our components, WECO offers various component packaging systems, such as

Tape-on-Reel

These carrier tapes on reels are suitable for most SMD and THR components. They feature blisters and are sealed with a cover film.

WECO offer reels in different widths of 24 mm, 32 mm, 44 mm, 56 mm, 72 mm or 88 mm.

Trays

WECO also offers trays as another option for automated component assembly. The flat trays feature component pockets, they are stackable and ensure sufficiently large component supply.

Bar magazines

Our 550 mm bar magazines have various geometries which are tailored to the individual component size and shape. Both magazine ends are closed with a plug that is easy to remove.

Delivered in cardboard folding boxes, bar magazines are easy to unpack.

When assembling components from tape-on-reels or trays, the placement head vacuum-picks the component from the tape or the tray, verifies the position by means of a camera system, calculates angle and position offset to the nominal position and places the component onto the PC board. After all components have been placed, a conveyor system transports the assembled PC board downstream.

All three component packaging types use anti-static materials to avoid problems with electrostatic discharges (ESD).

Other options

Moulding colours

WECO offers a multitude of various moulding colours.
In addition to our standard colours charcoal grey, black, vermilion and natural other moulding colours are also possible.

Please contact us for further information, we look forward to assisting you.

Standard colours

- Charcoal grey (similar to RAL U706)
- Black (similar to RAL 9011)
- Vermilion (similar to RAL 2002)
- Natural

Special colours

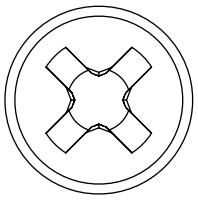
- Red orange (similar to RAL 2001)
- Heather violet (similar to RAL 4003)
- Zinc yellow (similar to RAL 1018)
- Brilliant blue (similar to RAL 5007)
- Yellow green (similar to RAL 6018)
- Light grey (similar to RAL 7035)
- White (similar to RAL 9010)

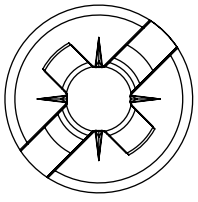
Screws

We use standard slotted-head screws for our products.

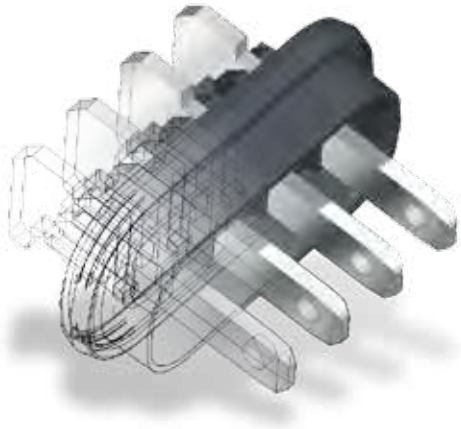
Upon inquiry and specific customer request, we also offer screws with Phillips/ Pozidriv or +/- screw heads.

Other materials:
Our products are predominantly equipped with steel screws. Upon request, screws made of alternative materials, such as brass, are also available.





Sie suchen eine kundenspezifische Lösung?



“Abgedichtet”

Im Raster 3,5 mm wurde dieses Einlegeteil mit vier Flachsteckern 2,8 x 0,8 mm dafür entwickelt, die Kontakte abzudichten, um die Anwendung nach Schutzklasse IP54 zu erfüllen.

“Hoch Hinaus“

*Ausführung einer Klemme unserer 970er-Baureihe im Raster 5 mm.
Um einen Abstand von 100 mm zur Leiterplatte zu erreichen, wurde ein Gehäuseunterteil konstruiert, welches die Stifte nicht nur schützt sondern sie auch in eine besondere Anordnung positioniert.
Im Klemmbereich sind noch zusätzlich verlängerte Rippen angebracht.*

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- Ihnen wäre ein Besuch bei uns angenehmer?
  Sie sind bei uns immer herzlich willkommen.

Wir freuen uns auf Ihren Kontakt.

„Gut Kontaktiert“

*Diese Steckerleiste im Raster 5 mm verfügt über außenliegende und vergoldete Kontaktflächen.
Die Seitenwände wurden zusätzlich mit Rippen zur Aufnahme eines korrespondierenden Rasthakens versehen.*

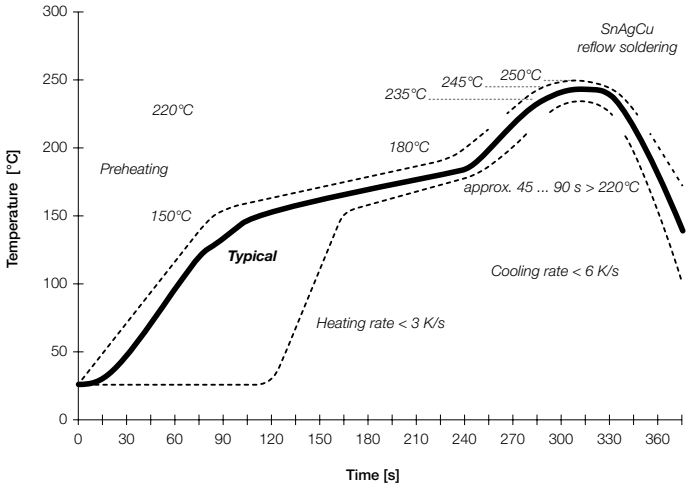
Soldering processes

As a principle, soldering electrically and mechanically connects electronic components to printed circuits forming a subassembly.

The solder contributes essentially to the operational reliability of an assembly. Among the various soldering methods, such as reflow soldering and wave soldering, Surface-Mount-Technology (SMT) using reflow soldering is the most common and cost-efficient process.

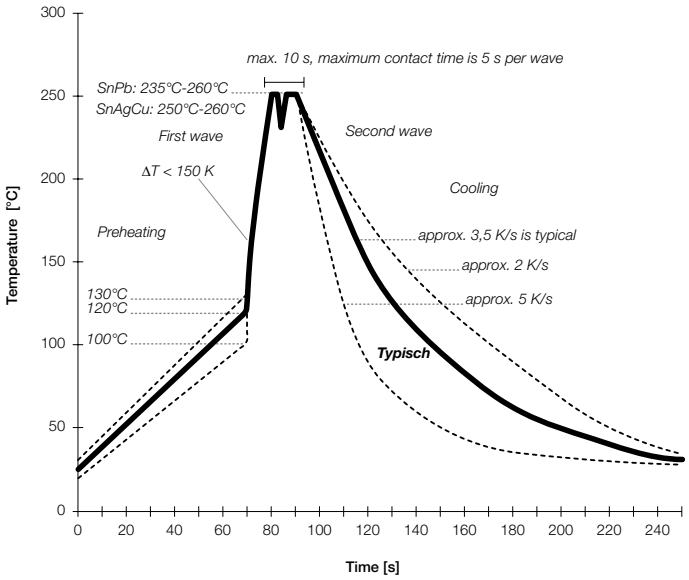
Reflow soldering

During the reflow soldering process, printed circuit boards assembled with SMD and THR components, are passed at a constant speed through various heating zones of a furnace (preheating, reflow soldering and furnace cooling).
In contrast to wave soldering, components and their plastic packages are exposed to the same temperatures as the metallic contacts to be soldered.
Electrical components, printed circuit boards and solder joints are heated either by infrared, convection or a vapor phase processes. In order to avoid oxidation of the solder pads on the printed circuit, this process can also be conducted under inert atmosphere.



Wave soldering

Wave soldering processes are suitable for soldering conventional components.
A conveyor system moves the PCB through the soldering system at a constant speed. Upstream in the wave soldering system, the PCB and its components pass through the fluxer. Downstream in the preheating zone, the solvents contained in the fluxer are vaporized thus activating the flux.
Liquid solder is continuously pumped flowing over edges, through holes or into gaps, forming a wave of solder. This solder wave conveys and wets the underside of the printed circuit. Capillary forces raise the solder through the space between hole and component lead (solder pin) forming the characteristic solder meniscus.



The shown tables represents two solder temperature profiles compliant with EN 61760-1. Due to the various customer-specific parameters (e.g. soldering system, solder paste, component arrangement and orientation) the profiles are only recommendations and should be used accordingly.

Technical Information

Rating of clearance and creepage distances according to DIN EN 60664-1 (VDE 0110-1)

The rating of clearance and creepage distances depends on the expected electrical surge, the characteristic values of the electronic protection measures as well as the contamination at the place of installation.
Clearance distances are dimensioned in accordance with the rated impulse voltage (see table F.1), which results out of the overvoltage category and phase-to-earth voltage.
The minimum clearance in air is stated at altitudes of less than 2000 m above sea level and ascertained in accordance with the impulse voltage and the contamination level, see table F.2.
Creepage distances are measured by the operating voltage, the characteristic of the insulants (CTI value), the expected contamination level as well as the preventive measures against contamination.
Basis of the creepage distance is the rated voltage derived from the operating and / or system voltage.
The minimum creepage distance (depending on the respective degree of contamination) are assigned to the rated voltage, see table F.4.

F.1 DIN EN 60664-1 (VDE 0110-1), table F.1 (extract)
Rated impulse voltages for electrical equipments, which are energised directly by a low-voltage system

Nominal voltage of the supply system [1] based on IEC 60038 [3]		Rated impulse voltage [2]			
		Overvoltage catagory [4]			
Three phase	Single phase	I	II	III	IV
V	V	V	V	V	V
	120-240	800	1 500	2 500	4 000
230/400 277/480		1 500	2 500	4 000	6 000
400/690		2 500	4 000	6 000	8 000
1 000		4 000	6 000	8 000	12 000

[1] See Annex B for application to existing different low-voltage mains and their nominal voltages.
[2] Equipment with these rated impulse voltages can be used in installations in accordance with IEC 60364-4-44.
[3] The / mark indicates a four-wire three-phase distribution system. The lower value is the voltage line-to-neutral, while the higher value is the voltage line-to-line. Where only one value is indicated, it refers to three-wire, three-phase systems and specifies the value line-to-line.
[4] See 4.3.3.2.2 for an explanation of the overvoltage catagories.

F.4 DIN EN 60664-1 (VDE 0110-1), table F.4 (extract)
Creepage distance for the avoidance of the failure by tracking

Voltage r.m.s. [1]	Minimum creepage distances								
	Printed wiring material								
	Pollution degree								
	1	2	1	2			3		
	All material groups	All material groups except IIIb	All material groups	Material group I	Material group II	Material group III	Material group I	Material group II	Material group III [2]
V	mm	mm	mm	mm	mm	mm	mm	mm	mm
25	0,025	0,040	0,125	0,500	0,500	0,500	1,250	1,250	1,250
32	0,025	0,040	0,14	0,53	0,53	0,53	1,30	1,30	1,30
40	0,025	0,040	0,16	0,56	0,80	1,10	1,40	1,60	1,80
50	0,025	0,040	0,18	0,60	0,85	1,20	1,50	1,70	1,90
63	0,040	0,063	0,20	0,63	0,90	1,25	1,60	1,80	2,00
80	0,063	0,100	0,22	0,67	0,95	1,30	1,70	1,90	2,10
100	0,100	0,160	0,25	0,71	1,00	1,40	1,80	2,00	2,20
125	0,160	0,250	0,28	0,75	1,05	1,50	1,90	2,10	2,40
160	0,250	0,400	0,32	0,80	1,10	1,60	2,00	2,20	2,50
200	0,400	0,630	0,42	1,00	1,40	2,00	2,50	2,80	3,20
250	0,560	1,000	0,56	1,25	1,80	2,50	3,20	3,60	4,00
320	0,75	1,60	0,75	1,60	2,20	3,20	4,00	4,50	5,00
400	1,0	2,0	1,0	2,0	2,8	4,0	5,0	5,6	6,3
500	1,3	2,5	1,3	2,5	3,6	5,0	6,3	7,1	8,0
630	1,8	3,2	1,8	3,2	4,5	6,3	8,0	9,0	10,0
800	2,4	4,0	2,4	4,0	5,6	8,0	10,0	11,0	12,5
1000	3,2	5,0	3,2	5,0	7,1	10,0	12,5	14,0	16,0

[1] This voltage is
- for functional insulation, the working voltage,
- for basic and supplementary insulation of the circuit energized directly from the supply mains (see 4.3.2.2.1), the voltage rationalized through Table F.3a or Table F.3b, based on the rated voltage of the equipment, or the rated insulation voltage,
- for basic and supplementary insulation of systems, equipment and internal circuits not energized directly from the mains (see 4.3.2.2.2), the highest r.m.s. voltage which can occur in the system, equipment or internal circuit when supplied at rated voltage and under the most onerous combination of conditions of operation within equipment rating.

[2] Material group IIIb is no not recommended for application in pollution degree 3 above 630 V.

Overvoltage categories

Overvoltage category IV

Electrical equipments for the use at the connection point of the installation e.g. electricity meter and primary over-current protection devices.

Overvoltage category III

Electrical equipment in firm installations and for such cases in which special demands are made against the reliability and the availability of the electrical equipment, e.g. switches in firm installations and devices for industrial use with continuing connection to the firm installation.

Overvoltage category II

Energy using electrical equipment, which is energised by a firm installation e.g. household appliances, portable tools and other domestic appliances as well as similar devices.

Overvoltage category I

Electrical equipment for the connection to electric circuits, in which measures are taken for the delimitation of the transient overvoltages to a suitable low value, e.g. devices with electronic circuits and appropriate protection level.

Technical Information

Degree of contamination

The micro environment determines the influence of the contamination on the isolation.
However the macro environment must be considered with the view of the micro environment.
Resources to achieve a reduction of the contamination on the regarded isolation can be planned by the effective employment of casings (housings), encapsulations or hermetic sealings.
The influence of the contamination is considered with the calculation of air and creepage distances by degrees of pollution.

Four degrees of contamination levels are defined for the micro environment:

Contamination level 1
No contamination or only dry, non-conductive contamination occurs. The contamination has no influence;

Contamination level 2
Only non-conductive contamination occurs. However, occasional temporary conductivity must be expected as a result of moisture condensation;

Contamination level 3
Conductive contamination occurs; dry, non-conductive contamination which becomes conductive as a result of moisture condensation may also occur;

Contamination level 4
Impurities in the form of conductive dust, rain or humidity result in permanent conductivity.

F.2 DIN EN 60664-1 (VDE 0110-1), table F.2 (extract)
Clearance for transient overvoltages

Required impulse withstand voltage [1) 5)]	Mimimum clearence in air up to 2 000 m above sea level		
	Case A Inhomogeneous field (see 3.15)		
	Pollution degree		
	1	2	3
kV	mm	mm	mm
1,2	0,25	0,25	0,8 [4)]
1,5 [2)]	0,5	0,5	
2,0	1,0	1,0	1,0
2,5 [2)]	1,5	1,5	1,5
3,0	2,0	2,0	2,0
4,0 [2)]	3,0	3,0	3,0
5,0	4,0	4,0	4,0
6,0 [2)]	5,5	5,5	5,5
8,0 [2)]	8,0	8,0	8,0

1) This voltage is
- for functional insulation, the maximum impulse voltage expected to occur accross the clearence (see 5.1.5),
- for basic insulation directly exposed to or significantly influenced by transient overvoltages from the low-voltage mains (see 4.3.3.3, 4.3.3.4.1 and 5.1.6), the rated impulse voltage of the equipment,
- for other basic insulation (see 4.3.3.4.2), the highest impulse voltage that can occur in the circuit.

2) Prefered values as specified in 4.2.3.

4) The minimum clearences given for pollution degrees 2 and 3 are based on the reduced withstand characteristics of the associated creepage distance under humidity conditions (see IEC 60664-5).

5) For parts or circuits within equipment subject to impulse voltages according to 4.3.3.4.2, interpolation of values is allowed. However, standardization is achieved by using the preferred series of impulse voltage values in 4.2.3.

Insulant

DIN EN 60664-1 (VDE 0110-1) divides the insulants according to their CTI values in four groups. These are:

Insulant I: $600 \leq CTI$
Insulant II: $400 \leq CTI < 600$
Insulant IIIa: $175 \leq CTI < 400$
Insulant IIIb: $100 \leq CTI < 175$

The check numbers of the tracking must be determined according to IEC 60112 at an examination body using test solution A. The check number of the tracking is used as a proof of the creepage characteristics of insulants.

Technical Information

Rated cross section

The current carrying capacity depends not only on the terminal design, but also on the application of the terminals. The appropriate specifications for the devices, e.g. DIN EN 60335-1 (VDE 0700-1), should be taken into account.
According to DIN EN 60999-1 / VDE 0609 part 1, the current cross section and respectively the rated connection ability of a connection referres to the wire cross section indicated by the manufacturer, to which determined thermal, mechanical and electrical requirements apply to.
The relationship between rated connection abilities and diameters of the wires is represented in table 1.
If nothing else is specified in the product standard, each connection point must be able to take up not only its rated cross section (rated connection ability) but also the next two lower cross sections.
Connecting points must be able to take up unprepared wires.
Regarded as unprepared wires are all cables stripped at their ends, whose form is adjusted before insertion or whose wires are twisted for the purpose of the solidification.
In the USA and Canada an identification is used by leader sizes (AWG) instead of the cross section indicated in mm².

T1 DIN EN 60999-1, table 1 (extract)
Relation between rated connection abilities and wires

Rated cross section	Theoretical diameter of the largest conductor						
	metric			AWG			
	solid		flexible	solid			flexible
	single wire	multi-stranded wire			b) single wire	b) Class B multi-stranded wire	c) Class I, K, M multi-stranded wire
mm²	mm	mm	mm	No.	mm	mm	mm
0,2	0,51	0,53	0,61	24	0,54	0,61	0,64
0,34	0,63	0,66	0,8	22	0,68	0,71	0,80
0,5	0,9	1,1	1,1	20	0,85	0,97	1,02
0,75	1,0	1,2	1,3	18	1,07	1,23	1,28
1,0	1,2	1,4	1,5	–	–	–	–
1,5	1,5	1,7	1,8	16	1,35	1,55	1,60
2,5	1,9	2,2	2,3 a)	14	1,71	1,95	2,08
4,0	2,4	2,7	2,9 a)	12	2,15	2,45	2,70
6,0	2,9	3,3	3,9 a)	10	2,72	3,09	3,36
10,0	3,7	4,2	5,1	8	3,34	3,89	4,32
16,0	4,6	5,3	6,3	6	4,32	4,91	5,73
25,0	–	6,6	7,8	4	5,45	6,18	7,26
35	–	7,9	9,2	2	6,87	7,78	9,02

NOTE The diameter of the largest solid and flexible wire is based on Table 1 according to IEC 60228A and IEC 60344 and for AWG conductors on ASTM B 172-71 [4], ICEA-Publication S-19-81 [5], ICEA-Publication S-66-524 [6] and ICEA-Publication S-66-516 [7].

a) Information only for flexible wires in class 5 of IEC 60228A.
b) Nominal + 5 %.
c) Largest diameter for each of the three classes I, K, M + 5 %.

Current carrying-capacity

Technical data state a maximum rated current at which no thermal damage or malfunctions occur, if a certain ambient temperature and rated cross-section is provided. The rated current is a current which the terminal or connector can carry simultaneously at all contacts without exceeding the maximum permissible temperature limit.

Appropriate test currents are applied to the rated cross sections (see table T2). Depending on the connection type, the maximum permissible heating of the clamping unit is limited to 45 K (acc. to DIN 60998-1, Temperature Rise Test for PCB Connectors) and to 30 K (acc. to DIN 60512-5-1, Temperature Rise Test for Plug Connectors)
Based on the results of the temperature rise test acc. to DIN EN 60512-5-2 and the rated cross-section, a current carrying curve (base curve) is generated under consideration of the upper temperature limit for the insulating material and depending on the ambient temperature.

This base curve is used to determine the current carrying capacity of PCB connectors. For plug connectors, the base curve is corrected by factor 0.8 (derating curve). The permissible current carrying capacity not only depends on the terminal design but also the final application of the terminal. The corresponding equipment specifications, e.g. DIN EN 60335-1 (VDE 0700-1) must be observed.

T2 DIN EN 60998-1, table 2 (extract)
Relation between rated connection abilities and testing current

Rated Cross-section	Load capacity
mm²	A
0,2	4
0,34	5
0,5	6
0,75	9
1	13,5
1,5	17,5
2,5	24
4	32
6	41
10	57
16	76
25	101
35	125

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Catalogue overview

Electronic

1: Pitch 3,5 mm
2: Pitch 5 mm
3: Pitch 5,08 mm
4: Pitch 7,5 mm
5: Pitch >10 mm
6: SMD & THR

Electrical

7: Europe type connectors
8: Tab connectors & Screw connectors

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Art.-No.: 52 955 102
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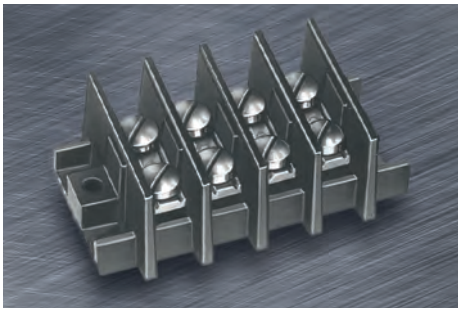
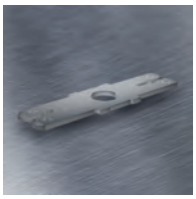
Tab connectors &
Screw connector blocks

WECOnnexion

WECO - making contacts





Catalogue 8

Electrical

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407-PA

3070-PCM

411-S / 411-B

Symbols on data sheets

These symbols can be found on our data sheets on the right side of the product image.

RoHS COMPLIANT

RoHS compliant

These articles comply with the RoHS regulations.

„no flame“ after glow-wire test according to household appliance standard DIN EN/IEC 60335-1

The housing materials used are VDE-tested and approved according to the glow-wire tests specified in DIN EN/IEC 60335-1. They meet the requirements of the household appliance standard.

pottable

Through its geometry, this product is specially suitable for potting.

We reserve the right to make technical as well as changes to measurements, colours and formats after print. Only the values given in our written confirmations will be binding for us. Please take notice that it is not allowed to use our photos, drawings or catalogue pages for your own applications without having our written agreement.

Overview

Connectors for printed circuit boards

WECO PCB connectors always offer a good solution for almost any connection problem by its big variety of types. The screw connections are available in socket terminal style, in elevator clamping style or as head contact terminals. The plug connectors are especially designed for the connection of components or peripheral devices. Tab connectors and screwless types complete the product program.

Plug-In connector systems

The series of conecta are plug-in connector systems consisting of plug connectors with screw and their corresponding pin strips.
Due to four different pitch sizes, lateral flange executions, tier versions and different plug directions, this product serie suit almost every application on the PCB. All connectors offer coding possibilities to avoid incorrect plugging.

SMD & THR

“SMarTconn” covers terminals and plug connectors for surface mount and reflow soldering technique. Apart from the proven Through-Hole-Technology (THR) we focus on genuine SMD - Surface Mount Devices – in this product serie. With their reliable adhesive forces and their good reflow soldering capabilities, we offer products, which are a worthy replacement for the conventional soldering technique. All products of this series are packed in tape-on-reel or tube magazines for the automatic assembling with a pick & place machine.

Terminal strips

This group contains socket terminals, plug-in connectors, screwless types and additionally the combination of screw and solder tag for the wire-to-wire connection. All types are available for different cross sections, with and without wire protectors. The used Polyamide plastic material pass the ball pressure test with 125°C according to VDE 0470, which is demanded in many IEC and VDE regulations for insulants.

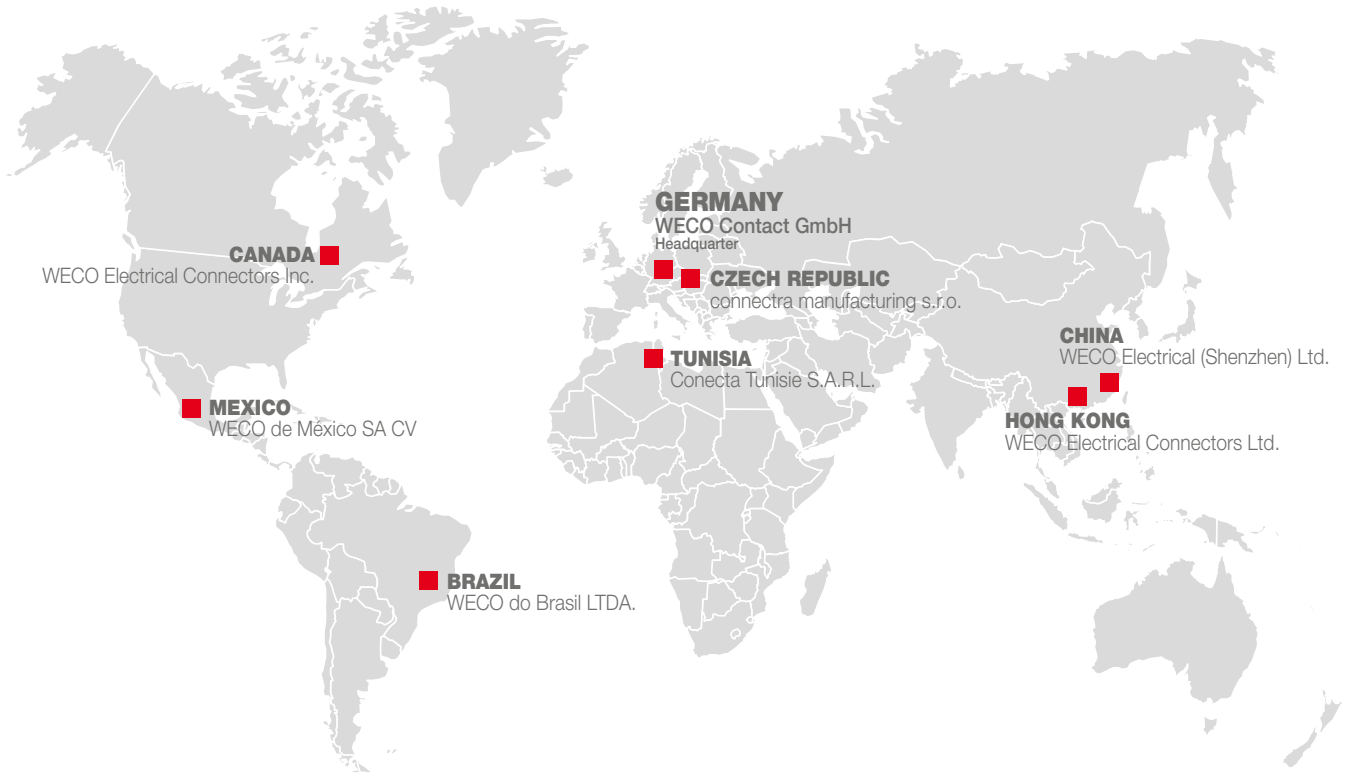
Tab connectors

These connectors are equipped with receptacles in different sizes and styles. Mixed arrangements per terminal block as well as per pole (Multi-Point Tab Connectors) are possible. Combinations of tab / solder connectors, flat plug couplers and space saving tier versions increase the density of connections. The tab connectors offer a wide spectrum of possible combinations, whereby many connection problems can be solved.

Ceramic terminal blocks

This group covers mantle terminals, ceramic terminal strips and terminals for explosion and firedamp-hazard areas. Various sizes and designs permit them to be used for wire cross sections up to 120 mm² and including applications in furnace construction and ship building, for engines and intrinsically safe electrical equipment. The terminal blocks with ceramic insulator can be used at increased temperatures.

The WECO Group



We, WECO Contact GmbH, are a German manufacturer of high reputation for connectors in the field of electronics and electrical engineering. Our headquarter is located in Hanau and has own assembly and sales companies in Canada, Brazil, China, Hong Kong, Mexico, Tunisia and Czech Republic. With over 450 employees and a worldwide distribution network in 56 countries, we speak the language of our customers.

Our wide product range includes nearly 17,000 different articles.

We are well known for innovation which is particularly evident in the patented SMD series for the genuine surface mounting technology. Hereby, the user experiences real cost savings in the manufacturing process, especially if the terminal is the last component of the customer to be soldered on the board.

Another strength are the customer-specific developments and a fast and flexible project implementation with which we respond to the increasing engineering demands of the middle class customers.

The entire WECO Group is a reliable partner for our customers, and the customers' satisfaction is one of our main goals to achieve.

www.wecogroup.com

Household Appliance Standard DIN EN/IEC 60335-1

What is the household appliance standard all about?

The household appliance standard DIN EN/IEC 60335-1:2012-10 standardizes the safety features of electrical appliances for household and commercial use whose rated voltages do not exceed 250 V for single-phase appliances and 480 V for other appliances.

Which aspects of the household appliance standard are particularly important for WECO products?

Chapter 30: Heat- and flame-resistance. Components made of non-metallic materials holding active components (e.g. connection elements) in position must be resistant against ignition and fire propagation.
Electrical appliances are divided into several classes. Depending on their application, they are tested according to different methods.
Most WECO products meet the requirements for unattended appliances with currents > 0.2 A. These requirements stipulate the glow-wire resistance test for non-metallic materials and refer to other glow-wire tests.

These flame-resistance requirements shall prevent self-ignition of unattended appliances. On the market, they are designated as “no flame”.

Who is affected by this household appliance standard?

The standard is applicable for manufacturers of electric and electronic components in household appliances, such as terminals and switches, e.g. in:

- Dishwashers, washing machines, refrigerators
- Kitchen stoves, microwaves
- Small household appliances, such as mixers, coffee machines

Also affected is unattended equipment used in small and medium-sized enterprises, particularly:

- Pump components
- Illuminant components
- Industrial and commercial cleaning equipment
- Hair salon equipment etc.

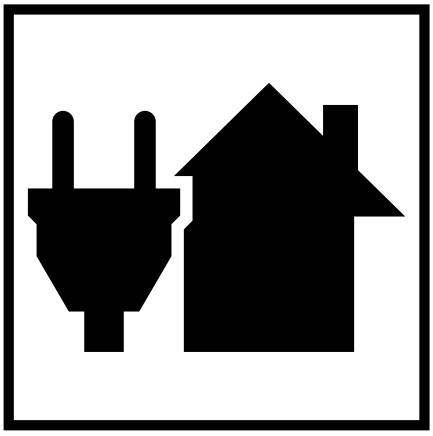
WECO products are compliant with the glow-wire test of the household appliance standard!

For the white goods market segment, WECO Contact GmbH offers an extensive range of PC board terminals and PC board plug connectors which meet the flame-resistance requirements of the Household Appliance Standard DIN EN/IEC 60335-1.

Molding materials used by WECO are tested and VDE-approved according to the glow-wire test requirements specified in DIN EN/IEC 60335-1. This applies for all standard WECO colors!

WECO products made of these molding materials are:

- All products with PC board connection technology, except for versions with higher number of poles such as series 95.., 96.. and 97…,
- terminal strips (catalogue 7), if purchased made of V-0 molding material (for unprinted versions, the part number ends with “EN6”),
- other products. Feasibility must be checked individually.



WECO “no flame” products are designated with a small symbol on our label:

Our customer service

WECO takes technical support and after-sale service for our customers very seriously.
For your information, we have therefore compiled a list of all manufacturer products affected by the household appliance standard on our website. At a glance, you can gather information on whether your appliances are affected or not.

The list is also a valuable tool for both our sales staff and our field reps, helping them to resolve unclear issues in project meetings, and enabling them to optimally support the customer.

RoHS - Restriction of Hazardous Substances

Declaration

The directive 2002/95/EC (RoHS 1) on the restriction of the use of certain hazardous substances in electrical and electronic equipment controls since 1st July 2006 the use of hazardous substances in devices and components. The directive is generally named with the short term RoHS (Restriction of Hazardous Substances). It affects manufacturers, sellers, distributors and recyclers of electrical and electronic equipment containing mercury, cadmium, lead, chromium VI, polybrominated biphenyls (PBB) and polybrominated diphenyl ethers (PBDE).

This directive has been replaced on 3rd January 2013 by the revised version 2011/65/EU (RoHS 2). Thus, the ranges of validity of the RoHS have been extended. Earlier given exceptions are reduced step by step.

WECO Contact is a responsible manufacturer of components for electrical connection technology and thus

RoHS COMPLIANT

provides products in RoHS - compliant versions since the implementation of the EU Directive 2002/95/EC in 2006. All products are now RoHS compliant since the recast 2011/65/EU.

Labeling of our products

Customers can clearly see the RoHS Compliance of the product on the right bottom of our product labels, marked with a little icon:

Products, which have been produced before 14th October 2013, do not have this icon, but even here RoHS Compliance is guaranteed and marked - albeit somewhat hidden. These products bear the letters „GP“ at the end of the line with the product type name.

Frequently Asked Questions

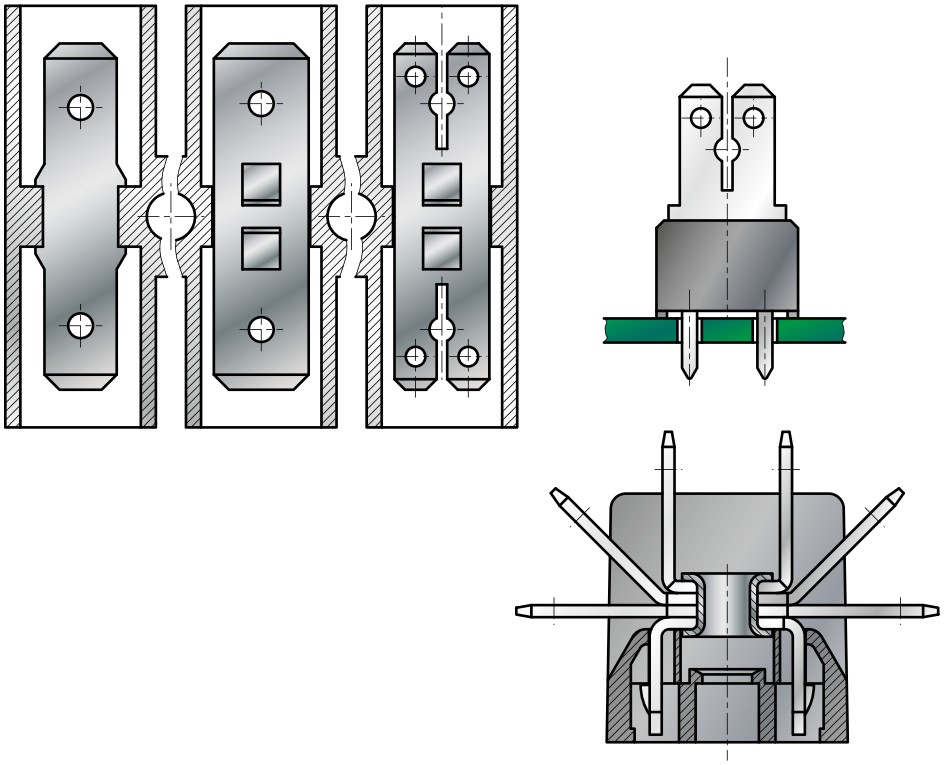
Which technical solutions does WECO provide?

- Matt pure tin as a surface for solder elements,
- Thick layer passivated screws,
- Temperature-resistant housing

What should be considered for the use of the products?

Particular attention should be paid to the storage life of the solder pins. For this, WECO offers a comfortable delivery-on-demand procedure by means of our supply agreements. The customer just sends a preview call for our production planning and always receives „fresh“ products.

Tab-, screw and solder connector blocks



Tab connectors are equipped with tab terminals of various sizes and can be used combined as assemblies on one strip but also on only one contact.

These lead distributors and space-saving feature multi-tier designs thus increasing connection density.
Thanks to the countless possible combinations, also with screw or solder terminals, our tab connectors provide immediate solutions for most connection problems

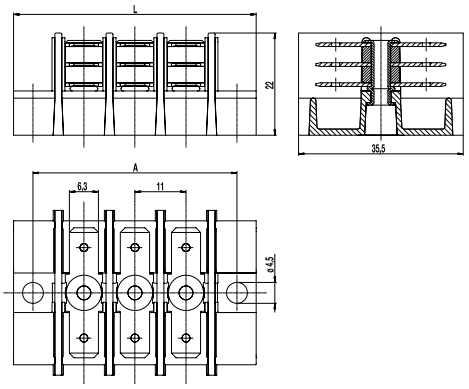
Tab- and solder connector blocks are used mainly as connectors, lead distributors or as an electrical interface in equipment and motor vehicles.

Depending on your application, these connector blocks are available with B 2.8, 4.8 or 6.3 tab connectors in various sizes, pole numbers and designs. We deliver tab connector blocks with two-sided push-on termination, as solder tab connectors and as tab connector guide.

Tab/screw connector blocks

3070-PCM

Parallel arrangement of the tabs



L = (Number of poles x Pitch) + 8
A = (Number of poles + 1) x Pitch
Shown type of tab connector package: 5.033

Series 3070-PCM connectors are a combination of straight tab and straight screw connectors and used for mains connection of electrical equipment and many other applications. Depending on the respective specifications, they are available in different pole number and variants.
Type 307-PC is designed only with one-tier tabs.
Tab connectors are suitable for tab receptacles according to DIN 46247. They are joined with a metal rivet to a package with multiple connections (max. 6 connection per pole), thus resulting in low contact resistances.
Due to the numerous and variable assembly combinations at the pole, high connection densities can be achieved.
Mounting holes are located at each end.
Flexible wires require the use of ferrules and cable lugs.

For mixed assemblies, we kindly ask for a scheme according to the example on the next page. For asymmetrical assemblies, it must contain the component orientation.
Due to the large variety of different types, article numbers cannot be listed.

General Information

Pitch	11 mm
No. of poles	2 - 21

Technical Data

Clamping Range	*solid / flexible / AWG* 0,75-4 mm² / 0,75-2,5 mm² / 18-12 AWG [1] 0,5-1,5 mm² / 0,5-1,5 mm² / 20-16 AWG [2]
Rated Cross Section	4 mm² [1] / 1,5 mm² [2]
Wire Stripping Length	8 mm
Overvoltage Category	III
Pollution Severity Level	3
Rated Voltage	250 V
Rated Impulse Voltage	4 kV
Rated Insulation Voltage	450 V acc. to EN 60998-1
Rated Current	6 A with receptacle 2,8; wire 1 mm² (16 AWG) 16 A with receptacle 4,8; wire 2,5 mm² (14 AWG) 25 A with receptacle 6,3; wire 6 mm² (10 AWG) Screw connection depends on tab connector design
Torque	1,2 Nm
Other specifications	Screw terminals are generally suitable for wires with identical wire type / cross-section.

Material

Moulding	PC, grey, V-0
Comparative Tracking Index	CTI 250
Insulating Group	IIIa
Temperature Range	-40°C up to 125°C
Tab	Nickel plated brass
Screw	M4; zinc plated steel, blue passivated
Tubular rivet	Tin plated copper

Approvals

	Current	Voltage	Group	AWG	Nm
	25	300	B	max. 10	[3][6][7]
	15	300	B	max. 14	[4][6][7]
	6	300	B	max. 16	[5][6][7]
	25	300	B	max. 10	[3]
	15	300	B	max. 10	[4]

Options / Accessories

- Marking strips BST-307
- Jumpers 307-V, 307-VS; Cover 3070-B
- Special packages upon request (e.g. 6,3 tab connector with solder connection)

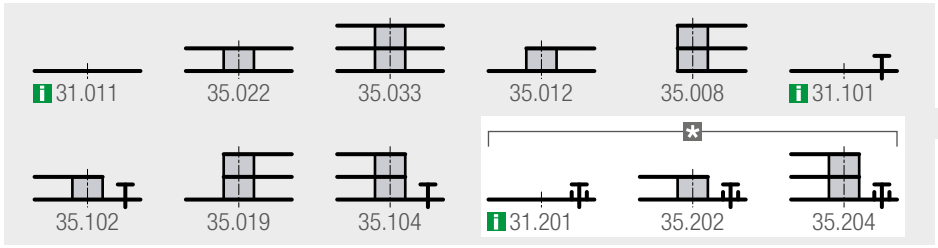
[1] Screw connection
[2] SAK version
[3] For use with insulation receptacles 6,3
[4] For use with insulation receptacles 4,8
[5] For use with insulation receptacles 2,8
[6] for factory wiring only
[7] Group C: 150 V

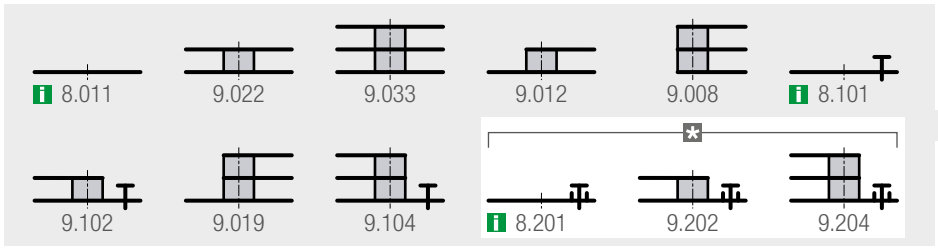
Tab/screw connector blocks

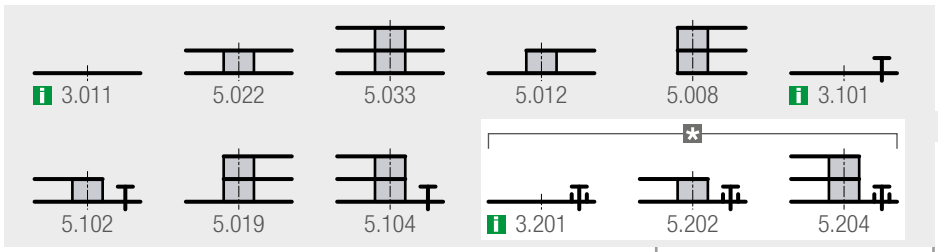
3070-PCM

Assembly layout and order information

Assembly layout



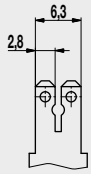




✲ This type of assembly (SAK-variants) features laterally raised edges preventing false insertion of wires with small cross-sections.

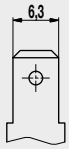
ⓘ Designs, which ONLY consist of one-tier tab connector (.011, .101 and/or .201), are obtained as product "307 PC", please see corresponding data sheet.

Tab size



XBS

4,8



6,3

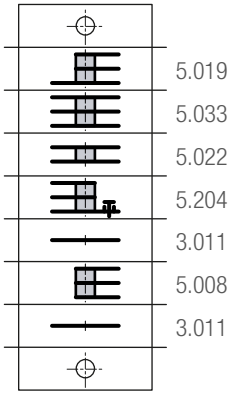
Poles
02
up to
21

Assembly layout
Please enter here the desired assembly type number.

If you order various sizes, please enclose drawing and enter here: **MIX**

**3070-PCM/ – **

Example ordering scheme for mixed assembly ("MIX")



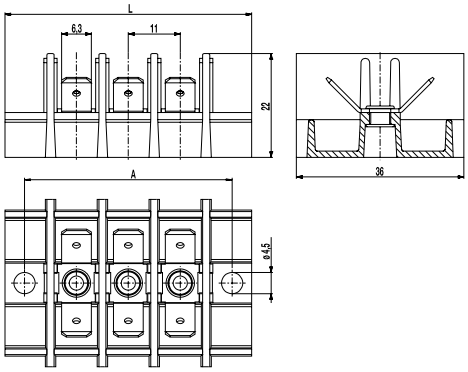
When inquiring or ordering products for uniform assembly, stating the above designation is sufficient.

For mixed assembly ("MIX" as part of the type designation), we additionally need a drawing according to the example on the left.
The drawing must state the desired number of poles, the assembly of each pole and the assembly number.

Tab/screw connector blocks

307-PC/-PCM

Star-shaped tab arrangement



L = (number of poles x pitch) + 8
A = (number of poles + 1) x pitch
Types of connection shown with package 5.033

A combination of straight and angular tabs and straight screw connections, these connector blocks are particularly suitable for the mains connection of electrical equipment. They are available in various sizes, pole numbers and types for individual applications. Depending on the application requirements, they are available in different number of poles and variants.
The tabs are suitable for receptacles to DIN 46247 and assembled in packets containing multiple ports (maximum of 6 ports per pole) with a metal rivet which results in low contact resistance.
Due to the variable and extensive assembly combinations of the poles, a high packing density is achieved.
At the end of the connectors a fixing hole is provided. Flexible conductors may only be used with core cable ends and cable lugs.

At a mixed assembly, we ask for a sketch according to order illustration (please see next page), especially for the orientation of asymmetric packets.
Due to the variety of designs, a total list of part numbers is not possible.

Note concerning the variants:
..-PC: single level
..-PCM: multi level

General Information

Pitch	11 mm
No. of poles	2 - 21

Technical Data

Clamping Range	*solid / flexible / AWG*		
	0,75-4 mm² / 0,75-2,5 mm² / 18-12 AWG [1] 0,5-1,5 mm² / 0,5-1,5 mm² / 20-16 AWG [2]		
Rated Cross Section	4 mm² [1] / 1,5 mm² [2]		
Wire Stripping Length	8 mm ± 0,5 mm		
Overvoltage Category	III	III	II
Pollution Severity Level	3	2	2
Rated Voltage	200 V	320 V	500 V
Rated Impulse Voltage	4 kV	4 kV	4 kV
Rated Insulation Voltage	250 V acc. to EN 60998-1 [1]		
Rated Current	6 A with receptacle 2,8; wire 1 mm² (16 AWG) 16 A with receptacle 4,8; wire 2,5 mm² (14 AWG) 25 A with receptacle 6,3; wire 6 mm² (10 AWG) Screw connection: depending on tab versions		
Torque	1,2 Nm		
Other specifications	Screw terminals are generally suitable for wires with identical wire type / cross-section.		

Material

Moulding	PC, black, V-0
Comparative Tracking Index	CTI 250
Insulating Group	IIIa
Temperature Range	-40°C up to 125°C
Tab	Nickel plated brass
Screw	M4; zinc plated steel, blue passivated
Tubular rivet	Tin plated copper

Approvals

	Current	Voltage	Group	AWG	Nm
	25	300	B	max. 10	[4][7][8]
	15	300	B	max. 14	[5][7][8]
	6	300	B	max. 16	[6][7][8]
	25	300	B	max. 10	[4]
	15	300	B	max. 10	[5]

Options / Accessories

- Marking strips BST-307
- Jumpers 307-V, 307-VS

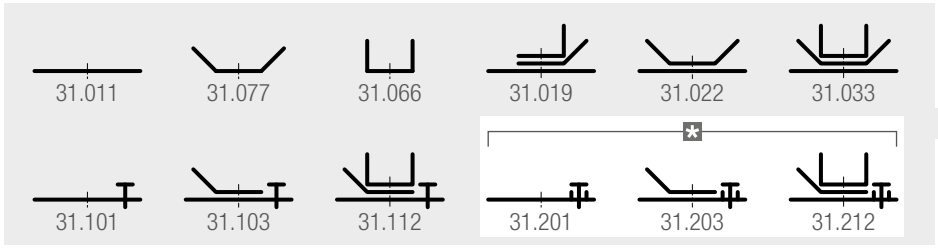
[1] Screw connection
[2] SAK version
[3] For use with insulation receptacles 450 V
[4] For use with insulation receptacles 6,3
[5] For use with insulation receptacles 4,8
[6] For use with insulation receptacles 2,8
[7] for factory wiring only
[8] Group C: 150 V

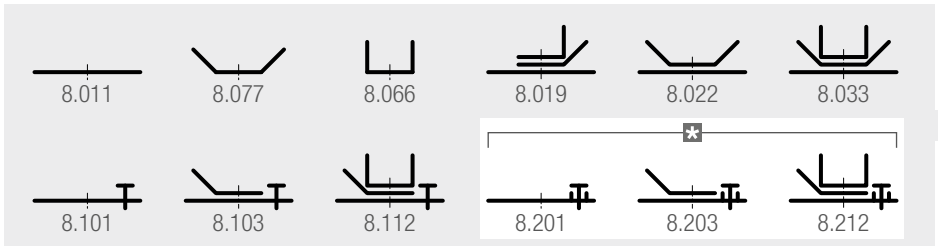
Tab/screw connector blocks

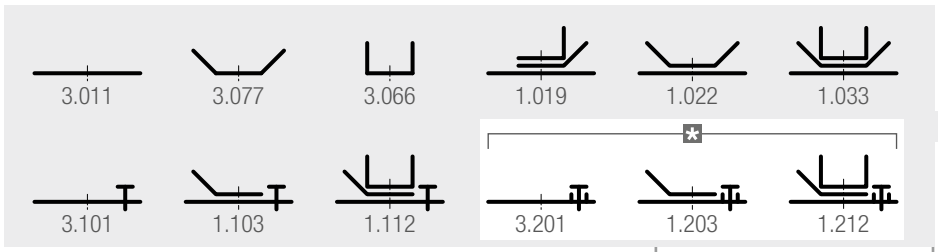
307-PC/-PCM

Assembly layout and order information

Assembly layout

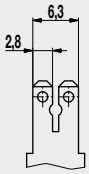






✲ This type of assembly (SAK-variants) features laterally raised edges preventing false insertion of wires with small cross-sections.

Tab size



XBS

4,8

6,3

Poles
02
up to
21

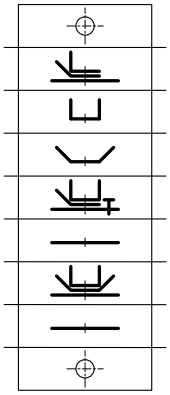
Assembly layout
Please enter here the desired assembly type number.

If you order various sizes, please enclose drawing and enter here: **MIX**

**307-PCM/ - **

one-tier tab connector (.011, .077, .066, .101, .201) only as „-PC“

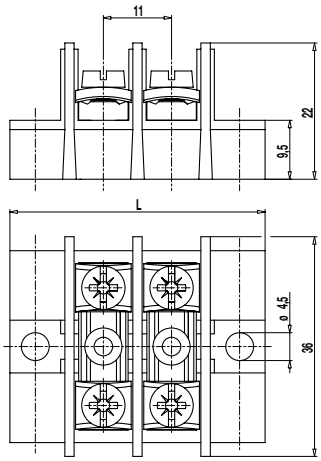
Example ordering scheme for mixed assembly (“MIX”)



When inquiring or ordering products for uniform assembly, stating the above designation is sufficient.

For mixed assembly (“MIX” as part of the type designation), we additionally need a drawing according to the example on the left.
The drawing must state the desired number of poles, the assembly of each pole and the assembly number.

Multi-point screw connector
307-PCF
with grooved flat terminals



The multi-point screw connector 307-PCF in 11 mm pitch is available in 2- to 21-pole design.
They are equipped with grooved flat terminals and are particularly suitable for the mains connection of electrical equipment. They are available in various sizes, pole numbers and types to suit individual applications.
The grooves serve as wire guide and prevent lateral wire offset when fastening the screw connection.
Each one mounting hole is provided on the end of the connector block.
The connector block features a polycarbonate housing with riveted flat tabs according to DIN 41000/12.66

Part Numbers

No. of poles	307-PCF	Length	A *	PU
2	50.880.602	41,00	33,00	112
3	50.880.603	52,00	44,00	84
4	50.880.604	63,00	55,00	64
5	50.880.605	74,00	66,00	56
6	50.880.606	85,00	77,00	48
7	50.880.607	96,00	88,00	40
8	50.880.608	107,00	99,00	36
9	50.880.609	118,00	110,00	32
10	50.880.610	129,00	121,00	32
11	50.880.611	140,00	132,00	28
12	50.880.612	151,00	143,00	20
13	50.880.613	162,00	154,00	24
14	50.880.614	173,00	165,00	42
15	50.880.615	184,00	176,00	42
16	50.880.616	195,00	187,00	21
17	50.880.617	206,00	198,00	21
18	50.880.618	217,00	209,00	63
19	50.880.619	228,00	220,00	16
20	50.880.620	239,00	231,00	70
21	50.880.621	250,00	242,00	16

** = Distance of the two outermost mounting holes*

General Information

Pitch	11 mm
No. of poles	2 - 21
Usable with	Cover 3070-B; securing pins BEF-3070

Technical Data

Clamping Range	*solid / flexible / AWG*		
	0,5 - 4 mm² / 0,5 - 4 mm² / 20 - 14 AWG [1] [2] [3]		
Rated Cross Section	4 mm²		
Wire Stripping Length	12,5 mm ± 0,5 mm		
Overvoltage Category	III	III	II
Pollution Severity Level	3	2	2
Rated Voltage	400 V	630 V	630 V
Rated Impulse Voltage	6 kV	6 kV	6 kV
Rated Insulation Voltage	750 V acc. to EN 60998-1		
Rated Current	32 A		
Torque	1,2 Nm		
Other specifications	Screw terminals are generally suitable for wires with identical wire type / cross-section.		

Material

Moulding	PC, black, V-0
Comparative Tracking Index	CTI 250
Insulating Group	IIIa
Temperature Range	-40°C up to 125°C
Screw terminal	Nickel plated brass
Screw	M4; zinc plated steel, blue passivated
Tubular rivet	Tin plated copper
Washer	Zinc plated steel, blue passivated

Approvals

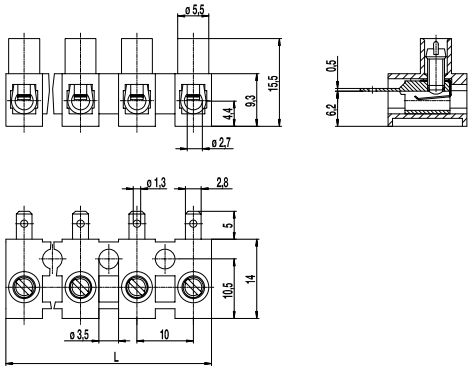
	Current	Voltage	Group	AWG	Nm
	20	300	B	max. 14	1,2
	20	150	C	max. 14	1,2
	20	300	B	18 - 14	1,2
	20	150	C	18 - 14	1,2

Options / Accessories

- Consecutive numbering
- Special marking according to drawing
- Marking strips BST-307
- Jumper 307-VS
- Cover 3070-B
- Securing pin BEF-3070

[1] with cabel lug 6 mm²
[2] Ferrules are required when using flexible or fine-wire conductors.
[3] for 4 mm² flexible wires, only one conductor per clamping unit is possible

Tab/screw connector
322-A-2,8(-DS)
with tab A 2,8



The tab connector block 322-A-2,8 in 10 mm pitch is available with 1 to 12 poles. These connector strips are a combination of screw and tab connectors. The can be used to connect equipment to the grid and are well suited for many other applications.

After slipping on the tab receptacles, their ends protrude approx. 12,5 mm from the moulding. The screws are ready to be wired, secured against self-loosening and captive.

This tab connector block can be combined with our plug-in terminal strip 322-SV - the plugs are simply inserted in the sockets and subsequently screwed tight.

The wire protector of the “DS”-version reliably prevents damage to multi-wire flexible conductors by the turning screw.
These terminals strips can be screw-mounted on a substrate.

Part Numbers

No. of poles	322-A-2,8	322-A-2,8-DS	Length	PU
1	11.821.014	31.821.014	8,00	2000
2	12.821.014	32.821.014	18,00	2000
3	13.821.014	33.821.014	28,00	1000
4	14.821.014	34.821.014	38,00	800
5	15.821.014	35.821.014	48,00	500
6	16.821.014	36.821.014	58,00	100
7	17.821.014	37.821.014	68,00	70
8	18.821.014	38.821.014	78,00	70
9	19.821.014	39.821.014	88,00	60
10	20.821.014	40.821.014	98,00	50
11	21.821.014	41.821.014	108,00	50
12	22.821.014	42.821.014	117,00	50

General Information

Pitch	10 mm
No. of poles	1 - 12
Accessories	322-SV

Technical Data

Clamping Range	*solid / flexible / AWG*		
without wire protector	0,5 - 4 mm² / 0,5 - 2,5 mm² / 20 - 12 AWG		
with wire protector	0,34 - 2,5 mm² / 0,34 - 2,5 mm² / 22 - 14 AWG		
Rated Cross Section	[1] 2,5 mm²; [2] 1 mm²		
Overvoltage Category	III	III	II
Pollution Severity Level	3	2	2
Rated Voltage	400 V	630 V	1000 V
Rated Impulse Voltage	6 kV	6 kV	6 KV
Rated Insulation Voltage	450 V acc. to EN 60998-1		
Rated Current	6 A compare DIN 46 249		
Torque	0,5 Nm		

Material

Moulding	PA, natural, V-2
Comparative Tracking Index	CTI ≥ 600
Insulating Group	I
Temperature Range	-40°C up to 100°C
Terminal Body	Nickel plated brass
Screw	M3; zinc plated steel, blue passivated
Wire protector	Tin plated tin bronze

Approvals

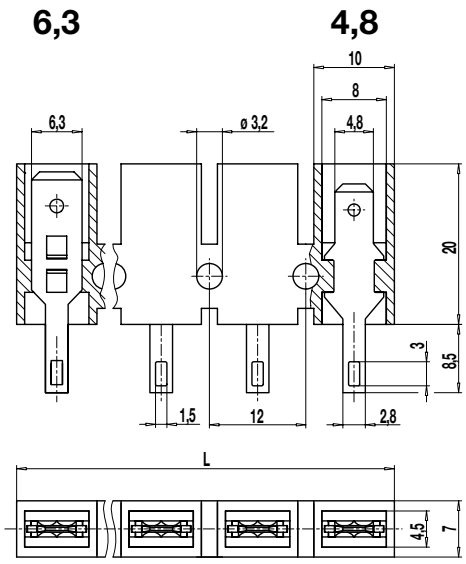
	Current	Voltage	Group	AWG	Nm
CSA	6	300	B,D,E	22 - 10	0,51

Options / Accessories

- Marking options on the screw guides
- Marking strips BST-322
- Cover caps A-323 und base plate B-323 for additional contact protection

[1] Screw side
[2] Plug-in side

Tab/solder connector block
401-LFPA-4,8/-6,3



The combined tab/solder connector blocks are used primarily as connectors, cable splitter or as a base in electrical appliances and in automotive.
In the -LF version of the Type 401 a solder connection is located on the opposite side of the flat plug. The solder tags protrude approximately 8,5 mm from the housing. On the solder tag a flat plug sleeve B 2.8 x 0.8 can be inserted.
Depending on the application, this type is available with flat connectors 4,8 mm or 6,3 mm width in 1 to 12 pole design.
The insulation on the plug side can be done with our insulating ISO 187 on the tab 4,8 mm and ISO 110 with the solder joints. The tab connectors are suitable for flat plugs according to DIN 46247.

Part Numbers

No. of poles	401-LFPA-4,8	401-LFPA-6,3	Length	A *	PU
1	11.833.002	31.833.010	11,00		2500
2	12.833.002	32.833.010	23,00		1500
3	13.833.002	33.833.010	35,00	12,00	1000
4	14.833.002	34.833.010	47,00	24,00	800
5	15.833.002	35.833.010	59,00	36,00	200
6	16.833.002	36.833.010	71,00	48,00	250
7	17.833.002	37.833.010	83,00	60,50	250
8	18.833.002	38.833.010	95,00	72,50	250
9	19.833.002	39.833.010	107,00	84,50	200
10	20.833.002	40.833.010	119,00	96,50	150
11	21.833.002	41.833.010	131,00	108,50	150
12	22.833.002	42.833.010	143,00	120,50	150

** = Distance of the two outermost mounting holes*

General Information

Pitch	12 mm
No. of poles	1 - 12

Technical Data

Overvoltage Category	III	III	II
Pollution Severity Level	3	2	2
Rated Voltage	400 V	630 V	1000V
Rated Impulse Voltage	6 kV	6 kV	6 kV
Rated Insulation Voltage	450 V acc. to EN 60998-1		
Rated Current	16 A: with receptacle 4,8; wire 2,5 mm² (14 AWG) 25 A: with receptacle 6,3; wire 6,0 mm² (10 AWG)		
Other specifications	Rated values apply to use in combination with insulated substrates.		

Material

Moulding	PA, natural, V-2
Comparative Tracking Index	CTI ≥ 600
Insulating Group	I
Temperature Range	-40°C up to 100°C
Tab	Tin plated brass

Approvals

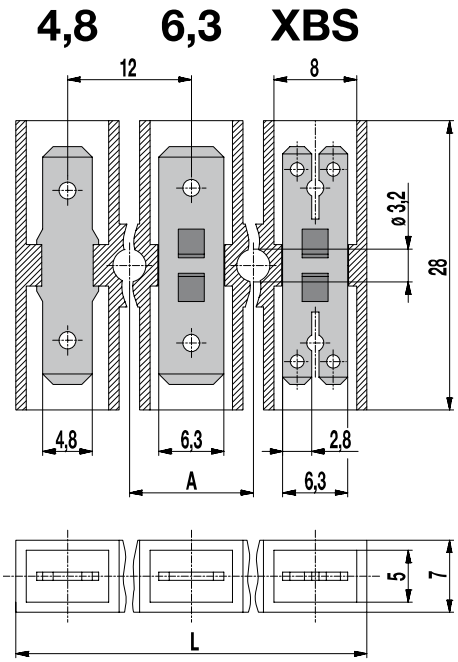
	Current	Voltage	Group	AWG	Nm
	15	300	B	max. 10	[1][2]
	15	300	B	max. 10	[1]
	15	150	C	max. 10	[1]
	10	300	D,E	max. 10	[1]

[1] max. 14 AWG for solder side
[2] max. 16 AWG for solder side

Options / Accessories

- Consecutive numbering
- Special marking according to drawing
- Insulating sleeves ISO-110 for solder points and ISO-187 for receptacles
- Other tab connector variants available upon request, e.g. for the transition from 4.8 to 6.3

Tab connector block
401-PA-4,8/-6,3 /-XBS



Tab connector blocks 401-PA are used mainly as connectors, lead distributors or as electrical interface in equipment and motor vehicles. Depending on the application, these connector blocks are available with B 2,8 (-XBS); 4,8 or 6,3 tab connectors in 1- to 12-pole design.

Upon request, crimping points for 4,8 tabs can be insulated with our ISO insulating sleeves. Tab connectors are suitable for tab receptacles according to DIN 46247.

Part Numbers

No. of poles	401-PA-4,8	401-PA-6,3	401-PA-XBS	Length	A *	PU
1	11.830.039	31.830.039	71.830.039	12,00		2500
2	12.830.039	32.830.039	72.830.039	24,00		1500
3	13.830.039	33.830.039	73.830.039	36,00	12,00	1000
4	14.830.039	34.830.039	74.830.039	48,00	24,00	1000
5	15.830.039	35.830.039	75.830.039	59,00	36,00	200
6	16.830.039	36.830.039	76.830.039	71,00	48,00	200
7	17.830.039	37.830.039	77.830.039	83,00	60,00	50
8	18.830.039	38.830.039	78.830.039	95,00	72,00	50
9	19.830.039	39.830.039	79.830.039	107,00	84,00	25
10	20.830.039	40.830.039	80.830.039	119,00	96,00	100
11	21.830.039	41.830.039	81.830.039	131,00	108,00	100
12	22.830.039	42.830.039	82.830.039	142,00	120,00	100

** = Distance of the two outermost mounting holes*

General Information

Pitch	12 mm
No. of poles	1 - 12
Additonal Information	After pushing on the tab receptacles, their ends protrude 7 mm from the housing.

Technical Data

Overvoltage Category	III	III	II
Pollution Severity Level	3	2	2
Rated Voltage	500 V	630 V	1000 V
Rated Impulse Voltage	6 kV	6 kV	6 kV
Rated Insulation Voltage	750 V acc. to EN 60998-1		
Rated Current	6 A: with receptacle 2,8; wire 1 mm² (16 AWG) 16 A: with receptacle 4,8; wire 2,5 mm² (14 AWG) 25 A: with receptacle 6,3; wire 6,0 mm² (10 AWG)		
Other specifications	Rated values apply to use in combination with insulated substrates.		

Material

Moulding	PA, natural, V-2
Comparative Tracking Index	CTI ≥ 600
Insulating Group	I
Temperature Range	-40°C up to 100°C
Tab	Nickel plated brass

Approvals

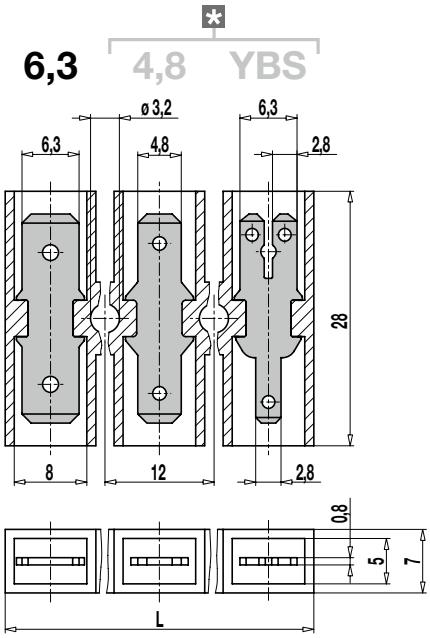
	Current	Voltage	Group	AWG	Nm
	25 [2]	300	B	max. 10	
	6 [3]	300	B	max. 16	
	15 [4]	300	B	max. 14	
	25 [1] [2]	300	B	max. 10	
	25 [1] [2]	150	C	max. 10	
	10	300	D,E	max. 10	

[1] 15 A is applicable for 401-PA-4.8 in group B,C
[2] applies only for receptacle for tabs 6,3
[3] applies for receptacle for tabs 2,8
[4] applies for receptacle for tabs 4,8

Options / Accessories

- Consecutive numbering
- Special marking according to drawing
- Insulating sleeves ISO-187 for receptacles
- Other tab connector variants available upon request, e.g. for the transition from 4.8 to 6.3

Tab connector block
401-PVC-6,3
Material: PVC



[*] = optionally available tab connector types

The standard version of tab connector block 401-PVC comes with tab width 6,3 mm and is available in 1- to 12-pole design. It is used mainly as connector, lead distributor or as electrical interface in equipment and motor vehicles.

Optionally, they are available in tab width 4,8 mm and as "–YBS"-version, i.e. with one single connection on the one side and a double connection 2 x 2,8 mm or 1 x 6,3 mm on the opposite side.
Crimped points can be insulated with our ISO insulation sleeves.
These tab connectors are suitable for tab receptacles according to DIN 46247.

Part Numbers

No. of poles	401-PVC-6,3	Length	A *	PU
1	31.830.002	12,00		2500
2	32.830.002	24,00		1500
3	33.830.002	36,00	12,00	1000
4	34.830.002	48,00	24,00	1000
5	35.830.002	59,00	36,00	200
6	36.830.002	71,00	48,00	200
7	37.830.002	83,00	60,00	50
8	38.830.002	95,00	72,00	50
9	39.830.002	107,00	84,00	25
10	40.830.002	119,00	96,00	100
11	41.830.002	131,00	108,00	100
12	42.830.002	142,00	120,00	100

** = Distance of the two outermost mounting holes*

General Information

Pitch	12 mm
No. of poles	1 - 12
Additonal Information	After pushing on the tab receptacles, their ends protrude 7 mm from the housing.

Technical Data

Overvoltage Category	III	III	II
Pollution Severity Level	3	2	2
Rated Voltage	500 V	630 V	1000 V
Rated Impulse Voltage	6 kV	6 kV	6 kV
Rated Insulation Voltage	750 V acc. to EN 60998-1		
Rated Current	6 A: with receptacle 2,8; wire 1 mm² (16 AWG) 16 A: with receptacle 4,8; wire 2,5 mm² (14 AWG) 25 A: with receptacle 6,3; wire 6,0 mm² (10 AWG)		
Other specifications	Rated values apply to use in combination with insulated substrates.		

Material

Moulding	Soft PVC, transparent, V-2
Comparative Tracking Index	CTI 400
Insulating Group	II
Temperature Range	-10°C up to 70°C
Tab	Nickel plated brass

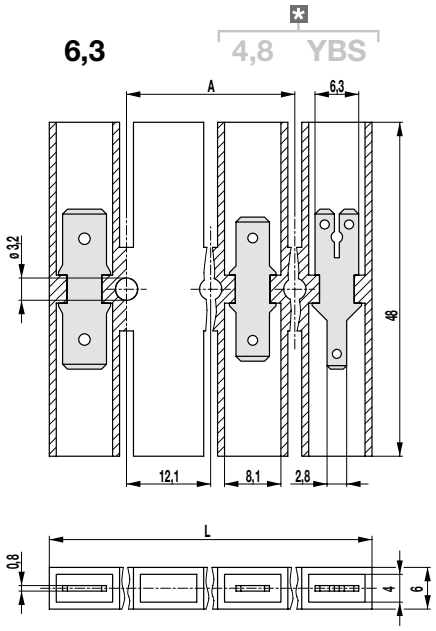
Approvals

	Current	Voltage	Group	AWG	Nm
	25	300	B	max. 10	

Options / Accessories

- Consecutive numbering
- Special marking according to drawing
- Flat connector type -4,8
- Flat connector type -YBS
- Other tab connector variants available upon request, e.g. for the transition from 4.8 to 6.3

Tab connector block
404-6,3



[*] = optionally available tab connector types

The tab connector 404 with the pitch of 12,1 mm is mainly used as connector, terminal or as a electrical distribution in electrical equipment and motor vehicle construction.
In the standard version, these tab connector is available with 6,3 mm tabs and with two-sided push-on termination. The tabs are suitable for receptacle for tabs according to DIN 46 247.

Deferred receptacles are fully covered by the wide housing insulation. This allows stacking the connector without the need for an intermediate insulating layer. The connector is similar to DIN 72 586-C50.

Part Numbers

No. of poles	404-6,3	Length	A *	PU
1	31.830.008	12,00		1500
2	32.830.008	24,00		1000
3	33.830.008	36,00	12,10	250
4	34.830.008	48,00	24,20	200
5	35.830.008	60,00	36,30	200
6	36.830.008	72,00	48,40	150
7	37.830.008	84,00	60,50	100
8	38.830.008	96,00	72,60	100
9	39.830.008	108,00	84,70	100
10	40.830.008	120,00	96,80	100
11	41.830.008	132,00	108,90	70
12	42.830.008	144,00	121,00	70

** = Distance of the two outermost mounting holes*

General Information

Pitch	12,1 mm
No. of poles	1 - 12

Technical Data

Overvoltage Category	III
Pollution Severity Level	3
Rated Voltage	320 V
Rated Impulse Voltage	4 kV
Rated Insulation Voltage	450 V acc. to EN 60998-1
Rated Current	6 A: with receptacle 2,8; wire 1 mm² (16 AWG) 16 A: with receptacle 4,8; wire 2,5 mm² (14 AWG) 25 A: with receptacle 6,3; wire 6,0 mm² (10 AWG)
Other specifications	Rated values apply to use without insulated substrates.

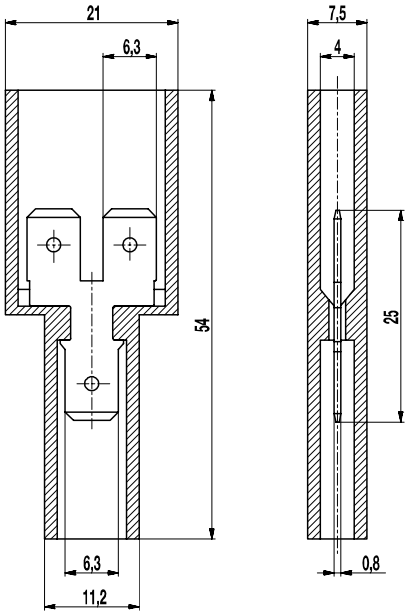
Material

Moulding	Soft PVC, transparent, V-2
Comparative Tracking Index	CTI 400
Insulating Group	II
Temperature Range	-10°C up to 70°C
Tab	Nickel plated brass

Options / Accessories

- Consecutive numbering
- Special marking according to drawing
- Flat connector types -4,8
- Flat connector types -YBS

Tab connector
406
Lead distributor



Tab connector 406 is only available as 1-pole variant. It features one single connection 6,3 mm on one side and a double connection 2x6,3 mm on the opposite side.
Pushed on tab receptacles 6,3 are completely covered by the housing.

Part Numbers

No. of poles	406	Length	PU
1	10.836.008	54	250

General Information

No. of poles	1

Technical Data

Overvoltage Category	III
Pollution Severity Level	3
Rated Voltage	630 V
Rated Impulse Voltage	6 kV
Rated Insulation Voltage	750 V acc. to EN 60998-1
Rated Current	25 A: with receptacle 6,3; wire 6,0 mm² (10 AWG)
Other specifications	Rated values apply to use without insulated substrates.

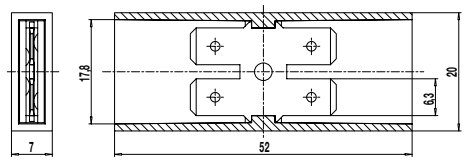
Material

Moulding	Soft PVC, transparent, V-2
Comparative Tracking Index	CTI 400
Insulating Group	II
Temperature Range	-10°C up to 70°C
Tab	Nickel plated brass

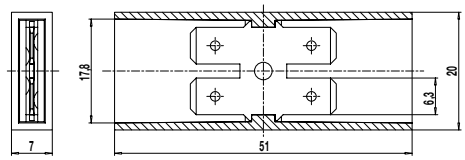
Options / Accessories

- Special marking according to drawing

Tab connector
407-PA/-PVC



407-PA



407-PVC

Tab connector 407 is only available as 1-pole variant. It features double connections with 6,3 mm tabs.
Pushed on tab receptacles 6,3 are completely covered by the housing.

Part Numbers

No. of poles	407-PA	407-PVC	PU
1	20.830.040	20.830.030	400

Part numbers: "no flame" acc. to glow-wire test

No. of poles	407-PA	407-PVC	PU
1	20.830.036.EN6		400

General Information

No. of poles	1

Technical Data

Overvoltage Category	III
Pollution Severity Level	3
Rated Voltage	500 V
Rated Impulse Voltage	6 kV
Rated Insulation Voltage	750 V acc. to EN 60998-1
Rated Current	25 A: with receptacle 6,3; wire 6,0 mm² (10 AWG)
Other specifications	Rated values apply to use without insulated substrates.

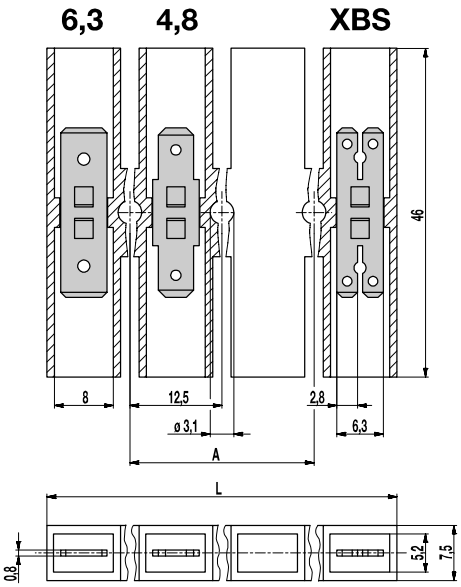
Material

Moulding	PA, natural, V-2 (PA, white, V-0) Details in parentheses for "no flame" products Soft PVC, transparent, V-2
Comparative Tracking Index	PA: CTI ≥ 600; PVC: CTI 400
Insulating Group	PA: I; PVC: II
Temperature Range	PA: -40°C up to 100°C; PVC: -10°C up to 70°C
Tab	Nickel plated brass

Options / Accessories

- Special marking according to drawing

Tab connector block
408-46-4,8/-6,3 /-XBS
Housing width 46 mm



Tab connector blocks 408-46 with double connectors on both sides are used mainly as connectors, lead distributors or as electrical interface in equipment and motor vehicles. Depending on the application, these connector blocks with a housing width of 46 mm are available for 4,8; 6,3 or XBS-tabs in 1- to 12-pole design.

These tab connectors are suitable for tab receptacles according to DIN 46247. The housing variant requires 2,8 tab receptacles for the insulation of crimp points.

Part Numbers

No. of poles	408-46-4,8	408-46-6,3	408-46-XBS	Length	A *	PU
1	40.830.221	30.830.221	20.830.221	10,00		2000
2	40.830.222	30.830.222	20.830.222	22,50		1000
3	40.830.223	30.830.223	20.830.223	35,00	12,50	700
4	40.830.224	30.830.224	20.830.224	47,50	25,00	200
5	40.830.225	30.830.225	20.830.225	60,00	37,50	100
6	40.830.226	30.830.226	20.830.226	72,50	50,00	100
7	40.830.227	30.830.227	20.830.227	85,00	62,50	100
8	40.830.228	30.830.228	20.830.228	97,50	75,00	100
9	40.830.229	30.830.229	20.830.229	110,00	87,50	70
10	40.830.230	30.830.230	20.830.230	122,50	100,00	70
11	40.830.231	30.830.231	20.830.231	135,00	112,50	70
12	40.830.232	30.830.232	20.830.232	147,50	125,00	60

** = Distance of the two outermost mounting holes*

General Information

Pitch	12,5 mm
No. of poles	1 - 12

Technical Data

Overvoltage Category	III	III	II
Pollution Severity Level	3	2	2
Rated Voltage	320 V	320 V	630 V
Rated Impulse Voltage	4 kV	4 kV	4 kV
Rated Insulation Voltage	450 V acc. to EN 60998-1		
Rated Current	6 A: with receptacle 2,8; wire 1 mm² (16 AWG) 16 A: with receptacle 4,8; wire 2,5 mm² (14 AWG) 25 A: with receptacle 6,3; wire 6,0 mm² (10 AWG)		
Other specifications	Rated values apply to use without insulated substrates.		

Material

Moulding	PA, natural, V-2
Comparative Tracking Index	CTI ≥ 600
Insulating Group	I
Temperature Range	-40°C up to 100°C
Tab	Nickel plated brass

Approvals

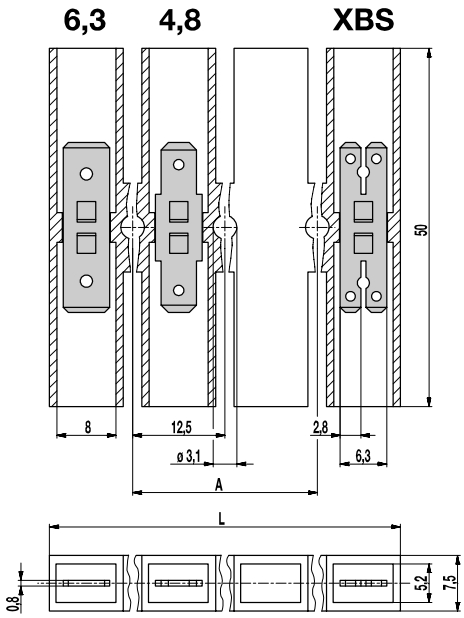
	Current	Voltage	Group	AWG	Nm
	25	600	B,C	max. 10	[1]
	15	600	B,C	max. 14	[2]
	6	600	B,C	max. 16	[3]
	25	600	B,C	max. 10	[1]

[1] only applicable when used with 6,3 tab receptacles
[2] only applicable when used with 4,8 tab receptacles
[3] only applicable when used with 2,8 tab receptacles

Options / Accessories

- Consecutive numbering
- Special marking according to drawing

Tab connector block
408-50-4,8/-6,3 /-XBS
Housing width 50 mm



Tab connector blocks 408-50 with double connectors on both sides are used mainly as connectors, lead distributors or as electrical interface in equipment and motor vehicles. Depending on the application, these connector blocks with a housing width of 50 mm are available for 4,8; 6,3 or XBS-tabs in 1- to 12-pole design.
Except for pitch and total length this variant is compliant with DIN 72586-C50.

These tab connectors are suitable for tab receptacles according to DIN 46247. The crimp points of tab receptacles are completely insulated.

Part Numbers

No. of poles	408-50-4,8	408-50-6,3	408-50-XBS	Length	A *	PU
1	40.830.201	30.830.201	20.830.201	10,00		2000
2	40.830.202	30.830.202	20.830.202	22,50		1000
3	40.830.203	30.830.203	20.830.203	35,00	12,50	700
4	40.830.204	30.830.204	20.830.204	47,50	25,00	600
5	40.830.205	30.830.205	20.830.205	60,00	37,50	100
6	40.830.206	30.830.206	20.830.206	72,50	50,00	100
7	40.830.207	30.830.207	20.830.207	85,00	62,50	100
8	40.830.208	30.830.208	20.830.208	97,50	75,00	100
9	40.830.209	30.830.209	20.830.209	110,00	87,50	70
10	40.830.210	30.830.210	20.830.210	122,50	100,00	70
11	40.830.211	30.830.211	20.830.211	135,00	112,50	70
12	40.830.212	30.830.212	20.830.212	147,50	125,00	50

** = Distance of the two outermost mounting holes*

General Information

Pitch	12,5 mm
No. of poles	1 - 12

Technical Data

Overvoltage Category	III	III	II
Pollution Severity Level	3	2	2
Rated Voltage	500 V	630 V	1000 V
Rated Impulse Voltage	6 kV	6 kV	6 kV
Rated Insulation Voltage	750 V acc. to EN 60998-1		
Rated Current	6 A: with receptacle 2,8; wire 1 mm² (16 AWG) 16 A: with receptacle 4,8; wire 2,5 mm² (14 AWG) 25 A: with receptacle 6,3; wire 6,0 mm² (10 AWG)		
Other specifications	Rated values apply to use without insulated substrates.		

Material

Moulding	PA, natural, V-2
Comparative Tracking Index	CTI ≥ 600
Insulating Group	I
Temperature Range	-40°C up to 100°C
Tab	Nickel plated brass

Approvals

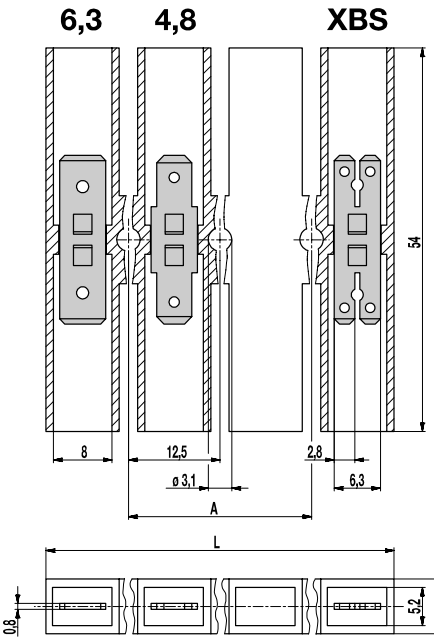
	Current	Voltage	Group	AWG	Nm
	25	600	B,C	max. 10	[1]
	15	600	B,C	max. 14	[2]
	6	600	B,C	max. 16	[3]
	25	600	B,C	max. 10	[1]

[1] only applicable when used with 6,3 tab receptacles
[2] only applicable when used with 4,8 tab receptacles
[3] only applicable when used with 2,8 tab receptacles

Options / Accessories

- Consecutive numbering
- Special marking according to drawing

Tab connector block
408-54-4,8/-6,3 /-XBS
Housing width 54 mm



Tab connector blocks 408-54 with double connectors on both sides are used mainly as connectors, lead distributors or as electrical interface in equipment and motor vehicles. Depending on the application, these connector blocks with a housing width of 4,8; 6,3 or XBS-tabs in 1- to 12-pole design.
These tab connectors are suitable for tab receptacles according to DIN 46247. The crimp points of tab receptacles are completely insulated.

Part Numbers

No. of poles	408-54-4,8	408-54-6,3	408-54-XBS	Length	A *	PU
1	40.830.241	30.830.241	20.830.241	10,00		2000
2	40.830.242	30.830.242	20.830.242	22,50		1000
3	40.830.243	30.830.243	20.830.243	35,00	12,50	800
4	40.830.244	30.830.244	20.830.244	47,50	25,00	500
5	40.830.245	30.830.245	20.830.245	60,00	37,50	100
6	40.830.246	30.830.246	20.830.246	72,50	50,00	100
7	40.830.247	30.830.247	20.830.247	85,00	62,50	80
8	40.830.248	30.830.248	20.830.248	97,50	75,00	80
9	40.830.249	30.830.249	20.830.249	110,00	87,50	80
10	40.830.250	30.830.250	20.830.250	122,50	100,00	50
11	40.830.251	30.830.251	20.830.251	135,00	112,50	50
12	40.830.252	30.830.252	20.830.252	147,50	125,00	50

** = Distance of the two outermost mounting holes*

Part numbers: "no flame" acc. to glow-wire test

No. of poles	408-54-4,8	408-54-6,3	408-54-XBS	Length	A *	PU
1	40.830.261.EN6	30.830.261.EN6	20.830.261.EN6	10,00		2000
3		30.830.263.EN6		35,00	12,50	800
4		30.830.264.EN6		47,50	25,00	500
12		30.830.272.EN6		147,50	125,00	50

General Information

Pitch	12,5 mm
No. of poles	1 - 12

Technical Data

Overvoltage Category	III	III	II
Pollution Severity Level	3	2	2
Rated Voltage	630 V	630 V	1000 V
Rated Impulse Voltage	6 kV	6 kV	6 kV
Rated Insulation Voltage	750 V acc. to EN 60998-1		
Rated Current	6 A: with receptacle 2,8; wire 1 mm² (16 AWG) 16 A: with receptacle 4,8; wire 2,5 mm² (14 AWG) 25 A: with receptacle 6,3; wire 6,0 mm² (10 AWG)		
Other specifications	Rated values apply to use without insulated substrates.		

Material

Moulding	PA, natural, V-2 (PA, white, V-0) Details in parentheses for "no flame" products
Comparative Tracking Index	CTI ≥ 600
Insulating Group	I
Temperature Range	-40°C up to 100°C
Tab	Nickel plated brass

Approvals

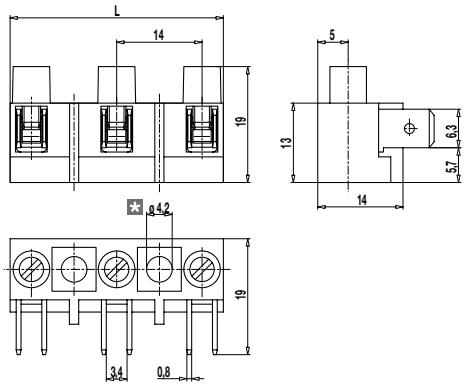
	Current	Voltage	Group	AWG	Nm
	25	600	B,C	max. 10	[1]
	15	600	B,C	max. 14	[2]
	6	600	B,C	max. 16	[3]
	25	600	B,C	max. 10	[1]

[1] only applicable when used with 6,3 tab receptacles
[2] only applicable when used with 4,8 tab receptacles
[3] only applicable when used with 2,8 tab receptacles

Options / Accessories

- Consecutive numbering
- Special marking according to drawing

Tab/screw connector block
42..-CL(-DS)
Tabs 6,3 mm



* = Outer hole for 2 and 6 poles: ø 3,6 mm

Tab/screw connector block 42..-CL in 14 mm pitch is a combination of socket terminals and tab connectors. On the tab connector side, it features two 6,3 mm tabs and is available in 2- to 4- and 6-pole design.
The individual poles are continuously numbered according to the number of poles.
The wire protector of the "DS"-version reliably prevents damage to multi-wire flexible conductors by the turning screw.

Ordering note:
For the variable placeholder („..“) in the type designation, please enter the corresponding number of poles. Example: 423-CL for a 3-pole variant.

Part Numbers

No. of poles	42..-CL	42..-CL-DS	Length	PU
2	50.830.414	60.830.414	21,00	200
3	50.830.415	60.830.415	35,00	150
4	50.830.417	60.830.417	49,00	100
6	50.830.411	60.830.411	77,00	100

General Information

Pitch	14 mm
No. of poles	2, 3, 4, 6
Areas of application	Mains connection of electrical equipment
Additonal Information	These components cannot be mounted side-by-side. Multiple connectors can only be mounted side-by-side in 14 mm pitch to ensure clearance and creepage distances are observed.

Technical Data

Clamping Range	*solid / flexible / AWG*		
without wire protector	4 mm² / - / 12 AWG [1]		
with wire protector	1,5 - 4 mm² / 1,5 - 2,5 mm² / 16 - 12 AWG		
Rated Cross Section	2,5 mm² [2]		
Wire Stripping Length	6 mm ± 0,5 mm		
Overvoltage Category	III	III	II
Pollution Severity Level	3	2	2
Rated Voltage	400 V	630 V	1000 V
Rated Impulse Voltage	6 kV	6 kV	6 kV
Rated Insulation Voltage	450 V acc. to EN 60998-1		
Rated Current	25 A: with receptacle 6,3; wire 6,0 mm² (10 AWG) 24 A: screw side		
Torque	0,5 Nm		

Material

Moulding	PA, grey, V-0
Comparative Tracking Index	CTI ≥ 600
Insulating Group	I
Temperature Range	-40°C up to 100°C
Terminal Body	Nickel plated brass
Tab	Nickel plated brass
Screw	M3; zinc plated steel, blue passivated
Wire protector	Tin plated tin bronze

Approvals

	Current	Voltage	Group	AWG	Nm
	20	300	B	14 - 12	0,51 [3][4]
	20	150	C	14 - 12	0,51 [3][4]
	20	300	B	20 - 12	0,51 [3][5]
	10	300	D,E	20 - 12	0,51 [3][5]

Options / Accessories

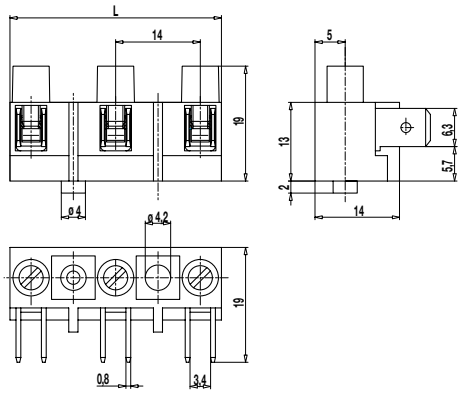
- Marking strips BST-422 to -426
- Extended screw guide
- Insulation receptacles ISO

[1] use only solid wires. Small and flexible wires are not possible.
[2] Screw side
[3] quick connector max. 10 AWG
[4] 18 - 12 AWG is applicable for 42...-CL-DS
[5] 22 - 12 AWG is applicable for 42...-CL-DS

Tab/screw connector block

42..-CZ(-DS)

Tabs 6,3, with peg



Tab/screw connector block 42..-CZ in 14 mm pitch with projecting peg is a combination of socket terminals and tab connectors. On the tab connector side, it features two 6,3 mm tabs and is available in 3- and 4-pole design.
The individual poles are continuously numbered according to the number of poles.

In place of the mounting hole, a projecting peg at the base is located on the left side facing the tabs, enabling to mount the connector to the substrate with only one screw.
The wire protector of the “DS”-version reliably prevents damage to multi-wire flexible conductors by the turning screw.

Ordering note:
For the variable placeholder („..“) in the type designation, please enter the corresponding number of poles. Example: 423-CZ for a 3-pole variant.

Part Numbers

No. of poles	42..-CZ	42..-CZ-DS	Length	PU
3	50.830.416	60.830.416	35,00	150
4	50.830.418	60.830.418	49,00	100

General Information

Pitch	14 mm
No. of poles	3 + 4
Areas of application	Mains connection of electrical equipment
Additonal Information	These components cannot be mounted side-by-side. Multiple connectors can only be mounted side-by-side in 14 mm pitch to ensure clearance and creepage distances are observed.

Technical Data

Clamping Range	*solid / flexible / AWG*		
without wire protector	4 mm² / - / 12 AWG [1]		
with wire protector	1,5 - 4 mm² / 1,5 - 2,5 mm² / 16 - 12 AWG		
Rated Cross Section	2,5 mm² [2]		
Wire Stripping Length	6 mm ± 0,5 mm		
Overvoltage Category	III	III	II
Pollution Severity Level	3	2	2
Rated Voltage	400 V	630 V	1000 V
Rated Impulse Voltage	6 kV	6 kV	6 kV
Rated Insulation Voltage	450 V acc. to EN 60998-1		
Rated Current	25 A: with receptacle 6,3; wire 6,0 mm² (10 AWG) 24 A: screw side		
Torque	0,5 Nm		

Material

Moulding	PA, grey, V-0
Comparative Tracking Index	CTI ≥ 600
Insulating Group	I
Temperature Range	-40°C up to 100°C
Terminal Body	Nickel plated brass
Tab	Nickel plated brass
Screw	M3; zinc plated steel, blue passivated
Wire protector	Tin plated tin bronze

Approvals

	Current	Voltage	Group	AWG	Nm
	20	300	B	14 - 12	0,51 [3][4]
	20	150	C	14 - 12	0,51 [3][4]
	20	300	B	20 - 12	0,51 [3][5]
	10	300	D,E	20 - 12	0,51 [3][5]

Options / Accessories

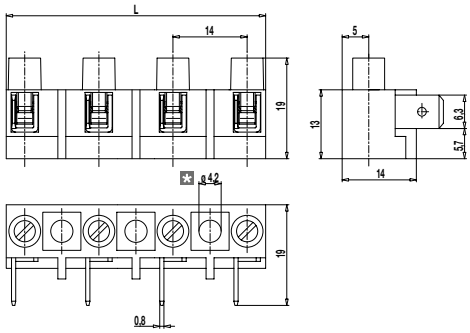
- Marking strips BST-422 to -426
- Extended screw guide
- Insulation receptacles ISO

[1] use only solid wires. Small and flexible wires are not possible
[2] Screw side
[3] quick connector max. 10 AWG
[4] 18 - 12 AWG is applicable for 42...-CZ-DS
[5] 22 - 12 AWG is applicable for 42...-CZ-DS

Tab/screw connector block

42..-DL(-DS)

single-sided tab 6,3 mm



* = Outer hole for 2 and 6 poles: ø 3,6 mm

Tab/screw connector block 42..-DL in 14 mm pitch is a combination of socket terminals and tab connectors. On the tab connector side, it features two 6,3 mm tabs and is available in 2- to 4- and 6-pole design.
The individual poles are continuously numbered according to the number of poles.
The wire protector of the "DS"-version reliably prevents damage to multi-wire flexible conductors by the turning screw.

Ordering note:
For the variable placeholder („..“) in the type designation, please enter the corresponding number of poles. Example: 423-DL for a 3-pole variant.

Part Numbers

No. of poles	42..-DL	42..-DL-DS	Length	PU
2	11.830.414	71.830.414	21,00	200
3	11.830.415	71.830.415	35,00	150
4	11.830.417	71.830.417	49,00	100
6	11.830.411	71.830.411	77,00	100

General Information

Pitch	14 mm
No. of poles	2, 3, 4, 6
Areas of application	Mains connection of electrical equipment
Additonal Information	These components cannot be mounted side-by-side. Multiple connectors can only be mounted side-by-side in 14 mm pitch to ensure clearance and creepage distances are observed.

Technical Data

Clamping Range	*solid / flexible / AWG*		
without wire protector	4 mm² / - / 12 AWG [1]		
with wire protector	1,5 - 4 mm² / 1,5 - 2,5 mm² / 16 - 12 AWG		
Rated Cross Section	2,5 mm² [2]		
Wire Stripping Length	6 mm ± 0,5 mm		
Overvoltage Category	III	III	II
Pollution Severity Level	3	2	2
Rated Voltage	400 V	630 V	1000 V
Rated Impulse Voltage	6 kV	6 kV	6 kV
Rated Insulation Voltage	450 V acc. to EN 60998-1		
Rated Current	25 A: with receptacle 6,3; wire 6,0 mm² (10 AWG) 24 A: screw side		
Torque	0,5 Nm		

Material

Moulding	PA, grey, V-0
Comparative Tracking Index	CTI ≥ 600
Insulating Group	I
Temperature Range	-40°C up to 100°C
Terminal Body	Nickel plated brass
Tab	Nickel plated brass
Screw	M3; zinc plated steel, blue passivated
Wire protector	Tin plated tin bronze

Approvals

	Current	Voltage	Group	AWG	Nm
	20	300	B	14 - 12	0,51 [3][4]
	20	150	C	14 - 12	0,51 [3][4]
	20	300	B	20 - 12	0,51 [3][5]
	10	300	D,E	20 - 12	0,51 [3][5]

Options / Accessories

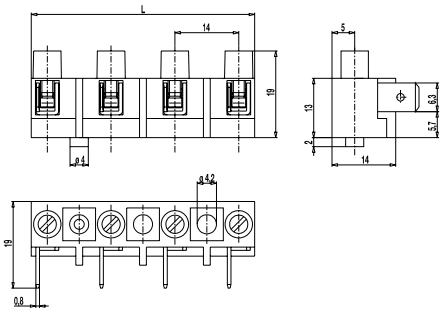
- Marking strips BST-422 to -426
- Extended screw guide
- Insulation receptacles ISO

[1] use only solid wires. Small and flexible wires are not possible
[2] Screw side
[3] quick connector max. 10 AWG
[4] 18 - 12 AWG is applicable for 42...-DL-DS
[5] 22 - 12 AWG is applicable for 42...-DL-DS

Tab/screw connector block

42..-DZ(-DS)

single-sided tab 6,3 mm, with peg



Tab/screw connector block 42..-DZ in 14 mm pitch with projecting peg is a combination of socket terminals and tab connectors. On the tab connector side, it features one 6,3 mm tab per pole and is available in 3- and 4-pole design.
The individual poles are continuously numbered according to the number of poles.

In place of the mounting hole, a projecting peg at the base is located on the left side facing the tabs, enabling to mount the connector to the substrate with only one screw.
The wire protector of the “DS”-version reliably prevents damage to multi-wire flexible conductors by the turning screw.

Ordering note:
For the variable placeholder („..“) in the type designation, please enter the corresponding number of poles. Example: 423-DZ for a 3-pole variant.

Part Numbers

No. of poles	42..-DZ	42..-DZ-DS	Length	PU
3	11.830.416	71.830.416	35,00	150
4	11.830.418	71.830.418	49,00	100

General Information

Pitch	14 mm
No. of poles	3 + 4
Areas of application	Mains connection of electrical equipment
Additonal Information	These components cannot be mounted side-by-side. Multiple connectors can only be mounted side-by-side in 14 mm pitch to ensure clearance and creepage distances are observed.

Technical Data

Clamping Range	*solid / flexible / AWG*		
without wire protector	4 mm² / - / 12 AWG [1]		
with wire protector	1,5 - 4 mm² / 1,5 - 2,5 mm² / 16 - 12 AWG		
Rated Cross Section	2,5 mm² [2]		
Wire Stripping Length	6 mm ± 0,5 mm		
Overvoltage Category	III	III	II
Pollution Severity Level	3	2	2
Rated Voltage	400 V	630 V	1000 V
Rated Impulse Voltage	6 kV	6 kV	6 kV
Rated Insulation Voltage	450 V acc. to EN 60998-1		
Rated Current	25 A: with receptacle 6,3; wire 6,0 mm² (10 AWG) 24 A: screw side		
Torque	0,5 Nm		

Material

Moulding	PA, grey, V-0
Comparative Tracking Index	CTI ≥ 600
Insulating Group	I
Temperature Range	-40°C up to 100°C
Terminal Body	Nickel plated brass
Tab	Nickel plated brass
Screw	M3; zinc plated steel, blue passivated
Wire protector	Tin plated tin bronze

Approvals

	Current	Voltage	Group	AWG	Nm
	20	300	B	14 - 12	0,51 [3][4]
	20	150	C	14 - 12	0,51 [3][4]
	20	300	B	20 - 12	0,51 [3][5]
	10	300	D,E	20 - 12	0,51 [3][5]

Options / Accessories

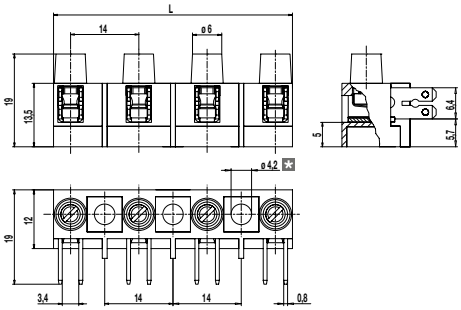
- Marking strips BST-422 to -426
- Extended screw guide
- Insulation receptacles ISO

[1] use only solid wires. Small and flexible wires are not possible
[2] Screw side
[3] quick connector max. 10 AWG
[4] 18 - 12 AWG is applicable for 42...-DZ-DS
[5] 22 - 12 AWG is applicable for 42...-DZ-DS

Tab/screw connector block

42..-EL(-DS)

Tab 2x2,8 / 1x6,3



* = Outer hole for 2 and 6 poles: ø 3,6 mm

Tab/screw connector block 42..-EL in 14 mm pitch is a combination of socket terminals and tab connectors. On the tab connector side, it features two B 2,8 mm tabs per pole and is available in 2- to 4- and 6-pole design.
The individual poles are continuously numbered according to the number of poles.
The wire protector of the "DS"-version reliably prevents damage to multi-wire flexible conductors by the turning screw.

Ordering note:
For the variable placeholder („...") in the type designation, please enter the corresponding number of poles. Example: 423-EL for a 3-pole variant.

Part Numbers

No. of poles	42..-EL	42..-EL-DS	Length	PU
2	80.830.414	81.830.414	21,00	200
3	80.830.415	81.830.415	35,00	150
4	80.830.417	81.830.417	49,00	100
6	80.830.411	81.830.411	77,00	100

General Information

Pitch	14 mm
No. of poles	2, 3, 4, 6
Areas of application	Mains connection of electrical equipment
Additonal Information	These components cannot be mounted side-by-side. Multiple connectors can only be mounted side-by-side in 14 mm pitch to ensure clearance and creepage distances are observed.

Technical Data

Clamping Range	*solid / flexible / AWG*		
without wire protector	4 mm² / - / 12 AWG [1]		
with wire protector	1,5 - 4 mm² / 1,5 - 2,5 mm² / 16 - 12 AWG		
Rated Cross Section	2,5 mm² [2]		
Wire Stripping Length	6 mm ± 0,5 mm		
Overvoltage Category	III	III	II
Pollution Severity Level	3	2	2
Rated Voltage	400 V	630 V	1000 V
Rated Impulse Voltage	6 kV	6 kV	6 kV
Rated Insulation Voltage	450 V acc. to EN 60998-1		
Rated Current	6 A: with receptacle 2,8; wire 1,0 mm² (16 AWG) 25 A: with receptacle 6,3; wire 6,0 mm² (10 AWG) 24 A: screw side		
Torque	0,5 Nm		

Material

Moulding	PA, grey, V-0
Comparative Tracking Index	CTI ≥ 600
Insulating Group	I
Temperature Range	-40°C up to 100°C
Terminal Body	Nickel plated brass
Tab	Nickel plated brass
Screw	M3; zinc plated steel, blue passivated
Wire protector	Tin plated tin bronze

Approvals

	Current	Voltage	Group	AWG	Nm
	20	300	B	14 - 12	0,51 [3][4]
	20	150	C	14 - 12	0,51 [3][4]
	20	300	B	20 - 12	0,51 [3][5]
	10	300	D,E	20 - 12	0,51 [3][5]

Options / Accessories

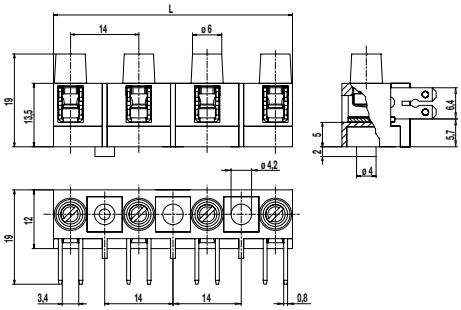
- Marking strips BST-422 to -426
- Extended screw guide
- Insulation receptacles ISO

[1] use only solid wires. Small and flexible wires are not possible
[2] Screw side
[3] quick connector max. 10 AWG
[4] 18 - 12 AWG is applicable for 42...-EL-DS
[5] 22 - 12 AWG is applicable for 42...-EL-DS

Tab/screw connector block

42..-EZ(-DS)

Tab 2x2,8 / 1x6,3, with peg



Tab/screw connector block 42..-EZ in 14 mm pitch with projecting peg is a combination of socket terminals and tab connectors. On the tab connector side, it features two 6,3 mm tabs and is available in 3- and 4-pole design.
The individual poles are continuously numbered according to the number of poles.

In place of the mounting hole, a projecting peg at the base is located on the left side facing the tabs, enabling to mount the connector to the substrate with only one screw.
The wire protector of the "DS"-version reliably prevents damage to multi-wire flexible conductors by the turning screw.

Ordering note:
For the variable placeholder („..“) in the type designation, please enter the corresponding number of poles. Example: 423-EZ for a 3-pole variant.

Part Numbers

No. of poles	42..-EZ	42..-EZ-DS	Length	PU
3	80.830.416	81.830.416	35,00	150
4	80.830.418	81.830.418	49,00	100

General Information

Pitch	14 mm
No. of poles	3 + 4
Areas of application	Mains connection of electrical equipment
Additonal Information	These components cannot be mounted side-by-side. Multiple connectors can only be mounted side-by-side in 14 mm pitch to ensure clearance and creepage distances are observed.

Technical Data

Clamping Range	*solid / flexible / AWG*		
without wire protector	4 mm² / - / 12 AWG [1]		
with wire protector	1,5 - 4 mm² / 1,5 - 2,5 mm² / 16 - 12 AWG		
Rated Cross Section	2,5 mm² [2]		
Wire Stripping Length	6 mm ± 0,5 mm		
Overvoltage Category	III	III	II
Pollution Severity Level	3	2	2
Rated Voltage	400 V	630 V	1000 V
Rated Impulse Voltage	6 kV	6 kV	6 kV
Rated Insulation Voltage	450 V acc. to EN 60998-1		
Rated Current	6 A: with receptacle 2,8; wire 1,0 mm² (16 AWG) 25 A: with receptacle 6,3; wire 6,0 mm² (10 AWG) 24 A: screw side		
Torque	0,5 Nm		

Material

Moulding	PA, grey, V-0
Comparative Tracking Index	CTI ≥ 600
Insulating Group	1
Temperature Range	-40°C up to 100°C
Terminal Body	Nickel plated brass
Tab	Nickel plated brass
Screw	M3; zinc plated steel, blue passivated
Wire protector	Tin plated tin bronze

Approvals

	Current	Voltage	Group	AWG	Nm
	20	300	B	14 - 12	0,51 [3][4]
	20	150	C	14 - 12	0,51 [3][4]
	20	300	B	20 - 12	0,51 [3][5]
	10	300	D,E	20 - 12	0,51 [3][5]

Options / Accessories

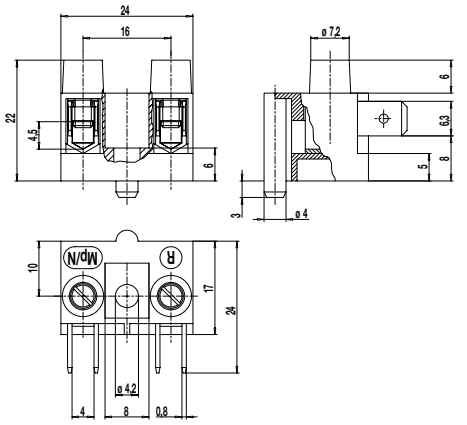
- Marking strips BST-422 to -426
- Extended screw guide
- Insulation receptacles ISO

[1] use only solid wires. Small and flexible wires are not possible
[2] Screw side
[3] quick connector max. 10 AWG
[4] 18 - 12 AWG is applicable for 42...-EZ-DS
[5] 22 - 12 AWG is applicable for 42...-EZ-DS

Tab/screw connector block

432-ZA(-DS)

with peg, with marking "R Mp/N"



Tab/screw connector block 432-ZA is available in 2-pole design. It is equipped with a one-piece metal part on mains and equipment side avoiding contact resistance inside the connector.
The wire protector of the “DS”-version reliably prevents damage to multi-wire flexible conductors by the turning screw.

This type features the additional permanent marking:
„R Mp/N“

Part Numbers

No. of poles	432-ZA	432-ZA-DS	Length	PU
2	50.830.432	60.830.432	24,00	200

General Information

Pitch	16 mm
No. of poles	2
Additonal Information	These components cannot be mounted side-by-side. Multiple connectors can only be mounted side-by-side in 16 mm pitch to ensure clearance and creepage distances are observed.

Technical Data

Clamping Range	*solid / flexible / AWG*		
without wire protector	1,5 - 6 mm² / - / 16 - 10 AWG [1]		
with wire protector	1,5 - 6 mm² / 1,5 - 6 mm² / 16 - 10 AWG		
Rated Cross Section	4 mm² [2]		
Wire Stripping Length	7 mm ± 0,5 mm		
Overvoltage Category	III	III	II
Pollution Severity Level	3	2	2
Rated Voltage	500 V	630 V	1000 V
Rated Impulse Voltage	6 kV	6 kV	6 kV
Rated Insulation Voltage	750 V acc. to EN 60998-1		
Rated Current	25 A: with receptacle 6,3; wire 6,0 mm² (10 AWG) 32 A: screw side		
Torque	0,5 Nm		

Material

Moulding	PA, grey, V-0
Comparative Tracking Index	CTI ≥ 600
Insulating Group	I
Temperature Range	-40°C up to 100°C
Terminal Body	Nickel plated brass
Tab	Nickel plated brass
Screw	M3,5; zinc plated steel, blue passivated
Wire protector	Tin plated tin bronze

Approvals

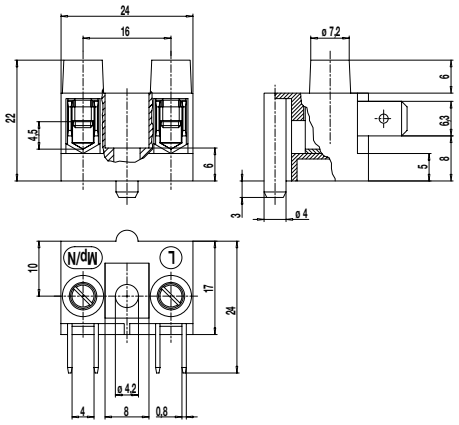
	Current	Voltage	Group	AWG	Nm
	25	300	B	18-10 [3]	0,51
	25	150	C	18-10 [3]	0,51
	25	300	B	22-12 [3]	0,51
	10	300	D,E	22-12 [3]	0,51

Options / Accessories

- Different pole markings on housing
- Extended screw guide
- Insulation receptacles ISO

[1] use only solid wires
[2] Screw side
[3] quick connector max. 10 AWG

Tab/screw connector block
432-ZB(-DS)
with peg, with marking "L Mp/N"



Tab/screw connector block 432-ZB is available in 2-pole design. It is equipped with a one-piece metal part on mains and equipment side avoiding contact resistance inside the connector.
The wire protector of the “DS”-version reliably prevents damage to multi-wire flexible conductors by the turning screw.

This type features the additional permanent marking:
„L Mp/N“

Part Numbers

No. of poles	432-ZB	432-ZB-DS	Length	PU
2	50.830.442	60.830.442	24,00	200

General Information

Pitch	16 mm
No. of poles	2
Additonal Information	These components cannot be mounted side-by-side. Multiple connectors can only be mounted side-by-side in 16 mm pitch to ensure clearance and creepage distances are observed.

Technical Data

Clamping Range	*solid / flexible / AWG*		
without wire protector	1,5 - 6 mm² / - / 16 - 10 AWG [1]		
with wire protector	1,5 - 6 mm² / 1,5 - 6 mm² / 16 - 10 AWG		
Rated Cross Section	4 mm² [2]		
Wire Stripping Length	7 mm ± 0,5 mm		
Overvoltage Category	III	III	II
Pollution Severity Level	3	2	2
Rated Voltage	500 V	630 V	1000 V
Rated Impulse Voltage	6 kV	6 kV	6 kV
Rated Insulation Voltage	750 V acc. to EN 60998-1		
Rated Current	25 A: with receptacle for tabs 6,3; wire 6,0 mm² (10 AWG) 32 A: screw side		
Torque	0,5 Nm		

Material

Moulding	PA, grey, V-0
Comparative Tracking Index	CTI ≥ 600
Insulating Group	I
Temperature Range	-40°C up to 100°C
Terminal Body	Nickel plated brass
Tab	Nickel plated brass
Screw	M3,5; zinc plated steel, blue passivated
Wire protector	Tin plated tin bronze

Approvals

	Current	Voltage	Group	AWG	Nm
	25	300	B	18-10 [3]	0,51
	25	150	C	18-10 [3]	0,51
	25	300	B	22-12 [3]	0,51
	10	300	D,E	22-12 [3]	0,51

Options / Accessories

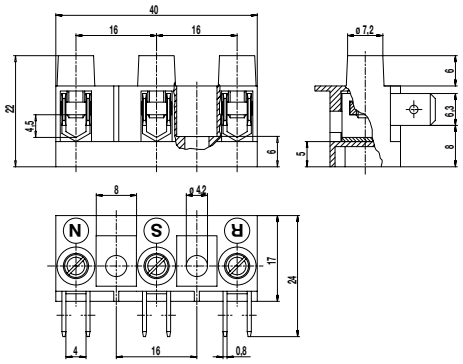
- Different pole markings on housing
- Extended screw guide
- Insulation receptacles ISO

[1] use only solid wires
[2] Screw side
[3] quick connector max. 10 AWG

Tab/screw connector block

433-LA(-DS)

Tab 6,3 mm, with marking "R S N"



Tab/screw connector block 433-LA is available in 3-pole design. It is equipped with a one-piece metal part on mains and equipment side avoiding contact resistance inside the connector.
Thanks to mounting holes between the poles and with a only one screw, this connector can be mounted twist-proof on an appropriately prepared substrate.
The wire protector of the “DS”-version reliably prevents damage to multi-wire flexible conductors by the turning screw.

This type features the additional permanent marking:
„R S N“

Part Numbers

No. of poles	433-LA	433-LA-DS	Length	PU
3	50.830.431	60.830.431	40,00	150

General Information

Pitch	16 mm
No. of poles	3
Additonal Information	These components cannot be mounted side-by-side. Multiple connectors can only be mounted side-by-side in 16 mm pitch to ensure clearance and creepage distances are observed.

Technical Data

Clamping Range	*solid / flexible / AWG*		
without wire protector	1,5 - 6 mm² / - / 16 - 10 AWG [1]		
with wire protector	1,5 - 6 mm² / 1,5 - 6 mm² / 16 - 10 AWG		
Rated Cross Section	4 mm² [2]		
Wire Stripping Length	7 mm ± 0,5 mm		
Overvoltage Category	III	III	II
Pollution Severity Level	3	2	2
Rated Voltage	500 V	630 V	1000 V
Rated Impulse Voltage	6 kV	6 kV	6 kV
Rated Insulation Voltage	750 V acc. to EN 60998-1		
Rated Current	25 A: with receptacle for tabs 6,3; wire 6,0 mm² (10 AWG) 32 A: screw side		
Torque	0,5 Nm		

Material

Moulding	PA, grey, V-0
Comparative Tracking Index	CTI ≥ 600
Insulating Group	I
Temperature Range	-40°C up to 100°C
Terminal Body	Nickel plated brass
Tab	Nickel plated brass
Screw	M3,5; zinc plated steel, blue passivated
Wire protector	Tin plated tin bronze

Approvals

	Current	Voltage	Group	AWG	Nm
	25	300	B	18-10 [3]	0,51
	25	150	C	18-10 [3]	0,51
	25	300	B	22-12 [3]	0,51
	10	300	D,E	22-12 [3]	0,51

Options / Accessories

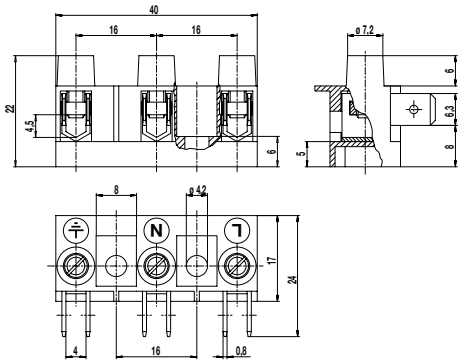
- Different pole markings on housing
- Extended screw guide
- Insulation receptacles ISO

[1] use only solid wires
[2] Screw side
[3] quick connector max. 10 AWG

Tab/screw connector block

433-LB(-DS)

Tab 6,3 mm, with marking "L N [Earth]"



Tab/screw connector block 433-LA is available in 3-pole design. It is equipped with a one-piece metal part on mains and equipment side avoiding contact resistance inside the connector.
Thanks to mounting holes between the poles and with a only one screw, this connector can be mounted twist-proof on an appropriately prepared substrate.
The wire protector of the “DS”-version reliably prevents damage to multi-wire flexible conductors by the turning screw.

This type features the additional permanent marking:
„L N [Earth]“

Part Numbers

No. of poles	433-LB	433-LB-DS	Length	PU
3	50.830.406	60.830.406	40,00	150

General Information

Pitch	16 mm
No. of poles	3
Additonal Information	These components cannot be mounted side-by-side. Multiple connectors can only be mounted side-by-side in 16 mm pitch to ensure clearance and creepage distances are observed.

Technical Data

Clamping Range	*solid / flexible / AWG*		
without wire protector	1,5 - 6 mm² / - / 16 - 10 AWG [1]		
with wire protector	1,5 - 6 mm² / 1,5 - 6 mm² / 16 - 10 AWG		
Rated Cross Section	4 mm² [2]		
Wire Stripping Length	7 mm ± 0,5 mm		
Overvoltage Category	III	III	II
Pollution Severity Level	3	2	2
Rated Voltage	500 V	630 V	1000 V
Rated Impulse Voltage	6 kV	6 kV	6 kV
Rated Insulation Voltage	750 V acc. to EN 60998-1		
Rated Current	25 A: with receptacle for tabs 6,3; wire 6,0 mm² (10 AWG) 32 A: screw side		
Torque	0,5 Nm		

Material

Moulding	PA, grey, V-0
Comparative Tracking Index	CTI ≥ 600
Insulating Group	I
Temperature Range	-40°C up to 100°C
Terminal Body	Nickel plated brass
Tab	Nickel plated brass
Screw	M3,5; zinc plated steel, blue passivated
Wire protector	Tin plated tin bronze

Approvals

	Current	Voltage	Group	AWG	Nm
	25	300	B	18-10 [3]	0,51
	25	150	C	18-10 [3]	0,51
	25	300	B	22-12 [3]	0,51
	10	300	D,E	22-12 [3]	0,51

Options / Accessories

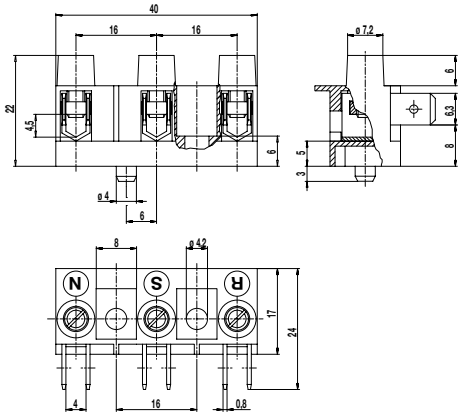
- Different pole markings on housing
- Extended screw guide
- Insulation receptacles ISO

[1] use only solid wires
[2] Screw side
[3] quick connector max. 10 AWG

Tab/screw connector block

433-ZA(-DS)

Tab 6,3 mm, with peg, with marking "R S N"



Tab/screw connector block 433-ZA is available in 3-pole design. It is equipped with a one-piece metal part on mains and equipment side avoiding contact resistance inside the connector.
Thanks to mounting holes between the poles and a protecting peg, this connector can be mounted twist-proof with a only one screw on an appropriately prepared substrate.
The wire protector of the “DS”-version reliably prevents damage to multi-wire flexible conductors by the turning screw.

This type features the additional permanent marking:
„R S N“

Part Numbers

No. of poles	433-ZA	433-ZA-DS	Length	PU
3	50.830.433	60.830.433	40,00	150

General Information

Pitch	16 mm
No. of poles	3
Additonal Information	These components cannot be mounted side-by-side. Multiple connectors can only be mounted side-by-side in 16 mm pitch to ensure clearance and creepage distances are observed.

Technical Data

Clamping Range	*solid / flexible / AWG*		
without wire protector	1,5 - 6 mm² / - / 16 - 10 AWG [1]		
with wire protector	1,5 - 6 mm² / 1,5 - 6 mm² / 16 - 10 AWG		
Rated Cross Section	4 mm² [2]		
Wire Stripping Length	7 mm ± 0,5 mm		
Overvoltage Category	III	III	II
Pollution Severity Level	3	2	2
Rated Voltage	500 V	630 V	1000 V
Rated Impulse Voltage	6 kV	6 kV	6 kV
Rated Insulation Voltage	750 V acc. to EN 60998-1		
Rated Current	25 A: with receptacle for tabs 6,3; wire 6,0 mm² (10 AWG) 32 A: screw side		
Torque	0,5 Nm		

Material

Moulding	PA, grey, V-0
Comparative Tracking Index	CTI ≥ 600
Insulating Group	I
Temperature Range	-40°C up to 100°C
Terminal Body	Nickel plated brass
Tab	Nickel plated brass
Screw	M3,5; zinc plated steel, blue passivated
Wire protector	Tin plated tin bronze

Approvals

	Current	Voltage	Group	AWG	Nm
	25	300	B	18-10 [3]	0,51
	25	150	C	18-10 [3]	0,51
	25	300	B	22-12 [3]	0,51
	10	300	D,E	22-12 [3]	0,51

Options / Accessories

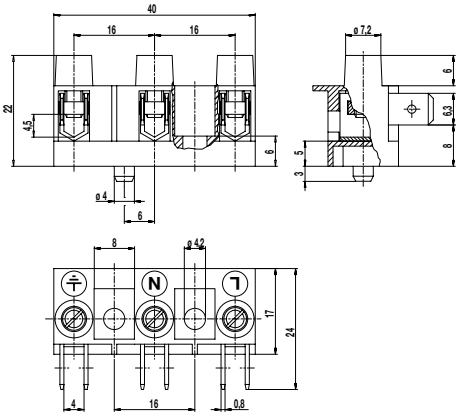
- Different pole markings on housing
- Extended screw guide
- Insulation receptacles ISO

[1] use only solid wires
[2] Screw side
[3] quick connector max. 10 AWG

Tab/screw connector block

433-ZB(-DS)

Tab 6,3 mm, with peg, with marking "L N [Earth]"



Tab/screw connector block 433-ZB is available in 3-pole design. It is equipped with a one-piece metal part on mains and equipment side avoiding contact resistance inside the connector.
Thanks to mounting holes between the poles and a protecting peg, this connector can be mounted twist-proof with a only one screw on an appropriately prepared substrate.
The wire protector of the “DS”-version reliably prevents damage to multi-wire flexible conductors by the turning screw.

This type features the additional permanent marking:
„L N [Earth]“

Part Numbers

No. of poles	433-ZB	433-ZB-DS	Length	PU
3	50.830.404	60.830.404	40,00	150

General Information

Pitch	16 mm
No. of poles	3
Additonal Information	These components cannot be mounted side-by-side. Multiple connectors can only be mounted side-by-side in 16 mm pitch to ensure clearance and creepage distances are observed.

Technical Data

Clamping Range	*solid / flexible / AWG*		
without wire protector	1,5 - 6 mm² / - / 16 - 10 AWG [1]		
with wire protector	1,5 - 6 mm² / 1,5 - 6 mm² / 16 - 10 AWG		
Rated Cross Section	4 mm² [2]		
Wire Stripping Length	7 mm ± 0,5 mm		
Overvoltage Category	III	III	II
Pollution Severity Level	3	2	2
Rated Voltage	500 V	630 V	1000 V
Rated Impulse Voltage	6 kV	6 kV	6 kV
Rated Insulation Voltage	750 V acc. to EN 60998-1		
Rated Current	25 A: with receptacle for tabs 6,3; wire 6,0 mm² (10 AWG) 32 A: screw side		
Torque	0,5 Nm		

Material

Moulding	PA, grey, V-0
Comparative Tracking Index	CTI ≥ 600
Insulating Group	I
Temperature Range	-40°C up to 100°C
Terminal Body	Nickel plated brass
Tab	Nickel plated brass
Screw	M3,5; zinc plated steel, blue passivated
Wire protector	Tin plated tin bronze

Approvals

	Current	Voltage	Group	AWG	Nm
	25	300	B	18-10 [3]	0,51
	25	150	C	18-10 [3]	0,51
	25	300	B	22-12 [3]	0,51
	10	300	D,E	22-12 [3]	0,51

Options / Accessories

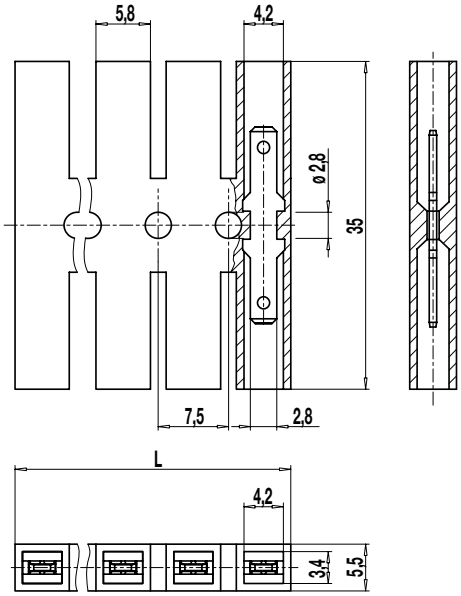
- Different pole markings on housing
- Extended screw guide
- Insulation receptacles ISO

[1] use only solid wires
[2] Screw side
[3] quick connector max. 10 AWG

Tab connector block

444-B

with tabs 2,8



Tab connectors 444-B in 7,5 mm pitch are used as connectors, lead distributors or as electrical interface in equipment. They are available with 2,8 tabs in 1- to 12-pole design.

Tab connectors are suitable for tab receptacles according to DIN 46247.
For this variant, pushed on tab receptacles are completely covered, allowing to stack 2-pole or more tab connector blocks on top of each other.

Part Numbers

No. of poles	444-B	Length	A *	PU
1	31.835.001	7,50		800
2	32.835.001	15,00		400
3	33.835.001	22,50	7,50	250
4	34.835.001	30,00	15,00	500
5	35.835.001	37,50	22,50	500
6	36.835.001	45,00	30,00	200
7	37.835.001	52,50	37,50	100
8	38.835.001	60,00	45,00	100
9	39.835.001	67,50	52,50	100
10	40.835.001	75,00	60,00	50
11	41.835.001	82,50	67,50	50
12	42.835.001	88,00	75,50	100

** = Distance of the two outermost mounting holes*

General Information

Pitch	7,5 mm
No. of poles	1 - 12

Technical Data

Overvoltage Category	III	III	II
Pollution Severity Level	3	2	2
Rated Voltage	250 V	320 V	500 V
Rated Impulse Voltage	4 kV	4 kV	4 kV
Rated Insulation Voltage	450 V acc. to EN 60998-1		
Rated Current	6 A: with receptacle 2,8; wire 1 mm² (16 AWG)		
Other specifications	Rated values apply to use in combination with insulated substrates.		

Material

Moulding	Soft PVC, transparent, V-2
Comparative Tracking Index	CTI 400
Insulating Group	II
Temperature Range	-10°C up to 70°C
Tab	Tin plated brass

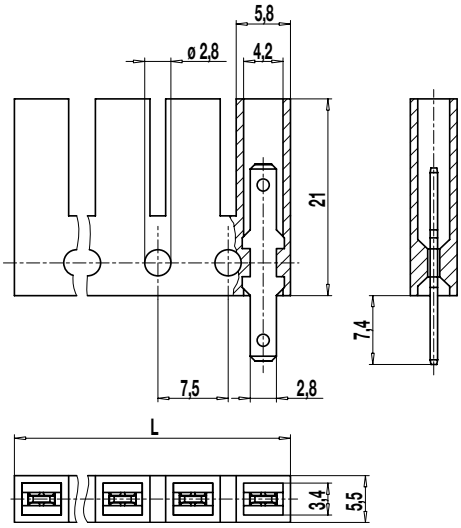
Options / Accessories

- Consecutive numbering
- Special marking according to drawing

Tab/solder connector block

444-BLF

with solder connection



Tab/solder connector blocks 444-BLF in 7,5 mm pitch are used as connectors, lead distributors or as electrical interface in equipment.

This type features one solder connection on one side and is available in 1- to 12-pole design. The soldering tags protrude about 7,4 mm from the housing. The diameter of the soldering lug is ø 1,4 mm. A 2,8 x 0,8 tab receptacle can also be pushed on the soldering tag.

Part Numbers

No. of poles	444-BLF	Length	A *	PU
1	31.835.002	7,50		2000
2	32.835.002	15,00		1000
3	33.835.002	22,50	7,50	1000
4	34.835.002	30,00	15,00	500
5	35.835.002	37,50	22,50	500
6	36.835.002	45,00	30,00	200
7	37.835.002	52,50	37,50	100
8	38.835.002	60,00	45,00	100
9	39.835.002	67,50	52,50	100
10	40.835.002	75,00	60,00	100
11	41.835.002	82,50	67,50	100
12	42.835.002	88,00	75,00	100

** = Distance of the two outermost mounting holes*

General Information

Pitch	7,5 mm
No. of poles	1 - 12

Technical Data

Overvoltage Category	III	III	II
Pollution Severity Level	3	2	2
Rated Voltage	320 V	320 V	630 V
Rated Impulse Voltage	4 kV	4 kV	4 kV
Rated Insulation Voltage	450 V acc. to EN 60998-1		
Rated Current	6 A: with receptacle 2,8; wire 1 mm² (16 AWG)		
Other specifications	Rated values apply to use in combination with insulated substrates.		

Material

Moulding	Soft PVC, transparent, V-2
Comparative Tracking Index	CTI 400
Insulating Group	II
Temperature Range	-10°C up to 70°C
Tab	Tin plated brass

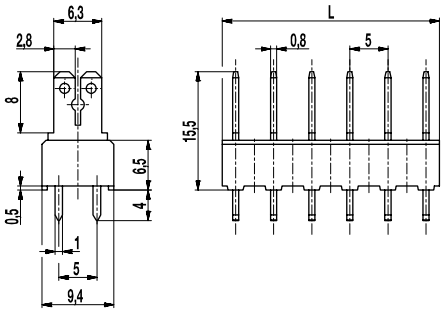
Options / Accessories

- Consecutive numbering
- Special marking according to drawing
- Insulating sleeves ISO-187 for receptacles

Tab connector

900-F-S-5

Tab 2x 2,8 mm / 1x 6,3 mm, with pegs



The tab connector 900-F-S-5 with a pitch of 5 mm is a raised 900-S-5 version and designed for tab receptacles of 1x 2.8 mm or 1x 6.3 mm.

The tab connector housing of series 900-F was raised for this special variant. The enormous variety of different tab connector designs and their mixed mounting increase the versatility of this series. When potting the tab connector moulding, the casting resin can penetrate between the raised feet from below without affecting the blade connection area.

Depending on the respective application, the series 900-F allows to plug in bare, partially or fully insulated tab receptacles according to DIN 46247. Also non-insulated 2.8 mm or 6.3 mm tab receptacles can be plugged on these tab connectors. Insulation receptacles ISO-25 (see also ISO product data sheet) can be used to insulate 2.8 mm or 6.3 mm tab receptacles.
Insulation sockets are available for 6.3 mm tab connectors with double-spring contacts (see also ISO-900 product data sheet).

Part Numbers

No. of poles	900-F-S-5	Length	PU
5	50.870.710	23,50	100

further number of poles on request

General Information

Pitch	5 mm
No. of poles	2 - 25

Technical Data

Overvoltage Category	III	III	II
Pollution Severity Level	3	2	2
Rated Voltage	320 V	320 V	630 V
Rated Impulse Voltage	4 kV	4 kV	4 kV
Rated Insulation Voltage	450 V acc. to EN 60998-1		
Rated Current	6 A: with receptacles 2,8; wire 1 mm² (16 AWG) 16 A: with receptacles 6,3; wire 2,5 mm² (14 AWG)		
Hole in PCB	ø 1,6 mm		
Other specifications	Indicated rated voltages refer to applications with insulation receptacles		

Material

Moulding	PA, grey, V-0
Comparative Tracking Index	CTI ≥ 600
Insulating Group	I
Temperature Range	-40°C up to 100°C
Solder pin	1,0 x 0,8 mm; tin plated brass
Tab	2,8 x 0,8 mm; 6,3 x 0,8 mm; tin plated brass

Approvals

	Current	Voltage	Group	AWG	Nm
	15	125	B		

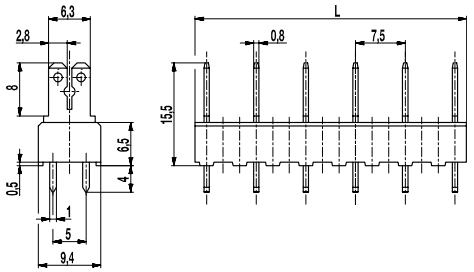
Options / Accessories

- Consecutive numbering
- Special marking according to drawing
- Self-adhesive marking strip BST-5,00
- Insulation receptacles ISO
- Insulation sockets ISO-900
- Change of pitch
- Component mix of tab connector versions
- Tab connectors are also individually available (see single tabs GST-900)

Tab connector

900-F-S-7,5

Tab 2x 2,8 mm / 1x 6,3 mm, with pegs



The tab connector 900-F-S-7,5 with a pitch of 7,5 mm is a raised 900-S-7,5 version and designed for tab receptacles of 1x 2,8 mm or 1x 6,3 mm.

The tab connector housing of series 900-F was raised for this special variant. The enormous variety of different tab connector designs and their mixed mounting increase the versatility of this series. When potting the tab connector moulding, the casting resin can penetrate between the raised feet from below without affecting the blade connection area.

Depending on the respective application, the series 900-F allows to plug in bare, partially or fully insulated tab receptacles according to DIN 46247. Also non-insulated 2,8 mm or 6,3 mm tab receptacles can be plugged on these tab connectors. Insulation receptacles ISO-25 (see also ISO product data sheet) can be used to insulate 2,8 mm or 6,3 mm tab receptacles.
Insulation sockets are available for 6,3 mm tab connectors with double-spring contacts (see also ISO-900 product data sheet).

Part Numbers

No. of poles	900-F-S-7,5	Length	PU
3	75.870.704	18,50	200
5	75.870.707	33,50	100
6	75.870.709	41,00	100
9	75.870.713	63,50	100
10	75.870.715	71,00	100

further number of poles on request

General Information

Pitch	7,5 mm
No. of poles	2 - 17

Technical Data

Overvoltage Category	III	III	II
Pollution Severity Level	3	2	2
Rated Voltage	500 V	630 V	1000 V
Rated Impulse Voltage	6 kV	6 kV	6 kV
Rated Insulation Voltage	750 V acc. to EN 60998-1		
Rated Current	6 A: with receptacles 2,8; wire 1 mm² (16 AWG) 16 A: with receptacles 6,3; wire 2,5 mm² (14 AWG)		
Hole in PCB	ø 1,6 mm		
Other specifications	Indicated rated voltages refer to applications with insulation receptacles		

Material

Moulding	PA, grey, V-0
Comparative Tracking Index	CTI ≥ 600
Insulating Group	I
Temperature Range	-40°C up to 100°C
Solder pin	1,0 x 0,8 mm; tin plated brass
Tab	2,8 x 0,8 mm; 6,3 x 0,8 mm; tin plated brass

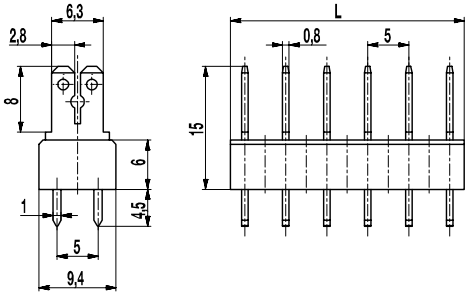
Approvals

	Current	Voltage	Group	AWG	Nm
	15	300	B		

Options / Accessories

- Consecutive numbering
- Special marking according to drawing
- Self-adhesive marking strip BST-7,50
- Insulation receptacles ISO
- Insulation sockets ISO-900
- Change of pitch
- Component mix of tab connector versions
- Tab connectors are also individually available (see single tabs GST-900)

Tab connector
900-S-5
Tab 2x 2,8 mm / 1x 6,3 mm



The tab connector 900-S-5 with double solder termination and a pitch of 5 mm is designed for 1x 2,8 mm or 1x 6,3 mm tab connector receptacles.

Depending on the respective application, the tab connectors of series 900 allow to plug in bare, partially or fully insulated tab receptacles according to DIN 46247. Also non-insulated 2,8 mm or 6,3 mm tab receptacles can be plugged on these tab connectors. Insulation receptacles ISO-25 (see also ISO product data sheet) can be used to insulate 2,8 mm or 6,3 mm tab receptacles.
Insulation sockets are available for 6,3 mm tab connectors with double-spring contacts (see also ISO-900 product data sheet).

Part Numbers

No. of poles	900-S-5	Length	PU
2	50.870.902	8,50	250
3	50.870.903	13,50	250
4	50.870.904	18,50	200
5	50.870.905	23,50	100
6	50.870.906	28,50	100
7	50.870.907	33,50	100
8	50.870.908	38,50	100
9	50.870.909	43,50	100
10	50.870.910	48,50	100
11	50.870.911	53,50	100
12	50.870.912	58,50	100
13	50.870.913	63,50	100
14	50.870.914	68,50	100
15	50.870.915	73,50	100
16	50.870.916	78,50	100
17	50.870.917	83,50	100
18	50.870.918	88,50	100
19	50.870.919	93,50	100
20	50.870.920	98,50	100
21	50.870.921	103,50	100
22	50.870.922	108,50	100
23	50.870.923	113,50	100
24	50.870.924	118,50	50
25	50.870.925	123,50	50

further number of poles on request

General Information

Pitch	5 mm
No. of poles	2 - 25

Technical Data

Overvoltage Category	III	III	II
Pollution Severity Level	3	2	2
Rated Voltage	320 V	320 V	630 V
Rated Impulse Voltage	4 kV	4 kV	4 kV
Rated Insulation Voltage	450 V acc. to EN 60998-1		
Rated Current	6 A: with receptacles 2,8; wire 1 mm² (16 AWG) 16 A: with receptacles 6,3; wire 2,5 mm² (14 AWG)		
Hole in PCB	ø 1,6 mm		
Other specifications	Indicated rated voltages refer to applications with insulation receptacles		

Material

Moulding	PA, red, V-0
Comparative Tracking Index	CTI ≥ 600
Insulating Group	I
Temperature Range	-40°C up to 100°C
Solder pin	1,0 x 0,8 mm; tin plated brass
Tab	2,8 x 0,8 mm; 6,3 x 0,8 mm; tin plated brass

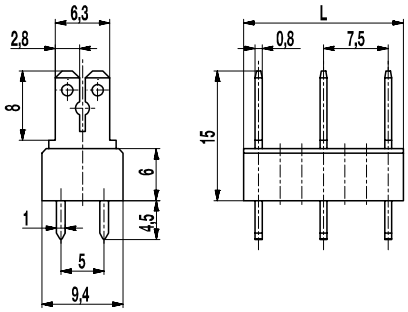
Approvals

	Current	Voltage	Group	AWG	Nm
	15	125	B		
	15	300	B		
	10	300	D, E		

Options / Accessories

- Consecutive numbering
- Special marking according to drawing
- Self-adhesive marking strip BST-5,00
- Insulation receptacles ISO
- Insulation sockets ISO-900
- Change of pitch
- Component mix of tab connector versions
- Tab connectors are also individually available (see single tabs GST-900)

Tab connector
900-S-7,5
Tab 2x 2,8 mm / 1x 6,3 mm



The tab connector 900-S-7,5 with double solder termination and a pitch of 7,5 mm is designed for 1x 2,8 mm or 1x 6,3 mm tab connector receptacles.

Depending on the respective application, the tab connectors of series 900 allow to plug in bare, partially or fully insulated tab receptacles according to DIN 46247. Also non-insulated 2,8 mm or 6,3 mm tab receptacles can be plugged on these tab connectors. Insulation receptacles ISO-25 (see also ISO product data sheet) can be used to insulate 2,8 mm or 6,3 mm tab receptacles.
Insulation sockets are available for 6,3 mm tab connectors with double-spring contacts (see also ISO-900 product data sheet).

Part Numbers

No. of poles	900-S-7,5	Length	PU
2	75.870.903	11,00	250
3	75.870.904	18,50	200
4	75.870.906	26,00	100
5	75.870.907	33,50	100
6	75.870.909	41,00	100
7	75.870.910	48,50	100
8	75.870.912	56,00	100
9	75.870.913	63,50	100
10	75.870.915	71,00	100
11	75.870.916	78,50	100
12	75.870.918	86,00	100
13	75.870.919	93,50	100
14	75.870.921	101,00	100
15	75.870.922	108,50	100
16	75.870.924	116,00	50
17	75.870.925	123,50	50

General Information

Pitch	7,5 mm
No. of poles	2 - 17

Technical Data

Overvoltage Category	III	III	II
Pollution Severity Level	3	2	2
Rated Voltage	500 V	630 V	1000 V
Rated Impulse Voltage	6 kV	6 kV	6 kV
Rated Insulation Voltage	750 V acc. to EN 60998-1		
Rated Current	6 A: with receptacles 2,8; wire 1 mm² (16 AWG) 16 A: with receptacles 6,3; wire 2,5 mm² (14 AWG)		
Hole in PCB	ø 1,6 mm		
Other specifications	Indicated rated voltages refer to applications with insulation receptacles		

Material

Moulding	PA, red, V-0
Comparative Tracking Index	CTI ≥ 600
Insulating Group	I
Temperature Range	-40°C up to 100°C
Solder pin	1,0 x 0,8 mm; tin plated brass
Tab	2,8 x 0,8 mm; 6,3 x 0,8 mm; tin plated brass

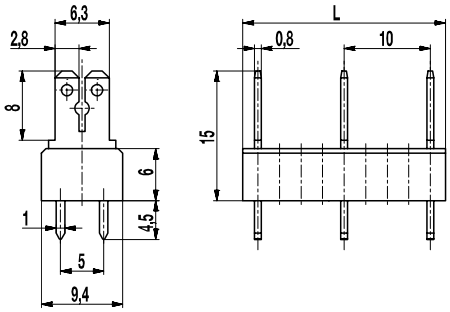
Approvals

	Current	Voltage	Group	AWG	Nm
	15	300	B		
	15	150	C		
	15	300	B		
	10	300	D, E		

Options / Accessories

- Consecutive numbering
- Special marking according to drawing
- Self-adhesive marking strip BST-7,50
- Insulation receptacles ISO
- Insulation sockets ISO-900
- Change of pitch
- Component mix of tab connector versions
- Tab connectors are also individually available (see single tabs GST-900)

Tab connector
900-S-10
Tab 2x 2,8 mm / 1x 6,3 mm



The tab connector 900-S-10 with double solder termination and a pitch of 10 mm is designed for 1x 2,8 mm or 1x 6,3 mm tab connector receptacles.

Depending on the respective application, the tab connectors of series 900 allow to plug in bare, partially or fully insulated tab receptacles according to DIN 46247. Also non-insulated 2,8 mm or 6,3 mm tab receptacles can be plugged on these tab connectors. Insulation receptacles ISO-25 (see also ISO product data sheet) can be used to insulate 2,8 mm or 6,3 mm tab receptacles.
Insulation sockets are available for 6,3 mm tab connectors with double-spring contacts (see also ISO-900 product data sheet).

Part Numbers

No. of poles	900-S-10	Length	PU
2	80.870.903	13,50	250
3	80.870.905	23,50	100
4	80.870.907	33,50	100
5	80.870.909	43,50	100
6	80.870.911	53,50	100
7	80.870.913	63,50	100
8	80.870.915	73,50	100
9	80.870.917	83,50	100
10	80.870.919	93,50	100
11	80.870.921	103,50	100
12	80.870.923	113,50	100
13	80.870.925	123,50	50

further number of poles on request

General Information

Pitch	10 mm
No. of poles	2 - 13

Technical Data

Overvoltage Category	III	III	II
Pollution Severity Level	3	2	2
Rated Voltage	630 V	630 V	1000 V
Rated Impulse Voltage	6 kV	6 kV	6 kV
Rated Insulation Voltage	750 V acc. to EN 60998-1		
Rated Current	6 A: with receptacles 2,8; wire 1 mm² (16 AWG) 16 A: with receptacles 6,3; wire 2,5 mm² (14 AWG)		
Hole in PCB	ø 1,6 mm		
Other specifications	Indicated rated voltages refer to applications with insulation receptacles		

Material

Moulding	PA, red, V-0
Comparative Tracking Index	CTI ≥ 600
Insulating Group	I
Temperature Range	-40°C up to 100°C
Solder pin	1,0 x 0,8 mm; tin plated brass
Tab	2,8 x 0,8 mm; 6,3 x 0,8 mm; tin plated brass

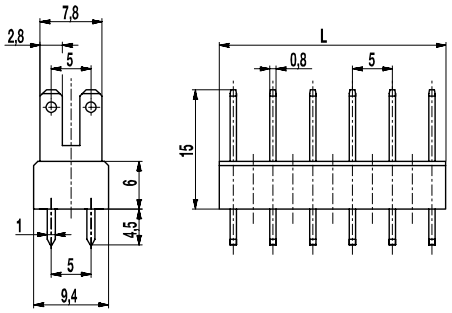
Approvals

	Current	Voltage	Group	AWG	Nm
	15	300	B		
	15	150	C		
	15	300	B		
	10	300	D, E		

Options / Accessories

- Consecutive numbering
- Special marking according to drawing
- Self-adhesive marking strip BST-10,00
- Insulation receptacles ISO
- Insulation sockets ISO-900
- Change of pitch
- Component mix of tab connector versions
- Tab connectors are also individually available (see single tabs GST-900)

Tab connector
900-SH-5
Tab 2x 2,8 mm



The tab connector 900-SH-5 with double solder termination and a pitch of 5 mm is designed for 2x 2,8 mm tab connector receptacles.

Depending on the respective application, the tab connectors of series 900 allow to plug in bare, partially or fully insulated tab receptacles according to DIN 46247. On tab connectors of this series, two non-insulated 2,8 mm tab receptacles can be plugged in parallel. Insulation receptacles ISO-110 (see also ISO product data sheet) can be used to insulate 2,8 mm tab receptacles.

Part Numbers

No. of poles	900-SH-5	Length	PU
2	35.870.902	8,50	250
3	35.870.903	13,50	250
4	35.870.904	18,50	200
5	35.870.905	23,50	100
6	35.870.906	28,50	100
7	35.870.907	33,50	100
8	35.870.908	38,50	100
9	35.870.909	43,50	100
10	35.870.910	48,50	100
11	35.870.911	53,50	100
12	35.870.912	58,50	100
13	35.870.913	63,50	100
14	35.870.914	68,50	100
15	35.870.915	73,50	100
16	35.870.916	78,50	100
17	35.870.917	83,50	100
18	35.870.918	88,50	100
19	35.870.919	93,50	100
20	35.870.920	98,50	100
21	35.870.921	103,50	100
22	35.870.922	108,50	100
23	35.870.923	113,50	100
24	35.870.924	118,50	50
25	35.870.925	123,50	50

further number of poles on request

General Information

Pitch	5 mm
No. of poles	2 - 25

Technical Data

Overvoltage Category	III	III	II
Pollution Severity Level	3	2	2
Rated Voltage	320 V	320 V	630 V
Rated Impulse Voltage	4 kV	4 kV	4 kV
Rated Insulation Voltage	450 V acc. to EN 60998-1		
Rated Current	6 A: with receptacles 2,8; wire 1 mm² (16 AWG)		
Hole in PCB	ø 1,6 mm		
Other specifications	Indicated rated voltages refer to applications with insulation receptacles		

Material

Moulding	PA, red, V-0
Comparative Tracking Index	CTI ≥ 600
Insulating Group	I
Temperature Range	-40°C up to 100°C
Solder pin	1,0 x 0,8 mm; tin plated brass
Tab	2,8 x 0,8 mm; tin plated brass

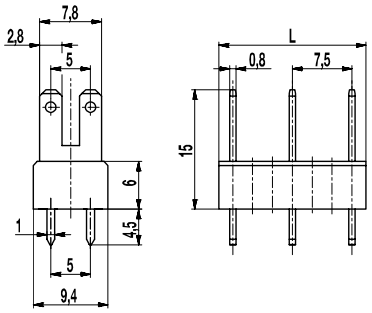
Approvals

	Current	Voltage	Group	AWG	Nm
	15	125	B		
	15	300	B		
	10	300	D, E		

Options / Accessories

- Consecutive numbering
- Special marking according to drawing
- Self-adhesive marking strip BST-5,00
- Insulation receptacles ISO
- Change of pitch
- Component mix of tab connector versions
- Tab connectors are also individually available (see single tabs GST-900)

Tab connector
900-SH-7,5
Tab 2x 2,8 mm



The tab connector 900-SH-7,5 with double solder termination and a pitch of 7,5 mm is designed for 2x 2,8 mm tab connector receptacles.

Depending on the respective application, the tab connectors of series 900 allow to plug in bare, partially or fully insulated tab receptacles according to DIN 46247. On tab connectors of this series, two non-insulated 2,8 mm tab receptacles can be plugged in parallel. Insulation receptacles ISO-110 (see also ISO product data sheet) can be used to insulate 2,8 mm tab receptacles.

Part Numbers

No. of poles	900-SH-7,5	Length	PU
2	37.870.903	11,00	250
3	37.870.904	18,50	200
4	37.870.906	26,00	100
5	37.870.907	33,50	100
6	37.870.909	41,00	100
7	37.870.910	48,50	100
8	37.870.912	56,00	100
9	37.870.913	63,50	100
10	37.870.915	71,00	100
11	37.870.916	78,50	100
12	37.870.918	86,00	100
13	37.870.919	93,50	100
14	37.870.921	101,00	100
15	37.870.922	108,50	100
16	37.870.924	116,00	50
17	37.870.925	123,50	50

General Information

Pitch	7,5 mm
No. of poles	2 - 17

Technical Data

Overvoltage Category	III	III	II
Pollution Severity Level	3	2	2
Rated Voltage	500 V	630 V	1000 V
Rated Impulse Voltage	6 kV	6 kV	6 kV
Rated Insulation Voltage	750 V acc. to EN 60998-1		
Rated Current	6 A: with receptacles 2,8; wire 1 mm² (16 AWG)		
Hole in PCB	ø 1,6 mm		
Other specifications	Indicated rated voltages refer to applications with insulation receptacles		

Material

Moulding	PA, red, V-0
Comparative Tracking Index	CTI ≥ 600
Insulating Group	I
Temperature Range	-40°C up to 100°C
Solder pin	1,0 x 0,8 mm; tin plated brass
Tab	2,8 x 0,8 mm; tin plated brass

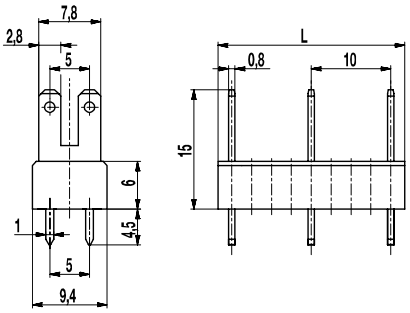
Approvals

	Current	Voltage	Group	AWG	Nm
	15	300	B		
	15	150	C		
	15	300	B		
	10	300	D, E		

Options / Accessories

- Consecutive numbering
- Special marking according to drawing
- Self-adhesive marking strip BST-7,50
- Insulation receptacles ISO
- Change of pitch
- Component mix of tab connector versions
- Tab connectors are also individually available (see single tabs GST-900)

Tab connector
900-SH-10
Tab 2x 2,8 mm



The tab connector 900-SH-10 with double solder termination and a pitch of 10 mm is designed for 2x 2,8 mm tab connector receptacles.

Depending on the respective application, the tab connectors of series 900 allow to plug in bare, partially or fully insulated tab receptacles according to DIN 46247. On tab connectors of this series, two non-insulated 2,8 mm tab receptacles can be plugged in parallel. Insulation receptacles ISO-110 (see also ISO product data sheet) can be used to insulate 2,8 mm tab receptacles.

Part Numbers

No. of poles	900-SH-10	Length	PU
2	39.870.903	13,50	250
3	39.870.905	23,50	100
4	39.870.907	33,50	100
5	39.870.909	43,50	100
6	39.870.911	53,50	100
7	39.870.913	63,50	100
8	39.870.915	73,50	100
9	39.870.917	83,50	100
10	39.870.919	93,50	100
11	39.870.921	103,50	100
12	39.870.923	113,50	100
13	39.870.925	123,50	50

further number of poles on request

General Information

Pitch	10 mm
No. of poles	2 - 13

Technical Data

Overvoltage Category	III	III	II
Pollution Severity Level	3	2	2
Rated Voltage	630 V	630 V	1000 V
Rated Impulse Voltage	6 kV	6 kV	6 kV
Rated Insulation Voltage	750 V acc. to EN 60998-1		
Rated Current	6 A: with receptacles 2,8; wire 1 mm² (16 AWG)		
Hole in PCB	ø 1,6 mm		
Other specifications	Indicated rated voltages refer to applications with insulation receptacles		

Material

Moulding	PA, red, V-0
Comparative Tracking Index	CTI ≥ 600
Insulating Group	I
Temperature Range	-40°C up to 100°C
Solder pin	1,0 x 0,8 mm; tin plated brass
Tab	2,8 x 0,8 mm; tin plated brass

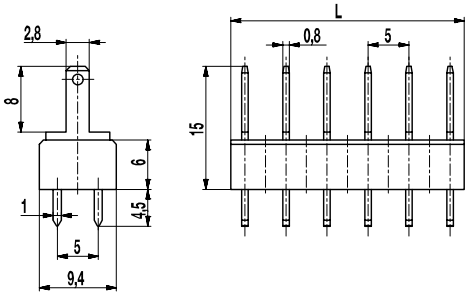
Approvals

	Current	Voltage	Group	AWG	Nm
	15	300	B		
	15	150	C		
	15	300	B		
	10	300	D, E		

Options / Accessories

- Consecutive numbering
- Special marking according to drawing
- Self-adhesive marking strip BST-10,00
- Insulation receptacles ISO
- Change of pitch
- Component mix of tab connector versions
- Tab connectors are also individually available (see single tabs GST-900)

Tab connector
900-SUB-5
Tab 2,8 mm



The tab connector 900-SUB-5 with double solder termination and a pitch of 5 mm is designed for 2,8 mm tab connector receptacles.

Depending on the respective application, the tab connectors of series 900 allow to plug in bare, partially or fully insulated tab receptacles according to DIN 46247. Insulation receptacles ISO-110 (see also ISO product data sheet) can be used to insulate 2,8 mm tab receptacles.
Insulation sockets are available for 6,3 mm tab connectors with double-spring contacts (see also ISO-900 product data sheet).

Part Numbers

No. of poles	900-SUB-5	Length	PU
2	11.870.902	8,50	250
3	11.870.903	13,50	250
4	11.870.904	18,50	200
5	11.870.905	23,50	100
6	11.870.906	28,50	100
7	11.870.907	33,50	100
8	11.870.908	38,50	100
9	11.870.909	43,50	100
10	11.870.910	48,50	100
11	11.870.911	53,50	100
12	11.870.912	58,50	100
13	11.870.913	63,50	100
14	11.870.914	68,50	100
15	11.870.915	73,50	100
16	11.870.916	78,50	100
17	11.870.917	83,50	100
18	11.870.918	88,50	100
19	11.870.919	93,50	100
20	11.870.920	98,50	100
21	11.870.921	103,50	100
22	11.870.922	108,50	100
23	11.870.923	113,50	100
24	11.870.924	118,50	50
25	11.870.925	123,50	50

further number of poles on request

General Information

Pitch	5 mm
No. of poles	2 - 25

Technical Data

Overvoltage Category	III	III	II
Pollution Severity Level	3	2	2
Rated Voltage	320 V	320 V	630 V
Rated Impulse Voltage	4 kV	4 kV	4 kV
Rated Insulation Voltage	450 V acc. to EN 60998-1		
Rated Current	6 A: with receptacles 2,8; wire 1 mm² (16 AWG)		
Hole in PCB	ø 1,6 mm		
Other specifications	Indicated rated voltages refer to applications with insulation receptacles		

Material

Moulding	PA, red, V-0
Comparative Tracking Index	CTI ≥ 600
Insulating Group	I
Temperature Range	-40°C up to 100°C
Solder pin	1,0 x 0,8 mm; tin plated brass
Tab	2,8 x 0,8 mm; tin plated brass

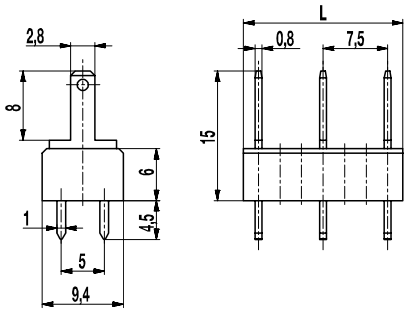
Approvals

	Current	Voltage	Group	AWG	Nm
	15	125	B		
	6	300	B, D, E		

Options / Accessories

- Consecutive numbering
- Special marking according to drawing
- Self-adhesive marking strip BST-5,00
- Insulation receptacles ISO
- Insulation sockets ISO-900
- Change of pitch
- Component mix of tab connector versions
- Tab connectors are also individually available (see single tabs GST-900)

Tab connector
900-SUB-7,5
Tab 2,8 mm



The tab connector 900-SUB-7,5 with double solder termination and a pitch of 7,5 mm is designed for 2,8 mm tab connector receptacles.

Depending on the respective application, the tab connectors of series 900 allow to plug in bare, partially or fully insulated tab receptacles according to DIN 46247. Insulation receptacles ISO-110 (see also ISO product data sheet) can be used to insulate 2,8 mm tab receptacles.
Insulation sockets are available for 6,3 mm tab connectors with double-spring contacts (see also ISO-900 product data sheet).

Part Numbers

No. of poles	900-SUB-7,5	Length	PU
2	12.870.903	11,00	250
3	12.870.904	18,50	200
4	12.870.906	26,00	100
5	12.870.907	33,50	100
6	12.870.909	41,00	100
7	12.870.910	48,50	100
8	12.870.912	56,00	100
9	12.870.913	63,50	100
10	12.870.915	71,00	100
11	12.870.916	78,50	100
12	12.870.918	86,00	100
13	12.870.919	93,50	100
14	12.870.921	101,00	100
15	12.870.922	108,50	100
16	12.870.924	116,00	50
17	12.870.925	123,50	50

General Information

Pitch	7,5 mm
No. of poles	2 - 17

Technical Data

Overvoltage Category	III	III	II
Pollution Severity Level	3	2	2
Rated Voltage	500 V	630 V	1000 V
Rated Impulse Voltage	6 kV	6 kV	6 kV
Rated Insulation Voltage	750 V acc. to EN 60998-1		
Rated Current	6 A: with receptacles 2,8; wire 1 mm² (16 AWG)		
Hole in PCB	ø 1,6 mm		
Other specifications	Indicated rated voltages refer to applications with insulation receptacles		

Material

Moulding	PA, red, V-0
Comparative Tracking Index	CTI ≥ 600
Insulating Group	I
Temperature Range	-40°C up to 100°C
Solder pin	1,0 x 0,8 mm; tin plated brass
Tab	2,8 x 0,8 mm; tin plated brass

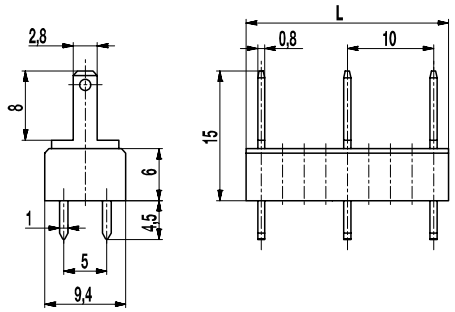
Approvals

	Current	Voltage	Group	AWG	Nm
	15	300	B		
	15	150	C		
	6	300	B, D, E		

Options / Accessories

- Consecutive numbering
- Special marking according to drawing
- Self-adhesive marking strip BST-7,50
- Insulation receptacles ISO
- Insulation sockets ISO-900
- Change of pitch
- Component mix of tab connector versions
- Tab connectors are also individually available (see single tabs GST-900)

Tab connector
900-SUB-10
Tab 2,8 mm



The tab connector 900-SUB-10 with double solder termination and a pitch of 10 mm is designed for 2,8 mm tab connector receptacles.

Depending on the respective application, the tab connectors of series 900 allow to plug in bare, partially or fully insulated tab receptacles according to DIN 46247. Insulation receptacles ISO-110 (see also ISO product data sheet) can be used to insulate 2,8 mm tab receptacles.
Insulation sockets are available for 6,3 mm tab connectors with double-spring contacts (see also ISO-900 product data sheet).

Part Numbers

No. of poles	900-SUB-10	Length	PU
2	13.870.903	13,50	250
3	13.870.905	23,50	250
4	13.870.907	33,50	250
5	13.870.909	43,50	250
6	13.870.911	53,50	250
7	13.870.913	63,50	100
8	13.870.915	73,50	100
9	13.870.917	83,50	100
10	13.870.919	93,50	100
11	13.870.921	103,50	100
12	13.870.923	113,50	100
13	13.870.925	123,50	50

further number of poles on request

General Information

Pitch	10 mm
No. of poles	2 - 13

Technical Data

Overvoltage Category	III	III	II
Pollution Severity Level	3	2	2
Rated Voltage	630 V	630 V	1000 V
Rated Impulse Voltage	6 kV	6 kV	6 kV
Rated Insulation Voltage	750 V acc. to EN 60998-1		
Rated Current	6 A: with receptacles 2,8; wire 1 mm² (16 AWG)		
Hole in PCB	ø 1,6 mm		
Other specifications	Indicated rated voltages refer to applications with insulation receptacles		

Material

Moulding	PA, red, V-0
Comparative Tracking Index	CTI ≥ 600
Insulating Group	I
Temperature Range	-40°C up to 100°C
Solder pin	1,0 x 0,8 mm; tin plated brass
Tab	2,8 x 0,8 mm; tin plated brass

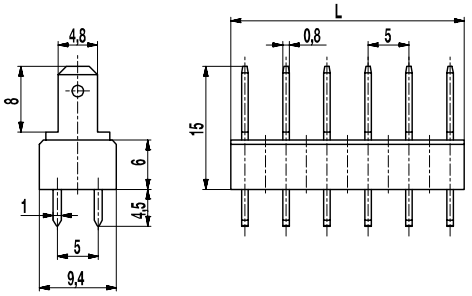
Approvals

	Current	Voltage	Group	AWG	Nm
	15	300	B		
	15	150	C		
	6	300	B, D, E		

Options / Accessories

- Consecutive numbering
- Special marking according to drawing
- Self-adhesive marking strip BST-10,00
- Insulation receptacles ISO
- Insulation sockets ISO-900
- Change of pitch
- Component mix of tab connector versions
- Tab connectors are also individually available (see single tabs GST-900)

Tab connector
900-SUC-5
Tab 4,8 mm



The tab connector 900-SUC-5 with double solder termination and a pitch of 5 mm is designed for 4,8 mm tab connector receptacles.

Depending on the respective application, the tab connectors of series 900 allow to plug in bare, partially or fully insulated tab receptacles according to DIN 46247. Insulation receptacles ISO-187 (see also ISO product data sheet) can be used to insulate 4,8 mm tab receptacles.
Insulation sockets are available for 6,3 mm tab connectors with double-spring contacts (see also ISO-900 product data sheet).

Part Numbers

No. of poles	900-SUC-5	Length	PU
2	15.870.902	8,50	250
3	15.870.903	13,50	250
4	15.870.904	18,50	200
5	15.870.905	23,50	100
6	15.870.906	28,50	100
7	15.870.907	33,50	100
8	15.870.908	38,50	100
9	15.870.909	43,50	100
10	15.870.910	48,50	100
11	15.870.911	53,50	100
12	15.870.912	58,50	100
13	15.870.913	63,50	100
14	15.870.914	68,50	100
15	15.870.915	73,50	100
16	15.870.916	78,50	100
17	15.870.917	83,50	100
18	15.870.918	88,50	100
19	15.870.919	93,50	100
20	15.870.920	98,50	100
21	15.870.921	103,50	100
22	15.870.922	108,50	100
23	15.870.923	113,50	100
24	15.870.924	118,50	50
25	15.870.925	123,50	50

further number of poles on request

General Information

Pitch	5 mm
No. of poles	2 - 25

Technical Data

Overvoltage Category	III	III	II
Pollution Severity Level	3	2	2
Rated Voltage	320 V	320 V	630 V
Rated Impulse Voltage	4 kV	4 kV	4 kV
Rated Insulation Voltage	450 V acc. to EN 60998-1		
Rated Current	16 A: with receptacles 4,8; wire 2,5 mm² (14 AWG)		
Hole in PCB	ø 1,6 mm		
Other specifications	Indicated rated voltages refer to applications with insulation receptacles		

Material

Moulding	PA, red, V-0
Comparative Tracking Index	CTI ≥ 600
Insulating Group	I
Temperature Range	-40°C up to 100°C
Solder pin	1,0 x 0,8 mm; tin plated brass
Tab	4,8 x 0,8 mm; tin plated brass

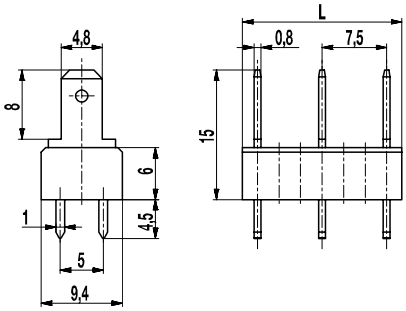
Approvals

	Current	Voltage	Group	AWG	Nm
	15	125	B		
	15	300	B		
	10	300	D, E		

Options / Accessories

- Consecutive numbering
- Special marking according to drawing
- Self-adhesive marking strip BST-5,00
- Insulation receptacles ISO
- Insulation sockets IS0-900
- Change of pitch
- Component mix of tab connector versions
- Tab connectors are also individually available (see single tabs GST-900)

Tab connector
900-SUC-7,5
Tab 4,8 mm



The tab connector 900-SUC-7,5 with double solder termination and a pitch of 7,5 mm is designed for 4,8 mm tab connector receptacles.

Depending on the respective application, the tab connectors of series 900 allow to plug in bare, partially or fully insulated tab receptacles according to DIN 46247. Insulation receptacles ISO-187 (see also ISO product data sheet) can be used to insulate 4,8 mm tab receptacles.
Insulation sockets are available for 6,3 mm tab connectors with double-spring contacts (see also ISO-900 product data sheet).

Part Numbers

No. of poles	900-SUC-7,5	Length	PU
2	17.870.903	11,00	250
3	17.870.904	18,50	200
4	17.870.906	26,00	100
5	17.870.907	33,50	100
6	17.870.909	41,00	100
7	17.870.910	48,50	100
8	17.870.912	56,00	100
9	17.870.913	63,50	100
10	17.870.915	71,00	100
11	17.870.916	78,50	100
12	17.870.918	86,00	100
13	17.870.919	93,50	100
14	17.870.921	101,00	100
15	17.870.922	108,50	100
16	17.870.924	116,00	50
17	17.870.925	123,50	50

General Information

Pitch	7,5 mm
No. of poles	2 - 17

Technical Data

Overvoltage Category	III	III	II
Pollution Severity Level	3	2	2
Rated Voltage	500 V	630 V	1000 V
Rated Impulse Voltage	6 kV	6 kV	6 kV
Rated Insulation Voltage	750 V acc. to EN 60998-1		
Rated Current	16 A: with receptacles 4,8; wire 2,5 mm² (14 AWG)		
Hole in PCB	ø 1,6 mm		
Other specifications	Indicated rated voltages refer to applications with insulation receptacles		

Material

Moulding	PA, red, V-0
Comparative Tracking Index	CTI ≥ 600
Insulating Group	I
Temperature Range	-40°C up to 100°C
Solder pin	1,0 x 0,8 mm; tin plated brass
Tab	4,8 x 0,8 mm; tin plated brass

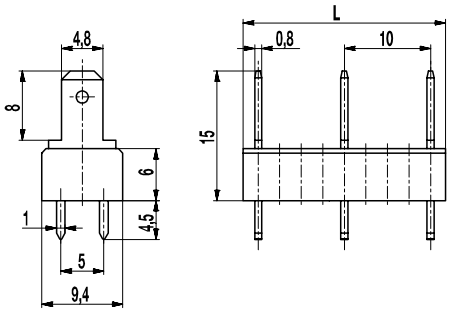
Approvals

	Current	Voltage	Group	AWG	Nm
	15	300	B		
	15	150	C		
	15	300	B		
	10	300	D, E		

Options / Accessories

- Consecutive numbering
- Special marking according to drawing
- Self-adhesive marking strip BST-7,50
- Insulation receptacles ISO
- Insulation sockets IS0-900
- Change of pitch
- Component mix of tab connector versions
- Tab connectors are also individually available (see single tabs GST-900)

Tab connector
900-SUC-10
Tab 4,8 mm



The tab connector 900-SUC-10 with double solder termination and a pitch of 10 mm is designed for 4,8 mm tab connector receptacles.

Depending on the respective application, the tab connectors of series 900 allow to plug in bare, partially or fully insulated tab receptacles according to DIN 46247. Insulation receptacles ISO-187 (see also ISO product data sheet) can be used to insulate 4,8 mm tab receptacles.
Insulation sockets are available for 6,3 mm tab connectors with double-spring contacts (see also ISO-900 product data sheet).

Part Numbers

No. of poles	900-SUC-10	Length	PU
2	19.870.903	13,50	250
3	19.870.905	23,50	100
4	19.870.907	33,50	100
5	19.870.909	43,50	100
6	19.870.911	53,50	100
7	19.870.913	63,50	100
8	19.870.915	73,50	100
9	19.870.917	83,50	100
10	19.870.919	93,50	100
11	19.870.921	103,50	100
12	19.870.923	113,50	100
13	19.870.925	123,50	50

further number of poles on request

General Information

Pitch	10 mm
No. of poles	2 - 13

Technical Data

Overvoltage Category	III	III	II
Pollution Severity Level	3	2	2
Rated Voltage	630 V	630 V	1000 V
Rated Impulse Voltage	6 kV	6 kV	6 kV
Rated Insulation Voltage	750 V acc. to EN 60998-1		
Rated Current	16 A: with receptacles 4,8; wire 2,5 mm² (14 AWG)		
Hole in PCB	ø 1,6 mm		
Other specifications	Indicated rated voltages refer to applications with insulation receptacles		

Material

Moulding	PA, red, V-0
Comparative Tracking Index	CTI ≥ 600
Insulating Group	I
Temperature Range	-40°C up to 100°C
Solder pin	1,0 x 0,8 mm; tin plated brass
Tab	4,8 x 0,8 mm; tin plated brass

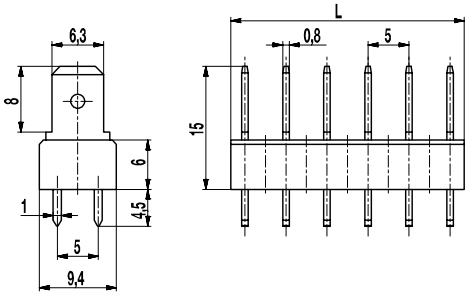
Approvals

	Current	Voltage	Group	AWG	Nm
	15	300	B		
	15	150	C		
	15	300	B		
	10	300	D, E		

Options / Accessories

- Consecutive numbering
- Special marking according to drawing
- Self-adhesive marking strip BST-10,00
- Insulation receptacles ISO
- Insulation sockets ISO-900
- Change of pitch
- Component mix of tab connector versions
- Tab connectors are also individually available (see single tabs GST-900)

Tab connector
900-SUN-5
Tab 6,3 mm



The tab connector 900-SUN-5 with double solder termination and a pitch of 5 mm is designed for 6,3 mm tab connector receptacles.

Depending on the respective application, the tab connectors of series 900 allow to plug in bare, partially or fully insulated tab receptacles according to DIN 46247. Insulation receptacles ISO-25 and ISO-250 (see also ISO product data sheet) can be used to insulate 6,3 mm tab receptacles.
Insulation sockets are available for 6,3 mm tab connectors with double-spring contacts (see also ISO-900 product data sheet).

Part Numbers

No. of poles	900-SUN-5	Length	PU
2	45.870.902	8,50	250
3	45.870.903	13,50	250
4	45.870.904	18,50	200
5	45.870.905	23,50	100
6	45.870.906	28,50	100
7	45.870.907	33,50	100
8	45.870.908	38,50	100
9	45.870.909	43,50	100
10	45.870.910	48,50	100
11	45.870.911	53,50	100
12	45.870.912	58,50	100
13	45.870.913	63,50	100
14	45.870.914	68,50	100
15	45.870.915	73,50	100
16	45.870.916	78,50	100
17	45.870.917	83,50	100
18	45.870.918	88,50	100
19	45.870.919	93,50	100
20	45.870.920	98,50	100
21	45.870.921	103,50	100
22	45.870.922	108,50	100
23	45.870.923	113,50	100
24	45.870.924	118,50	50
25	45.870.925	123,50	50

further number of poles on request

General Information

Pitch	5 mm
No. of poles	2 - 25

Technical Data

Overvoltage Category	III	III	II
Pollution Severity Level	3	2	2
Rated Voltage	320 V	320 V	630 V
Rated Impulse Voltage	4 kV	4 kV	4 kV
Rated Insulation Voltage	450 V acc. to EN 60998-1		
Rated Current	16 A: with receptacles 6,3; wire 2,5 mm² (14 AWG)		
Hole in PCB	ø 1,6 mm		
Other specifications	Indicated rated voltages refer to applications with insulation receptacles		

Material

Moulding	PA, red, V-0
Comparative Tracking Index	CTI ≥ 600
Insulating Group	I
Temperature Range	-40°C up to 100°C
Solder pin	1,0 x 0,8 mm; tin plated brass
Tab	6,3 x 0,8 mm; tin plated brass

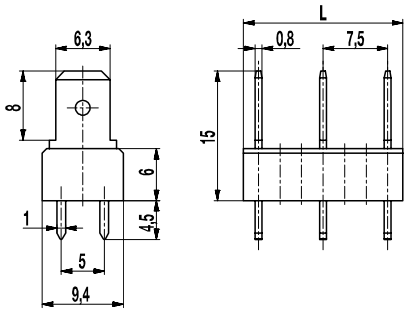
Approvals

	Current	Voltage	Group	AWG	Nm
	15	125	B		
	15	300	B		
	10	300	D, E		

Options / Accessories

- Consecutive numbering
- Special marking according to drawing
- Self-adhesive marking strip BST-5,00
- Insulation receptacles ISO
- Insulation sockets IS0-900
- Change of pitch
- Component mix of tab connector versions
- Tab connectors are also individually available (see single tabs GST-900)

Tab connector
900-SUN-7,5
Tab 6,3 mm



The tab connector 900-SUN-7,5 with double solder termination and a pitch of 7,5 mm is designed for 6,3 mm tab connector receptacles.

Depending on the respective application, the tab connectors of series 900 allow to plug in bare, partially or fully insulated tab receptacles according to DIN 46247. Insulation receptacles ISO-25 and ISO-250 (see also ISO product data sheet) can be used to insulate 6,3 mm tab receptacles.
Insulation sockets are available for 6,3 mm tab connectors with double-spring contacts (see also ISO-900 product data sheet).

Part Numbers

No. of poles	900-SUN-7,5	Length	PU
2	47.870.903	11,00	250
3	47.870.904	18,50	200
4	47.870.906	26,00	100
5	47.870.907	33,50	100
6	47.870.909	41,00	100
7	47.870.910	48,50	100
8	47.870.912	56,00	100
9	47.870.913	63,50	100
10	47.870.915	71,00	100
11	47.870.916	78,50	100
12	47.870.918	86,00	100
13	47.870.919	93,50	100
14	47.870.921	101,00	100
15	47.870.922	108,50	100
16	47.870.924	116,00	50
17	47.870.925	123,50	50

General Information

Pitch	7,5 mm
No. of poles	2 - 17

Technical Data

Overvoltage Category	III	III	II
Pollution Severity Level	3	2	2
Rated Voltage	500 V	630 V	1000 V
Rated Impulse Voltage	6 kV	6 kV	6 kV
Rated Insulation Voltage	750 V acc. to EN 60998-1		
Rated Current	16 A: with receptacles 6,3; wire 2,5 mm² (14 AWG)		
Hole in PCB	ø 1,6 mm		
Other specifications	Indicated rated voltages refer to applications with insulation receptacles		

Material

Moulding	PA, red, V-0
Comparative Tracking Index	CTI ≥ 600
Insulating Group	I
Temperature Range	-40°C up to 100°C
Solder pin	1,0 x 0,8 mm; tin plated brass
Tab	6,3 x 0,8 mm; tin plated brass

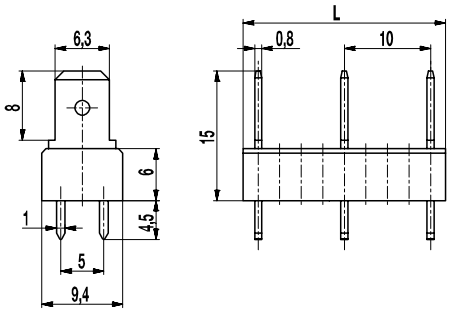
Approvals

	Current	Voltage	Group	AWG	Nm
	15	300	B		
	15	150	C		
	15	300	B		
	10	300	D, E		

Options / Accessories

- Consecutive numbering
- Special marking according to drawing
- Self-adhesive marking strip BST-7,50
- Insulation receptacles ISO
- Insulation sockets IS0-900
- Change of pitch
- Component mix of tab connector versions
- Tab connectors are also individually available (see single tabs GST-900)

Tab connector
900-SUN-10
Tab 6,3 mm



The tab connector 900-SUN-10 with double solder termination and a pitch of 10 mm is designed for 6,3 mm tab connector receptacles.

Depending on the respective application, the tab connectors of series 900 allow to plug in bare, partially or fully insulated tab receptacles according to DIN 46247. Insulation receptacles ISO-25 and ISO-250 (see also ISO product data sheet) can be used to insulate 6,3 mm tab receptacles.
Insulation sockets are available for 6,3 mm tab connectors with double-spring contacts (see also ISO-900 product data sheet).

Part Numbers

No. of poles	900-SUN-10	Length	PU
2	49.870.903	13,50	250
3	49.870.905	23,50	100
4	49.870.907	33,50	100
5	49.870.909	43,50	100
6	49.870.911	53,50	100
7	49.870.913	63,50	100
8	49.870.915	73,50	100
9	49.870.917	83,50	100
10	49.870.919	93,50	100
11	49.870.921	103,50	100
12	49.870.923	113,50	100
13	49.870.925	123,50	50

further number of poles on request

General Information

Pitch	10 mm
No. of poles	2 - 13

Technical Data

Overvoltage Category	III	III	II
Pollution Severity Level	3	2	2
Rated Voltage	630 V	630 V	1000 V
Rated Impulse Voltage	6 kV	6 kV	6 kV
Rated Insulation Voltage	750 V acc. to EN 60998-1		
Rated Current	16 A: with receptacles 6,3; wire 2,5 mm² (14 AWG)		
Hole in PCB	ø 1,6 mm		
Other specifications	Indicated rated voltages refer to applications with insulation receptacles		

Material

Moulding	PA, red, V-0
Comparative Tracking Index	CTI ≥ 600
Insulating Group	I
Temperature Range	-40°C up to 100°C
Solder pin	1,0 x 0,8 mm; tin plated brass
Tab	6,3 x 0,8 mm; tin plated brass

Approvals

	Current	Voltage	Group	AWG	Nm
	15	300	B		
	15	150	C		
	15	300	B		
	10	300	D, E		

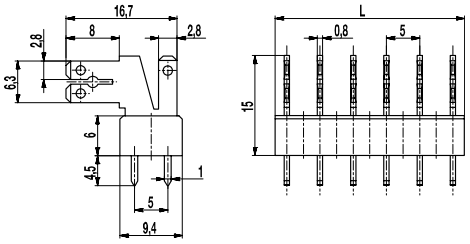
Options / Accessories

- Consecutive numbering
- Special marking according to drawing
- Self-adhesive marking strip BST-10,00
- Insulation receptacles ISO
- Insulation sockets ISO-900
- Change of pitch
- Component mix of tab connector versions
- Tab connectors are also individually available (see single tabs GST-900)

Tab connector

900-W-5

Tabs with 90° angle



The tab connector 900-W-5 with double solder termination and a pitch of 5 mm is designed for 1x 2,8 mm and 1x 2,8 mm/1x 6,3 mm tab connector receptacles.

Depending on the respective application, the tab connectors of series 900 allow to plug in bare, partially or fully insulated tab receptacles according to DIN 46247. A non-insulated 2,8 mm or a 6,3 mm (optionally also insulated) tab connector receptacle can be plugged in the angled plug-in area of the tab connector. To the vertical tab connector, a non-insulated 2,8 mm tab connector receptacle can be also be connected. Insulation receptacles ISO-25 and ISO-250 (see also ISO product data sheet) can be used to insulate 6,3 mm tab receptacles.

Part Numbers

No. of poles	900-W-5	Length	PU
2	25.870.902	8,50	250
3	25.870.903	13,50	250
4	25.870.904	18,50	200
5	25.870.905	23,50	100
6	25.870.906	28,50	100
7	25.870.907	33,50	100
8	25.870.908	38,50	100
9	25.870.909	43,50	100
10	25.870.910	48,50	100
11	25.870.911	53,50	100
12	25.870.912	58,50	100
13	25.870.913	63,50	100
14	25.870.914	68,50	50
15	25.870.915	73,50	50
16	25.870.916	78,50	50
17	25.870.917	83,50	50
18	25.870.918	88,50	50
19	25.870.919	93,50	50
20	25.870.920	98,50	50
21	25.870.921	103,50	50
22	25.870.922	108,50	50
23	25.870.923	113,50	50
24	25.870.924	118,50	50
25	25.870.925	123,50	50

further number of poles on request

General Information

Pitch	5 mm
No. of poles	2 - 25

Technical Data

Overvoltage Category	III	III	II
Pollution Severity Level	3	2	2
Rated Voltage	320 V	320 V	630 V
Rated Impulse Voltage	4 kV	4 kV	4 kV
Rated Insulation Voltage	450 V acc. to EN 60998-1		
Rated Current	6 A: with receptacles 2,8; wire 1 mm² (16 AWG) 16 A: with receptacles 6,3; wire 2,5 mm² (14 AWG)		
Hole in PCB	ø 1,6 mm		
Other specifications	Indicated rated voltages refer to applications with insulation receptacles		

Material

Moulding	PA, red, V-0
Comparative Tracking Index	CTI ≥ 600
Insulating Group	I
Temperature Range	-40°C up to 100°C
Solder pin	1,0 x 0,8 mm; tin plated brass
Tab	2,8 x 0,8 mm; 6,3 x 0,8 mm; tin plated brass

Approvals

	Current	Voltage	Group	AWG	Nm
	15	125	B		
	15	300	B		
	10	300	D, E		

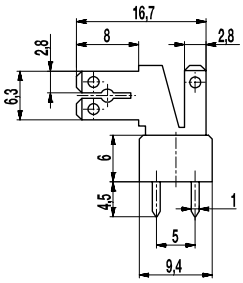
Options / Accessories

- Consecutive numbering
- Special marking according to drawing
- Self-adhesive marking strip BST-5,00
- Insulation receptacles ISO
- Change of pitch
- Component mix of tab connector versions
- Tab connectors are also individually available (see single tabs GST-900)

Tab connector

900-W-7,5

Tabs with 90° angle



The tab connector 900-W-7,5 with double solder termination and a pitch of 7,5 mm is designed for 1x 2,8 mm and 1x 2,8 mm / 1x 6,3 mm tab connector receptacles.

Depending on the respective application, the tab connectors of series 900 allow to plug in bare, partially or fully insulated tab receptacles according to DIN 46247. A non-insulated 2,8 mm or a 6,3 mm (optionally also insulated) tab connector receptacle can be plugged in the angled plug-in area of the tab connector. To the vertical tab connector, a non-insulated 2,8 mm tab connector receptacle can be also be connected. Insulation receptacles ISO-25 and ISO-250 (see also ISO product data sheet) can be used to insulate 6,3 mm tab receptacles.

Part Numbers

No. of poles	900-W-7,5	Length	PU
2	27.870.903	11,00	250
3	27.870.904	18,50	200
4	27.870.906	26,00	100
5	27.870.907	33,50	100
6	27.870.909	41,00	100
7	27.870.910	48,50	100
8	27.870.912	56,00	100
9	27.870.913	63,50	100
10	27.870.915	71,00	50
11	27.870.916	78,50	50
12	27.870.918	86,00	50
13	27.870.919	93,50	50
14	27.870.921	101,00	50
15	27.870.922	108,50	50
16	27.870.923	116,00	50
17	27.870.924	123,50	50

General Information

Pitch	7,5 mm
No. of poles	2 - 17

Technical Data

Overvoltage Category	III	III	II
Pollution Severity Level	3	2	2
Rated Voltage	500 V	630 V	1000 V
Rated Impulse Voltage	6 kV	6 kV	6 kV
Rated Insulation Voltage	750 V acc. to EN 60998-1		
Rated Current	6 A: with receptacles 2,8; wire 1 mm² (16 AWG) 16 A: with receptacles 6,3; wire 2,5 mm² (14 AWG)		
Hole in PCB	ø 1,6 mm		
Other specifications	Indicated rated voltages refer to applications with insulation receptacles		

Material

Moulding	PA, red, V-0
Comparative Tracking Index	CTI ≥ 600
Insulating Group	I
Temperature Range	-40°C up to 100°C
Solder pin	1,0 x 0,8 mm; tin plated brass
Tab	2,8 x 0,8 mm; 6,3 x 0,8 mm; tin plated brass

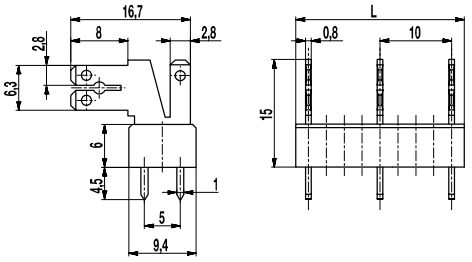
Approvals

	Current	Voltage	Group	AWG	Nm
	15	300	B		
	15	150	C		
	15	300	B		
	10	300	D, E		

Options / Accessories

- Consecutive numbering
- Special marking according to drawing
- Self-adhesive marking strip BST-7,50
- Insulation receptacles ISO
- Change of pitch
- Component mix of tab connector versions
- Tab connectors are also individually available (see single tabs GST-900)

Tab connector
900-W-10
Tabs with 90° angle



The tab connector 900-W-10 with double solder termination and a pitch of 10 mm is designed for 1x 2,8 mm and 1x 2,8 mm / 1x 6,3 mm tab connector receptacles.

Depending on the respective application, the tab connectors of series 900 allow to plug in bare, partially or fully insulated tab receptacles according to DIN 46247. A non-insulated 2,8 mm or a 6,3 mm (optionally also insulated) tab connector receptacle can be plugged in the angled plug-in area of the tab connector. To the vertical tab connector, a non-insulated 2,8 mm tab connector receptacle can be also be connected. Insulation receptacles ISO-25 and ISO-250 (see also ISO product data sheet) can be used to insulate 6,3 mm tab receptacles.

Part Numbers

No. of poles	900-W-10	Length	PU
2	30.870.903	13,50	250
3	30.870.905	23,50	100
4	30.870.907	33,50	100
5	30.870.909	43,50	100
6	30.870.911	53,50	100
7	30.870.913	63,50	100
8	30.870.915	73,50	50
9	30.870.917	83,50	50
10	30.870.919	93,50	50
11	30.870.921	103,50	50
12	30.870.923	113,50	50
13	30.870.925	123,50	50

further number of poles on request

General Information

Pitch	10 mm
No. of poles	2 - 13

Technical Data

Overvoltage Category	III	III	II
Pollution Severity Level	3	2	2
Rated Voltage	630 V	630 V	1000 V
Rated Impulse Voltage	6 kV	6 kV	6 kV
Rated Insulation Voltage	750 V acc. to EN 60998-1		
Rated Current	6 A: with receptacles 2,8; wire 1 mm² (16 AWG) 16 A: with receptacles 6,3; wire 2,5 mm² (14 AWG)		
Hole in PCB	ø 1,6 mm		
Other specifications	Indicated rated voltages refer to applications with insulation receptacles		

Material

Moulding	PA, red, V-0
Comparative Tracking Index	CTI ≥ 600
Insulating Group	I
Temperature Range	-40°C up to 100°C
Solder pin	1,0 x 0,8 mm; tin plated brass
Tab	2,8 x 0,8 mm; 6,3 x 0,8 mm; tin plated brass

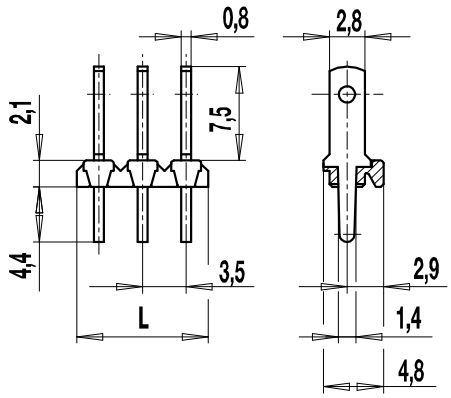
Approvals

	Current	Voltage	Group	AWG	Nm
	15	300	B		
	15	150	C		
	15	300	B		
	10	300	D, E		

Options / Accessories

- Consecutive numbering
- Special marking according to drawing
- Self-adhesive marking strip BST-10,00
- Insulation receptacles ISO
- Change of pitch
- Component mix of tab connector versions
- Tab connectors are also individually available (see single tabs GST-900)

Tab connector
931-FST



The tab connector 931-FST with tabs 2,8 x 0,8 mm can be used both with plug connector 930-FL or 938-FLDS and to connect individual wires with tab receptacles B 2.8-DIN 46 247 whose crimped points must be insulated. The tab connector is inserted in the plug connector 930-FL in direction of the wire entrance, which minimizes the space requirements on the PC board compared to the combination with pin strip 931-SLS or 931-SLR.
The receptacles are not parts of our production program.

Part Numbers

No. of poles	931-FST	Length	Pcs
2	12.893.705	7,00	1000
3	13.893.705	10,50	1000
4	14.893.705	14,00	500
5	15.893.705	17,50	500
6	16.893.705	21,00	500
7	17.893.705	24,50	500
8	18.893.705	28,00	250
9	19.893.705	31,50	200
10	20.893.705	35,00	200
11	21.893.705	38,50	200
12	22.893.705	42,00	250
13	23.893.705	45,50	200
14	24.893.705	49,00	200
15	25.893.705	52,50	200
16	26.893.705	56,00	200

General Information

Pitch	3,5 mm
No. of poles	2 - 16
Usable with	plug connector 930-FL; 938-FLDS; receptacle B 2,8

Technical Data

Overvoltage Category	III	III	II
Pollution Severity Level	3	2	2
Rated Voltage	160 V	160 V	250 V
Rated Impulse Voltage	2,5 kV	2,5 kV	2,5 kV
Rated Insulation Voltage	130 V acc. to EN 60998-1		
Rated Current	6 A: with receptacles 2,8; wire 1 mm² (16 AWG)		
Hole in PCB	ø 1,8 mm		
Other specifications	Rated voltage with insulated receptacles		

Material

Moulding	PA, grey, V-0
Comparative Tracking Index	CTI 250
Insulating Group	IIIa
Temperature Range	-40°C up to 100°C
Solder pin	1,4 x 0,8 mm; tin plated brass
Tab	2,8 x 0,8 mm; tin plated brass

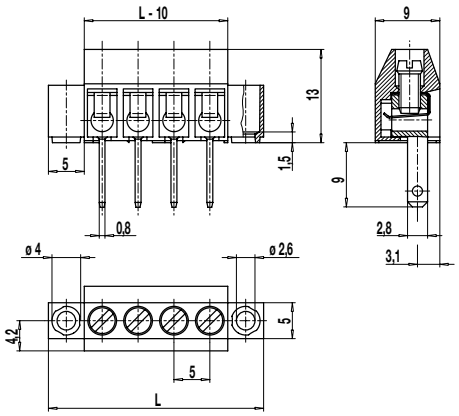
Approvals

	Current	Voltage	Group	AWG	Nm
	6	300	B		
	6	300	B		

Options / Accessories

- Pitch of 7 mm for larger clearance and creepage distances

Tab/screw connector block
970-B-2,8(-DS)
screw connection, with tabs 2,8



Tab/screw connector block 970-B-2,8 in 5 mm pitch is a combination of tab connector block and screw connector. They are available in 2- to 8-pole design. They are mostly used for the mains connections of electrical equipment but are also suitable for other applications.

Due to the 5 mm pitch, the tab/screw connector block 970-B-2,8 has only small space requirements and is particularly suitable as lead-out terminal for plastic walls.
The housing features two lateral mounting flanges.
Interior connections are designed as A 2,8 mm x 0,8 mm tab connectors.
The wire protector of the “DS”-version reliably prevents damage to multi-wire flexible conductors by the turning screw.

Installation note:
Tab connectors are provided for connections inside electrical equipment. They offer easy and low-cost mounting solutions. Screw connections are available for mains connections.

Part Numbers

No. of poles	970-B-2,8	970-B-2,8-DS	Length	PU
2	13.872.702	23.872.702	20,00	200
3	13.872.703	23.872.703	25,00	200
4	13.872.704	23.872.704	30,00	100
5	13.872.705	23.872.705	35,00	100
6	13.872.706	23.872.706	40,00	100
7	13.872.707	23.872.707	45,00	100
8	13.872.708	23.872.708	50,00	100

General Information

Pitch	5 mm
No. of poles	2 - 8

Technical Data

Clamping Range	*solid / flexible / AWG*
without wire protector	1 - 6 mm² / 1 - 2,5 mm² / 16 - 12 AWG
with wire protector	0,75 - 4 mm² / 0,75 - 2,5 mm² / 18 - 12 AWG
Rated Cross Section	2,5 mm² [1]; 1 mm² [2]
Wire Stripping Length	6,5 mm
Overvoltage Category	III
Pollution Severity Level	3
Rated Voltage	250 V
Rated Impulse Voltage	4 kV
Rated Insulation Voltage	250 V acc. to EN 60998-1
Rated Current	6 A: with receptacle 2,8; wire 1 mm² (16 AWG)
Torque	0,5 Nm
Other specifications	Indicated rated voltages refer to applications with insulation receptacles.

Material

Moulding	PA, grey, V-0
Comparative Tracking Index	CTI ≥ 600
Insulating Group	I
Temperature Range	-40°C up to 100°C
Terminal Body	Nickel plated brass
Tab	Nickel plated brass
Screw	M3; zinc plated steel, blue passivated
Wire protector	Tin plated tin bronze

Approvals

	Current	Voltage	Group	AWG	Nm
	6	300	B,D	22 - 12	0,51 [3]
	6	300	B,D,E	22 - 10	0,51

Options / Accessories

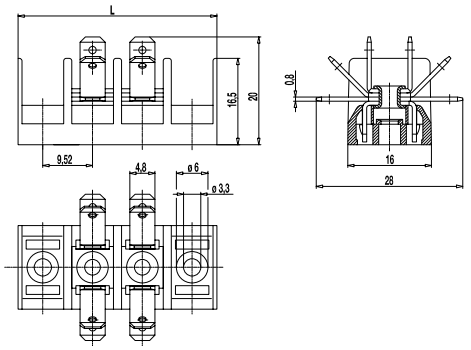
- Consecutive numbering
- Special marking according to drawing
- Self-adhesive marking strip BST-5,00
- Version with higher number of poles
- Version without fastening flanges
- Version with extended wire entrance
- Double wire protector as bridge

[1] Screw side
[2] Plug-in side
[3] No. 26 AWG min for factory-wiring only

Tab/screw connector blocks

982-F

with tabs 4,8 or screw connection



Tab/screw connector block 982-F in 9,52 mm pitch is based on our proven 98.. series (see Catalogue 4 “Pitch 7,5 mm”).
It features a 4.8 mm tab connector in star-shaped arrangement and is available in 2- to 24-pole design for a maximum of six tab connectors or alternatively one screw connector per pole.
The compartments on both extremities of the block can serve either for mounting on a substrate or for fastening our 982-A/983-A cover caps. Upon request, other compartments can remain empty for mounting purposes.

Installation note:
Since the bottom is not closed, the connector should be mounted on an isolating substrate/surface. Alternatively, our marking strip BST-983-F can be used for this purpose.

Due to the large variety of different types, listing numbers and prices of the various articles is not possible. When inquiring or ordering products with uniform assembly, stating the number of poles and the assembly number is sufficient. For mixed assemblies, we require an exemplary scheme including the orientation of asymmetrical assemblies, stating the number of desired poles and the assembly of each pole with assembly number.

General Information

Pitch	9,52 mm
No. of poles	2 - 24

Technical Data

Clamping Range	*solid / flexible / AWG*
	0,75 - 2,5 mm² / 0,75 - 2,5 mm² / 18 - 12 AWG
Rated Cross Section	2,5 mm² [1]
Wire Stripping Length	8,5 mm
Overvoltage Category	III
Pollution Severity Level	3
Rated Voltage	320 V
Rated Impulse Voltage	4 kV
Rated Insulation Voltage	450 V acc. to EN 60998-1
Rated Current	16 A: with receptacle 4,8; wire 2,5 mm² (14 AWG)
Torque	0,8 Nm
Other specifications	For screw connectors, two leads of identical cross-section can be connected per pole.

Material

Moulding	PA, grey, V-0
Comparative Tracking Index	CTI ≥ 600
Insulating Group	I
Temperature Range	-40°C up to 100°C
Terminal Body	Nickel plated brass
Tab	Nickel plated brass
Screw	M3,5; zinc plated steel, blue passivated
Tubular rivet	Tin plated copper

Approvals

	Current	Voltage	Group	AWG	Nm
	20	300	B	20 - 12	0,79
	15	300	B	20 - 12	0,79
	10	300	D,E	20 - 12	0,79

Options / Accessories

- Consecutive numbering
- Version for printed circuits (with solder connection), see type 983-FS/-FD
- Cover cap for use with assembly type 8.011 and screw connections
- Crosshead screws
- Fastening pole position can be freely selected

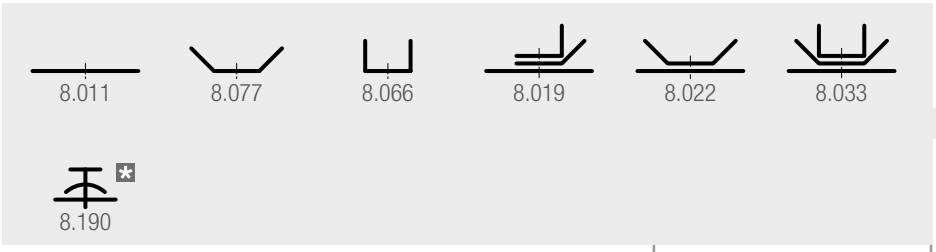
[1] Screw side

Tab/screw connector blocks

982-F

Assembly layout and order information

Assembly layout



* Standard crosshead screw design, crosshead screws upon request

Tab size

4,8

No. of poles
02
to
24

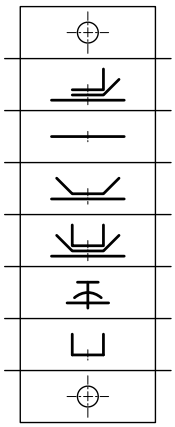
Assembly layout
Please enter here the desired assembly type number.

If you order various sizes, please enclose drawing and enter here: **MIX**

Tab size
4,8
(not applicable, if screw connection 8.190 only)

**982-F-4,8/ – **

Example ordering scheme for mixed assembly (“MIX”)



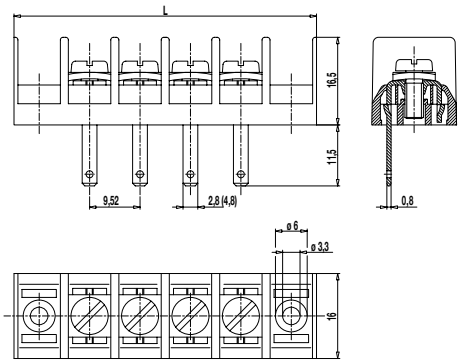
When inquiring or ordering products for uniform assembly, stating the above designation is sufficient.

For mixed assembly (“MIX” as part of the type designation), we additionally need a drawing according to the example on the left.
The drawing must state the desired number of poles, the assembly of each pole and the assembly number.

Tab/screw connector block

982-MF-2,8/-4,8

with tabs



Tab/screw connector blocks 982-MF-2,8 and 982-MF-4,8 in 9,52 mm pitch are available in 2- to 12-pole design and can be mounted side-by-side in nominal pitch. These connectors are based on our series 982 terminal strips.

The lead connection is designed as head contact terminal with M3,5 screws. Screws and square washers are movably connected. The square washers are mounted in a non-twist arrangement. For an easier connection of the lead, the washer automatically moves up when the screw is loosened.

One tab connection per pole with widths of 2,8 or 4,8 mm is located on the solder/tab side. That way, current transmission to other components is possible without using printed circuits.

Part Numbers

No. of poles	982-MF-2,8	982-MF-4,8	Length	PU
2	40.873.704	42.873.704	38,08	100
3	40.873.705	42.873.705	47,60	100
4	40.873.706	42.873.706	57,12	100
5	40.873.707	42.873.707	66,64	100
6	40.873.708	42.873.708	76,16	100
7	40.873.709	42.873.709	85,68	50
8	40.873.710	42.873.710	95,20	50
9	40.873.711	42.873.711	104,72	50
10	40.873.712	42.873.712	114,24	50
11	40.873.713	42.873.713	123,76	50
12	40.873.714	42.873.714	133,28	50

further number of poles on request

General Information

Pitch	9,52 mm
No. of poles	2 - 12
Areas of application	Wall bushings

Technical Data

Clamping Range	*solid / flexible / AWG*
	0,5 - 2,5 mm² / 0,5 - 2,5 mm² / 20 - 12 AWG
Rated Cross Section	2,5 mm² [1]
Wire Stripping Length	8,5 mm
Overvoltage Category	III
Pollution Severity Level	3
Rated Voltage	320 V
Rated Impulse Voltage	4 kV
Rated Insulation Voltage	450 V acc. to EN 60998-1
Rated Current	6 A: with receptacle 2,8; wire 1 mm² (16 AWG) 16 A: with receptacle 4,8; wire 2,5 mm² (14 AWG)
Torque	0,8 Nm
Other specifications	Per pole two wires of identical cross-section can be connected. Indicated rated voltages refer to applications with insulation receptacles.

Material

Moulding	PA, grey, V-0
Comparative Tracking Index	CTI ≥ 600
Insulating Group	I
Temperature Range	-40°C up to 100°C
Terminal Body	Nickel plated brass
Tab	Nickel plated brass
Screw	M3,5; zinc plated steel, blue passivated
Tubular rivet	Tin plated copper

Approvals

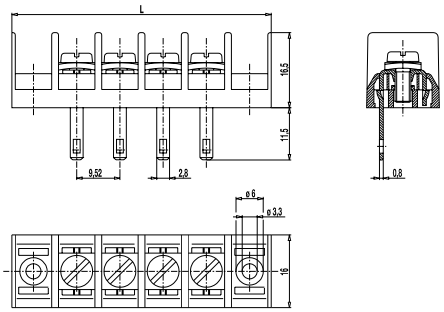
	Current	Voltage	Group	AWG	Nm
	15	300	B	20 - 12	0,79 [2]
	15	300	B	20 - 12	0,79 [3]
	10	300	D,E	20 - 12	0,79 [3]

Options / Accessories

- Consecutive numbering
- Insulation receptacles ISO
- Cover caps
- Crosshead screws on request
- Tab versions available instead of screw connections
- Bushing and mounting bases are available upon request

[1] Screw side
[2] For type 982-MF-2,8 is applicable: 300 V / B / 6 A / 0,79 Nm
[3] For type 982-MF-2,8 is applicable: 300 V / B,D,E / 6 A / 0,79 Nm

Screw/solder connector block
982-ML-2,8
with soldering tags



Screw/solder connector block 982-ML-2,8 in 9,52 mm pitch is available in 2- to 12-pole design and can be mounted side-by-side in nominal pitch. This connector is based on our series 982 terminal strip.

The lead connection is designed as head contact terminal with M3,5 screws. Screws and square washers are movably connected. The square washers are mounted in a non-twist arrangement. For an easier connection of the lead, the washer automatically moves up when the screw is loosened.

One solder tag (width 2,8 mm) per pole is located on the soldering side.

Part Numbers

No. of poles	982-ML-2,8	Length	PU
2	46.873.704	38,08	100
3	46.873.705	47,60	100
4	46.873.706	57,12	100
5	46.873.707	66,64	100
6	46.873.708	76,16	100
7	46.873.709	85,68	50
8	46.873.710	95,20	50
9	46.873.711	104,72	50
10	46.873.712	114,24	50
11	46.873.713	123,76	50
12	46.873.714	133,28	50

General Information

Pitch	9,52 mm
No. of poles	2 - 12
Accessories	Marking strips 983-F
Areas of application	Wall bushings

Technical Data

Clamping Range	*solid / flexible / AWG*
	0,75 - 2,5 mm² / 0,75 - 2,5 mm² / 18 - 12 AWG
Rated Cross Section	2,5 mm² [1]
Wire Stripping Length	8,5 mm
Overvoltage Category	III
Pollution Severity Level	3
Rated Voltage	320 V
Rated Impulse Voltage	4 kV
Rated Insulation Voltage	450 V acc. to EN 60998-1
Rated Current	17,5 A (wire 1,5 mm² at soldering tag)
Torque	0,8 Nm
Other specifications	Per pole two wires of identical cross-section can be connected.

Material

Moulding	PA, grey, V-0
Comparative Tracking Index	CTI ≥ 600
Insulating Group	I
Temperature Range	-40°C up to 100°C
Terminal Body	Tin plated brass
Screw	M3,5; zinc plated steel, blue passivated
Tubular rivet	Tin plated copper

Approvals

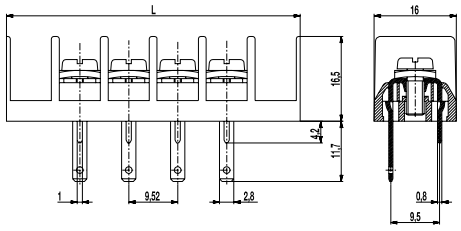
	Current	Voltage	Group	AWG	Nm
	20	300	B	20 - 12	0,79
	20	300	B	20 - 12	0,79
	10	300	D,E	20 - 12	0,79

Options / Accessories

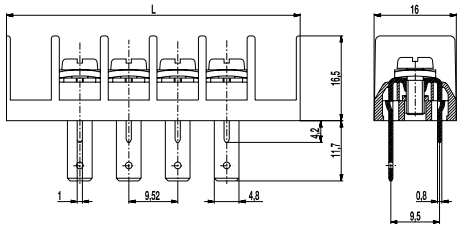
- Consecutive numbering
- Version for printed circuits (with solder connection), see type 983-FS/-FD
- Insulation receptacles ISO
- Cover caps
- Crosshead screws on request
- Tab versions available instead of screw connections
- Bushing and mounting bases are available upon request

[1] Screw side

PCB connector
982-SMF-2,8/-4,8
Screw connection, with solder pin and tab



982-SMF-2,8



982-SMF-4,8

The PCB connectors 982-SMF-2,8 and 982-SMF-4,8 with a pitch of 9.52 mm are available in 1- to 12-pole design and can be mounted side-by-side in the nominal pitch.
They are based on our series 982 terminal strips.

The conductor terminal is of head contact design with Screws M3.5, whereby the screws and square washers are movably connected.
For easier connection, the non-rotably mounted square washers are automatically lifted when the screw is loosened.

On the solder side and the plug-in side they feature one solder pin and one tab connection of 2.8 mm or 4.8 mm width per pole.
This allows current to flow to other components without having to use additional conductor paths.

Part Numbers

No. of poles	982-SMF-2,8	982-SMF-4,8	Length	PU
1	91.873.703	92.873.703	28,56	200
2	91.873.704	92.873.704	38,08	200
3	91.873.705	92.873.705	47,60	200
4	91.873.706	92.873.706	57,12	100
5	91.873.707	92.873.707	66,64	50
6	91.873.708	92.873.708	76,16	50
7	91.873.709	92.873.709	85,68	50
8	91.873.710	92.873.710	95,20	50
9	91.873.711	92.873.711	104,72	50
10	91.873.712	92.873.712	114,24	50
11	91.873.713	92.873.713	123,76	50
12	91.873.714	92.873.714	133,28	50

further number of poles on request

General Information

Pitch	9,52 mm
No. of poles	1 - 12

Technical Data

Clamping Range	*solid / flexible / AWG* 0,75 - 2,5 mm² / 0,75 - 2,5 mm² / 18 - 12 AWG
Rated Cross Section	2,5 mm²
Wire Stripping Length	8,5 mm
Overvoltage Category	III
Pollution Severity Level	3
Rated Voltage	320 V
Rated Impulse Voltage	4 kV
Rated Insulation Voltage	450 V acc. to EN 60998-1
Rated Current	6 A: with receptacles 2,8; wire 1 mm² (16 AWG) 16 A: with receptacles 4,8; wire 2,5 mm² (14 AWG)
Hole in PCB	ø 1,6 mm
Torque	0,8 Nm
Other specifications	Screw-fixing holes ø 3,2 mm. Per pole two wires of identical cross-section can be connected. Indicated rated voltage applies to applications with insulation receptacles.

Material

Moulding	PA, grey, V-0
Comparative Tracking Index	CTI ≥ 600
Insulating Group	I
Temperature Range	-40°C up to 100°C
Pressure clamp	Tin plated brass
Screw	M3,5; zinc plated steel, blue passivated
Solder pin	0,8 x 1,0 mm; tin plated brass

Approvals

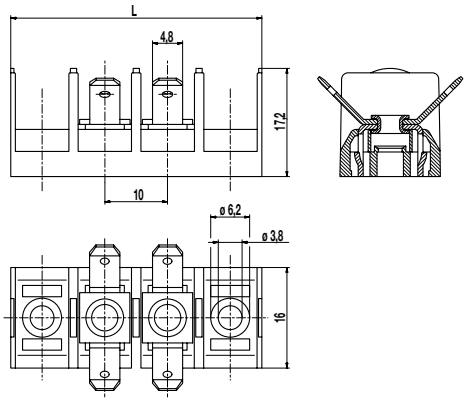
	Current	Voltage	Group	AWG	Nm
	20	300	B	20 - 12	0,79
	6	300	B, D, E	20 - 12	0,79 [1]
	15	300	B	20 - 12	0,79 [2]
	10	300	D, E	20 - 12	0,79 [2]

[1] for 982-SMF-2,8
[2] for 982-SMF-4,8

Options / Accessories

- Consecutive numbering
- Special marking according to drawing
- Crosshead screws
- Cover cap 982-A
- Securing pins BEF-983
- Fastening pole position can be freely selected
- Various versions of tabs instead of screw connections

Tab/screw connector blocks
983-F
with tabs 4,8 or screw connection



Tab/screw connector block 983-F in 10 mm pitch is based on our proven 98.. series (see Catalogue 5 “Pitch >10 mm”).
It features a 4.8 mm tab connector in star-shaped arrangement and is available in 2- to 24-pole design for a maximum of six tab connectors or alternatively one screw connector per pole.
The compartments on both extremities of the block can serve either for mounting on a substrate or for fastening our 982-A/983-A cover caps. Upon request, other compartments can remain empty for mounting purposes.

Installation note:
Since the bottom is not closed, the connector should be mounted on an isolating substrate/surface. Alternatively, our marking strip BST-983-F can be used for this purpose.

Due to the large variety of different types, listing numbers and prices of the various articles is not possible. When inquiring or ordering products with uniform assembly, stating the number of poles and the assembly number is sufficient. For mixed assemblies, we require an exemplary scheme including the orientation of asymmetrical assemblies, stating the number of desired poles and the assembly of each pole with assembly number.

General Information

Pitch	10 mm
No. of poles	2 - 24

Technical Data

Clamping Range	*solid / flexible / AWG*
	0,5 - 2,5 mm² / 0,5 - 2,5 mm² / 20 - 12 AWG
Rated Cross Section	2,5 mm² [1]
Wire Stripping Length	8,5 mm
Overvoltage Category	III
Pollution Severity Level	3
Rated Voltage	320 V
Rated Impulse Voltage	4 kV
Rated Insulation Voltage	450 V acc. to EN 60998-1
Rated Current	16 A: with receptacle 4,8; wire 2,5 mm² (14 AWG)
Torque	1,2 Nm
Other specifications	For screw connectors, two leads of identical cross-section can be connected per pole.

Material

Moulding	PA, grey, V-0
Comparative Tracking Index	CTI ≥ 600
Insulating Group	I
Temperature Range	-40°C up to 100°C
Terminal Body	Nickel plated brass
Tab	Nickel plated brass
Screw	M4; zinc plated steel, blue passivated
Tubular rivet	Tin plated brass

Approvals

	Current	Voltage	Group	AWG	Nm
	15 [2]	300	B	20 - 12	1,13
	15 [2]	300	B	20 - 12	1,13
	10	300	D,E	20 - 12	1,13

Options / Accessories

- Consecutive numbering
- Special marking according to drawing
- Self-adhesive marking strip BST-10,00
- Design for printed circuits (with solder connection), please see 983-FS/-FD
- Cover caps
- Crosshead for screw connection upon request
- Fastening pole position can be freely selected

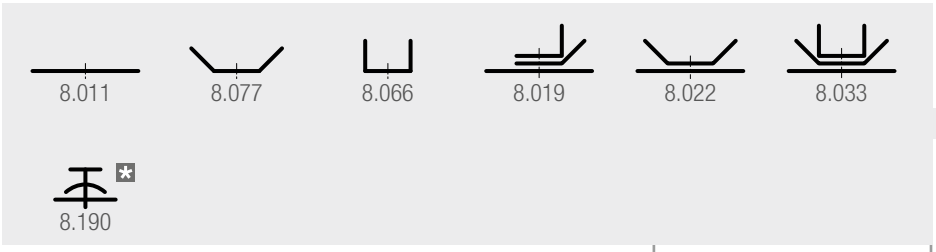
[1] Screw side
[2] Version with screw connections only: 20 A max.

Tab/screw connector blocks

983-F

Assembly layout and order information

Assembly layout



* Standard crosshead screw design, crosshead screws upon request

Tab size

4,8

No. of poles
02
to
24

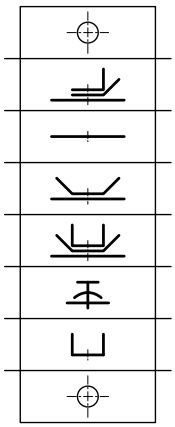
Assembly layout
Please enter here the desired assembly type number.

If you order various sizes, please enclose drawing and enter here: **MIX**

Tab size
4,8
(not applicable, if screw connection 8.190 only)

**983-F-4,8/ – **

Example ordering scheme for mixed assembly (“MIX”)



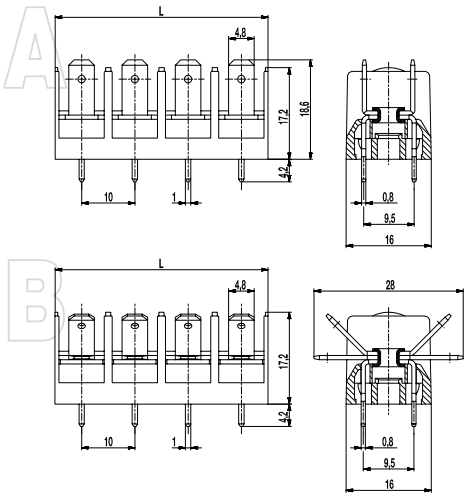
When inquiring or ordering products for uniform assembly, stating the above designation is sufficient.

For mixed assembly (“MIX” as part of the type designation), we additionally need a drawing according to the example on the left.
The drawing must state the desired number of poles, the assembly of each pole and the assembly number.

Tab connector

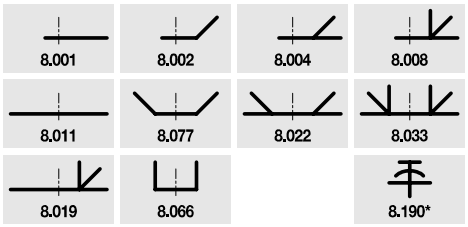
983-FD

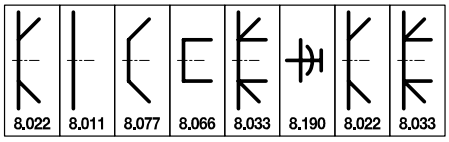
Tab/screw connection, 2 solder pins per pole



L = Number of poles x pitch
A: Terminal design with tab connector package 8.066
B: Terminal design with tab connector package 8.022

Terminal designs / Example of mixed assembly





* = Screw connection

On the input side, each pole of the tab connector 983-FD in 10 mm pitch can be connected to up to 6 tab connections or one screw connection.
For a uniform assembly, version, assembly type (4-digit number) and number of poles must be specified. Both technical drawings (A and B) show an example for uniform assembly. Mixed assembly requires either specifications of the terminal design for each pole or a drawing.

Due to the multitude of assembly combinations there is no designated order code. For uniform assembly with screw connections (8.190) see tab connector strip 983-D.

General Information

Pitch	10 mm
No. of poles	2 - 26
Usable with	receptacles for tabs acc. to DIN 46247

Technical Data

Clamping Range	*solid / flexible / AWG*
	0,5 - 2,5 mm² / 0,5 - 2,5 mm² / 20 - 12 AWG
Rated Cross Section	2,5 mm²
Wire Stripping Length	8,5 mm
Overvoltage Category	III
Pollution Severity Level	3
Rated Voltage	320 V
Rated Impulse Voltage	4 kV
Rated Insulation Voltage	450 V acc. to EN 60998-1
Rated Current	16 A: with receptacles 4,8; wire 2,5 mm² (14 AWG)
Hole in PCB	ø 1,6 mm
Torque	1,2 Nm
Other specifications	For screw connections, 2 wires of the same cross-section can be connected per pole. The specified rated voltage applies to applications with insulating receptacles.

Material

Moulding	PA, grey, V-0
Comparative Tracking Index	CTI ≥ 600
Insulating Group	I
Temperature Range	-40°C up to 100°C
Pressure clamp	Tin plated brass
Screw	M4; zinc plated steel, blue passivated
Solder pin	0,8 x 1,0 mm; tin plated brass
Tab	Nickel plated brass
Tubular rivet	Tin plated copper

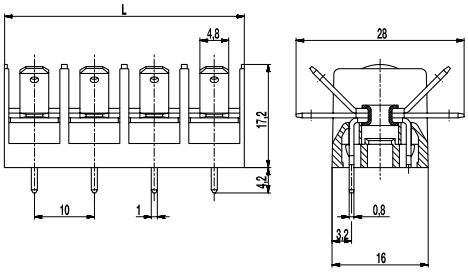
Approvals

	Current	Voltage	Group	AWG	Nm
	15	300	B	20 - 12	
	15	300	B	20 - 12	
	10	300	D, E	20 - 12	

Options / Accessories

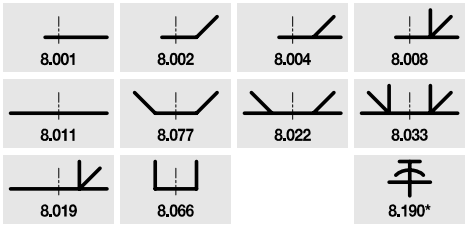
- Consecutive numbering
- Special marking according to drawing
- Self-adhesive marking strip BST-10,00
- Cover cap 983-A (two unassigned poles required); not suitable for every assembly type
- Crosshead screws
- 10 mm pin length
- Version without solder pin

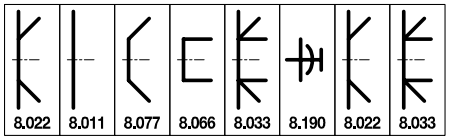
Tab connector
983-FS
Tab/screw connection, 1 solder pin per pole



L = Number of poles x pitch
Terminal design with tab connector package 8.022

Terminal designs / Example of mixed assembly





* = Screw connection

On the input side, each pole of the tab connector 983-FS in 10 mm pitch can be connected to up to 6 tab connections or one screw connection.
For a uniform assembly, version, assembly type (4-digit number) and number of poles must be specified. Both technical drawings (A and B) show an example for uniform assembly. Mixed assembly requires either specifications of the terminal design for each pole or a drawing.

Due to the multitude of assembly combinations there is no designated order code.
For uniform assembly with screw connections (8.190) see tab connector strip 983-S.

General Information

Pitch	10 mm
No. of poles	2 - 26
Usable with	receptacles for tabs acc. to DIN 46247

Technical Data

Clamping Range	*solid / flexible / AWG*
	0,5 - 2,5 mm² / 0,5 - 2,5 mm² / 20 - 12 AWG
Rated Cross Section	2,5 mm²
Wire Stripping Length	8,5 mm
Overvoltage Category	III
Pollution Severity Level	3
Rated Voltage	320 V
Rated Impulse Voltage	4 kV
Rated Insulation Voltage	450 V acc. to EN 60998-1
Rated Current	16 A: with receptacles 4,8; wire 2,5 mm² (14 AWG)
Hole in PCB	ø 1,6 mm
Torque	1,2 Nm
Other specifications	For screw connections, 2 wires of the same cross-section can be connected per pole. The specified rated voltage applies to applications with insulating receptacles.

Material

Moulding	PA, grey, V-0
Comparative Tracking Index	CTI ≥ 600
Insulating Group	I
Temperature Range	-40°C up to 100°C
Pressure clamp	Tin plated brass
Screw	M4; zinc plated steel, blue passivated
Solder pin	0,8 x 1,0 mm; tin plated brass
Tab	Nickel plated brass
Tubular rivet	Tin plated copper

Approvals

	Current	Voltage	Group	AWG	Nm
	15	300	B	20 - 12	
	15	300	B	20 - 12	
	10	300	D, E	20 - 12	

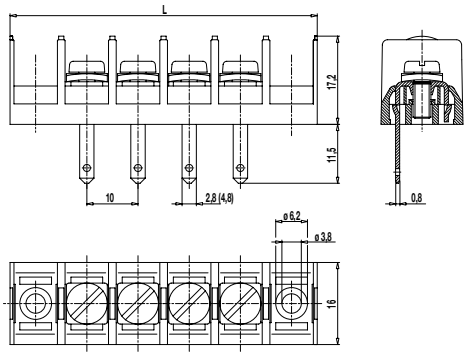
Options / Accessories

- Consecutive numbering
- Special marking according to drawing
- Self-adhesive marking strip BST-10,00
- Cover cap 983-A (two unassigned poles required); not suitable for every assembly type
- Crosshead screws
- 10 mm pin length
- Version without solder pin
- Version with screw connections only, please see 983-S

Tab/screw connector blocks

983-MF-2,8/-4,8

with tabs



Tab/screw connector blocks 983-MF-2,8 and 983-MF-4,8 in 10 mm pitch are available in 2- to 12-pole design and can be mounted side-by-side in nominal pitch. These connectors are based on our series 983 terminal strips.

The lead connection is designed as head contact terminal with M3,5 screws. Screws and square washers are movably connected. The square washers are mounted in a non-twist arrangement. For an easier connection of the lead, the washer automatically moves up when the screw is loosened.

One tab connection per pole with widths of 2,8 or 4,8 mm is located on the solder/tab side. That way, current transmission to other components is possible without using printed circuits.

Part Numbers

No. of poles	983-MF-2,8	983-MF-4,8	Length	PU
2	40.873.804	42.873.804	40,00	100
3	40.873.805	42.873.805	50,00	100
4	40.873.806	42.873.806	60,00	100
5	40.873.807	42.873.807	70,00	100
6	40.873.808	42.873.808	80,00	100
7	40.873.809	42.873.809	90,00	50
8	40.873.810	42.873.810	100,00	50
9	40.873.811	42.873.811	110,00	50
10	40.873.812	42.873.812	120,00	50
11	40.873.813	42.873.813	130,00	50
12	40.873.814	42.873.814	140,00	50

further number of poles on request

General Information

Pitch	10 mm
No. of poles	2 - 12
Areas of application	Wall bushings

Technical Data

Clamping Range	*solid / flexible / AWG*
	0,5 - 2,5 mm² / 0,5 - 2,5 mm² / 20 - 12 AWG
Rated Cross Section	2,5 mm² [1]
Wire Stripping Length	8,5 mm
Overvoltage Category	III
Pollution Severity Level	3
Rated Voltage	320 V
Rated Impulse Voltage	4 kV
Rated Insulation Voltage	450 V acc. to EN 60998-1
Rated Current	6 A: with receptacle 2,8; wire 1,0 mm² (16 AWG) 16 A: with receptacle 4,8; wire 2,5 mm² (14 AWG)
Torque	1,2 Nm
Other specifications	Per pole two wires of identical cross-section can be connected. Indicated rated voltages refer to applications with insulation receptacles.

Material

Moulding	PA, grey, V-0
Comparative Tracking Index	CTI ≥ 600
Insulating Group	I
Temperature Range	-40°C up to 100°C
Terminal Body	Nickel plated brass
Tab	Nickel plated brass
Screw	M4; zinc plated steel, blue passivated

Approvals

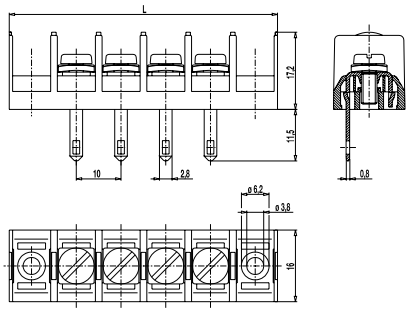
	Current	Voltage	Group	AWG	Nm
	15	300	B	20 - 12	1,13 [2]
	15	300	B	20 - 12	1,13 [3]
	10	300	D,E	20 - 12	1,13 [3]

Options / Accessories

- Consecutive numbering
- Special marking according to drawing
- Self-adhesive marking strip BST-10,00
- Insulation receptacles ISO
- Cover caps
- Crosshead screws on request
- Tab versions available instead of screw connections
- Bushing and mounting bases or backwalls are available upon request

[1] Screw side
[2] For type 983-MF-2,8 is applicable: 300 V / B / 7 A / 1,13 Nm
[3] For type 983-MF-2,8 is applicable: 300 V / B,D,E / 6 A / 1,13 Nm

Screw/solder connector block
983-ML-2,8
with soldering tags



Screw/solder connector block 983-ML-2,8 in 10 mm pitch is available in 2- to 12-pole design and can be mounted side-by-side in nominal pitch. This connector is based on our series 983 terminal strip.

The lead connection is designed as head contact terminal with M4 screws. Screws and square washers are movably connected. The square washers are mounted in a non-twist arrangement. For an easier connection of the lead, the washer automatically moves up when the screw is loosened.

One solder tag (width 2,8 mm) per pole is located on the soldering side.

Part Numbers

No. of poles	983-ML-2,8	Length	PU
2	46.873.804	40,00	100
3	46.873.805	50,00	100
4	46.873.806	60,00	100
5	46.873.807	70,00	100
6	46.873.808	80,00	100
7	46.873.809	90,00	50
8	46.873.810	100,00	50
9	46.873.811	110,00	50
10	46.873.812	120,00	50
11	46.873.813	130,00	50
12	46.873.814	140,00	50

further number of poles on request

General Information

Pitch	10 mm
No. of poles	2 - 12
Areas of application	Wall bushings

Technical Data

Clamping Range	*solid / flexible / AWG*
	0,5 - 2,5 mm² / 0,5 - 2,5 mm² / 20 - 12 AWG
Rated Cross Section	2,5 mm² [1]
Wire Stripping Length	8,5 mm
Overvoltage Category	III
Pollution Severity Level	3
Rated Voltage	320 V
Rated Impulse Voltage	4 kV
Rated Insulation Voltage	450 V acc. to EN 60998-1
Rated Current	17,5 A (wire 1,5 mm² at soldering tag)
Torque	1,2 Nm
Other specifications	Per pole two wires of identical cross-section can be connected.

Material

Moulding	PA, grey, V-0
Comparative Tracking Index	CTI > 600
Insulating Group	I
Temperature Range	-40°C up to 100°C
Terminal Body	Tin plated brass
Screw	M4; zinc plated steel, blue passivated

Approvals

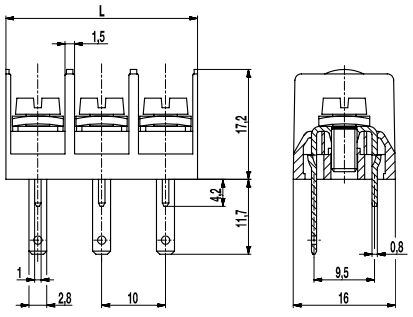
	Current	Voltage	Group	AWG	Nm
	20	300	B	20 - 12	1,13
	20	300	B	20 - 12	1,13
	10	300	D,E	20 - 12	1,13

Options / Accessories

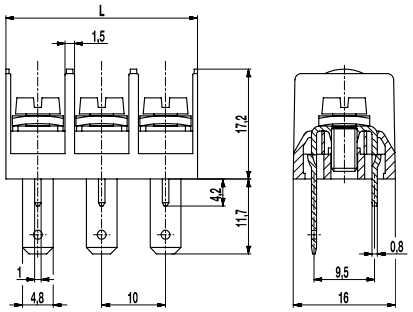
- Consecutive numbering
- Special marking according to drawing
- Self-adhesive marking strip BST-10,00
- Version for printed circuits (with solder connection), see type 983-FS/-FD
- Cover caps
- Crosshead screws on request
- Tab versions available instead of screw connections
- Bushing and mounting bases are available upon request
- Housings with backwalls

[1] Screw side

PCB connector
983-SMF-2,8/-4,8
Screw connection, with solder pin and tab



983-SMF-2,8



983-SMF-4,8

The PCB connectors 983-SMF-2,8 and 983-SMF-4,8 with a pitch of 10 mm are available in 1- to 12-pole design and can be mounted side-by-side in the nominal pitch.
They are based on our series 983 terminal strips.

The conductor terminal is of head contact design with Screws M4, whereby the screws and square washers are movably connected.
For easier connection, the non-rotably mounted square washers are automatically lifted when the screw is loosened.

On the solder side and the plug-in side they feature one solder pin and one tab connection of 2.8 mm or 4.8 mm width per pole.
This allows current to flow to other components without having to use additional conductor paths.

Part Numbers

No. of poles	983-SMF-2,8	983-SMF-4,8	Length	PU
1	91.873.803	92.873.803	30,00	100
2	91.873.804	92.873.804	40,00	100
3	91.873.805	92.873.805	50,00	100
4	91.873.806	92.873.806	60,00	100
5	91.873.807	92.873.807	70,00	100
6	91.873.808	92.873.808	80,00	100
7	91.873.809	92.873.809	90,00	50
8	91.873.810	92.873.810	100,00	50
9	91.873.811	92.873.811	110,00	50
10	91.873.812	92.873.812	120,00	50
11	91.873.813	92.873.813	130,00	50
12	91.873.814	92.873.814	140,00	50

General Information

Pitch	10 mm
No. of poles	1 - 12

Technical Data

Clamping Range	*solid / flexible / AWG* 0,5 - 2,5 mm² / 0,5 - 2,5 mm² / 20 - 12 AWG
Rated Cross Section	2,5 mm²
Wire Stripping Length	8,5 mm
Overvoltage Category	III
Pollution Severity Level	3
Rated Voltage	320 V
Rated Impulse Voltage	4 kV
Rated Insulation Voltage	450 V acc. to EN 60998-1
Rated Current	6 A: with receptacles 2,8; wire 1 mm² (16 AWG) 16 A: with receptacles 4,8; wire 2,5 mm² (14 AWG)
Hole in PCB	ø 1,6 mm
Torque	1,2 Nm
Other specifications	Screw-fixing holes ø 3,2 mm. Per pole two wires of identical cross-section can be connected. Indicated rated voltage applies to applications with insulation receptacles.

Material

Moulding	PA, grey, V-0
Comparative Tracking Index	CTI ≥ 600
Insulating Group	I
Temperature Range	-40°C up to 100°C
Pressure clamp	Tin plated brass
Screw	M4; zinc plated steel, blue passivated
Solder pin	0,8 x 1,0 mm; tin plated brass

Approvals

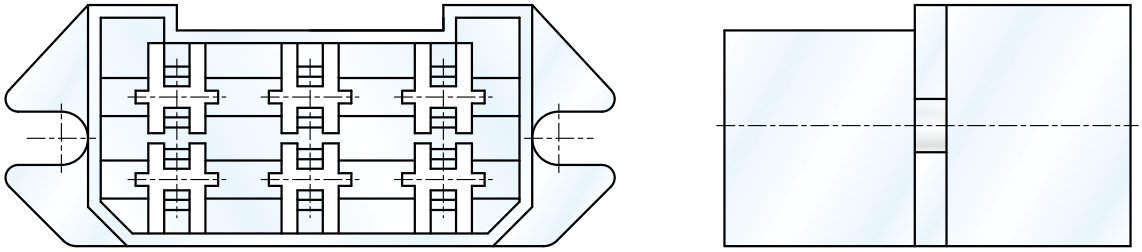
	Current	Voltage	Group	AWG	Nm
	20	300	B	20 - 12	1,13
	6	300	B, D, E	20 - 12	1,13 [1]
	15	300	B	20 - 12	1,33 [2]
	10	300	D, E	20 - 12	1,33 [2]

[1] for 982-SMF-2,8
[2] for 982-SMF-4,8

Options / Accessories

- Consecutive numbering
- Special marking according to drawing
- Self-adhesive marking strip BST-10,00
- Cover cap 983-A
- Securing pins BEF-983, fastening pole position can be freely selected
- Crosshead screws
- Various versions of tabs instead of screw connections

Flat plug guides and housings



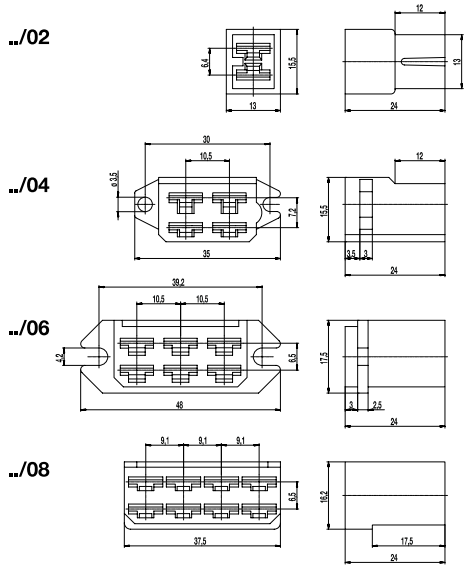
This section contains flat plug guides and housings.

Tab receptacles and housings of series 411 are suitable for all applications in electrical machines, vehicles, equipment and switchgear.

Tab connector or tab receptacle are connected with the terminal lead and inserted into the housing where they latch automatically.

The flat plug guide 440 is used for the insulation of tab connectors with nominal size 6.3.

Plug receptacle
411-B
for tabs 6,3 mm



Series 411 flat plug couplings are suited for electrical machines, vehicles, appliances and switch gear systems.
After crimping the leads, the flat plugs are plugged into the 411-B plug receptacles according to DIN 46340. Index lobes on the metal part lock them into place in the housing.
Subsequently, the housing/plug receptacles combination can now be connected with the 411-S housing equipped with flat plugs resulting in a flat plug coupling suitable in for switch gear applications.

The housing shape prevents false plugging. Pole identifiers are located on the plug openings of the metal parts.

Please note:
Suitable plug receptacles are not included in our product range.

Part Numbers

No. of poles	411-B	PU
2	10.837.004	1000
4	10.837.006	1000
6	10.837.002	500
8	10.837.008	500

Part numbers: "no flame" acc. to glow-wire test

No. of poles	411-B	PU
6	10.837.002.EN6	500

further number of poles on request

General Information

No. of poles	2, 4, 6, 8
Usable with	Flat plug housing 411-S
Areas of application	for electrical machines, vehicles, appliances and switch gear systems

Technical Data

Rated Cross Section	6,0 mm² / 10 AWG
Overvoltage Category	II
Pollution Severity Level	2
Rated Voltage	400 V
Rated Impulse Voltage	4 kV
Rated Current	25 A: with receptacle 6,3; wire 6,0 mm² (10 AWG)

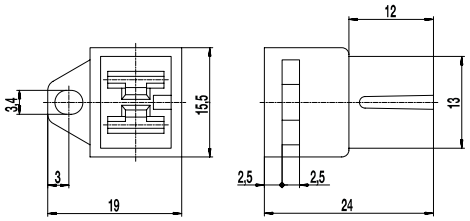
Material

Moulding	PA, natural, V-2 (PA, white, V-0) details in parentheses for "no flame" products
Comparative Tracking Index	CTI ≥ 600
Insulating Group	I
Temperature Range	-40°C up to 100°C

Plug receptacle

411-BML

with fastening flanges, for receptacle for tabs 6,3



Series 411 flat plug couplings are suited for electrical machines, vehicles, appliances and switch gear systems.
After crimping the leads, the flat plugs are plugged into the 411-BML plug receptacles according to DIN 46340.
Index lobes on the metal part lock them into place in the housing.
Subsequently, the housing/plug receptacles combination can now be connected with the 411-S housing equipped with flat plugs resulting in a flat plug coupling suitable in for switch gear applications.

The housing shape prevents false plugging.
Pole identifiers are located on the plug openings of the metal parts.
The housing side is equipped with an additional mounting lug.

Please note:
Suitable plug receptacles are not included in our product range.

Part Numbers

No. of poles	411-BML	PU
2	10.837.011	1000

General Information

No. of poles	2
Usable with	Flat plug housing 411-S
Areas of application	for electrical machines, vehicles, appliances and switch gear systems

Technical Data

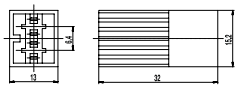
Rated Cross Section	6,0 mm² / 10 AWG
Overvoltage Category	II
Pollution Severity Level	2
Rated Voltage	400 V
Rated Impulse Voltage	4 kV
Rated Current	25 A: with receptacle 6,3; wire 6,0 mm² (10 AWG)

Material

Moulding	PA, natural, V-2
Comparative Tracking Index	CTI ≥ 600
Insulating Group	I
Temperature Range	-40°C up to 100°C

Flat plug housing
411-S
for tabs 6,3 mm

../02



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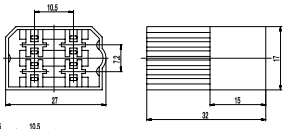

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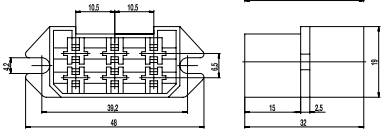

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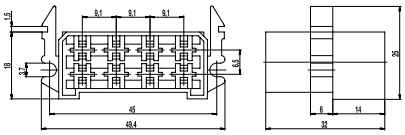


Series 411 flat plug couplings are suited for electrical machines, vehicles, appliances and switch gear systems.
After crimping the leads, the flat plugs are plugged into the 411-S flat plug housing. Index lobes on the metal part lock them into place in the housing.
Subsequently, the housing/flat plug combination can now be connected with 411-B or 411-BML housing equipped with plug receptacles resulting in a flat plug coupling suitable in for switch gear applications.

The housing shape prevents false plugging. Pole identifiers are located on the plug openings of the metal parts.

Please note:
Suitable flat plugs are not included in our product range.

Part Numbers

No. of poles	411-S	PU
2	10.837.003	1000
4	10.837.005	1000
6	10.837.001	500
8	10.837.007	500

Part numbers: "no flame" acc. to glow-wire test

No. of poles	411-S	PU
6	10.837.001.EN6	500

further number of poles on request

General Information

No. of poles	2, 4, 6, 8
Usable with	Plug receptacles 411-B, 411-BML
Areas of application	for electrical machines, vehicles, appliances and switch gear systems

Technical Data

Rated Cross Section	6,0 mm² / 10 AWG
Overvoltage Category	II
Pollution Severity Level	2
Rated Voltage	400 V
Rated Impulse Voltage	4 kV
Rated Current	25 A: with receptacle 6,3; wire 6,0 mm² (10 AWG)

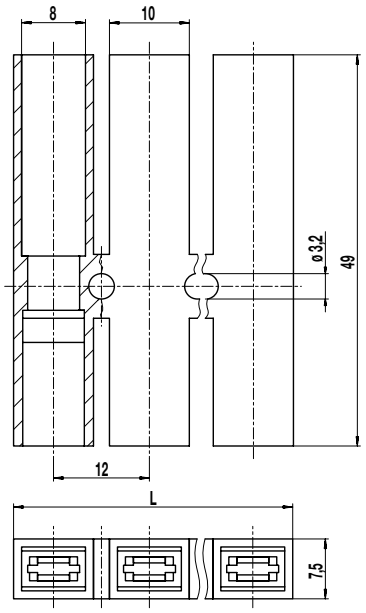
Material

Moulding	PA, natural, V-2 (PA, white, V-0) details in parentheses for "no flame" products
Comparative Tracking Index	CTI ≥ 600
Insulating Group	I
Temperature Range	-40°C up to 100°C

Flat plug guide

440-PA

for tab connections 6,3 mm



Flat plug guides 440-PA are used for insulating flat plug connections of nominal size 6,3.
During assembly, a latch locks the flat plug into place in the housing. The tab receptacle can then be plugged onto the plug.
All along the plug guide, the plug contact is completely insulated.

Part Numbers

No. of poles	440-PA	Length	A *	PU
1	20.830.011	10,00		15 000
2	20.830.012	22,00		1000
3	20.830.013	34,00	12,00	500
4	20.830.014	46,00	24,00	500
5	20.830.015	58,00	36,00	100
6	20.830.016	70,00	48,00	100
7	20.830.017	82,00	60,00	100
8	20.830.018	94,00	72,00	100
9	20.830.019	106,00	84,00	100
10	20.830.020	118,00	96,00	70
11	20.830.021	130,00	108,00	60
12	20.830.022	142,00	120,00	60

** = Distance of the two outermost mounting holes*

General Information

Pitch	12 mm
No. of poles	1 - 12

Technical Data

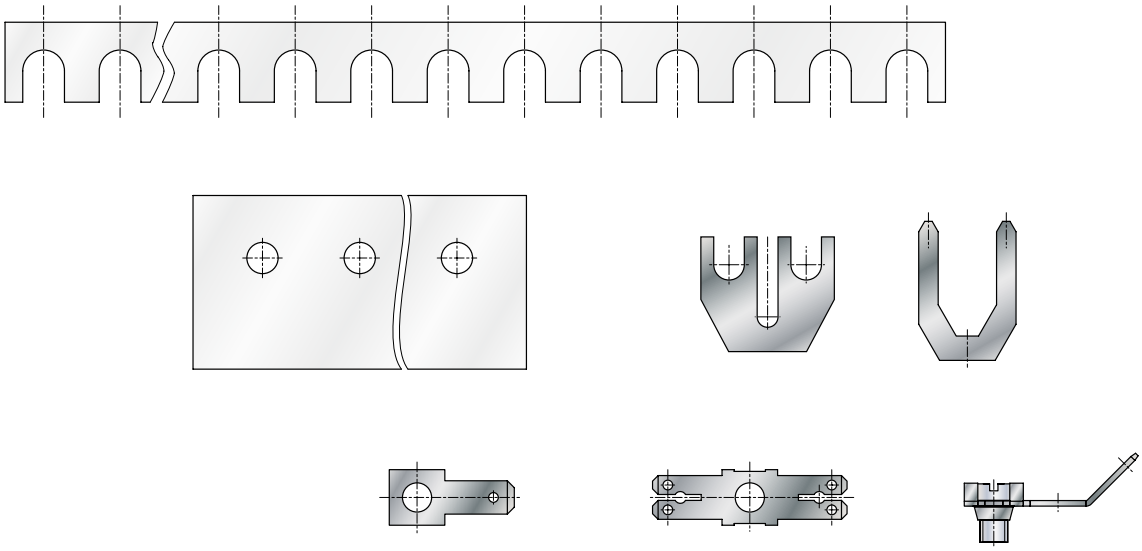
Clamping Range	*solid / flexible / AWG* 6,0 mm² / 10 AWG
Overvoltage Category	III
Pollution Severity Level	2
Rated Voltage	630 V
Rated Impulse Voltage	6 kV
Rated Current	25 A: with receptacle 6,3; wire 6,0 mm² (10 AWG)

Material

Moulding	PA, natural, V-2
Comparative Tracking Index	CTI ≥ 600
Insulating Group	I
Temperature Range	-40°C up to 100°C

Notes

Accessories

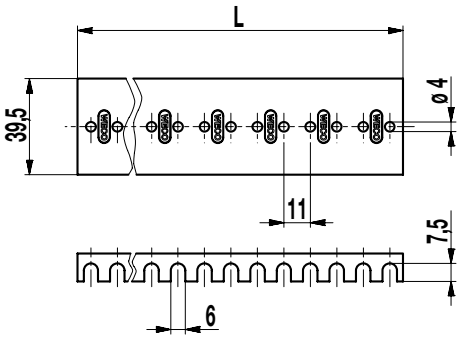


In this section you will find our accessories to the previous products.

In addition to marking strips for series 307/3070, series 422 to 426 and series 982/983, see this section for our range of individual tabs, washers, cover caps and jumpers for our Series 307/3070.

The marking strips are fastened together with the terminal blocks on or under the housing.
By default the designation strips are supplied unmarked.
Upon request we provide a label to according to your specifications. A later inscription can, for example, done with felt-tip pen, ink or stamp paint before or after assembly of the terminal strip.

Cover cap
3070-B1/-B2
Accessories



Caps 3070-B.. cover series 307/3070 connector blocks.
The tab receptacle crimping points protrude the housing by approx. 6 mm. When using our insulation sleeves, the cover caps completely insulate the connectors.
Depending on the number of poles, one or two BEF-3070 securing pins are required. After wiring, the pins are inserted through the mounting holes into the tubular rivets of the package. By pulling out the pins with a tool, the cap can be removed.

ORDERING NOTE:
..-B1 = 1 mounting holes
..-B2 = 2 mounting holes

Part Numbers

No. of poles	3070-B1	3070-B2	Length	PU
2	10.891.028	10.891.017	24,00	800
3	10.891.018	10.891.031	35,00	600
4		10.891.019	46,00	400
5		10.891.020	57,50	112
6		10.891.021	68,50	100
7		10.891.022	79,50	80
8		10.891.023	90,50	72
9		10.891.024	101,50	64
10		10.891.025	113,00	64
11		10.891.026	124,00	20
12		10.891.027	135,00	20

further number of poles on request

General Information

Pitch	11 mm
No. of poles	2 - 12
Usable with	connector blocks 307-PCF; 3070-PCM
Additonal Information	For one-tier poles, securing pins BEF-3070-21 are available, for multi-tier poles securing pins BEF-3070-18 are provided.

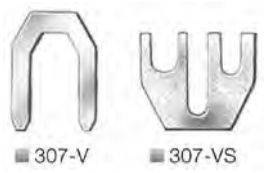
Material

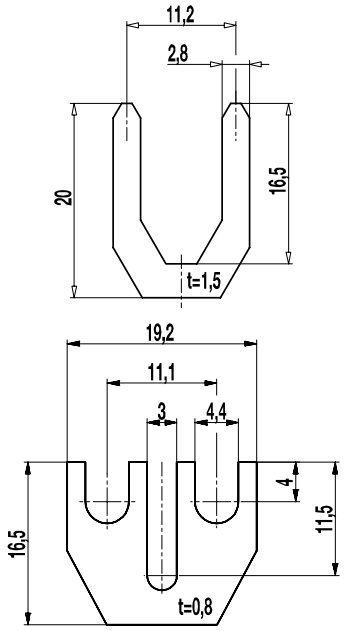
Moulding	PA, natural, V-2
Temperature Range	-40°C up to 100°C

Options / Accessories

- Securing pin BEF-3070

Jumpers
307-V/-VS
Accessories





Jumper 307-V is designed for the tab/screw connectors of series 307-PCF and 3070-PCM. By pushing them into to the tubular rivets from the top, it connects two adjacent poles to an impeccable electrical contact. This jumper cannot be used in combination with the cover caps.

Jumper 307-VS also connects two adjacent screw connections from the side (not SAK-types). Jumpers are made of nickel-plated brass and are supplied loose.

Part Numbers

No. of poles	307-V	307-VS	PU
1	10.451.007	10.454.001	10 000

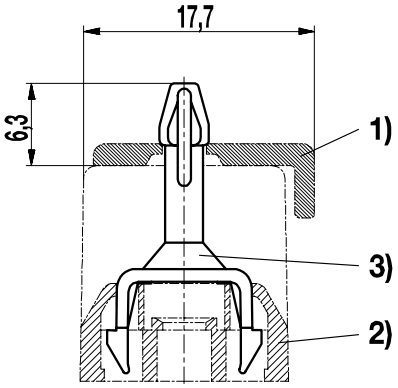
General Information

Usable with	Tab/screw connector blocks 307-PCF; 3070-PCM

Material

Jumpers	Nickel plated brass

Cover cap
982-A
Accessories



1) Cover cap
2) PCB connector
3) Securing pin

The 982-A cover cap is used as shock protection for series 982 PCB connectors.
All cover caps have two ø 3 mm fastening holes.
They are fastened after wiring the strips with two securing pins BEF-983, which are pressed into the first and the last empty pole compartment of the PCB connector.

When ordering series 982 PCB connectors, the two empty pole compartments on the far left and the far right must be specified because terminal pole numbers are only allocated to connected pole compartments.

The number of poles and the cover cap sizes stated herein are already configured according to the number of empty pole compartments, i.e. a 3-pole cover cap is suitable for a 3-pole PCB connector equipped with two additional empty pole compartments.

General Information

No. of poles	1 - 24
Usable with	PCB connectors series 982

Material

Moulding	ABS, transparent
Temperature Range	-30°C up to 80°C

Options / Accessories

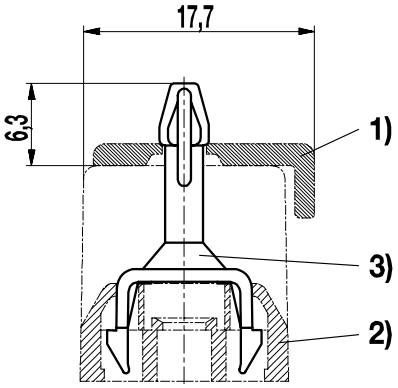
- Fastening holes in different position
- Securing pins BEF-983

Part Numbers

No. of poles	982-A	Length	PU
1	13.891.202	28,50	200
2	14.891.202	38,00	100
3	15.891.202	47,60	100
4	16.891.202	51,10	100
5	17.891.202	66,60	100
6	18.891.202	76,10	100
7	19.891.202	85,70	100
8	20.891.202	95,20	100
9	21.891.202	104,70	100
10	22.891.202	114,30	100
11	23.891.202	123,80	100
12	24.891.202	133,30	100
13	25.891.202	142,80	100
14	26.891.202	152,40	100
15	27.891.202	161,90	100
16	28.891.202	171,40	100
18	30.891.202	190,50	100
20	32.891.202	209,50	100
22	34.891.202	228,60	100
24	36.891.202	247,60	100

further number of poles on request

Cover cap
983-A
Accessories



1) Cover cap
2) PCB connector
3) Securing pin

The 983-A cover cap is used as shock protection for series 983 PCB connectors.
All cover caps have two ø 3 mm fastening holes.
They are fastened after wiring the strips with two securing pins BEF-983, which are pressed into the first and the last empty pole compartment of the PCB connector.

When ordering PCB connectors of series 983, the two empty pole compartments on the far left and the far right must be specified because terminal pole numbers are only allocated to connected pole compartments.

The number of poles and the cover cap sizes stated herein are already configured according to the number of empty pole compartments, i.e. a 3-pole cover cap is suitable for a 3-pole PCB connector equipped with two additional empty pole compartments.

General Information

No. of poles	1 - 24
Usable with	PCB connectors series 983

Material

Moulding	ABS, transparent
Temperature Range	-30°C up to 80°C

Options / Accessories

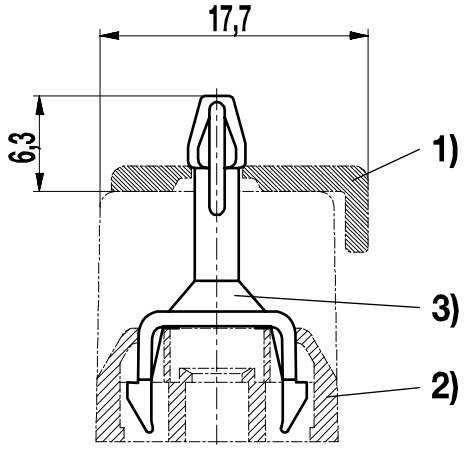
- Fastening holes in different position
- Securing pins BEF-983

Part Numbers

No. of poles	983-A	Length	PU
1	13.891.203	30,00	200
2	14.891.203	40,00	200
3	15.891.203	50,00	200
4	16.891.203	60,00	100
5	17.891.203	70,00	100
6	18.891.203	80,00	100
7	19.891.203	90,00	100
8	20.891.203	100,00	100
9	21.891.203	110,00	100
10	22.891.203	120,00	100
11	23.891.203	130,00	100
12	24.891.203	140,00	100
14	26.891.203	160,00	100
16	28.891.203	180,00	100
18	30.891.203	200,00	100
20	32.891.203	220,00	100
22	34.891.203	240,00	100
24	36.891.203	260,00	100

further number of poles on request

Securing pin
BEF-983
Accessories



1) Cover cap
2) PCB connector
3) Securing pin

The securing pins BEF-983 are used to attach the cover caps onto series 982 and 983 PCB connectors.
Both pins are pressed into the far end empty pole compartments of the series 982 and 983 PCB connectors.

Part Numbers

No. of poles	BEF-983	Length	PU
1	10.476.008		1000

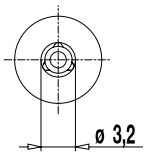
General Information

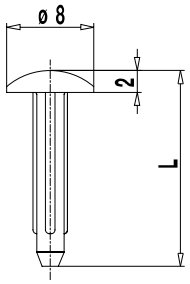
Usable with	PCB connectors series 982 and 983, cover caps 982-A and 983-A

Material

Moulding	PA, grey, V-0
Temperature Range	-40°C up to 100°C

Securing pins
BEF-3070-18/-21
Accessories





Securing pins BEF-3070 fasten cover cap 3070-B on tab/screw connector blocks of series 307-PCF und 3070-PCM.
Depending on the number of poles, one or two securing pins BEF-3070 are required. After the wiring, the pins are inserted through the mounting holes into tubular rivets of the package. By pulling out the pins with a tool, the cap can be removed.

For one-tier poles, securing pins BEF-3070-21 are available, for multi-tier poles securing pins BEF-3070-18 are provided.

Part Numbers

No. of poles	BEF-3070-18	BEF-3070-21	Length	PU
1	10.476.002	10.476.006	18,00 / 21,00	10 000

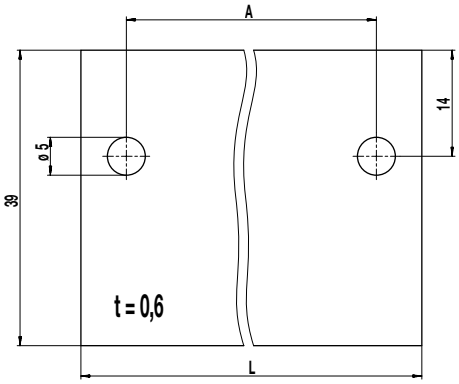
General Information

Usable with	Tab/screw connector blocks 307-PCA/-PCF and 3070-PCM

Material

Moulding	PA, natural, V-2
Temperature Range	-40°C up to 100°C

Marking strip
BST-307
Accessories



Marking strip BST-307 is available for our tab/screw connector blocks 307 and 3070 in 2- to 12-pole design.
They are made of matt white, hard PVC with a thickness of 0,6 mm.
Marking strips are attached on the housing bottom of the connector, where holes are provided in the respective locations.
The marking strip protrudes the connector by approx. 7 mm and therefore offers large marking space.

As standard, the marking strip is delivered without markings. Prior to or after the assembly of the connector, the strips can be marked with e.g. felt markers, ink pens or stamps. Special marking strips with customer-specific marking (letter size approx. 4 mm) are available upon request.

Part Numbers

No. of poles	BST-307	Length	A *	PU
2	10.495.032	42,00	33,00	500
3	10.495.033	53,00	44,00	500
4	10.495.034	64,00	55,00	500
5	10.495.035	75,00	66,00	500
6	10.495.036	86,00	77,00	500
7	10.495.037	97,00	88,00	250
8	10.495.038	108,00	99,00	250
9	10.495.039	119,00	110,00	250
10	10.495.040	130,00	121,00	250
11	10.495.041	141,00	132,00	250
12	10.495.042	152,00	143,00	200

** = Distance of the two outermost mounting holes*

General Information

No. of poles	2 - 12
Usable with	Tab/screw connector blocks 307, 3070

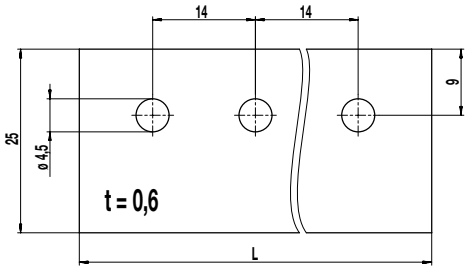
Material

Moulding	Hard PVC, white, mat
Temperature Range	up to 80°C

Options / Accessories

- Consecutive numbering
- Special marking according to drawing

Marking strips
BST-42..
Accessories



Marking strips BST-422 to BST-426 for tab/screw connector blocks 422, 423, 424 and 426 are available in 2-, 4- and 6-pole design.
They are made of matt white, hard PVC with a thickness of 0,6 mm.
Marking strips are attached on the housing bottom of the connector, where holes are provided in the respective locations.
Der Bezeichnungsstreifen steht unter der Leiste um etwa 7 mm vor und bietet so eine große Beschriftungsfläche.

Standardmäßig wird er unbeschriftet geliefert. Die Beschriftung erfolgt z.B. mit Filzschreiber, Tusche oder Stempelfarbe vor oder nach der Montage der Klemmleiste. Als Sonderausführung sind auch kundenspezifische Beschriftungen möglich (Schrifthöhe ca. 4 mm).

Ordering note:
For the variable placeholder („..“) in the type designation, please enter the corresponding number of poles. Example: BST-423 for a 3-pole variant.

Part Numbers

No. of poles	BST-42..	Length	PU
2	10.495.026	20,00	500
3	10.495.027	34,00	500
4	10.495.028	48,00	1000
6	10.495.030	76,00	1000

General Information

Pitch	14 mm
No. of poles	2 - 4, 6
Usable with	Tab/screw connector block series 422-426

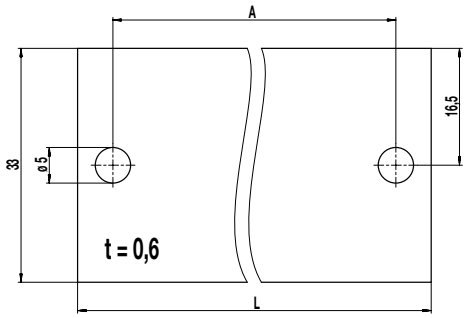
Material

Moulding	Hard PVC, white, mat
Temperature Range	up to 80°C

Options / Accessories

- Consecutive numbering
- Special marking according to drawing

Marking strip
BST-983-F
Accessories



Marking strip BST-983-F is available for our tab/screw connector blocks 982-F and 983-F in 2- to 24-pole design.
They are made of matt white, hard PVC with a thickness of 0,6 mm.
Marking strips are attached on the housing bottom of the connector, where holes are provided in the respective locations.
The marking strip protrudes the connector by approx. 11 mm and therefore offers large marking space.

As standard, the marking strip is delivered without markings. Prior to or after the assembly of the connector, the strips can be marked with e.g. felt markers, ink pens or stamps. Special marking strips with customer-specific marking (letter size approx. 4 mm) are available upon request.

Part Numbers

No. of poles	BST-983-F	Length	A *	PU
2	12.495.111	40,00	30,00	1000
3	13.495.111	50,00	40,00	1000
4	14.495.111	60,00	50,00	1000
5	15.495.111	70,00	60,00	1000
6	16.495.111	80,00	70,00	1000
7	17.495.111	90,00	80,00	500
8	18.495.111	100,00	90,00	500
9	19.495.111	110,00	100,00	500
10	20.495.111	120,00	110,00	500
11	21.495.111	130,00	120,00	500
12	22.495.111	140,00	130,00	500
13	23.495.111	150,00	140,00	250
14	24.495.111	160,00	150,00	250
15	25.495.111	170,00	160,00	250
16	26.495.111	180,00	170,00	250
17	27.495.111	190,00	180,00	250
18	28.495.111	200,00	190,00	250
19	29.495.111	210,00	200,00	250
20	30.495.111	220,00	210,00	250
21	31.495.111	230,00	220,00	250
22	32.495.111	240,00	230,00	250
23	33.495.111	250,00	240,00	250
24	34.495.111	260,00	250,00	250

** = Distance of the two outermost mounting holes*

General Information

No. of poles	2 - 24
Usable with	Tab/screw connector blocks 982-F, 983-F

Material

Moulding	Hard PVC, white, mat
Temperature Range	up to 80°C

Options / Accessories

- Consecutive numbering
- Special marking according to drawing

Tabs
GST-900
Accessories

This tabs for printed circuits with a thickness of 0,8 mm are used to connect receptacles for tabs, size 2,8, 4,8 and 6,3 according to DIN 46 247.
Depending on their scope of application they are available with vertical and/or parallel outgoing wires.
Insulation of the receptacles for taps can be achieved with our ISO insulating sleeves.

Technical Data

Rated Current	Tab 2,8: 6 A Tab 4,8: 16 A Tab 6,3: 25 A please see DIN 46 249

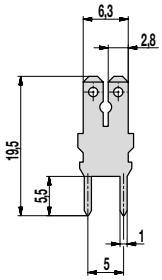
Material

Tab	Tin plated brass, thickness 0,8 mm

Options / Accessories

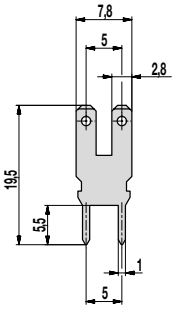
- Insulation receptacles
- GST-900-S tab with press-in pins

Versions



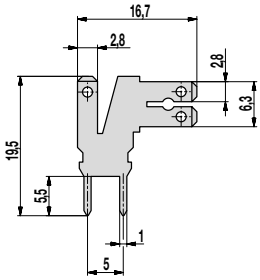
GST-900-S
Tab
1x 6,3 mm / 2x 2,8 mm

For a non-insulated 2,8 mm or an 6,3 mm receptacle for tabs



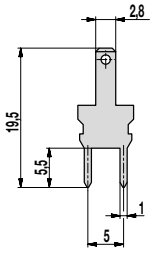
GST-900-SH
Tab 2x 2,8 mm

2 non-insulated 2,8 mm receptacles for tabs fit next to each other

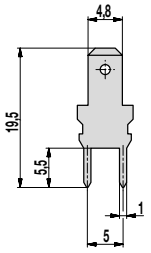


GST-900-W
Tab 1x 2,8 mm
1x 6,3 mm / 2x 2,8 mm

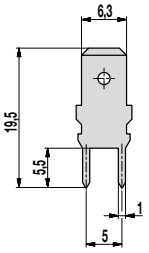
For a non-insulated 2,8 mm or an 6,3 mm receptacle for tabs



GST-900-SUB
Tab 2,8 mm



GST-900-SUC-4,8
Tab 4,8 mm



GST-900-SUN
Tab 6,3 mm

Part Numbers

Type	Part Numbers	PU
GST-900-S	10.351.107	on request
GST-900-SH	10.351.111	on request
GST-900-SUB	10.371.106	on request
GST-900-SUC-4,8	10.361.108	on request
GST-900-SUN	10.351.113	on request
GST-900-W	10.351.109	on request

Tabs for equipment

GST

for plugged-in receptacles 2x 2,8/6,3; 4,8 and 6,3 DIN 46247

These tab connectors are directly mounted onto the equipment, e.g. as ground connection.
They are suitable for tab receptacles according to DIN 46247, with nominal widths 2,8; 4,8; 6,3 x 0,8.

The packaging unit for all tab connectors is 1.000 pieces.

Technical Data

Rated Current	6 A: with receptacle 2,8; wire 1,0 mm² (16 AWG) 16 A: with receptacle 4,8; wire 2,5 mm² (14 AWG) 25 A: with receptacle 6,3; wire 6,0 mm² (10 AWG)

Material

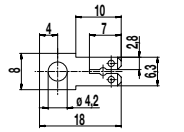
Tab	Nickel plated brass

Options / Accessories

- Also available as tab connector mounted on series 307/3070 and 983-F

Versions

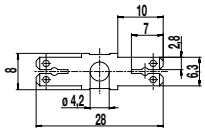
for plugged-in receptacles 2,8/6,3



GST-0-2,8/6,3
11.351.118

GST-45-2,8/6,3
11.351.218

GST-90-2,8/6,3
11.351.318



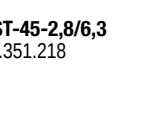
GST-0-0-2,8/6,3
11.352.118

GST-45-45-2,8/6,3
11.352.218

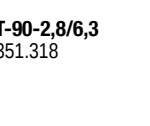
GST-90-90-2,8/6,3
11.352.318

for plugged-in receptacles 4,8

GST-00
11.361.106

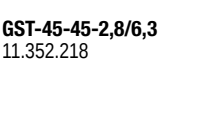


GST-045
11.361.105



GST-090
11.361.107

GST-00-00
11.362.304



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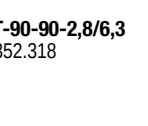
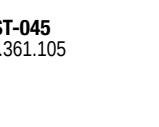


GST-090-090
11.362.303

for plugged-in receptacles 6,3

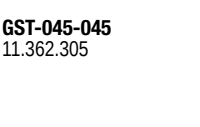
GST-0
11.351.101



GST-45
11.351.201

GST-90
11.351.301

GST-0-0
11.352.102



GST-45-45
11.352.201

GST-90-90
11.352.301

Tabs for equipment

GST-S

for plugged-in receptacles 2x 2,8/6,3; 4,8 and 6,3 DIN 46247, with screw connection

These tab connectors are directly mounted onto the equipment, e.g. as ground connection.
They are suitable for tab receptacles according to DIN 46247, with nominal widths 2,8; 4,8; 6,3 x 0,8.

Contrary to standard tab connectors, this equipment tab connector have an additional screw connection with one
M4x6 screw according to EN ISO 1580. "-SAK" types feature a laterally raised edge preventing incorrect wire insertion. For screw connections without SAK, the wires must be protected from wire offset when fastening the screw.

The packaging unit for all tab connectors is 1.000 pieces.

ADDITIONAL INFORMATION:
Flexible and stranded wires require the use of ferrules and/or cable lugs.

Technical Data

Rated Cross Section	4 mm² (1,5 mm² SAK-Version)
Rated Current	6 A: with receptacle 2,8; wire 1,0 mm² (16 AWG) 16 A: with receptacle 4,8; wire 2,5 mm² (14 AWG) 25 A: with receptacle 6,3; wire 6,0 mm² (10 AWG)
Torque	1,2 Nm

Material

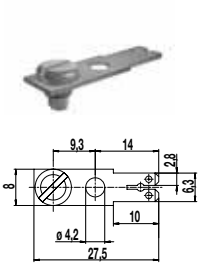
Tab	Nickel plated brass
Screw	M4x6; Zinc plated steel, blue passivated

Options / Accessories

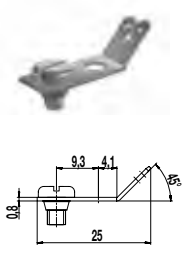
- Tab connectors also available with spring lock washer, washer and M4x8 screw
- Also available as tab connector mounted on series 307/3070 (including type 983-F)

Versions

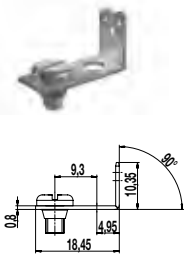
for plugged-in receptacles 2,8/6,3



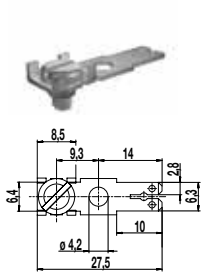
GST-S-0-2,8/6,3
21.351.401



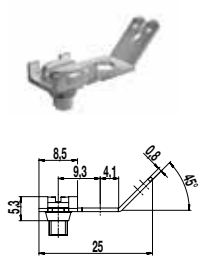
GST-S-45-2,8/6,3
21.351.402



GST-S-90-2,8/6,3
21.351.403



GST-SAK-0-2,8/6,3
21.352.423



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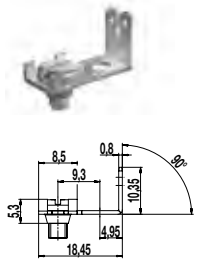
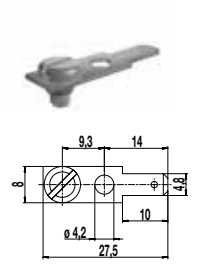
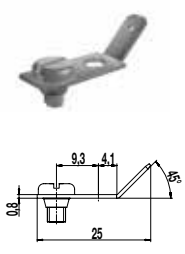


GST-SAK-90-2,8/6,3
21.352.425

for plugged-in receptacles 4,8



GST-S-00
21.362.401



GST-S-045
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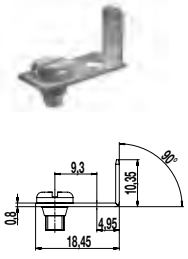

GST-S-090
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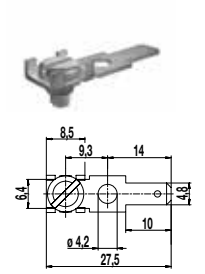

GST-SAK-00
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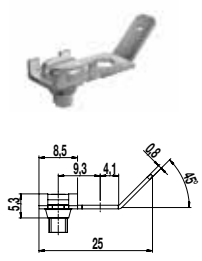

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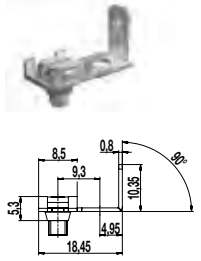
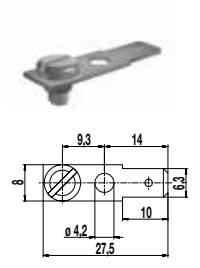
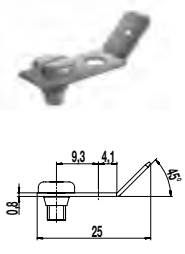


GST-SAK-090
21.362.406

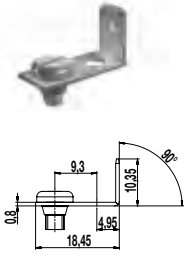
for plugged-in receptacles 6,3



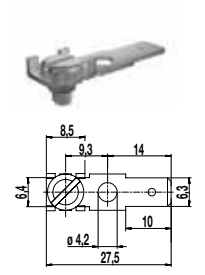
GST-S-0
21.352.401



GST-S-45
21.352.402



GST-S-90
21.352.413



GST-SAK-0
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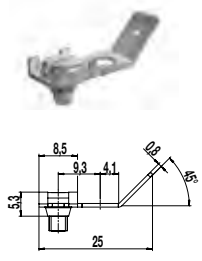
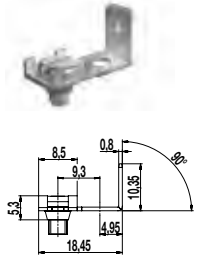
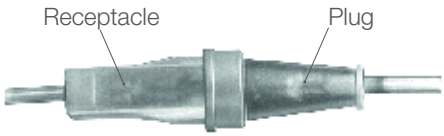


GST-SAK-45
21.352.407



GST-SAK-90
21.352.414

Insulation receptacles
ISO
Accessories



ISO-25 ISO-23

RoHS COMPLIANT

Mounting example

The insulation receptacles, made of polyethylene, are available in various sizes. Receptacles for tabs according to DIN 46 247 are fully insulated (including the crimped point) with insulation receptacles. Prior to crimping, they are pushed onto the wire end and are therefore captive. They can also be used to insulate crimped plug-in receptacles and cable sockets.

General Information

Additonal Information	By means of using both ISO-23 (tab connector side) and ISO-25 insulation receptacles, a 6,3 mm cross-section cable connection can be completely insulated (see figure).

Material

Moulding	PE, natural
Temperature Range	approx. up to 50°C

Options / Accessories

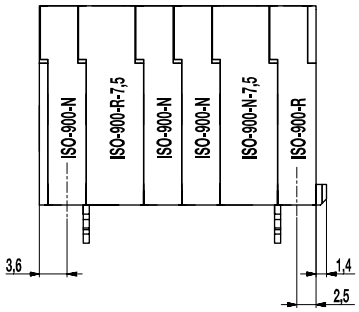
- Insulation receptacles in other colours on request

Part numbers

Part numbers	Type	Colour	Nom. Size	Cross-section*	Length x width x height	Pcs
10.838.001	ISO-110-PEN	natural	2,8	up to 1 mm² (16 AWG)	19,5 x 5,5 x 3,5 mm	10 000
10.838.011	ISO-187-PEN	natural	4,8	up to 1,5 mm² (16 AWG)	21 x 8 x 4,5 mm	10 000
10.838.006	ISO-23-PEN	natural	6,3	up to 2,5 mm² (14 AWG)	23 x 12,5 x 8,5 mm	10 000
10.838.013	ISO-25-PEN	natural	6,3	up to 2,5 mm² (14 AWG)	25 x 9,5 x 5 mm	10 000
10.838.009	ISO-250-PEN	natural	6,3	up to 4 mm² (12 AWG)	25 x 9,5 x 6 mm	10 000

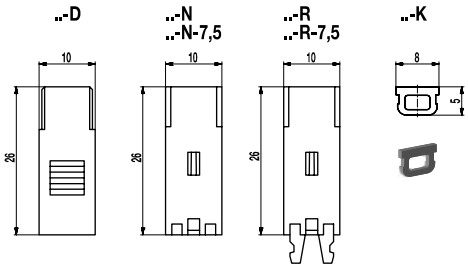
* Since cable diameters vary, cross-sections are only reference values.

Insulation sockets
ISO-900
Accessories



Mounting example

Versions



Version D: Cover
Version N: Standard insulation socket
Version R: Insulation socket with snap-fits
Version K: Coding keys to block empty chambers

ISO-900 insulation sockets are used to insulate double spring contacts.
They are single pole and can be mounted side-by-side in 5 mm and 7,5 mm pitch.
Apart from the standard insulation sockets ISO-900-N und ISO-900-N-7,5, type ISO-900-R and ISO-900-R-7,5 with a latching hook are available to provide additional locking strength against accidental withdrawal. These latching hooks snap in the empty receptacles of tab connectors 900-S and 900-SUN.
The cover ISO-900-D is used as contact protection for the last pole.
Insulation sockets with latching hooks and ISO-900-K coding keys allow contacting the sockets. They are inserted into the empty slots of the tab connector, in which no insulation socket with latching hook is allocated, thus preventing incorrect connections.

Part Numbers

Type	Part Numbers	PU
ISO-900-D	25.838.106	1000
ISO-900-N	10.838.104	1000
ISO-900-N-7,5	10.838.105	1000
ISO-900-R	20.838.107	1000
ISO-900-R-7,5	10.838.108	1000
ISO-900-K	10.496.021	1000

General Information

Pitch	5 mm / 7,5 mm
Usable with	Tab connectors 900-S, 900-SUN and 900-SUC
Additonal Information	When accurately positioned in the socket, the double-spring contacts audibly snap into place. These metal parts are not part of our product range. They can be used e.g. for TYCO timer contacts (no. 925598-1).

Material

Moulding	PA, red, V-0
Comparative Tracking Index	CTI ≥ 600
Insulating Group	I
Temperature Range	-40°C up to 100°C

Options / Accessories

- Special marking according to drawing
- ISO-900 insulation sockets can be provided as multipole combinations. Please enclose a drawing.
- Spacer 5 mm, with plug-in protection (ISO-900-NZ)

Coding systems

Coding keys ISO-900-K

Coding keys ISO-900-K are used for the coding of our tab connectors 900 series.
Depending on the pitch, tab connector strips feature minimum one empty pole cavity between each corresponding tab connector. This cavity can house coding key ISO-900-K, thus allowing for coding in insulating sockets with latching hooks.

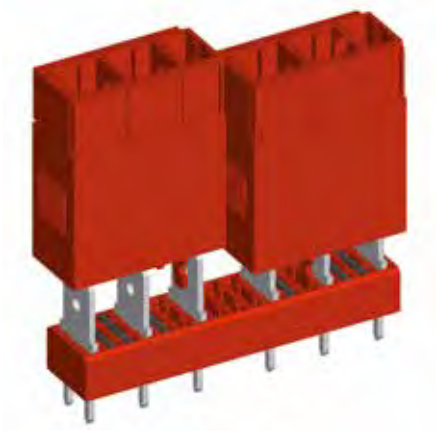
Part number	*Type*	*Colour*	*PU*
10.496.021	ISO-900-K KODIERPLAETTCHEN	grey	100

Usable with:

Tab connector:	Series 900
Insulation sockets:	ISO-900

Coding examples

Tab connector 900-SUN-MIX2/06-KOD



Tab connector 900-SUN-MIX2/06-KOD

Marking

WECO offers marking of individual connections for nearly all terminals and products.

Marking strips

Self-adhesive marking strips consist of polyester with black print on silver background. They are scratch-proof and surface-sealed with Mylar.

The numbering begins with 1. The last digit represents the indicated number of poles.
The marking strips withstand PC board cleaning processes using water and soap, Freon, fluorinated or chlorinated cleaning agents. However, they are not reflow-capable and should therefore only be mounted after the reflow soldering process.
Marking strips are delivered in ten strips per sheet.

Part number	Type	Marking	Pitch	Length (L)	Width (a)	PU
24.499.013	BST-3,50/24	1 2 3 ... 24	3,50 mm	84 mm	3 mm	100
24.499.009	BST-5,00/12	1 2 3 ... 12	5,00 mm	60 mm	3,5 mm	100
24.499.010	BST-5,00/32	1 2 3 ... 32	5,00 mm	160 mm	3,5 mm	100
24.499.006	BST-5,08/12	1 2 3 ... 12	5,08 mm	61 mm	3,5 mm	100
24.499.007	BST-5,08/32	1 2 3 ... 32	5,08 mm	162 mm	3,5 mm	100
24.499.012	BST-7,50/19	1 2 3 ... 19	7,50 mm	141 mm	3,5 mm	100
24.499.011	BST-10,00/16	1 2 3 ... 16	10,00 mm	155 mm	3,5 mm	100
24.499.008	BST-10,16/16	1 2 3 ... 16	10,16 mm	157 mm	3,5 mm	100

InkJet printing

As an alternative to self-adhesive marking strips, we also offer markings according to your specific requirements. Our products are marked by means of inkjet printers. Micro-sized ink droplets are shot accurately to the point and guided by an electric field thus creating the high-precision print – very much like a printed pattern generated by a common matrix printer. This process is fast, easy-to-use and reprogrammable. However, this printing process comprises of the contour precision of the print.
In addition to numbers and letters, special characters can also be printed. The inkjet print features tried and tested scratch- and wipe-resistance.

Standard marking for PCB connectors comes in either black or white - depending on the housing colour. The marking is printed on given surfaces.

Markings for our connectors featured in catalogue 7 are printed in black. Markings may be printed in two locations: either on or between the screw guides (for series 302 only on the screw guides).

Alternatively, WECO offers pad printed markings (also in special colours). Pad-printed markings excel with high-precision contours of the print, but are higher-priced due to the more elaborate printing process.

InkJet printing
(graphic illustration)

Tampon printing
(graphic illustration)

Packaging

As standard, we deliver our products packaged in eco-friendly folding boxes made of cardboard or corrugated board.

In order to ensure efficient automated assembly and subsequent soldering of our components, WECO offers various component packaging systems, such as

Tape-on-Reel

These carrier tapes on reels are suitable for most SMD and THR components. They feature blisters and are sealed with a cover film.

WECO offer reels in different widths of 24 mm, 32 mm, 44 mm, 56 mm, 72 mm or 88 mm.

Trays

WECO also offers trays as another option for automated component assembly. The flat trays feature component pockets, they are stackable and ensure sufficiently large component supply.

Bar magazines

Our 550 mm bar magazines have various geometries which are tailored to the individual component size and shape. Both magazine ends are closed with a plug that is easy to remove.

Delivered in cardboard folding boxes, bar magazines are easy to unpack.

When assembling components from tape-on-reels or trays, the placement head vacuum-picks the component from the tape or the tray, verifies the position by means of a camera system, calculates angle and position offset to the nominal position and places the component onto the PC board. After all components have been placed, a conveyor system transports the assembled PC board downstream.

All three component packaging types use anti-static materials to avoid problems with electrostatic discharges (ESD).

Other options

Moulding colours

WECO offers a multitude of various moulding colours.
In addition to our standard colours charcoal grey, black, vermilion and natural other moulding colours are also possible.

Please contact us for further information, we look forward to assisting you.

Standard colours

- Charcoal grey (similar to RAL U706)
- Black (similar to RAL 9011)
- Vermilion (similar to RAL 2002)
- Natural

Special colours

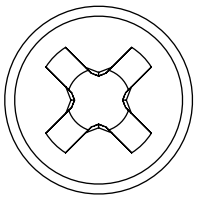
- Red orange (similar to RAL 2001)
- Heather violet (similar to RAL 4003)
- Zinc yellow (similar to RAL 1018)
- Brilliant blue (similar to RAL 5007)
- Yellow green (similar to RAL 6018)
- Light grey (similar to RAL 7035)
- White (similar to RAL 9010)

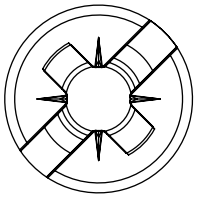
Screws

We use standard slotted-head screws for our products.

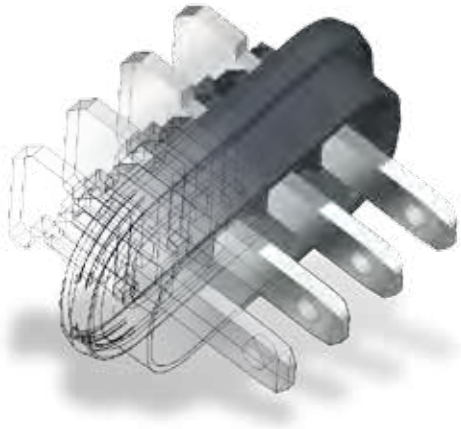
Upon inquiry and specific customer request, we also offer screws with Phillips/ Pozidriv or +/- screw heads.

Other materials:
Our products are predominantly equipped with steel screws. Upon request, screws made of alternative materials, such as brass, are also available.





Looking for a Customer Designed Solution?



„Sealed“

With a pitch of 3.5 mm, this insert with four tabs 2.8 x 0.8 mm was designed to seal the contacts to fulfill the application according to protection class IP54.

„Top“

Version of a terminal our series 970 in 5 mm pitch.
In order to achieve a distance of 100 mm from the PCB, a housing was constructed, which not only does protect the pins but also positions them in a special arrangement. In the terminal area are also placed elongated ribs.

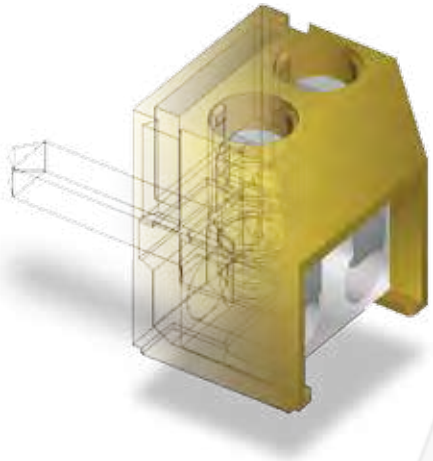
Our Product Information Centre will assist you with every technical inquiry.

- Please, call us under +49 6181 105-151.
- Contact us via e-mail at products@wecogroup.com.
- You want us to pay you a visit? We are pleased to arrange an appointment.
- You would prefer a visit in Hanau?
  Of course, you are welcomed anytime.

We are looking forward to your call.

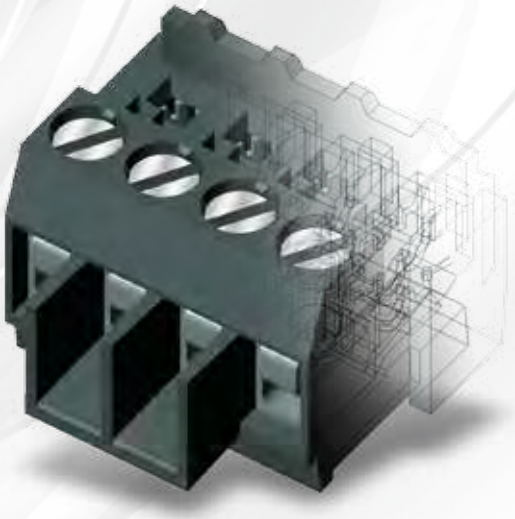
„Well Contacted“

This plug connector with the pitch of 5 mm is designed with outer gold-plated contact surfaces. Additionally, the side walls provide ribs for receiving a corresponding locking hook.



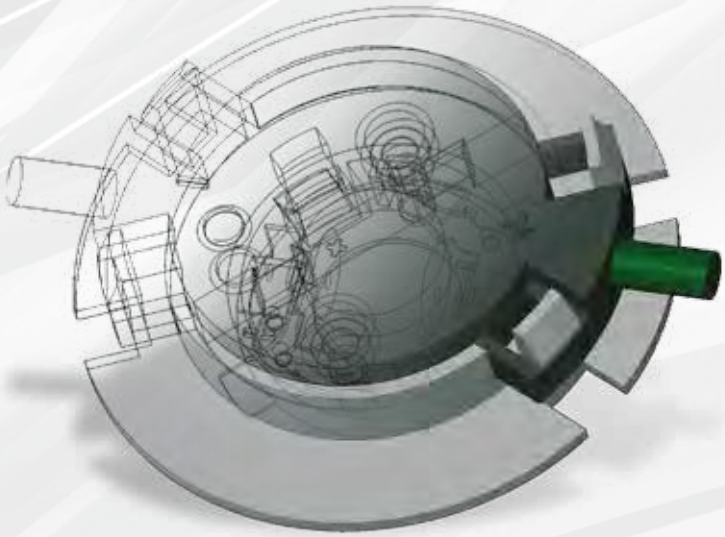
„Stable bridged“

Terminal connector in 5 mm pitch with one potential but two screw connections and a plug connector at the back. This allows a connection to other terminals.
For the customer the housing was made with zinc yellow material (similar to RAL 1018).



„Long-ribbed“

A plug connector with a pitch of 3.5 mm, with a anti-twist peg and two extra-long guiding ribs.
In the plug connection area, tabs and round plug pins could be contacted.



„Solar“

Draft for a photovoltaic-module connection.

Our Publications

Electronic

Catalogue 1
Connection technology for PCB
Pitch 3,5 mm
Part No. 36.955.102

Catalogue 2
Connection technology for PCB
Pitch 5 mm
Part No. 37.955.102

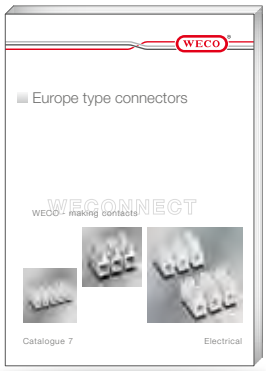
Catalogue 3
Connection technology for PCB
Pitch 5,08 mm
Part No. 38.955.102

Catalogue 4
Connection technology for PCB
Pitch 7,5 mm
Part No. 39.955.102

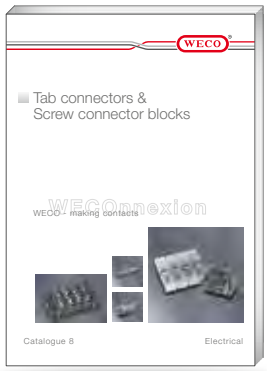
Catalogue 5
Connection technology for PCB
up from pitch 10 mm
Part No. 40.955.102

Catalogue 6
Connection technology for PCB
SMD & THR
Part No. 41.955.102

Electrical

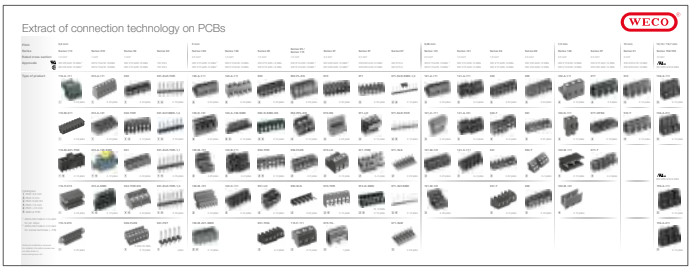


Catalogue 7
Europe type connectors
„WECONNECT“
Part No. 51.955.102

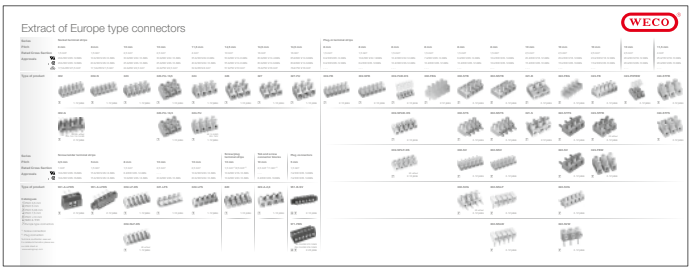


Catalogue 8
Tab connectors &
Screw connector blocks
„WECOnnexion“
Part No. 64.955.102

Our Publications



Overview
Connection technology for PCB
for Catalogue 1-6
Part No. 42.955.102



Overview
Europe type connectors
for Catalogue 7
Part No. 53.955.102

Flyer
„White Goods“
Extract from our product range
Part No. 55.955.102

Flyer
„Security Technology“
Extract from our product range
Part No. 56.955.102

Flyer
„Application Examples for
WECO products in lighting
technology“
Part No. 66.955.102

Flyer
„Heating Technology“
Extract from our product range
Part No. 58.955.102

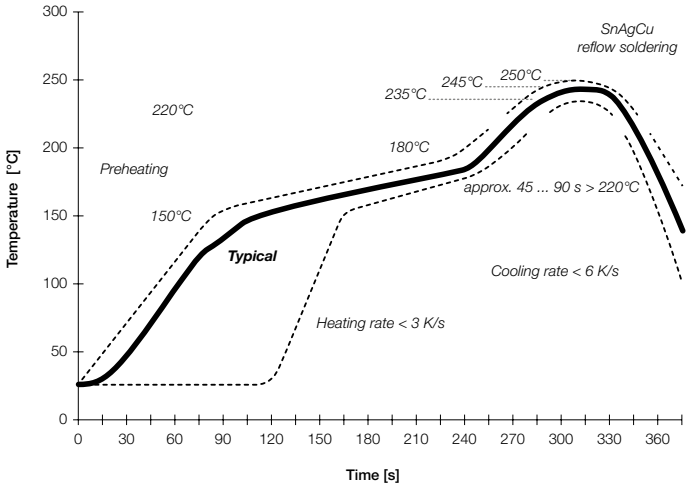
Soldering processes

As a principle, soldering electrically and mechanically connects electronic components to printed circuits forming a subassembly.

The solder contributes essentially to the operational reliability of an assembly. Among the various soldering methods, such as reflow soldering and wave soldering, Surface-Mount-Technology (SMT) using reflow soldering is the most common and cost-efficient process.

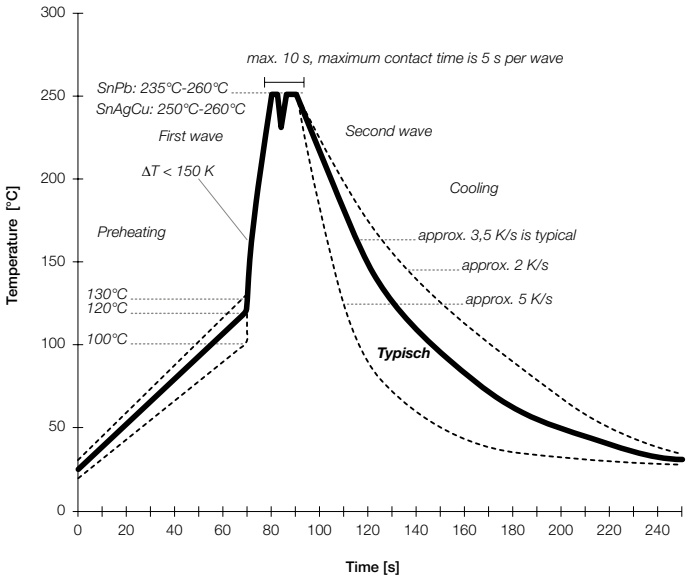
Reflow soldering

During the reflow soldering process, printed circuit boards assembled with SMD and THR components, are passed at a constant speed through various heating zones of a furnace (preheating, reflow soldering and furnace cooling).
In contrast to wave soldering, components and their plastic packages are exposed to the same temperatures as the metallic contacts to be soldered.
Electrical components, printed circuit boards and solder joints are heated either by infrared, convection or a vapor phase processes. In order to avoid oxidation of the solder pads on the printed circuit, this process can also be conducted under inert atmosphere.



Wave soldering

Wave soldering processes are suitable for soldering conventional components.
A conveyor system moves the PCB through the soldering system at a constant speed. Upstream in the wave soldering system, the PCB and its components pass through the fluxer. Downstream in the preheating zone, the solvents contained in the fluxer are vaporized thus activating the flux.
Liquid solder is continuously pumped flowing over edges, through holes or into gaps, forming a wave of solder. This solder wave conveys and wets the underside of the printed circuit. Capillary forces raise the solder through the space between hole and component lead (solder pin) forming the characteristic solder meniscus.



The shown tables represents two solder temperature profiles compliant with EN 61760-1. Due to the various customer-specific parameters (e.g. soldering system, solder paste, component arrangement and orientation) the profiles are only recommendations and should be used accordingly.

Technical Information

Rating of clearance and creepage distances according to DIN EN 60664-1 (VDE 0110-1)

The rating of clearance and creepage distances depends on the expected electrical surge, the characteristic values of the electronic protection measures as well as the contamination at the place of installation.
Clearance distances are dimensioned in accordance with the rated impulse voltage (see table F.1), which results out of the overvoltage category and phase-to-earth voltage.
The minimum clearance in air is stated at altitudes of less than 2000 m above sea level and ascertained in accordance with the impulse voltage and the contamination level, see table F.2.
Creepage distances are measured by the operating voltage, the characteristic of the insulants (CTI value), the expected contamination level as well as the preventive measures against contamination.
Basis of the creepage distance is the rated voltage derived from the operating and / or system voltage.
The minimum creepage distance (depending on the respective degree of contamination) are assigned to the rated voltage, see table F.4.

F.1 DIN EN 60664-1 (VDE 0110-1), table F.1 (extract)
Rated impulse voltages for electrical equipments, which are energised directly by a low-voltage system

Nominal voltage of the supply system [1] based on IEC 60038 [3]		Rated impulse voltage [2]			
		Overvoltage catagory [4]			
Three phase	Single phase	I	II	III	IV
V	V	V	V	V	V
	120-240	800	1 500	2 500	4 000
230/400 277/480		1 500	2 500	4 000	6 000
400/690		2 500	4 000	6 000	8 000
1 000		4 000	6 000	8 000	12 000

[1] See Annex B for application to existing different low-voltage mains and their nominal voltages.
[2] Equipment with these rated impulse voltages can be used in installations in accordance with IEC 60364-4-44.
[3] The / mark indicates a four-wire three-phase distribution system. The lower value is the voltage line-to-neutral, while the higher value is the voltage line-to-line. Where only one value is indicated, it refers to three-wire, three-phase systems and specifies the value line-to-line.
[4] See 4.3.3.2.2 for an explanation of the overvoltage catagories.

F.4 DIN EN 60664-1 (VDE 0110-1), table F.4 (extract)
Creepage distance for the avoidance of the failure by tracking

Voltage r.m.s. [1]	Minimum creepage distances								
	Printed wiring material								
	Pollution degree								
	1	2	1	2			3		
	All material groups	All material groups except IIIb	All material groups	Material group I	Material group II	Material group III	Material group I	Material group II	Material group III [2]
V	mm	mm	mm	mm	mm	mm	mm	mm	mm
25	0,025	0,040	0,125	0,500	0,500	0,500	1,250	1,250	1,250
32	0,025	0,040	0,14	0,53	0,53	0,53	1,30	1,30	1,30
40	0,025	0,040	0,16	0,56	0,80	1,10	1,40	1,60	1,80
50	0,025	0,040	0,18	0,60	0,85	1,20	1,50	1,70	1,90
63	0,040	0,063	0,20	0,63	0,90	1,25	1,60	1,80	2,00
80	0,063	0,100	0,22	0,67	0,95	1,30	1,70	1,90	2,10
100	0,100	0,160	0,25	0,71	1,00	1,40	1,80	2,00	2,20
125	0,160	0,250	0,28	0,75	1,05	1,50	1,90	2,10	2,40
160	0,250	0,400	0,32	0,80	1,10	1,60	2,00	2,20	2,50
200	0,400	0,630	0,42	1,00	1,40	2,00	2,50	2,80	3,20
250	0,560	1,000	0,56	1,25	1,80	2,50	3,20	3,60	4,00
320	0,75	1,60	0,75	1,60	2,20	3,20	4,00	4,50	5,00
400	1,0	2,0	1,0	2,0	2,8	4,0	5,0	5,6	6,3
500	1,3	2,5	1,3	2,5	3,6	5,0	6,3	7,1	8,0
630	1,8	3,2	1,8	3,2	4,5	6,3	8,0	9,0	10,0
800	2,4	4,0	2,4	4,0	5,6	8,0	10,0	11,0	12,5
1000	3,2	5,0	3,2	5,0	7,1	10,0	12,5	14,0	16,0

[1] This voltage is
- for functional insulation, the working voltage,
- for basic and supplementary insulation of the circuit energized directly from the supply mains (see 4.3.2.2.1), the voltage rationalized through Table F.3a or Table F.3b, based on the rated voltage of the equipment, or the rated insulation voltage,
- for basic and supplementary insulation of systems, equipment and internal circuits not energized directly from the mains (see 4.3.2.2.2), the highest r.m.s. voltage which can occur in the system, equipment or internal circuit when supplied at rated voltage and under the most onerous combination of conditions of operation within equipment rating.

[2] Material group IIIb is no not recommended for application in pollution degree 3 above 630 V.

Overvoltage categories

Overvoltage category IV

Electrical equipments for the use at the connection point of the installation e.g. electricity meter and primary over-current protection devices.

Overvoltage category III

Electrical equipment in firm installations and for such cases in which special demands are made against the reliability and the availability of the electrical equipment, e.g. switches in firm installations and devices for industrial use with continuing connection to the firm installation.

Overvoltage category II

Energy using electrical equipment, which is energised by a firm installation e.g. household appliances, portable tools and other domestic appliances as well as similar devices.

Overvoltage category I

Electrical equipment for the connection to electric circuits, in which measures are taken for the delimitation of the transient overvoltages to a suitable low value, e.g. devices with electronic circuits and appropriate protection level.

Technical Information

Degree of contamination

The micro environment determines the influence of the contamination on the isolation.
However the macro environment must be considered with the view of the micro environment.
Resources to achieve a reduction of the contamination on the regarded isolation can be planned by the effective employment of casings (housings), encapsulations or hermetic sealings.
The influence of the contamination is considered with the calculation of air and creepage distances by degrees of pollution.

Four degrees of contamination levels are defined for the micro environment:

Contamination level 1
No contamination or only dry, non-conductive contamination occurs. The contamination has no influence;

Contamination level 2
Only non-conductive contamination occurs. However, occasional temporary conductivity must be expected as a result of moisture condensation;

Contamination level 3
Conductive contamination occurs; dry, non-conductive contamination which becomes conductive as a result of moisture condensation may also occur;

Contamination level 4
Impurities in the form of conductive dust, rain or humidity result in permanent conductivity.

F.2 DIN EN 60664-1 (VDE 0110-1), table F.2 (extract)
Clearance for transient overvoltages

Required impulse withstand voltage [1) 5)]	Mimimum clearence in air up to 2 000 m above sea level		
	Case A Inhomogeneous field (see 3.15)		
	Pollution degree		
	1	2	3
kV	mm	mm	mm
1,2	0,25	0,25	0,8 [4)]
1,5 [2)]	0,5	0,5	
2,0	1,0	1,0	1,0
2,5 [2)]	1,5	1,5	1,5
3,0	2,0	2,0	2,0
4,0 [2)]	3,0	3,0	3,0
5,0	4,0	4,0	4,0
6,0 [2)]	5,5	5,5	5,5
8,0 [2)]	8,0	8,0	8,0

1) This voltage is
- for functional insulation, the maximum impulse voltage expected to occur accross the clearence (see 5.1.5),
- for basic insulation directly exposed to or significantly influenced by transient overvoltages from the low-voltage mains (see 4.3.3.3, 4.3.3.4.1 and 5.1.6), the rated impulse voltage of the equipment,
- for other basic insulation (see 4.3.3.4.2), the highest impulse voltage that can occur in the circuit.

2) Prefered values as specified in 4.2.3.

4) The minimum clearences given for pollution degrees 2 and 3 are based on the reduced withstand characteristics of the associated creepage distance under humidity conditions (see IEC 60664-5).

5) For parts or circuits within equipment subject to impulse voltages according to 4.3.3.4.2, interpolation of values is allowed. However, standardization is achieved by using the preferred series of impulse voltage values in 4.2.3.

Insulant

DIN EN 60664-1 (VDE 0110-1) divides the insulants according to their CTI values in four groups. These are:

Insulant I: $600 \leq CTI$
Insulant II: $400 \leq CTI < 600$
Insulant IIIa: $175 \leq CTI < 400$
Insulant IIIb: $100 \leq CTI < 175$

The check numbers of the tracking must be determined according to IEC 60112 at an examination body using test solution A. The check number of the tracking is used as a proof of the creepage characteristics of insulants.

Technical Information

Rated cross section

The current carrying capacity depends not only on the terminal design, but also on the application of the terminals. The appropriate specifications for the devices, e.g. DIN EN 60335-1 (VDE 0700-1), should be taken into account.
According to DIN EN 60999-1 / VDE 0609 part 1, the current cross section and respectively the rated connection ability of a connection referres to the wire cross section indicated by the manufacturer, to which determined thermal, mechanical and electrical requirements apply to.
The relationship between rated connection abilities and diameters of the wires is represented in table 1.
If nothing else is specified in the product standard, each connection point must be able to take up not only its rated cross section (rated connection ability) but also the next two lower cross sections.
Connecting points must be able to take up unprepared wires.
Regarded as unprepared wires are all cables stripped at their ends, whose form is adjusted before insertion or whose wires are twisted for the purpose of the solidification.
In the USA and Canada an identification is used by leader sizes (AWG) instead of the cross section indicated in mm².

T1 DIN EN 60999-1, table 1 (extract)
Relation between rated connection abilities and wires

Rated cross section	Theoretical diameter of the largest conductor						
	metric			AWG			
	solid		flexible	solid			flexible
	single wire	multi-stranded wire			b) single wire	b) Class B multi-stranded wire	c) Class I, K, M multi-stranded wire
mm²	mm	mm	mm	No.	mm	mm	mm
0,2	0,51	0,53	0,61	24	0,54	0,61	0,64
0,34	0,63	0,66	0,8	22	0,68	0,71	0,80
0,5	0,9	1,1	1,1	20	0,85	0,97	1,02
0,75	1,0	1,2	1,3	18	1,07	1,23	1,28
1,0	1,2	1,4	1,5	–	–	–	–
1,5	1,5	1,7	1,8	16	1,35	1,55	1,60
2,5	1,9	2,2	2,3 a)	14	1,71	1,95	2,08
4,0	2,4	2,7	2,9 a)	12	2,15	2,45	2,70
6,0	2,9	3,3	3,9 a)	10	2,72	3,09	3,36
10,0	3,7	4,2	5,1	8	3,34	3,89	4,32
16,0	4,6	5,3	6,3	6	4,32	4,91	5,73
25,0	–	6,6	7,8	4	5,45	6,18	7,26
35	–	7,9	9,2	2	6,87	7,78	9,02

NOTE The diameter of the largest solid and flexible wire is based on Table 1 according to IEC 60228A and IEC 60344 and for AWG conductors on ASTM B 172-71 [4], ICEA-Publication S-19-81 [5], ICEA-Publication S-66-524 [6] and ICEA-Publication S-66-516 [7].

a) Information only for flexible wires in class 5 of IEC 60228A.
b) Nominal + 5 %.
c) Largest diameter for each of the three classes I, K, M + 5 %.

Current carrying-capacity

Technical data state a maximum rated current at which no thermal damage or malfunctions occur, if a certain ambient temperature and rated cross-section is provided. The rated current is a current which the terminal or connector can carry simultaneously at all contacts without exceeding the maximum permissible temperature limit.

Appropriate test currents are applied to the rated cross sections (see table T2). Depending on the connection type, the maximum permissible heating of the clamping unit is limited to 45 K (acc. to DIN 60998-1, Temperature Rise Test for PCB Connectors) and to 30 K (acc. to DIN 60512-5-1, Temperature Rise Test for Plug Connectors)
Based on the results of the temperature rise test acc. to DIN EN 60512-5-2 and the rated cross-section, a current carrying curve (base curve) is generated under consideration of the upper temperature limit for the insulating material and depending on the ambient temperature.

This base curve is used to determine the current carrying capacity of PCB connectors. For plug connectors, the base curve is corrected by factor 0.8 (derating curve). The permissible current carrying capacity not only depends on the terminal design but also the final application of the terminal. The corresponding equipment specifications, e.g. DIN EN 60335-1 (VDE 0700-1) must be observed.

T2 DIN EN 60998-1, table 2 (extract)
Relation between rated connection abilities and testing current

Rated Cross-section	Load capacity
mm²	A
0,2	4
0,34	5
0,5	6
0,75	9
1	13,5
1,5	17,5
2,5	24
4	32
6	41
10	57
16	76
25	101
35	125

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3: Pitch 5,08 mm
4: Pitch 7,5 mm
5: Pitch >10 mm
6: SMD & THR

Electrical

7: Europe type connectors
8: Tab connectors & Screw connector blocks

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Art.-No.: 64 955 102
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