MOLEX HIGH-CURRENT ›
UNIVERSAL CLAMP TERMINAL BLOCK

A vital connection between high-current,
high-voltage devices and the power source

molex®

Where are Molex High-Current, Universal Clamp Terminal Blocks Needed?

Molex High-Current, Universal Clamp Terminal Blocks are a versatile solution for many application requirements where Aluminum to Aluminum, Copper to Copper or Aluminum to Copper conductor terminations are needed. Reliability and safety become paramount where a high-current and voltage power source is terminated to building infrastructure or an electrical device. Molex High-Current, Universal Clamp Terminal Blocks can be depended on to perform at the highest level of performance and standards.

Depend on Molex High-Current, Universal Clamp Terminal Blocks for such applications as...

Motor inverters
Motor drives
Motor control systems
Switchgears
Power distribution panels and cabinets
Vehicle charging stations
Commercial Vehicles
Electric trains
Photovoltaic systems

Infrastructure

Renewable Energy

Commercial Vehicle

Metering and Control

Maritime

Waste Water Treatment

Doors and Gates

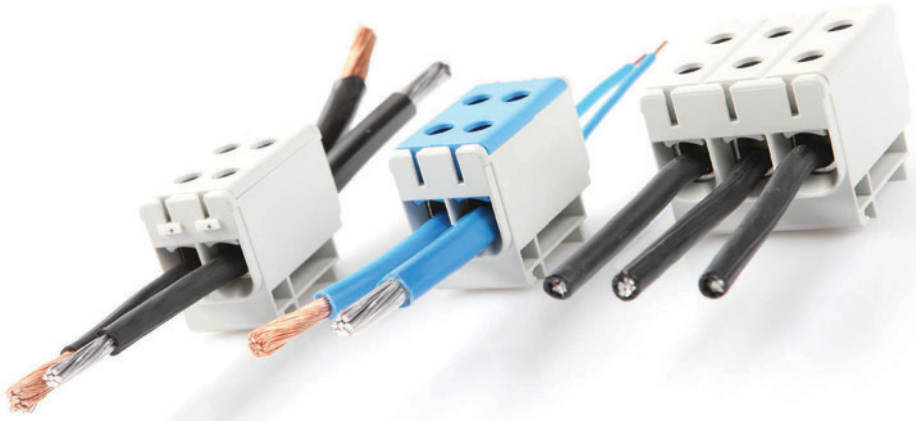
Mass Transportation

The Case for IEC EN 61238-1:2003 Class A Certification

Molex High-Current, Universal Clamp Terminal Blocks are suitable for Aluminum wire terminations. This means the Molex connectors have been short circuit tested according to the stringent requirements of IEC standard EN 61238-1:2003 to be Class A Certified for both general equipment and as feed-in terminations. Aluminum is a common wire material for high-voltage, high-amperage power feed line applications. Customers can rest assured Molex connectors will be reliable for their applications.

Molex Universal Terminal Blocks are suitable for feed-in lines

Molex Universal Terminal Blocks are suitable electrical switchboards



Conductor Material Conflict Resolution

As a rule, Aluminum and Copper alloys do not co-exist very well. When the two alloys come in contact, a chemical reaction takes place that causes them to oxidize. The oxidation can create a electrically high-resistance connection. This potential condition generates voltage drop across the connection leading to three serious problems:

Poor efficiency

Equipment damage

Dangerous thermal runaway which can create an electrical fire

Molex High-Current, Universal Clamp Terminal Blocks are designed to safely connect Aluminum and Copper wires due to their isolated, Tin plated Aluminum contacts and screws. Tin is a plating that can come into contact with either Aluminum or Copper conductors as it will not oxidize with either material. The connector body is also partitioned to prevent a bare Aluminum wire from coming in contact with a bare Copper wire.

Specifications

Certification Marks: UL, CE
Design Standards: UL: 1059
IEC: EN60947-7-1:2009; EN61238-1:2003

Technical Information
Maximum Voltage (UL): 600 to 1000
Amperage Range (UL): 120 to 380
*Wire Range: 500 MCM to 6 AWG

Materials
Housing: Polyamide
Body and screws: Tin-coated aluminum

Mechanical Features
Screw head: Hexagonal
Mounting: Screws or DIN rail

*Ferrules are recommended when using the product with flexible wire.

35mm DIN rail MX-PP37

Marking Strips MX-PM34.0X
(Contact factory for list of available marks)

MX-KE63.2

MX-69.3

MX-KE161.2

MX-KE162.6

DIN rail end clip MX-KRL2

MX-KE61

MX-KE66

MX-KE161

Terminal Shroud MX-KEL62

MX-KE163.4

One pole terminal blocks, 600V maximum rating

Order No.	Engineering No.*	Wire Type	Wire Gauge (AWG)	Maximum Voltage	Maximum Amperage	Tightening Torque (in/lbs)	Allen-hex Socket Head Required (mm)	Mounting Type	Weight (g)	Package Quantity
201606-0610	MX-KE61	Cu	1/0 – 6	600	150	90 (10nm)	5	DIN Rail	30	30
		Al			120					
201606-0620	MX-KE62	Cu	4/0 – 4	600	230	126 (14nm)	5	DIN Rail/ Screw	74	30
		Al			180					
201606-0630	MX-KE63	Cu	300 MCM – 2	600	285	216 (24nm)	8	DIN Rail/ Screw	120	30
		Al			230					
201606-0640	MX-KE64	Cu	500 MCM – 3/0	600	380	360 (40nm)	8	Screw	249	30
		Al			310					

Three pole terminal block, 600V maximum rating

Order No.	Engineering No.*	Wire Type	Wire Gauge (AWG)	Maximum Voltage	Maximum Amperage	Tightening Torque (in/lbs)	Allen-hex Socket Head Required (mm)	Mounting Type	Weight (g)	Package Quantity
201606-6163	MX-KE61.03	Cu	1/0 – 6	600	150	90 (10nm)	5	DIN Rail	77	30
		Al			120					

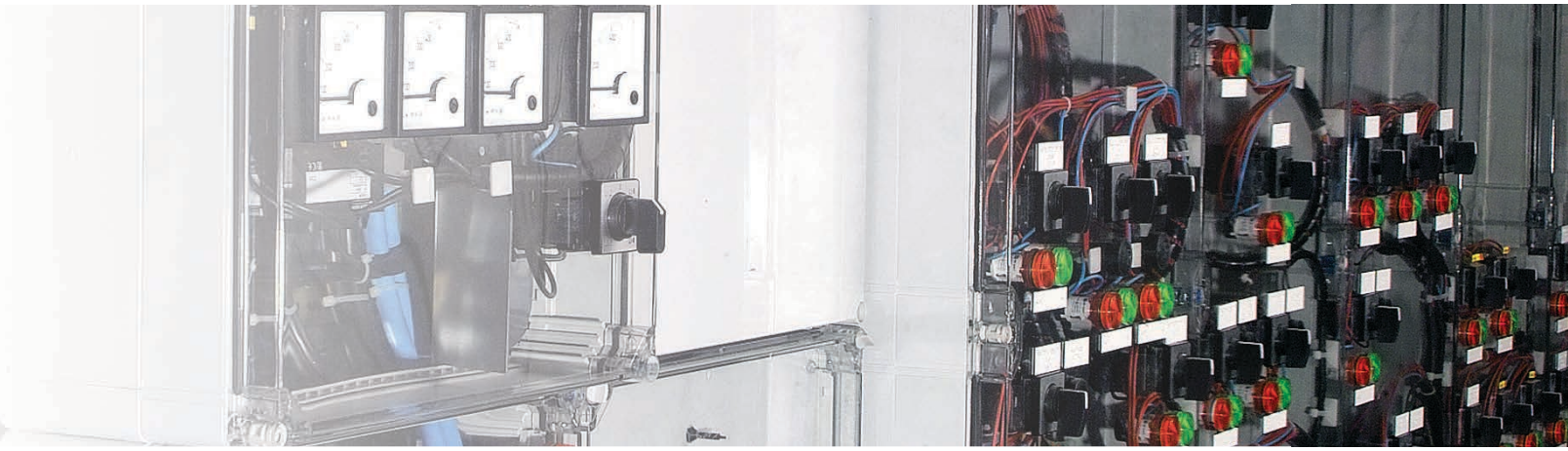
Tapping terminal blocks (one pole, four connections), 600V maximum rating

Order No.	Engineering No.*	Wire Type	Wire Gauge (AWG)	Maximum Voltage	Maximum Amperage	Tightening Torque (in/lbs)	Allen-hex Socket Head Required (mm)	Mounting Type	Weight (g)	Package Quantity
201606-0660	MX-KE66	Cu	1/0 – 6	600	150	90 (10nm)	5	DIN Rail	49	30
		Al			120					
201606-0670	MX-KE67	Cu	4/0 – 4	600	230	126 (14nm)	5	DIN Rail/ Screw	128	30
		Al			180					
201606-0680	MX-KE68	Cu	300 MCM – 2	600	285	216 (24nm)	8	DIN Rail/ Screw	210	30
		Al			230					
201606-0690	MX-KE69	Cu	500 MCM – 3/0	600	380	360 (40nm)	8	Screw	438	30
		Al			310					

Three pole terminal blocks, 1000V maximum rating

Order No.	Engineering No.*	Wire Type	Wire Gauge (AWG)	Maximum Voltage	Maximum Amperage	Tightening Torque (in/lbs)	Allen-hex Socket Head Required (mm)	Mounting Type	Weight (g)	Package Quantity
201606-1610	MX-KE161	Cu	1/0 – 6	1000	150	90 (10nm)	5	DIN Rail/ Screw	49	30
		Al			120					
201606-1620	MX-KE162	Cu	4/0 – 4	1000	230	126 (14nm)	5	DIN Rail/ Screw	91	30
		Al			180					
201606-1630	MX-KE163	Cu	300 MCM – 2	1000	285	216 (24nm)	8	DIN Rail/ Screw	143	30
		Al			230					

*Standard color is grey. Please visit molex.com to view available, optional colors.



What is a Molex High-Current Universal Clamp Terminal Block?

A powerful, yet compact and robust designed product

An adaptable wire-to-wire terminal block which can be mounted to a panel using either a DIN-rail or direct mounted with screws.

Terminations are accomplished with hexagonal screws for ultimate secureness.

Includes oxidation inhibiting compound to maximize electrical conductivity.

A product which meets demanding and varied global industry ratings

Connectors are certified to both IEC and UL standards for suitable use in domestic and international applications.

Connectors are certified to meet the rigorous connector Class A standard per IEC EN 61238-1:2003 providing the following benefits:

Third party tested and verified to survive a short circuit in high-current and high-voltage feed-in lines.

Suitable for use in switchboard applications which do not have fast-acting fuses.

A versatile and multi-purpose product

Uniquely suitable for use with either Copper or Aluminum wires.

Ideally suited for transitioning between Aluminum and Copper wires without the need for cable clamps.

High voltage models available in 600V or 1000V per UL 1059 and 800V or 1000V per EN 60947.

Includes 1000 VDC (per UL 1059) suitability for photovoltaic systems.

High-current models that range from 150 to 380 amperes per UL 1059 or 160 to 425 amperes per EN 60947.

Models available:

One pole, side-by-side stackable (Product code MX-KE61, MX-KE62, MX-KE63 and MX-KE64); three pole (Product code MX-KE61.03) – ideal for 3 Phase electrical applications; one pole, tapping for two wires per circuit (Product code MX-KE66, MX-KE67, MX-KE68 and MX-KE69) – ideal for double tapping; 1000V rated, one pole (Product code MX-KE161, MX-KE162 and MX-KE163)

Alternative models available in different colors for easy identification.

Accessories such as terminal shrouds, DIN rail, DIN rail end clips and marking strips available to increase application adaptability.

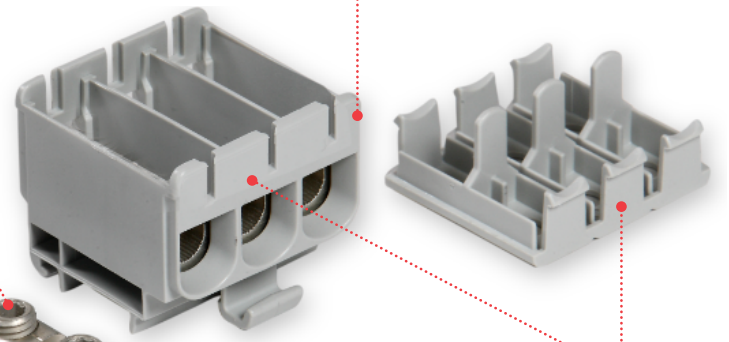
High-Current, Universal-Clamp Terminal Blocks

DIN-rail or panel-mountable High-Current Universal-Clamp Terminal Blocks offer a versatile solution for high-current and voltage applications requiring aluminum-to-aluminum, copper-to-copper or aluminum-to-copper terminations

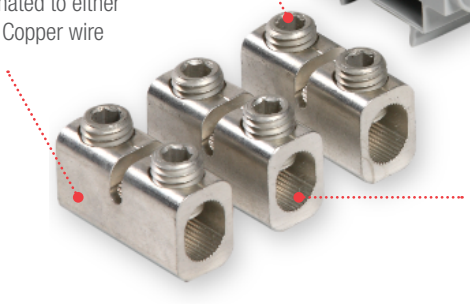
Features and Benefits

Partition wall on cover
The wall provides a barrier between the conductors to prevent oxidation

Hex Screws
Provide optimal secureness to stranded wire



Tin coated Aluminum contacts
Can be terminated to either Aluminum or Copper wire

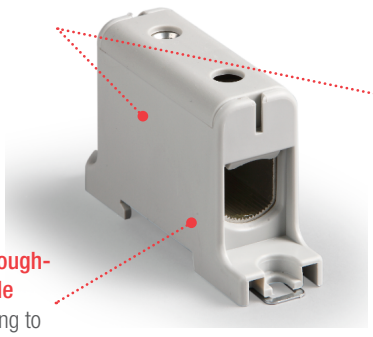


Polyamide housing and cover
Suitable for -40 to +105°C operating temperatures

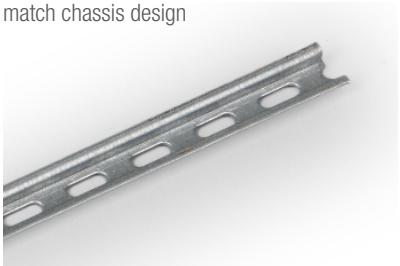
Compound coating
A grease is applied to the insides of the contacts to act as an oxidation inhibitor to extend shelf-life

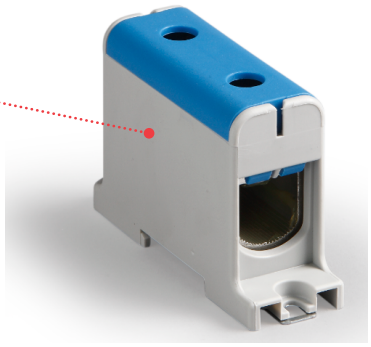
Single and Three Pole Versions Available

Multiple colors available for Single Pole Versions
Standard color is grey. Similar models are available with different color covers for ease of identification



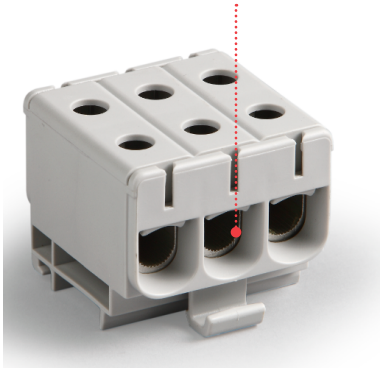
DIN-rail or through-hole mountable
Flexible mounting to match chassis design





Single pole models available in the following max. amperage (per UL)
MX-KE61: 150A
MX-KE62: 230A
MX-KE63: 285A
MX-KE64: 380A

Three Pole Version
Ideal for 3-phase power applications



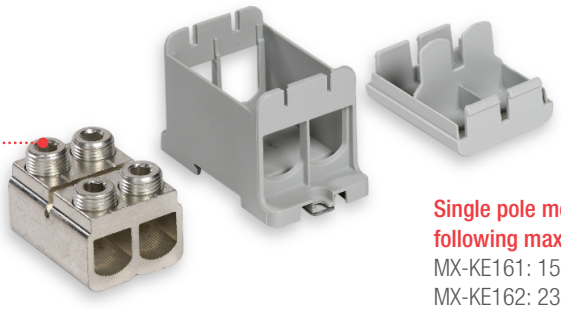
Three pole model max. amperage
MX-KE61.03: 150A

High-Current, Universal-Clamp Terminal Blocks

600V (per UL), Single Pole Tapping Blocks Available

Double housing and cover design

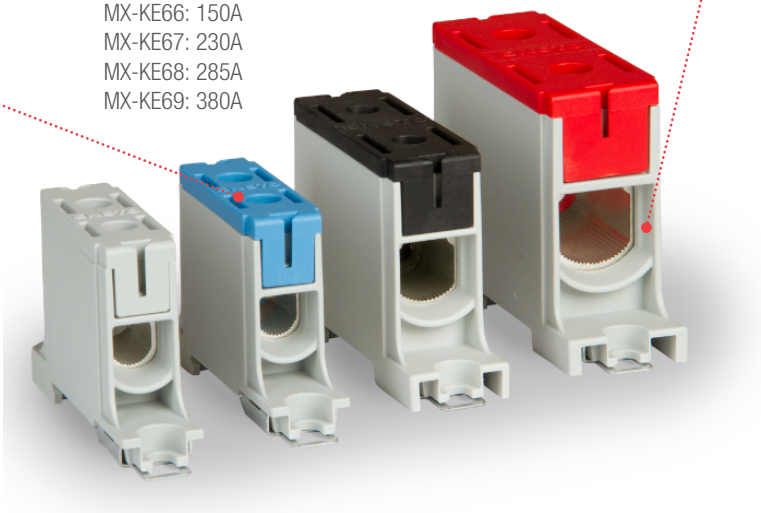
Single contact with four terminations
Intended for power feed applications



Different color covers available
Red and black for DC applications; grey and blue for AC applications

Single pole models available in the following max. amperage (per UL)
MX-KE161: 150A
MX-KE162: 230A
MX-KE163: 285A
MX-KE66: 150A
MX-KE67: 230A
MX-KE68: 285A
MX-KE69: 380A

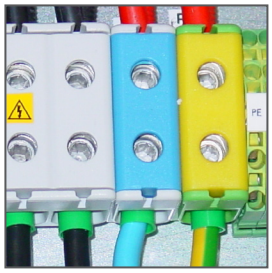
High temp Polyamide housing and cover
Suitable for -40 to +125°C operating temperatures of a 1000V system



Applications

- Motor inverters
- Motor drives
- Motor control systems
- Switchgears
- Power distribution panels and cabinets
- Vehicle charging stations
- Commercial vehicles
- Electric trains
- Photovoltaic (solar) systems

Commercial Vehicles



Motor Drive

Photovoltaic Systems

Specifications

REFERENCE INFORMATION
Certification Marks: UL, CE
Design Standards: UL: 1059
IEC: EN60947-7-1:2009; EN61238-1:2003
Designed In: Millimeters
RoHS: Yes
Halogen Free: Yes
Glow Wire Compliant: Yes

TECHNICAL INFORMATION
Maximum Voltage (UL): 600 or 1000
Amperage Range (UL): 120 to 380
Wire Range: 500 MCM to 6 AWG

PHYSICAL INFORMATION
Housing: Polyamide
Body and Screws: Tin-coated aluminum

MECHANICAL FEATURES
Recommended Tightening Torque: 10Nm – 40Nm (90 in/lbs to 360 in/lbs)
Screw Head: Hexagonal
Mounting: Screws or DIN rail
Plating: Tin
Operating Temperature: -40 to +125°C
DIN-rail Size: 35mm

High-Current, Universal-Clamp Terminal Blocks

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Ordering Information

One pole terminal blocks

Molex Part Number	Engineering Number*	Wire Type	Wire Gauge (AWG)	Maximum Voltage	Maximum Amperage	Tightening Torque in In/Lbs
2016060610	MX-KE61	Cu	1/0 to 6	600	150	90 (10Nm)
		Al			120	
2016060620	MX-KE62	Cu	4/0 to 4	600	230	126 (14Nm)
		Al			180	
2016060630	MX-KE63	Cu	300 MCM to 2	600	285	216 (24Nm)
		Al			230	
2016060640	MX-KE64	Cu	500 MCM to 3/0	600	380	360 (40Nm)
		Al			310	

Tapping terminal blocks (Single pole, four connections)

Molex Part Number	Engineering Number*	Wire Type	Wire Gauge (AWG)	Maximum Voltage	Maximum Amperage	Tightening Torque in In/Lbs
2016060660	MX-KE66	Cu	1/0 to 6	600	150	90 (10Nm)
		Al			120	
2016060670	MX-KE67	Cu	4/0 to 4	600	230	126 (14Nm)
		Al			180	
2016060680	MX-KE68	Cu	300 MCM to 2	600	285	216 (24Nm)
		Al			230	
2016060690	MX-KE69	Cu	500 MCM to 3/0	600	380	360 (40Nm)
		Al			310	

One pole terminal blocks, 1000V rated

Molex Part Number	Engineering Number*	Wire Type	Wire Gauge (AWG)	Maximum Voltage	Maximum Amperage	Tightening Torque in In/Lbs
2016061610	MX-KE161	Cu	1/0 to 6	1000	150	90 (10Nm)
		Al			120	
2016061620	MX-KE162	Cu	4/0 to 4	1000	230	126 (14Nm)
		Al			180	
2016061630	MX-KE163	Cu	300 MCM to 2	1000	285	216 (24Nm)
		Al			230	

*Standard color is grey. For optional colors, replace the last digit of Molex part number (zero) with: 2 (blue) or 3 (yellow/green).

Three pole terminal blocks

Molex Part Number	Engineering Number	Wire Type	Wire Gauge (AWG)	Maximum Voltage	Maximum Amperage	Tightening Torque in In/Lbs
2016066163	MX-KE61.03	Cu	1/0 – 6	600	150	90 (10Nm)
		Al			120	

www.molex.com/link/hcucterminalblocks.html

Order No. 987651-7108 USA/0k/GF/2017.09