



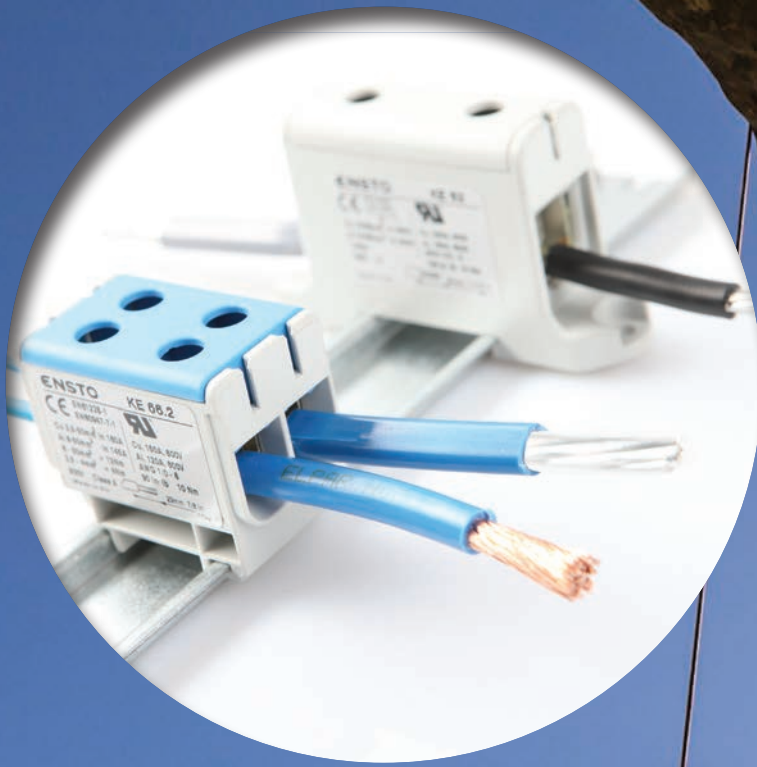
Saves Your Energy

Ensto Clampo Pro

Universal terminal series for Al/Cu conductors



Small item – great significance



Small item - great significance

It is of paramount importance that the equipment functions properly. It is vital to have a suitable connection between the devices and the power grid.

Most of the connections are made using cables and wires, terminals, or conductor rails at higher currents. The reliability and safety of the device depend on the type and use of the terminals.

It is therefore extremely important to use reliable terminals of the highest quality.

So, how do you recognize a good terminal?

The terminal

- Is certified according to the latest standards
- Is suitable for both Al and Cu conductors
- Has a wide range of application
- Has a reliable structure
- Is easy to use
- Is compact
- Has a reliable supplier
- Has an oxidation-inhibiting compound applied at the factory
- Has hexagonal screw heads enabling proper attachment of the conductors

Ensto Clampo Pro has it all!



Certified products for your convenience

CE marking is required for the sale of electrical appliances on the European market. CE marking is a manufacturer's declaration that the product fulfills the requirements set by EC directives. In order to be allowed to use CE marking, the manufacturer must issue a declaration of conformity.



Certified products are easy to use

When a product is certified, it means that an independent third party has tested the product and concluded that it fulfills the requirements of a given standard. The certification of a product assures you that the components used in your panel are safe and that you won't be liable for any component faults.

Certified products are only manufactured at the factory location mentioned on the certificate. The issuer of the certificate conducts follow-up audits on a regular basis to assure

that the products have remained unchanged and that the safety aspects are maintained.

The use of non-verified terminals at manufacturer's risk

If the terminals are not verified according to the latest standards, it is the sole responsibility of the equipment manufacturer to ensure that its products comply with directives and standards. The equipment manufacturer must in this case proof suitability with e.g. test reports, which are added to his technical file.

The latest versions of standards must be followed

Standards are constantly reviewed, and it's important to always use components that are certified according to the latest standards.

Technical standards for terminals

The suitability for copper conductors is verified according to the harmonized standard EN 60947-7-1:2009 and the suitability for aluminium conductors is verified according to standard EN 61238-1:2003.

Manufacturer



Technical file



EC
declaration
of conformity



CE marking

“Ensto Clampo Pro terminals are certified to meet the demands of the latest standards”



Class A beats class B

Aluminium conductors

Ensto Clampo Pro terminals are certified to meet requirements set by standards. They are short circuit tested class A terminals suitable for all aluminium connections.

By choosing Ensto Clampo Pro terminals for your aluminium connection you make sure you always have the right terminals in use.

Terminals that have been tested and certified according to EN 61238-1:2003 are divided into Classes A and B.

Class A terminals are short circuit tested and suitable for both equipment and general use also as feed-in terminals.

Class B terminals are not short circuit tested and can only be used in circuits which are protected with fast acting fuses, not with general use fuse or motor circuit fuses, which are typically used in industrial applications.

For this reason, the use of Class B terminals is limited to equipment terminal use or special circuits protected by fast-acting fuses only.





Only Class A terminals are suitable for feed-in lines.



Only Class A terminals can be used in normal switchboards, as they don't have fast-acting fuses.



“Ensto Clampo Pro terminals are short circuit tested class A terminals”

Duel of the metals

Connecting aluminium and copper conductors

Aluminium and copper don't get along. If these two metals touch each other – with just a little bit of humidity – an electrochemical process called “galvanic corrosion” occurs. Galvanic corrosion means that the metals start to react to each other and ions start to move from the weaker metal to the stronger one. The weaker metal, in this case aluminium, is corroded.

Weak connection – hot connector

In time, the connection in the terminals deteriorates and in the attempt to keep the current flowing, the terminal becomes hotter and hotter, ultimately resulting in the melt down of plastic parts, possibly causing a fire.

Tin works as a barrier

Metals are not created equal and whereas aluminium and copper don't like each other, tin gets along with both. Tin doesn't cause galvanic corrosion with either of the metals. This is why Ensto Clampo Pro terminals' conductive parts – the body and the screws – are made from tin-coated aluminium. The housing is also created so that there is a partition wall (polyamide) between the conductors, which should not touch under any circumstances.

Invest in safety – make sure you use terminals suitable for connecting aluminium and copper conductors – use Ensto Clampo Pro terminals.



“Ensto Clampo Pro allows a safe connection between Al/Cu conductors”



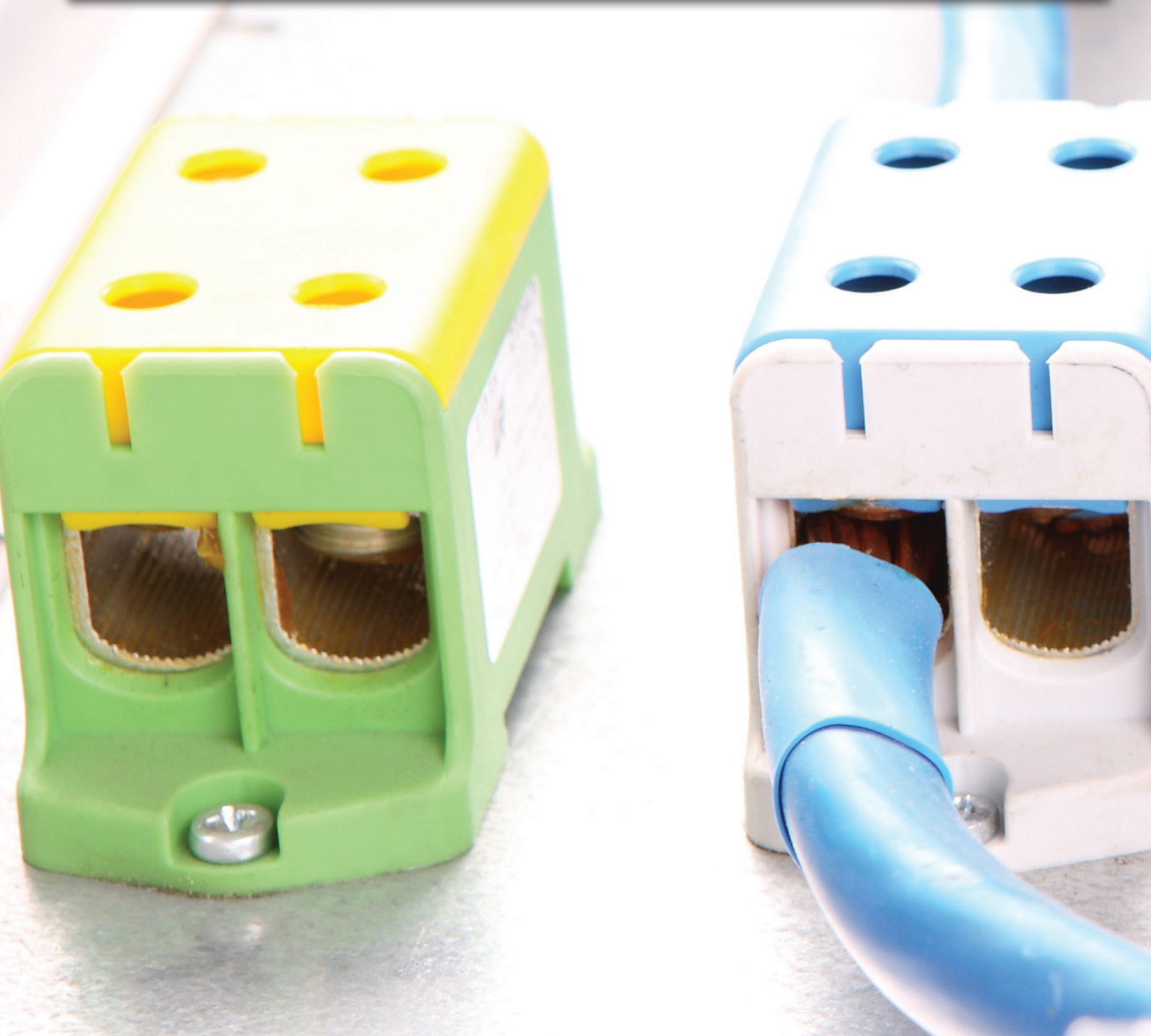
Ensto Clampo Pro universal terminals are truly universal

The Ensto Clampo Pro universal terminal series is a versatile solution for all installation needs, ranging from low-voltage switchgear and control gears for industry and construction to building automation. As it can be used with both aluminium and copper conductors, it makes life easier for

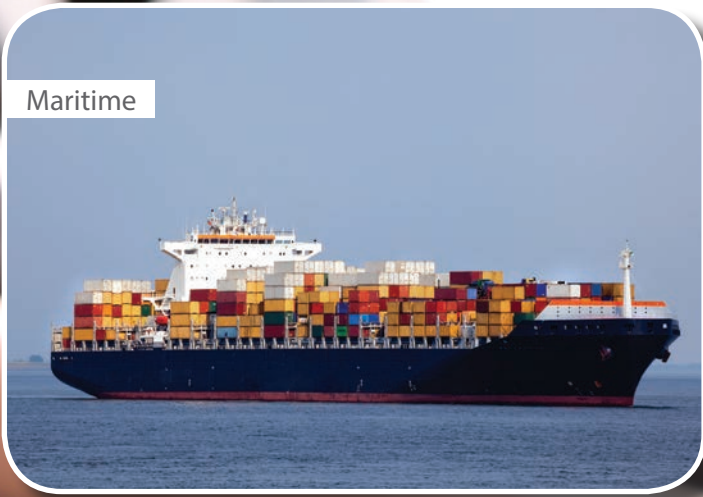
designers in both the OEM industry and mechanical engineering.

Easy to store, easy to order

The series has only four sizes to meet the needs of any installation – that saves room in storage and time when ordering.



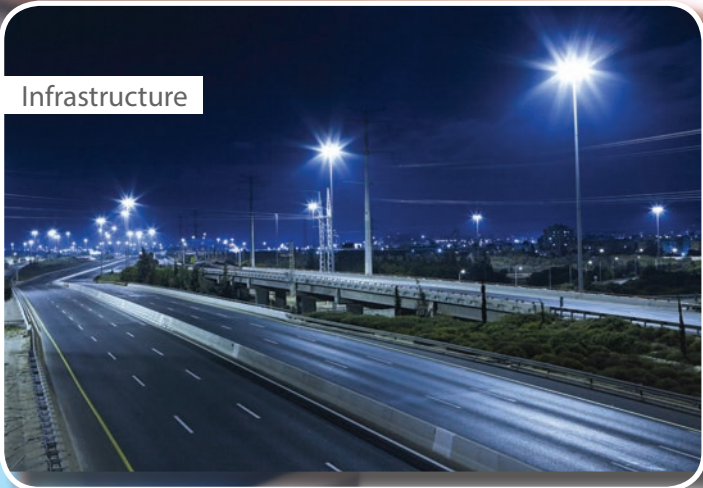
Maritime



Transportation



Infrastructure



Water and waste water treatment



Renewable energies



Metering and control



Doors and gates



Food and agriculture



Ensto Clampo Pro universal terminals

For Al/Cu conductors from 2.5 mm² to 240 mm²



Why choose the Ensto Clampo Pro

- Certified according to the latest standards
- UL- recognised and Gost R certified thus suitable for exporting the switchboards/equipment to the US and Russia
- Suitable for both aluminium and copper conductors
- Suitable for transitioning between aluminium and copper conductors without any extra cable clamps
- Suitable for use at the feed-in conductors (short circuit tested)
- Suitable for a wide cross-section range of conductors; a single terminal can be used in a large range of uses
- Suitable for stranded wires also, without extra bushings

Technical features

- Compact in size compared to similar products on the market
- Oxidation-inhibiting compound applied at the factory
- Simple and reliable construction made of a monoblock
- Can be fixed directly onto a DIN rail or, with screws, onto a base
- Quickly and easily connected using one screw only
- Reliable and strong tightening with hexagonal screws (possible to reuse without damage)
- Colour coding for N and PE terminals

Other reasons for choosing Ensto Clampo Pro

- Ensto has 50 year's experience of manufacturing terminals
- Ensto is a reliable supplier
- Small number of items to store, easy to order

| Conformity | |
|---------------------------|---|
| | |
| Standards | |
| For copper conductors: | EN 60947-7-1:2009 |
| For aluminium conductors: | EN 61238-1:2003 |
| Technical information | |
| Cross-section range: | Al 6 - 240 mm ² / Cu 2.5 - 240 mm ² |
| Nominal current range: | 145 - 425 A |
| Material | |
| Housing: | Polyamide |
| Body and screws: | Tin-coated aluminium |
| Mechanical features | |
| Screw heads: | Hexagonal |
| Mounting: | Screws or DIN rail |

Note: The use of ferrules is recommended for installations with flexible conductors* with the following cross-sections (single conductor installation):

- KE61, KE 66 2.5 – 16 mm²
- KE62, KE67 16 – 35 mm²
- KE63, KE68 35 – 70 mm²
- KE64, KE69 35 – 120 mm²

The use of 240 mm² flexible conductors is not recommended.

*Class 5, according to IEC 228 Second Edition 1978

Ensto Clampo Pro universal terminals and terminal shrouds. The functional shroud is L-shaped, thus protecting both the conductor space and the hole for the tightening tool.



Product cards with technical drawings can be found at www.ensto.com.

Ensto Clampo Pro universal terminals

Ensto Clampo Pro, one-pole terminal blocks

| Product code | Conductor cross-section (mm ²) | Colour | Nominal current (A) | Nominal insulation voltage (V) | Screw head hexagon (mm) | Tightening torque (Nm) | Mounting | Weight (kg) | Package size (pcs) | EAN 13 code |
|--------------|--|------------------|---------------------|--------------------------------|-------------------------|---|----------------|-------------|--------------------|---------------|
| KE61 | Cu 2,5-50 mm ² Al 6-50 mm ² | Grey | Cu 160 A, Al 145 A | 800 V | 5 mm | 4 Nm (2.5-4mm ²), 12 Nm (6-50mm ²) | DIN rail | 0.030 | 30 | 6418677191817 |
| KE61.2 | Cu 2,5-50 mm ² Al 6-50 mm ² | Blue | Cu 160 A, Al 145 A | 800 V | 5 mm | 4 Nm (2.5-4mm ²), 12 Nm (6-50mm ²) | DIN rail | 0.030 | 30 | 6418677191831 |
| KE61.3 | Cu 2,5-50 mm ² Al 6-50 mm ² | Yellow/ Green | | 800 V | 5 mm | 4 Nm (2.5-4mm ²), 12 Nm (6-50mm ²) | DIN rail | 0.030 | 30 | 6418677191848 |
| KE62 | 16-95 mm ² | Grey | Cu 245 A, Al 220 A | 800 V | 5 mm | 20 Nm | DIN rail/screw | 0.074 | 30 | 6418677191855 |
| KE62.2 | 16-95 mm ² | Blue | Cu 245 A, Al 220 A | 800 V | 5 mm | 20 Nm | DIN rail/screw | 0.074 | 30 | 6418677191862 |
| KE62.3 | 16-95 mm ² | Yellow/ Green | | 800 V | 5 mm | 20 Nm | DIN rail/screw | 0.074 | 30 | 6418677191879 |
| KE63 | 35-150 mm ² | Grey | Cu 320 A, Al 290 A | 800 V | 8 mm | 20 Nm (35-95mm ²), 30 Nm (120-150mm ²) | DIN rail/screw | 0.120 | 30 | 6418677191886 |
| KE63.2 | 35-150 mm ² | Blue | Cu 320 A, Al 290 A | 800 V | 8 mm | 20 Nm (35-95mm ²), 30 Nm (120-150mm ²) | DIN rail/screw | 0.120 | 30 | 6418677191893 |
| KE63.3 | 35-150 mm ² | Yellow/ Green | | 800 V | 8 mm | 20 Nm (35-95mm ²), 30 Nm (120-150mm ²) | DIN rail/screw | 0.120 | 30 | 6418677191909 |
| KE64 | 35-240 mm ² | Grey | Cu 425 A, Al 380 A | 800 V | 8 mm | 12 Nm (35-70mm ²), 45 Nm (95-240mm ²) | Screw | 0.249 | 30 | 6418677191916 |
| KE64.2 | 35-240 mm ² | Blue | Cu 425 A, Al 380 A | 800 V | 8 mm | 12 Nm (35-70mm ²), 45 Nm (95-240mm ²) | Screw | 0.249 | 30 | 6418677191923 |
| KE64.3 | 35-240 mm ² | Yellow/ Green | | 800 V | 8 mm | 12 Nm (35-70mm ²), 45 Nm (95-240mm ²) | Screw | 0.249 | 30 | 6418677191930 |

Connector class: A
Operating temperature: max. 80 °C
Pollution degree: 3

The nominal currents in the table are for maximum cross-sections.



KE61



KE62



KE63.2



KE64.3

Ensto Clampo Pro, three-pole terminal block

| Product code | Conductor cross-section (mm ²) | Colour | Nominal current (A) | Nominal insulation voltage (V) | Screw head hexagon (mm) | Tightening torque (Nm) | Mounting | Weight (kg) | Package size (pcs) | EAN 13 code |
|--------------|--|--------|---------------------|--------------------------------|-------------------------|---|----------|-------------|--------------------|---------------|
| KE61.03 | Cu 2,5-50 mm ² Al 6-50 mm ² | Grey | Cu 160 A, Al 145 A | 800 V | 5 mm | 4 Nm (2.5-4mm ²), 12 Nm (6-50mm ²) | DIN rail | 0.077 | 30 | 6418677191824 |

Connector class: A
Operating temperature: max. 80 °C
Pollution degree: 3

The nominal currents in the table are for maximum cross-sections.



KE61.03

Ensto Clampo Pro universal terminals

Ensto Clampo Pro, tapping blocks, single-pole, four connections

| Product code | Conductor cross-section (mm ²) | Colour | Nominal current (A) | Nominal insulation voltage (V) | Screw head hexagon (mm) | Tightening torque (Nm) | Mounting | Weight (kg) | Package size (pcs) | EAN 13 code |
|--------------|--|------------------|---------------------|--------------------------------|-------------------------|---|----------------|-------------|--------------------|---------------|
| KE66 | Cu 2,5-50 mm ² Al 6-50 mm ² | Grey | Cu 160 A, Al 145 A | 800 V | 5 mm | 4 Nm (2.5-4mm ²), 12 Nm (6-50mm ²) | DIN rail | 0.049 | 30 | 6418677191947 |
| KE66.2 | Cu 2,5-50 mm ² Al 6-50 mm ² | Blue | Cu 160 A, Al 145 A | 800 V | 5 mm | 4 Nm (2.5-4mm ²), 12 Nm (6-50mm ²) | DIN rail | 0.049 | 30 | 6418677191954 |
| KE66.3 | Cu 2,5-50 mm ² Al 6-50 mm ² | Yellow/ Green | | 800 V | 5 mm | 4 Nm (2.5-4mm ²), 12 Nm (6-50mm ²) | DIN rail | 0.049 | 30 | 6418677191961 |
| KE67 | 16-95 mm ² | Grey | Cu 245 A, Al 220 A | 800 V | 5 mm | 20 Nm | DIN rail/screw | 0.128 | 30 | 6418677191978 |
| KE67.2 | 16-95 mm ² | Blue | Cu 245 A, Al 220 A | 800 V | 5 mm | 20 Nm | DIN rail/screw | 0.128 | 30 | 6418677191985 |
| KE67.3 | 16-95 mm ² | Yellow/ Green | | 800 V | 5 mm | 20 Nm | DIN rail/screw | 0.128 | 30 | 6418677191992 |
| KE68 | 35-150 mm ² | Grey | Cu 320 A, Al 290 A | 800 V | 8 mm | 20 Nm (35-95mm ²), 30 Nm (120-150mm ²) | DIN rail/screw | 0.210 | 30 | 6418677192005 |
| KE68.2 | 35-150 mm ² | Blue | Cu 320 A, Al 290 A | 800 V | 8 mm | 20 Nm (35-95mm ²), 30 Nm (120-150mm ²) | DIN rail/screw | 0.210 | 30 | 6418677192012 |
| KE68.3 | 35-150 mm ² | Yellow/ Green | | 800 V | 8 mm | 20 Nm (35-95mm ²), 30 Nm (120-150mm ²) | DIN rail/screw | 0.210 | 30 | 6418677192029 |
| KE69 | 35-240 mm ² | Grey | Cu 425 A, Al 380 A | 800 V | 8 mm | 12 Nm (35-70mm ²), 45 Nm (95-240mm ²) | Screw | 0.438 | 30 | 6418677192036 |
| KE69.2 | 35-240 mm ² | Blue | Cu 425 A, Al 380 A | 800 V | 8 mm | 12 Nm (35-70mm ²), 45 Nm (95-240mm ²) | Screw | 0.438 | 30 | 6418677192043 |
| KE69.3 | 35-240 mm ² | Yellow/ Green | | 800 V | 8 mm | 12 Nm (35-70mm ²), 45 Nm (95-240mm ²) | Screw | 0.438 | 30 | 6418677192050 |

Connector class: A
Operating temperature: max. 80 °C
Pollution degree: 3

The nominal currents in the table are for maximum cross-sections.



KE66



KE67



KE68.2



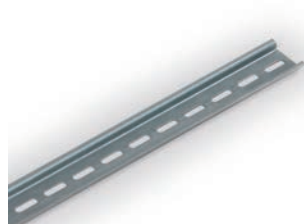
KE69.3

Accessories

| Product code | Description | Weight (kg) | Package size (pcs) | EAN 13 code |
|-------------------|--|-------------|--------------------|---------------|
| Terminal shrouds | | | | |
| KEL61 | Terminal shroud for KE61, KE66 | 0.001 | 100 | 6438100020064 |
| KEL62 | Terminal shroud for KE62, KE67 | 0.002 | 100 | 6438100020071 |
| KEL63 | Terminal shroud for KE63, KE68 | 0.003 | 100 | 6438100020088 |
| KEL64 | Terminal shroud for KE64, KE69 | 0.004 | 100 | 6438100020095 |
| Other accessories | | | | |
| PP37 | DIN rail, 35 mm, steel, length 2 m | 0.622 | 10 | 6418677161896 |
| KRL2 | End clip for fixing components to Din rail, PP37 | 0.009 | 50 | 6418677161919 |



Terminal shroud, KEL62.



DIN rail, 35 mm, PP37.



End clip for fixing components to Din rail, KRL2.

Ensto Clampo Pro universal terminals

Marking strips

Each strip contains 10 markers.

| Product code | Description | Weight (kg) | Package size (strips) | EAN 13 code |
|--------------|---------------------------------------|-------------|-----------------------|---------------|
| PM34.00 | Marking strip"0" | 0.001 | 10 | 6418677192067 |
| PM34.01 | Marking strip"1" | 0.001 | 10 | 6418677192074 |
| PM34.02 | Marking strip"2" | 0.001 | 10 | 6418677192081 |
| PM34.03 | Marking strip"3" | 0.001 | 10 | 6418677192098 |
| PM34.04 | Marking strip"4" | 0.001 | 10 | 6418677192104 |
| PM34.05 | Marking strip"5" | 0.001 | 10 | 6418677192111 |
| PM34.06 | Marking strip"6" | 0.001 | 10 | 6418677192128 |
| PM34.07 | Marking strip"7" | 0.001 | 10 | 6418677192135 |
| PM34.08 | Marking strip"8" | 0.001 | 10 | 6418677192142 |
| PM34.09 | Marking strip"9" | 0.001 | 10 | 6418677192159 |
| PM34.10 | Marking strip"Earth symbol in a ring" | 0.001 | 10 | 6418677192166 |
| PM34.11 | Marking strip"R" | 0.001 | 10 | 6418677192173 |
| PM34.12 | Marking strip"S" | 0.001 | 10 | 6418677192180 |
| PM34.13 | Marking strip"T" | 0.001 | 10 | 6418677192197 |
| PM34.14 | Marking strip"U" | 0.001 | 10 | 6418677192203 |
| PM34.15 | Marking strip"V" | 0.001 | 10 | 6418677192210 |
| PM34.16 | Marking strip"W" | 0.001 | 10 | 6418677192227 |
| PM34.19 | Marking strip"L" | 0.001 | 10 | 6418677192234 |
| PM34.22 | Marking strip"+" | 0.001 | 10 | 6418677192241 |
| PM34.23 | Marking strip"." | 0.001 | 10 | 6418677192258 |
| PM34.24 | Marking strip"Earth symbol " | 0.001 | 10 | 6418677192265 |
| PM34.25 | Marking strip"N" | 0.001 | 10 | 6418677192272 |
| PM34.26 | Marking strip"L1" | 0.001 | 10 | 6418677192289 |
| PM34.27 | Marking strip"L2" | 0.001 | 10 | 6418677192296 |
| PM34.28 | Marking strip"L3" | 0.001 | 10 | 6418677192302 |
| PM34.29 | Marking strip"PE" | 0.001 | 10 | 6418677192319 |



PM34.05

UL-recognitions

| Product code | Wire type | AWG* 1 wire/ terminal | AWG* 2 Cu-wires/ terminal | AWG* 3 Cu-wires/ terminal | Nominal insulation voltage (V) | Nominal current (A) | Nominal tightening torque (Lb-In) | Allen-hex socket head terminal screw (mm) | Dimensions (W x H x D) |
|-------------------------------|-----------|-----------------------------|---------------------------------|---------------------------------|--------------------------------------|------------------------|---|---|--|
| One-pole universal terminals | | | | | | | | | |
| KE61 | Cu | 1/0 - 6 | 6 | 8 | 600 | 150 | 90 | 5 | 17.8 x 49 x 43 mm (0.7 x 1.9 x 1.7 In) |
| | Al | 1/0 - 6 | | | 600 | 120 | 10 (Nm) | | |
| KE62 | Cu | 4/0 - 4 | 2 - 6 | 6 | 600 | 230 | 126 | 5 | 24 x 86 x 49 mm (0.9 x 3.4 x 1.9 In) |
| | Al | 4/0 - 4 | | | 600 | 180 | 14 (Nm) | | |
| KE63 | Cu | 300 - 2 | 1/0 - 2 | 2 | 600 | 285 | 216 | 8 | 29.5 x 95 x 59 mm (1.2 x 3.7 x 2.3 In) |
| | Al | 300 - 2 | | | 600 | 230 | 24 (Nm) | | |
| KE64 | Cu | 500 - 3/0 | 2/0 - 2 | 1/0 - 2 | 600 | 380 | 360 | 8 | 37.5 x 130 x 67 mm (1.5 x 5.1 x 2.6 In) |
| | Al | 500 - 3/0 | | | 600 | 310 | 40 (Nm) | | |
| Three-pole universal terminal | | | | | | | | | |
| KE61.03 | Cu | 1/0 - 6 | 6 | 8 | 600 | 150 | 90 | 5 | 49.5 x 49 x 43 mm (1.9 x 1.9 x 1.7 In) |
| | Al | 1/0 - 6 | | | 600 | 120 | 10 (Nm) | | |
| Tapping blocks | | | | | | | | | |
| KE66 | Cu | 1/0 - 6 | 6 | 8 | 600 | 150 | 90 | 5 | 29.8 x 49 x 43 mm (1.2 x 1.9 x 1.7 In) |
| | Al | 1/0 - 6 | | | 600 | 120 | 10 (Nm) | | |
| KE67 | Cu | 4/0 - 4 | 2 - 6 | 6 | 600 | 230 | 126 | 5 | 42 x 86 x 49 mm (1.7 x 3.4 x 1.9 In) |
| | Al | 4/0 - 4 | | | 600 | 180 | 14 (Nm) | | |
| KE68 | Cu | 300 - 2 | 1/0 - 2 | 2 | 600 | 285 | 216 | 8 | 51.5 x 95 x 59 mm (2.0 x 3.7 x 2.3 In) |
| | Al | 300 - 2 | | | 600 | 230 | 24 (Nm) | | |
| KE69 | Cu | 500 - 3/0 | 2/0 - 2 | 1/0 - 2 | 600 | 380 | 360 | 8 | 64 x 130 x 67 mm (2.5 x 5.1 x 2.6 In) |
| | Al | 500 - 3/0 | | | 600 | 310 | 40 (Nm) | | |

Standard UL 1059, UL category XCFR2, file E 192532.

* AWG = American Wire Gauge

Insulating material polyamide, flammability rating V-2 (UL94).

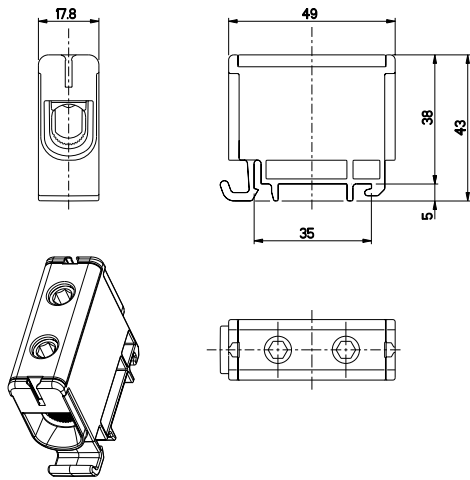
All terminal blocks KE61-KE69 are delivered with oxide inhibiting compound applied.

The suitability of these terminals shall be determined in the end-use investigation.

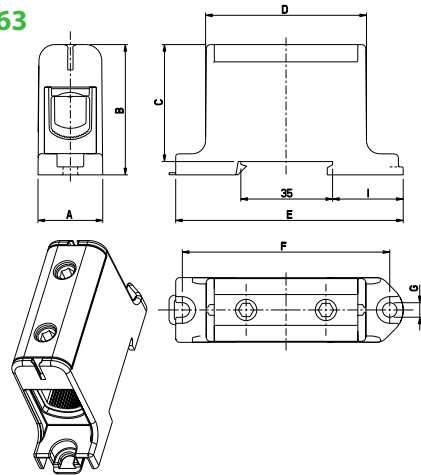
Dimensional drawings

Dimensions in mm

KE61

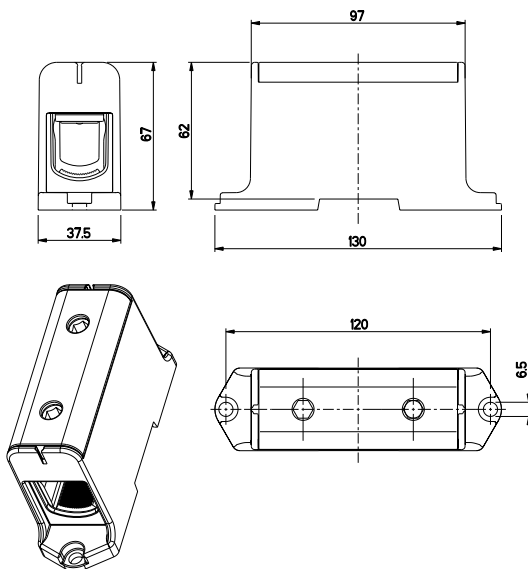


KE62, KE63

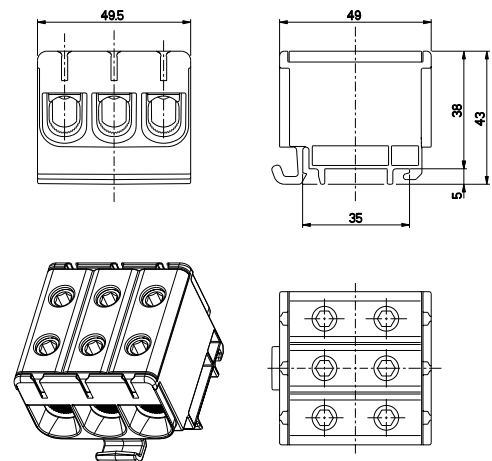


| | A | B | C | D | E | F | G | I |
|------|------|----|----|----|----|----|-----|------|
| KE62 | 24 | 49 | 44 | 60 | 86 | 78 | 5.5 | 25.5 |
| KE63 | 29.5 | 59 | 54 | 72 | 95 | 87 | 5.5 | 34.5 |

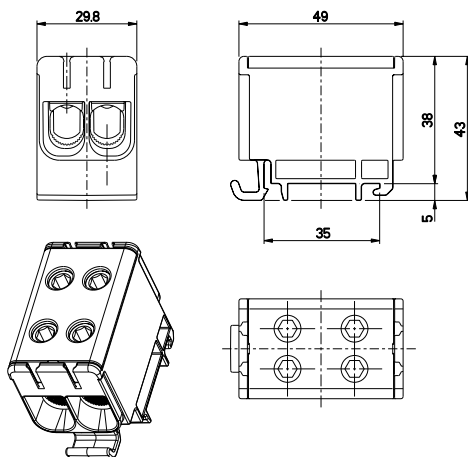
KE64



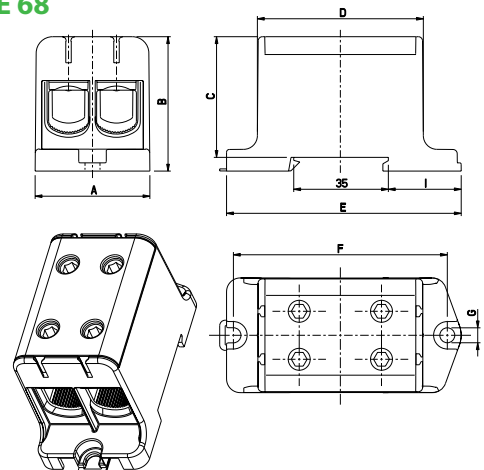
KE61.03



KE66



KE67, KE 68

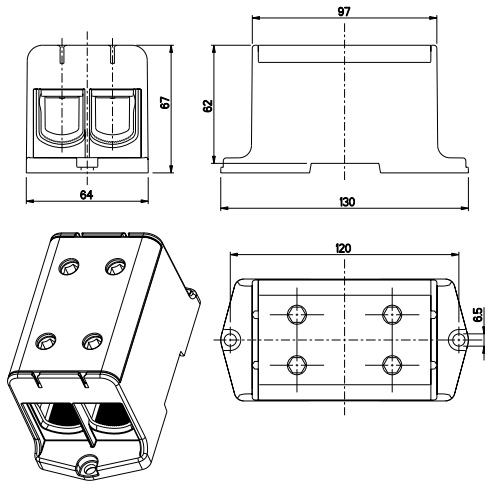


| | A | B | C | D | E | F | G | I |
|------|------|----|----|----|----|----|-----|------|
| KE67 | 42 | 49 | 44 | 60 | 86 | 78 | 5.5 | 25.5 |
| KE68 | 51.5 | 59 | 54 | 72 | 95 | 87 | 5.5 | 34.5 |

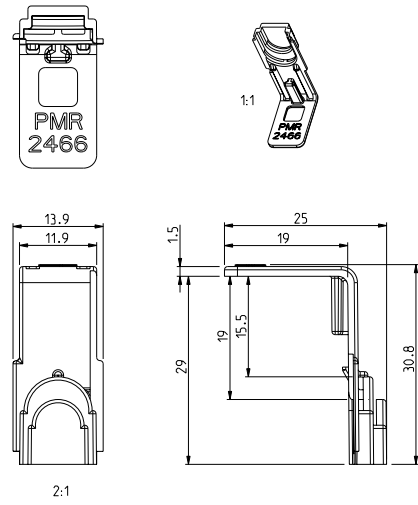
Dimensional drawings

Dimensions in mm

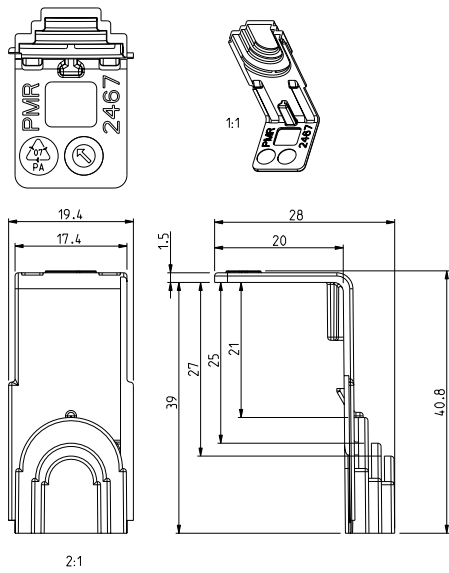
KE69



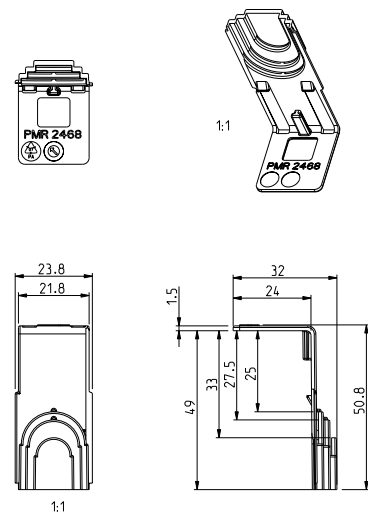
KEL61



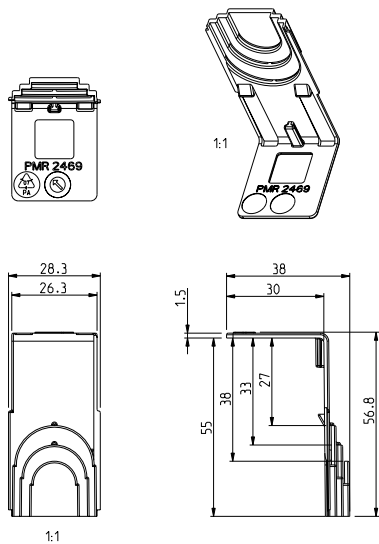
KEL62



KEL63



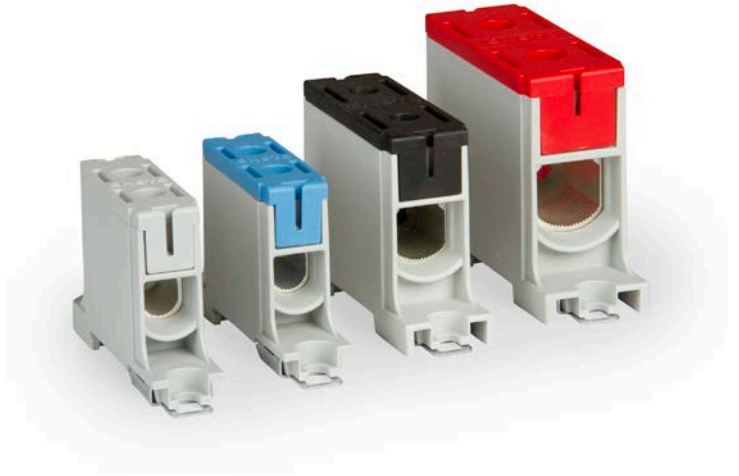
KEL64



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Ensto Clampo Pro 1000 V terminals

For Al/Cu conductors from 2,5 mm² to 150 mm²






Why choose the Ensto Clampo Pro 1000 V terminals

- Suitable for 1000 VAC and VDC
- Compact size
 - Can be installed next to each other without partition plates
- Suitable for both aluminium and copper conductors
- Short circuit tested class A terminals
- Higher temperature range (90 °C)

Technical features

- Housing: fiberglass reinforced polyamide
 - Better mechanical strength vs. polyamide
 - Better insulating capacity
 - 90°C temperature range achieved for the material
- Colours:
 - Red and black versions for DC applications
 - Grey and blue for AC applications (KE6x.3 to be used as a grounding terminal)

| Conformity | |
|--|--|
| CE    | |
| Standards | |
| For copper conductors: | EN 60947-7-1:2009 |
| For aluminium conductors: | EN 61238-1:2003 |
| UL recognition | UL 1059 |
| Connector class: | A |
| Technical information | |
| Cross-section range: | Al 6 - 150 mm ² Cu 2.5 - 150 mm ² |
| Nominal current range: | 145 - 320 A |
| Operating temperature: | max. 90 °C |
| Pollution degree: | 3 |
| Material | |
| Housing: | Fiberglass reinforced polyamide |
| Body and screws: | Tin-coated aluminium |
| Mechanical features | |
| Screw heads: | Hexagonal |
| Mounting: | Screws or DIN rail |



Ensto Clampo Pro 1000 V terminals

Ensto Clampo Pro 1000 V, one-pole terminal blocks

| Product code | Conductor cross-section (mm ²) | Colour | Nominal current (A) | Nominal insulation voltage (V) | Screw head hexagon (mm) | Tightening torque (Nm) | Mounting | Weight (kg) | Package size (pcs) | EAN 13 code |
|--------------|--|--------|-----------------------|--------------------------------|-------------------------|---|----------------|-------------|--------------------|---------------|
| KE161 | Cu 2,5-50 mm ² Al 6-50 mm ² | Grey | Cu 160 A, Al 145 A | 1000 V | 5 mm | 4 Nm (2.5-4mm ²), 12 Nm (6-50mm ²) | DIN rail | 0.045 | 30 | 6438100181758 |
| KE161.2 | Cu 2,5-50 mm ² Al 6-50 mm ² | Blue | Cu 160 A, Al 145 A | 1000 V | 5 mm | 4 Nm (2.5-4mm ²), 12 Nm (6-50mm ²) | DIN rail | 0.045 | 30 | 6438100181765 |
| KE161.4 | Cu 2,5-50 mm ² Al 6-50 mm ² | Red | Cu 160 A, Al 145 A | 1000 V | 5 mm | 4 Nm (2.5-4mm ²), 12 Nm (6-50mm ²) | DIN rail | 0.045 | 30 | 6438100181772 |
| KE161.6 | Cu 2,5-50 mm ² Al 6-50 mm ² | Black | Cu 160 A, Al 145 A | 1000 V | 5 mm | 4 Nm (2.5-4mm ²), 12 Nm (6-50mm ²) | DIN rail | 0.045 | 30 | 6438100181789 |
| KE162 | Al/Cu 16-95 mm ² | Grey | Cu 245 A, Al 220 A | 1000 V | 5 mm | 20 Nm | DIN rail/screw | 0.091 | 30 | 6438100160616 |
| KE162.2 | Al/Cu 16-95 mm ² | Blue | Cu 245 A, Al 220 A | 1000 V | 5 mm | 20 Nm | DIN rail/screw | 0.091 | 30 | 6438100160623 |
| KE162.4 | Al/Cu 16-95 mm ² | Red | Cu 245 A, Al 220 A | 1000 V | 5 mm | 20 Nm | DIN rail/screw | 0.091 | 30 | 6438100160647 |
| KE162.6 | Al/Cu 16-95 mm ² | Black | Cu 245 A, Al 220 A | 1000 V | 5 mm | 20 Nm | DIN rail/screw | 0.091 | 30 | 6438100160654 |
| KE163 | Al/Cu 35-150 mm ² | Grey | Cu 320 A, Al 290 A | 1000 V | 8 mm | 20 Nm (35-95mm ²), 30 Nm (120-150mm ²) | DIN rail/screw | 0.143 | 30 | 6438100181796 |
| KE163.2 | Al/Cu 35-150 mm ² | Blue | Cu 320 A, Al 290 A | 1000 V | 8 mm | 20 Nm (35-95mm ²), 30 Nm (120-150mm ²) | DIN rail/screw | 0.143 | 30 | 6438100181802 |
| KE163.4 | Al/Cu 35-150 mm ² | Red | Cu 320 A, Al 290 A | 1000 V | 8 mm | 20 Nm (35-95mm ²), 30 Nm (120-150mm ²) | DIN rail/screw | 0.143 | 30 | 6438100181819 |
| KE163.6 | Al/Cu 35-150 mm ² | Black | Cu 320 A, Al 290 A | 1000 V | 8 mm | 20 Nm (35-95mm ²), 30 Nm (120-150mm ²) | DIN rail/screw | 0.143 | 30 | 6438100181826 |

The nominal currents in the table are for maximum cross-sections.

UL recognitions

| Product code | Wire type | AWG* 1 wire/terminal | AWG* 2 Cu-wires/ terminal | AWG* 3 Cu-wires/ terminal | Max insulation voltage | Max current | Tightening torque | Allen-hex socket head terminal screw | Dimensions (W x H x D) |
|--------------|-----------|-------------------------|---------------------------------|---------------------------------|---------------------------|----------------|----------------------|--|---|
| KE161 | Cu | 1/0 - 6 | 6 | 8 | 1000 V | 150 A | 90 lb-in | 5 mm | 3.25 x 1.89 x 0.76 In (82.5 x 48 x 19.2 mm) |
| | Al | 1/0 - 6 | | | 1000 V | 120 A | (10 Nm) | | |
| KE162 | Cu | 4/0 - 4 | 2 - 6 | 6 | 1000 V | 230 A | 126 lb-in | 5 mm | 3.74 x 2.16 x 0.98 In (95 x 55 x 25 mm) |
| | Al | 4/0 - 4 | | | 1000 V | 180 A | (14 Nm) | | |
| KE163 | Cu | 300 - 2 | 1/0 - 2 | 2 | 1000 V | 285 A | 216 lb-in | 8 mm | 4.15 x 2.58 x 1.20 In (105.5 x 65.5 x 30.4 mm) |
| | Al | 300 - 2 | | | 1000 V | 230 A | (24 Nm) | | |

Standard UL 1059, UL category XCFR2, file # E 192532.

* AWG = American Wire Gauge

All terminal blocks are delivered with oxide-inhibiting compound applied.



KE161



KE161.2



KE162.6

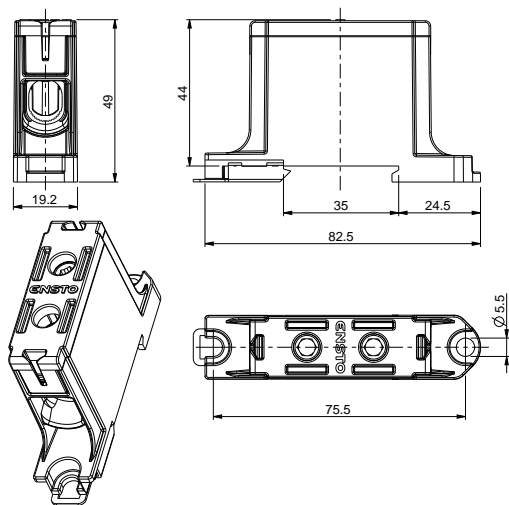


KE163.4

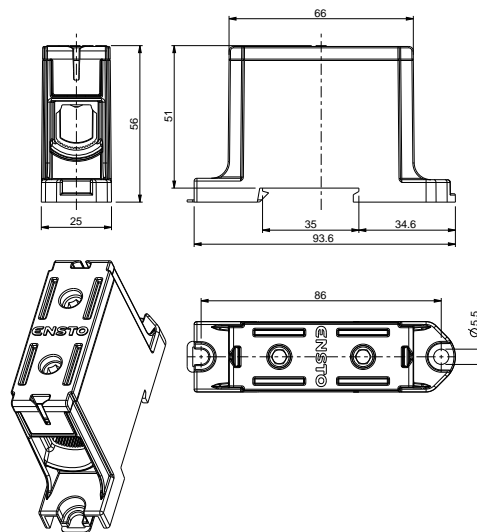
Dimensional drawings

Dimensions in mm

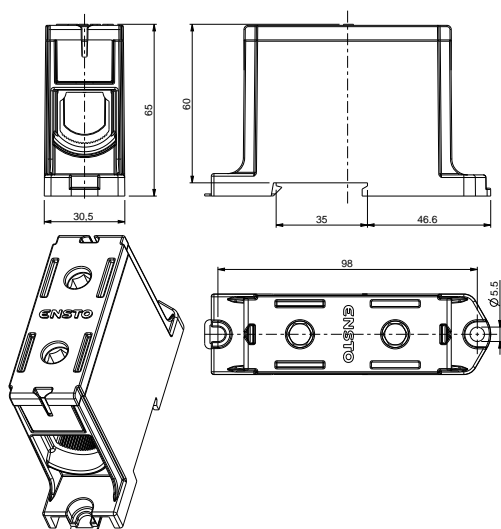
KE161



KE162



KE 163



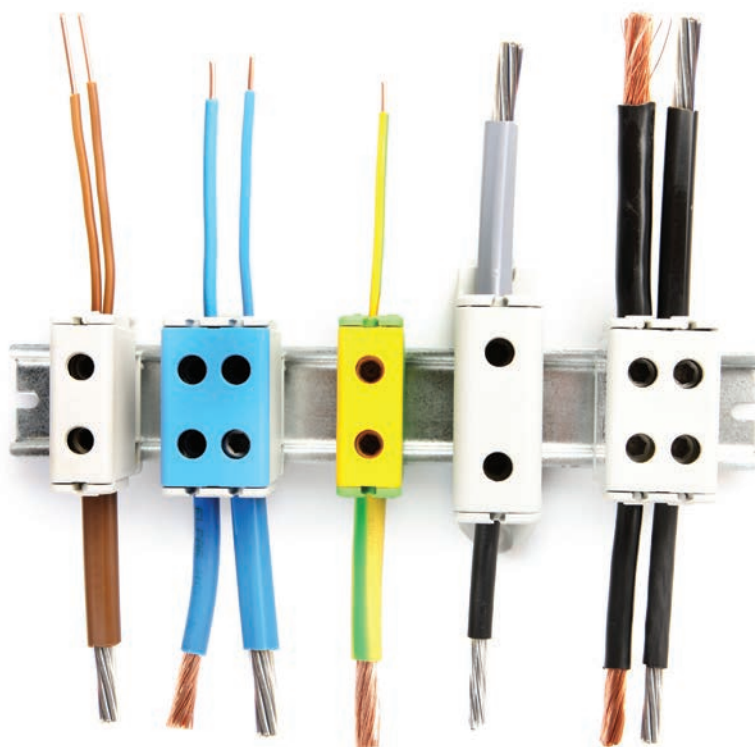
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Conductor table

Conductors that can be used with the terminals: number, cross-section and type.

- Nominal cross-sections are in bold type.
- Often the requirements of a specific apparatus restrict the number of conductors.
- The nominal current of the terminal must not be exceeded.
- In general, the conductors connected to one conductor space of a connector must be of the same type.
- Table values require careful installation.
- After installation, check that all conductors are firmly pressed into a connection.
- We recommend a ferrule when using a fine-stranded conductor.
- According to installation standard SFS 6000: 1999 section 810.2.6, each incoming and outgoing protection and neutral conductor in a panel must have its own separate terminal.
- The conductor numbers below refer only to factory industrially installed terminals (internal connections in a panel), (SGS Fimko).

| Product code | Wire type | Cross-sections of conductors (mm ²) and number of conductors/space. The conductor numbers below refer only to industrially installed terminals. | | | | | | | | | | | | | | Nominal current (A) | Nominal insulation voltage (V) | Tightening torque (Nm) | |
|--------------------------------------|-----------|--|-----|---|---|----|----|----|----|----|----|----|-----|-----|-----|---------------------|--------------------------------|------------------------|---------------------------------|
| | | 1.5 | 2.5 | 4 | 6 | 10 | 16 | 25 | 35 | 50 | 70 | 95 | 120 | 150 | 185 | | | | 240 |
| Ensto Clampo Pro universal terminals | | | | | | | | | | | | | | | | | | | |
| KE61 | Al | | | | 1 | 1 | 1 | 1 | 1 | 1 | | | | | | | 145 | 800 | 4 (2.5-4mm ²) |
| | Cu | 3 | 3 | 3 | 3 | 2 | 1 | 1 | 1 | 1 | | | | | | | 160 | 800 | 12 (6-50mm ²) |
| KE62 | Al | | | | | 1 | 1 | 1 | 1 | 1 | 1 | | | | | | 220 | 800 | 20 |
| | Cu | | | | | 3 | 2 | 2 | 1 | 1 | 1 | | | | | | 245 | | |
| KE63 | Al | | | | | | | | 1 | 1 | 1 | 1 | 1 | 1 | | | 290 | 800 | 20 (35-95 mm ²) |
| | Cu | | | | | | | | 3 | 2 | 1 | 1 | 1 | 1 | | | 320 | | 30 (120-150 mm ²) |
| KE64 | Al | | | | | | | | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 380 | 800 | 12 (35-70 mm ²) |
| | Cu | | | | | | | | 3 | 3 | 2 | 1 | 1 | 1 | 1 | 1 | 425 | | 45 (95-240mm ²) |
| KE66 | Al | | | | 1 | 1 | 1 | 1 | 1 | 1 | | | | | | | 145 | 800 | 4 (2.5-4mm ²), |
| | Cu | 3 | 3 | 3 | 3 | 2 | 1 | 1 | 1 | 1 | | | | | | | 160 | 800 | 12 (6-50mm ²) |
| KE67 | Al | | | | | 1 | 1 | 1 | 1 | 1 | 1 | 1 | | | | | 220 | 800 | 20 |
| | Cu | | | | | 3 | 2 | 2 | 1 | 1 | 1 | 1 | | | | | 245 | | |
| KE68 | Al | | | | | | | | 1 | 1 | 1 | 1 | 1 | 1 | | | 290 | 800 | 20 (35-95mm ²) |
| | Cu | | | | | | | | 3 | 3 | 2 | 1 | 1 | 1 | 1 | | 320 | | 30 (120-150mm ²) |
| KE69 | Al | | | | | | | | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 380 | 800 | 12 (35-70mm ²) |
| | Cu | | | | | | | | 3 | 3 | 2 | 1 | 1 | 1 | 1 | 1 | 425 | | 45 (95-240mm ²) |
| Ensto Clampo Pro 1000 V terminals | | | | | | | | | | | | | | | | | | | |
| KE161 | Al | | | | 1 | 1 | 1 | 1 | 1 | 1 | | | | | | | 145 | 1000 | 12 Nm (6-50mm ²) |
| | Cu | 3 | 3 | 3 | 3 | 2 | 1 | 1 | 1 | 1 | | | | | | | 160 | 1000 | 4 Nm (2.5-4mm ²) |
| KE162 | Al | | | | | 1 | 1 | 1 | 1 | 1 | 1 | 1 | | | | | 220 | 1000 | 20 |
| | Cu | | | | | 3 | 2 | 2 | 1 | 1 | 1 | 1 | | | | | 245 | | |
| KE163 | Al | | | | | | | | 1 | 1 | 1 | 1 | 1 | 1 | | | 290 | 1000 | 30 Nm (120-150mm ²) |
| | Cu | | | | | | | | 3 | 2 | 1 | 1 | 1 | 1 | 1 | | 320 | | 20 Nm (35-95mm ²) |



More information available on our website

Product cards available on www.ensto.com/products/terminals

We support your end solutions design process by offering product cards related to our terminals, load break switches and fuse bases. The product cards contain technical specifications, basic product data and the dimensional drawings in pdf format. Product cards are available on our web pages under the section Products (www.ensto.com/products).

The screenshot shows the ENSTO website interface. The top navigation bar includes 'Solutions', 'Products', 'Support', 'News Room', 'About Ensto', and 'Contacts'. The breadcrumb trail reads: 'Front page > Products > Industrial components > Terminals > Universal terminals > Universal terminal blocks'. The main content area is titled 'Product card:' and lists the following details:

- Type: K641
- EAN: 6418677191817
- Name: Clampo Pro terminal
- Description: 1-pole, grey, Al 6-50 mm², Cu 2.5-50 mm². Ensto Clampo Pro is a comprehensive universal terminal series for Al/Cu conductors of 2.5 – 240 mm².
- Package: 3/30/3150
- Unit: PCS

There are also logos for CE, RoHS, and other certifications. A QR code is located on the right side of the card. The 'Attachments' section lists:

- PDF: PDF-Product card (491 kB)
- TIF: Printable gb-*** (34 kB)
- PDF: Technical d (3.9 MB)
- PDF: Industrial components catalogue

The 'Technical specification' section is partially visible at the bottom.

More information available on www.ensto.com/clampopro

On this website you will find, for instance:

- Latest product news
- Product cards with relevant product information
- Customer references
- Catalogues and leaflets
- Distributor information
- Contact information for our sales personnel.

The screenshot shows the ENSTO website interface for 'Ensto Clampo Pro'. The breadcrumb trail reads: 'Front page > Solutions > Industrial Components > Terminals > Ensto Clampo Pro'. The main content area features a large image of the terminal being installed on a rock. The text reads:

Ensto Clampo Pro universal terminals

Small item - great significance

Ensto Clampo Pro is a comprehensive universal terminal series for Al/Cu conductors. Ensto Clampo universal terminal series is a versatile solution for all installation voltage switchgear and control gears for industry and construction to be built with both Al and Cu conductors, it makes life easier for designers in mechanical engineering.

How do you recognize a good terminal?

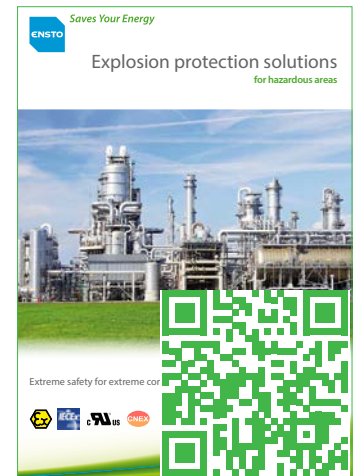
The terminal:

- Is certified according to the latest standards
- Is suitable for both Al and Cu conductors

A QR code is located on the right side of the page.

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Ensto

Ensto is a family business and an international cleantech company specializing in the development, manufacture and marketing of electrical systems and supplies for the distribution of electrical power as well as various electrical applications. We are committed to lasting sustainable development and our goal is to be a leading company in green energy efficiency and distribution. Our products, manufactured in seven countries, are environmentally friendly, energy efficient and leave a minimum carbon footprint.

Facts

- Established in 1958
- 1670 people in Europe and Asia
- Local presence in 20 countries
- Turnover EUR 280 million
- Headquarters located in Finland.

Cleantech

Cleantech refers to all those products, services, processes, and technologies which prevent or reduce the impact of harmful actions on the environment. Cleantech stands for higher quality, efficiency, and profitability. Ensto and other Finnish companies are already world leaders in several key cleantech sectors.



Saves Your Energy

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