



*Saves Your Energy*

# Terminals, switches and fuse bases

Industrial components



Electromechanical components for industrial use

# Industrial components

## Critical to the safety of your operations

We support your operations with high-quality terminals, load-break switches and fuse bases that are designed and tested to meet a wide range of applications in various environments.

You can rely on our components as they are certified against demanding industry standards to ensure high performance and quality of your operations.

We have sound experience of terminal solutions targeted at the OEM industries and panel builders.

## Benefits of using our components



### Reliable long-term partner

Ensto is a financially solid family-owned company, founded in 1958. We have modern production facilities and quality controlled manufacturing, and offer excellent customer care.



### Experienced partner

We are an expert with over 50 years experience in connecting technology. We have knowledge of solutions made for a wide range of applications in various environments and an excellent design team to support your processes.



### Reliable and fast deliveries

You get our products when you need them. This brings you cost-savings as you can better optimize your stock.



### Reliable, certified products

Our terminals are designed and tested to meet a wide range of industrial applications in various environments.



### Products with a long lifetime

Thanks to their good design, our components are reliable and have a long lifetime. This brings you savings in maintenance and replacement costs.





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# Product cards on our website

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 (ensto.com/products).



Scan the QR code to access our product information with your mobile device.



# Customer-specific solutions

In addition to the standard components, we offer customer-specific solutions. These include e.g. standard terminals customised with prints, and customer-specific labelling and solutions designed and developed on the basis of our customers' needs. An example of these is the Ensto Clampo Pro three-pole terminal block specially designed for one of our drives industry customers and available today in our standard product range.

Our service offering also includes deliveries with special packaging and manufacturing of products for private labels.

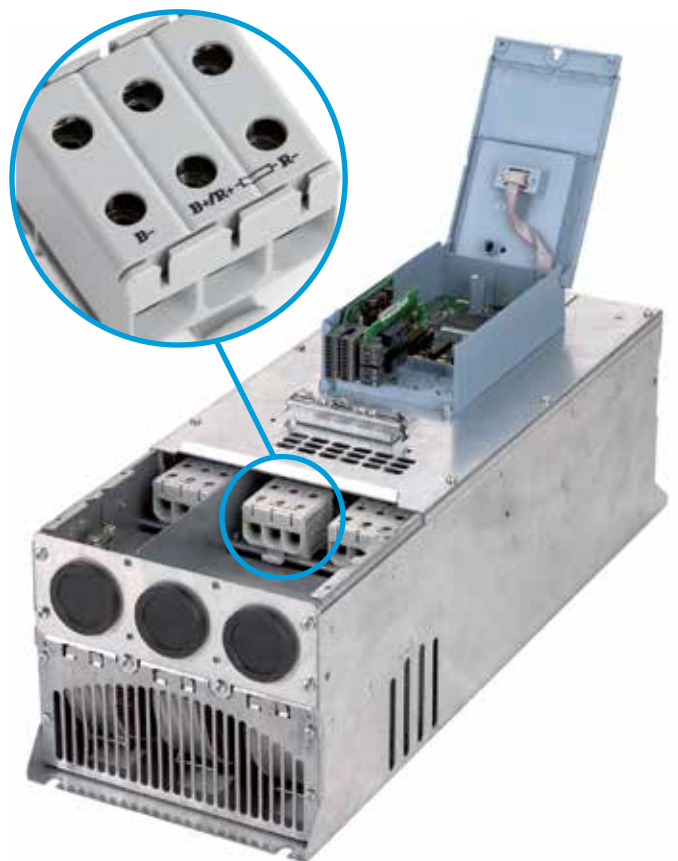
## Our special strengths include:

- Years of experience in customer-specific terminal solutions
- Experienced design department
- Production and assembly, also in low cost countries (LCC)
- Large selection of high-quality terminals for a global clientele.

## Customer-specific solutions

Our service offering includes:

- 3D modelling
- Prototyping
- Testing
- Branding and labeling
- Printing e.g. company logos, operating instructions and symbols
- Manufacturing plastic parts from colored plastic raw material
- Certification handling and consultation
- Manufacturing and assembly



Drives application including our Ensto Clampo Pro three-pole terminal blocks specially designed to meet the needs of the drives industry.



# Terminals

Our Ensto Clampo terminals are specially developed for the needs of the industry. Our offering includes a large range of terminal series, some of which are suitable for both aluminium and copper conductors. The nominal current of the terminals ranges between 17.5 and 730 A and the nominal insulation voltage varies from 400 to 1000 V.

Our offering also covers enclosed terminals, including everything needed for connecting wires, extending or branching cables and enclosing different components.

Our Ensto Clampo series have been tested by SGS Fimko. They meet the requirements of several different standards. Some models are also UL-recognized (Underwriters Laboratories, File # E 192532).

## Benefits for using our terminals



### Smaller stocks and reduced costs

You need fewer items in your stock as many of our terminals are suitable for safe connections between aluminium and copper conductors and most of our terminals can be installed both onto a DIN rail or directly onto a surface. Fewer items in your stocks means reduced costs.



### Wide application range

Our terminals are designed and tested to meet a wide range of applications. We have solutions for different uses like connecting two conductors, tapping, branching, grounding and transitioning from aluminium to copper conductors.



### Wide cross-section range

Our terminals are available in different sizes for different applications. All terminals are designed for big cross-section span, from small to big sized conductors.



### Connecting aluminium and copper conductors

A wide range of terminals can be used for both aluminium and copper conductors to create a safe transition from aluminium to copper.



### Reliable and cost-efficient

Our terminals are designed to be simple and robust for maximal reliability. They are manufactured from high quality raw materials to ensure a long life span.

# Ensto Clampo Pro universal terminals

For Al/Cu conductors from 2.5 mm<sup>2</sup> to 240 mm<sup>2</sup>



## Ensto Clampo Pro universal terminals in brief:

- Certified according to the latest standards
- UL- recognized and Gost R certified (switchboards/equipment suitable for exporting 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 for the feed-in conductors (short circuit tested)
- Suitable for a wide cross-section range of conductors (a single terminal can be used in a wide range of applications)
- Also 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 of connection with hexagonal screws (possible to reuse without damage)
- Color coding for N and PE terminals

## Conformity



## Standards

For copper conductors:	EN 60947-7-1:2009 EN 60947-7-2:2009
For aluminium conductors:	EN 61238-1:2003
UL- recognition:	UL 1059
Connector class:	A

## Technical information

Cross-section range:	Al 6 – 240 mm <sup>2</sup> , Cu 2.5 – 240 mm <sup>2</sup>
Nominal current range:	145 – 425 A
Operating temperature:	Max. 80 °C
Pollution degree:	3

## Material

Housing:	Polyamide
Body and screws:	Tin-coated aluminium

## Mechanical features

Screw head:	Hexagonal
Mounting:	Screws or DIN rail

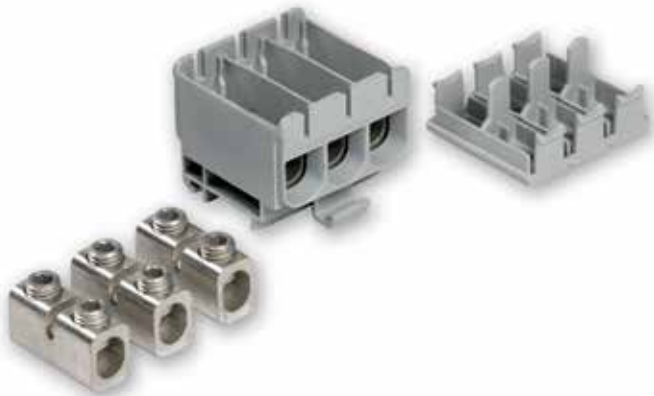
Conductor table can be found on page 25.

**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 mm<sup>2</sup>
- KE62, KE67 16 – 35 mm<sup>2</sup>
- KE63, KE68 35 – 70 mm<sup>2</sup>
- KE64, KE69 35 – 120 mm<sup>2</sup>

The use of 240 mm<sup>2</sup> flexible conductors is not recommended.

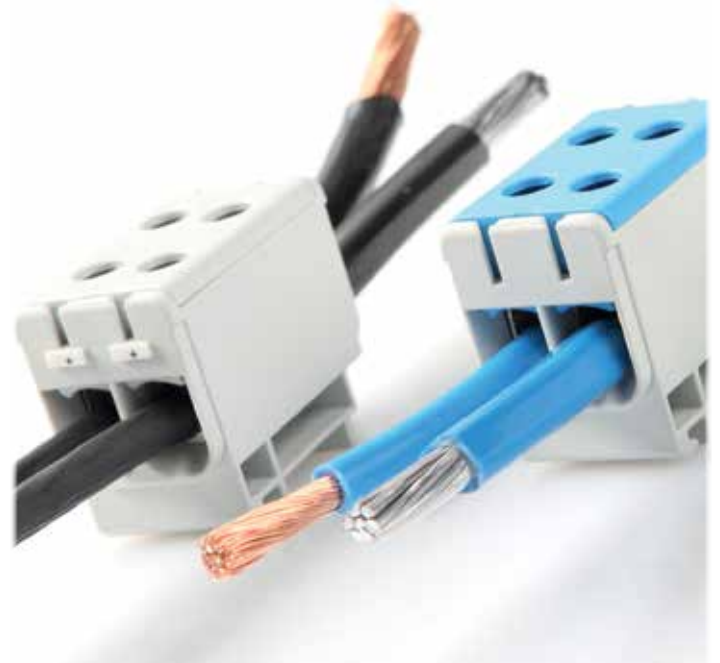
\*Class 5, according to IEC 228 Second Edition 1978



KE61.03 is a three-pole terminal block with three individual circuits.



Tapping terminals consist of a single pole with four connection points (single circuit).



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

Product code	Conductor cross-section	Color	Nominal current	Nominal insulation voltage	Screw head hexagon	Bit length min.	Tightening torque	Mounting	Dimensions W x L x H (mm)	Weight (kg)	Package size (pcs)	GTIN-13
<b>Ensto Clampo Pro, one-pole terminal blocks</b>												
KE61	Cu 2.5–50 mm <sup>2</sup> Al 6–50 mm <sup>2</sup>	Grey	Cu 160 A, Al 145 A	800 V	5 mm	20	4 Nm (2.5–4mm <sup>2</sup> ), 12 Nm (6–50mm <sup>2</sup> )	DIN rail	17.8 x 49 x 43	0.030	30	6418677191817
KE61.2	Cu 2.5–50 mm <sup>2</sup> Al 6–50 mm <sup>2</sup>	Blue	Cu 160 A, Al 145 A	800 V	5 mm	20	4 Nm (2.5–4mm <sup>2</sup> ), 12 Nm (6–50mm <sup>2</sup> )	DIN rail	17.8 x 49 x 43	0.030	30	6418677191831
KE61.3	Cu 2.5–50 mm <sup>2</sup> Al 6–50 mm <sup>2</sup>	Yellow/ Green		800 V	5 mm	20	4 Nm (2.5–4mm <sup>2</sup> ), 12 Nm (6–50mm <sup>2</sup> )	DIN rail	17.8 x 49 x 43	0.030	30	6418677191848
KE62	Al/Cu 16–95 mm <sup>2</sup>	Grey	Cu 245 A, Al 220 A	800 V	5 mm	25	20 Nm	DIN rail/screw	24 x 86 x 49	0.074	30	6418677191855
KE62.2	Al/Cu 16–95 mm <sup>2</sup>	Blue	Cu 245 A, Al 220 A	800 V	5 mm	25	20 Nm	DIN rail/screw	24 x 86 x 49	0.074	30	6418677191862
KE62.3	Al/Cu 16–95 mm <sup>2</sup>	Yellow/ Green		800 V	5 mm	25	20 Nm	DIN rail/screw	24 x 86 x 49	0.074	30	6418677191879
KE63	Al/Cu 35–150 mm <sup>2</sup>	Grey	Cu 320 A, Al 290 A	800 V	8 mm	34	20 Nm (35–95mm <sup>2</sup> ), 30 Nm (120–150mm <sup>2</sup> )	DIN rail/screw	29.5 x 95 x 59	0.120	30	6418677191886
KE63.2	Al/Cu 35–150 mm <sup>2</sup>	Blue	Cu 320 A, Al 290 A	800 V	8 mm	34	20 Nm (35–95mm <sup>2</sup> ), 30 Nm (120–150mm <sup>2</sup> )	DIN rail/screw	29.5 x 95 x 59	0.120	30	6418677191893
KE63.3	Al/Cu 35–150 mm <sup>2</sup>	Yellow/ Green		800 V	8 mm	34	20 Nm (35–95mm <sup>2</sup> ), 30 Nm (120–150mm <sup>2</sup> )	DIN rail/screw	29.5 x 95 x 59	0.120	30	6418677191909
KE64	Al/Cu 35–240 mm <sup>2</sup>	Grey	Cu 425 A, Al 380 A	800 V	8 mm	38	12 Nm (35–70mm <sup>2</sup> ), 45 Nm (95–240mm <sup>2</sup> )	Screw	37.5 x 130 x 67	0.249	30	6418677191916
KE64.2	Al/Cu 35–240 mm <sup>2</sup>	Blue	Cu 425 A, Al 380 A	800 V	8 mm	38	12 Nm (35–70mm <sup>2</sup> ), 45 Nm (95–240mm <sup>2</sup> )	Screw	37.5 x 130 x 67	0.249	30	6418677191923
KE64.3	Al/Cu 35–240 mm <sup>2</sup>	Yellow/ Green		800 V	8 mm	38	12 Nm (35–70mm <sup>2</sup> ), 45 Nm (95–240mm <sup>2</sup> )	Screw	37.5 x 130 x 67	0.249	30	6418677191930
<b>Ensto Clampo Pro, three-pole terminal block</b>												
KE61.03	Cu 2.5–50 mm <sup>2</sup> Al 6–50 mm <sup>2</sup>	Grey	Cu 160 A, Al 145 A	800 V	5 mm	20	4 Nm (2.5–4mm <sup>2</sup> ), 12 Nm (6–50mm <sup>2</sup> )	DIN rail	49.5 x 49 x 43	0.077	30	6418677191824
<b>Ensto Clampo Pro, tapping blocks, single pole, four connections</b>												
KE66	Cu 2.5–50 mm <sup>2</sup> Al 6–50 mm <sup>2</sup>	Grey	Cu 160 A, Al 145 A	800 V	5 mm	20	4 Nm (2.5–4mm <sup>2</sup> ), 12 Nm (6–50mm <sup>2</sup> )	DIN rail	29.8 x 49 x 43	0.049	30	6418677191947
KE66.2	Cu 2.5–50 mm <sup>2</sup> Al 6–50 mm <sup>2</sup>	Blue	Cu 160 A, Al 145 A	800 V	5 mm	20	4 Nm (2.5–4mm <sup>2</sup> ), 12 Nm (6–50mm <sup>2</sup> )	DIN rail	29.8 x 49 x 43	0.049	30	6418677191954
KE66.3	Cu 2.5–50 mm <sup>2</sup> Al 6–50 mm <sup>2</sup>	Yellow/ Green		800 V	5 mm	20	4 Nm (2.5–4mm <sup>2</sup> ), 12 Nm (6–50mm <sup>2</sup> )	DIN rail	29.8 x 49 x 43	0.049	30	6418677191961
KE67	Al/Cu 16–95 mm <sup>2</sup>	Grey	Cu 245 A, Al 220 A	800 V	5 mm	25	20 Nm	DIN rail/screw	42 x 86 x 49	0.128	30	6418677191978
KE67.2	Al/Cu 16–95 mm <sup>2</sup>	Blue	Cu 245 A, Al 220 A	800 V	5 mm	25	20 Nm	DIN rail/screw	42 x 86 x 49	0.128	30	6418677191985
KE67.3	Al/Cu 16–95 mm <sup>2</sup>	Yellow/ Green		800 V	5 mm	25	20 Nm	DIN rail/screw	42 x 86 x 49	0.128	30	6418677191992
KE68	Al/Cu 35–150 mm <sup>2</sup>	Grey	Cu 320 A, Al 290 A	800 V	8 mm	34	20 Nm (35–95mm <sup>2</sup> ), 30 Nm (120–150mm <sup>2</sup> )	DIN rail/screw	51.5 x 95 x 59	0.210	30	6418677192005
KE68.2	Al/Cu 35–150 mm <sup>2</sup>	Blue	Cu 320 A, Al 290 A	800 V	8 mm	34	20 Nm (35–95mm <sup>2</sup> ), 30 Nm (120–150mm <sup>2</sup> )	DIN rail/screw	51.5 x 95 x 59	0.210	30	6418677192012
KE68.3	Al/Cu 35–150 mm <sup>2</sup>	Yellow/ Green		800 V	8 mm	34	20 Nm (35–95mm <sup>2</sup> ), 30 Nm (120–150mm <sup>2</sup> )	DIN rail/screw	51.5 x 95 x 59	0.210	30	6418677192029
KE69	Al/Cu 35–240 mm <sup>2</sup>	Grey	Cu 425 A, Al 380 A	800 V	8 mm	38	12 Nm (35–70mm <sup>2</sup> ), 45 Nm (95–240mm <sup>2</sup> )	Screw	64 x 130 x 67	0.438	30	6418677192036
KE69.2	Al/Cu 35–240 mm <sup>2</sup>	Blue	Cu 425 A, Al 380 A	800 V	8 mm	38	12 Nm (35–70mm <sup>2</sup> ), 45 Nm (95–240mm <sup>2</sup> )	Screw	64 x 130 x 67	0.438	30	6418677192043
KE69.3	Al/Cu 35–240 mm <sup>2</sup>	Yellow/ Green		800 V	8 mm	38	12 Nm (35–70mm <sup>2</sup> ), 45 Nm (95–240mm <sup>2</sup> )	Screw	64 x 130 x 67	0.438	30	6418677192050

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



KE61



KE62



KE63.2



KE64.3



KE61.03



KE66



KE68.2



KE69.3



## Ensto Clampo terminal sets

Packed in convenient retail packages.

Cross-section (mm <sup>2</sup> )	Product code	GTIN-13	Description
Cu 2.5 – 50, Al 6 – 50	KE61SET	6418677191800	Mounting kit, KE61.03 + KE61.2 + KE61.3
	KE61T	6418677192326	Universal terminal, grey, bag of 3 pcs
	KE61.03T	6418677192357	Universal terminal, grey, 3-pole, bag of 2 pcs
	KE61.2T	6418677192333	Universal terminal, blue, bag of 3 pcs
	KE61.3T	6418677192340	Universal terminal, yellow-green, bag of 3 pcs
Al/Cu 16 – 95	KE62SET	6418677192432	Mounting kit, 3 x KE62 + KE62.2 + KE62.3
	KE62T	6418677192364	Universal terminal, grey, bag of 3 pcs
	KE62.2T	6418677192371	Universal terminal, blue, bag of 3 pcs
	KE62.3T	6418677192388	Universal terminal, yellow-green, bag of 3 pcs
Cu 2.5 – 50, Al 6 – 50	KE66T	6418677192395	Tapping block, grey, bag of 3 pcs
	KE66.2T	6418677192401	Tapping block, blue, bag of 3 pcs
	KE66.3T	6418677192418	Tapping block, yellow-green, bag of 3 pcs



KE61SET includes Ensto Clampo Pro universal terminals.

## Accessories

Product code	Description	Weight (kg)	Package size (pcs)	GTIN-13
<b>Terminal shrouds</b>				
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
<b>Other accessories</b>				
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



The terminal shroud is L-shaped, thus protecting both the conductor space and the hole from the tightening tool.



The terminals are easy to mark using the marking strips.

## Marking strips

Each strip contains 10 markers.

Product code	Markings	Weight (kg)	Package size (strips)	GTIN-13
PM34.00	0	0.001	10	6418677192067
PM34.01	1	0.001	10	6418677192074
PM34.02	2	0.001	10	6418677192081
PM34.03	3	0.001	10	6418677192098
PM34.04	4	0.001	10	6418677192104
PM34.05	5	0.001	10	6418677192111
PM34.06	6	0.001	10	6418677192128
PM34.07	7	0.001	10	6418677192135
PM34.08	8	0.001	10	6418677192142
PM34.09	9	0.001	10	6418677192159
PM34.10	⊕	0.001	10	6418677192166
PM34.11	R	0.001	10	6418677192173
PM34.12	S	0.001	10	6418677192180

Product code	Markings	Weight (kg)	Package size (strips)	GTIN-13
PM34.13	T	0.001	10	6418677192197
PM34.14	U	0.001	10	6418677192203
PM34.15	V	0.001	10	6418677192210
PM34.16	W	0.001	10	6418677192227
PM34.19	L	0.001	10	6418677192234
PM34.22	+	0.001	10	6418677192241
PM34.23	-	0.001	10	6418677192258
PM34.24	⊥	0.001	10	6418677192265
PM34.25	N	0.001	10	6418677192272
PM34.26	L1	0.001	10	6418677192289
PM34.27	L2	0.001	10	6418677192296
PM34.28	L3	0.001	10	6418677192302
PM34.29	PE	0.001	10	6418677192319

## UL recognitions

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

Standard UL 1059, UL category XCFR2, file no. E192532.

\* AWG = American Wire Gauge

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

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



# Ensto Clampo Pro 1000 V terminals

For Al/Cu conductors from 2.5 mm<sup>2</sup> to 150 mm<sup>2</sup>



## 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



## 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 <sup>2</sup> Cu 2.5 – 150 mm <sup>2</sup>
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

Conductor table can be viewed on page 25.

**Reliability and protection  
with higher supply voltages**



1000 V terminals are well suited for applications where higher supply voltages are used, such as in drivers, railway systems and ships. They are also suitable for DC applications, making them a perfect choice for photovoltaic connections.

## Ensto Clampo Pro 1000 V, one-pole terminal blocks

Product code	Conductor cross-section (mm <sup>2</sup> )	Colour	Nominal current (A)	Nominal insulation voltage (V)	Screw head hexagon (mm)	Bit length min.	Tightening torque (Nm)	Mounting	Dimensions W x L x H (mm)	Weight (kg)	Package size (pcs)	EAN 13 code
KE161	Cu 2.5–50 mm <sup>2</sup> Al 6–50 mm <sup>2</sup>	Grey	Cu 160 A, Al 145 A	1000 V	5 mm	20	4 Nm (2.5–4mm <sup>2</sup> ), 12 Nm (6–50mm <sup>2</sup> )	DIN rail/screw	19.2 x 82.5 x 48.5	0.045	30	6438100181758
KE161.2	Cu 2.5–50 mm <sup>2</sup> Al 6–50 mm <sup>2</sup>	Blue	Cu 160 A, Al 145 A	1000 V	5 mm	20	4 Nm (2.5–4mm <sup>2</sup> ), 12 Nm (6–50mm <sup>2</sup> )	DIN rail/screw	19.2 x 82.5 x 48.5	0.045	30	6438100181765
KE161.4	Cu 2.5–50 mm <sup>2</sup> Al 6–50 mm <sup>2</sup>	Red	Cu 160 A, Al 145 A	1000 V	5 mm	20	4 Nm (2.5–4mm <sup>2</sup> ), 12 Nm (6–50mm <sup>2</sup> )	DIN rail/screw	19.2 x 82.5 x 48.5	0.045	30	6438100181772
KE161.6	Cu 2.5–50 mm <sup>2</sup> Al 6–50 mm <sup>2</sup>	Black	Cu 160 A, Al 145 A	1000 V	5 mm	20	4 Nm (2.5–4mm <sup>2</sup> ), 12 Nm (6–50mm <sup>2</sup> )	DIN rail/screw	19.2 x 82.5 x 48.5	0.045	30	6438100181789
KE162	Al/Cu 16–95 mm <sup>2</sup>	Grey	Cu 245 A, Al 220 A	1000 V	5 mm	25	20 Nm	DIN rail/screw	25 x 93.5 x 55.5	0.091	30	6438100160616
KE162.2	Al/Cu 16–95 mm <sup>2</sup>	Blue	Cu 245 A, Al 220 A	1000 V	5 mm	25	20 Nm	DIN rail/screw	25 x 93.5 x 55.5	0.091	30	6438100160623
KE162.4	Al/Cu 16–95 mm <sup>2</sup>	Red	Cu 245 A, Al 220 A	1000 V	5 mm	25	20 Nm	DIN rail/screw	25 x 93.5 x 55.5	0.091	30	6438100160647
KE162.6	Al/Cu 16–95 mm <sup>2</sup>	Black	Cu 245 A, Al 220 A	1000 V	5 mm	25	20 Nm	DIN rail/screw	25 x 93.5 x 55.5	0.091	30	6438100160654
KE163	Al/Cu 35–150 mm <sup>2</sup>	Grey	Cu 320 A, Al 290 A	1000 V	8 mm	34	20 Nm (35–95mm <sup>2</sup> ), 30 Nm (120–150mm <sup>2</sup> )	DIN rail/screw	30.4 x 108 x 64.5	0.143	30	6438100181796
KE163.2	Al/Cu 35–150 mm <sup>2</sup>	Blue	Cu 320 A, Al 290 A	1000 V	8 mm	34	20 Nm (35–95mm <sup>2</sup> ), 30 Nm (120–150mm <sup>2</sup> )	DIN rail/screw	30.4 x 108 x 64.5	0.143	30	6438100181802
KE163.4	Al/Cu 35–150 mm <sup>2</sup>	Red	Cu 320 A, Al 290 A	1000 V	8 mm	34	20 Nm (35–95mm <sup>2</sup> ), 30 Nm (120–150mm <sup>2</sup> )	DIN rail/screw	30.4 x 108 x 64.5	0.143	30	6438100181819
KE163.6	Al/Cu 35–150 mm <sup>2</sup>	Black	Cu 320 A, Al 290 A	1000 V	8 mm	34	20 Nm (35–95mm <sup>2</sup> ), 30 Nm (120–150mm <sup>2</sup> )	DIN rail/screw	30.4 x 108 x 64.5	0.143	30	6438100181826

## 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	0.76 x 3.25 x 1.91 In (19.2 x 82.5 x 48.5 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	0.98 x 3.68 x 2.19 In (25 x 93.5 x 55.5 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	1.20 x 4.25 x 2.54 In (30.4 x 108 x 64.5 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

# Ensto Clampo Apparatus equipment terminals

## For Al/Cu conductors from 2.5 mm<sup>2</sup> to 300 mm<sup>2</sup>



### Ensto Clampo Apparatus equipment terminals in brief:

- Universal terminal series for connecting aluminium and copper conductors to equipment
- Specially developed to meet the needs of equipment manufacturers
- Wide application area (traditional panel-building and the manufacture of machinery and equipment in which both aluminium and copper conductors can be used)
- Used in equipment or as a transfer terminal between copper and aluminium
- Directly connected to one or two conductors
- Terminals with insulation base also available
- Reliable product with simple construction
- Oxidation-inhibiting compound applied at the factory
- Easy to install
- Models with two inputs also suitable for branching
- Fixing possibilities: with a bolt to a copper bar or with a base together with screws onto a DIN rail
- Short circuit tested class A terminals (not KE12.12 and KE12.20)

Conformity	
Standards	
KE12.12, KE12.20:	IEC 61545, EN 60947-7-1
Other terminals:	EN 61238-1, EN 60947-7-1
Connector class:	A
Technical information	
Cross-section range:	Al 2.5 – 300 mm <sup>2</sup> Cu 6 – 300 mm <sup>2</sup>
Nominal current range:	145 – 630 A
Nominal insulation voltage:	750 V
Operating temperature:	max 80 °C
Pollution degree:	3
Material	
Housing KE12.xx and insulation base KE7x:	Polyamide
Body and screws:	Tin-coated aluminium, KE55, KE57, KE58, KE75, KE77 and KE78 with steel screws
Mechanical features	
Screw head:	Hexagonal
Mounting:	Screws or DIN rail

Conductor table can be viewed on page 25.

### Ensto Clampo Apparatus, adapter terminals

Product code	Conductor cross-section	Number of poles	Nominal current	Screw head hexagon	Tightening torque	Dimensions W x L x H (mm)	Weight (kg)	Package size (pcs)	GTIN-13
KE12.12	Cu 2.5–50 mm <sup>2</sup> Al 6–50 mm <sup>2</sup>	1	Cu 160 A, Al 145 A	5 mm	10 Nm	16.4 x 43 x 29.1	0.013	90	6418677181788
KE12.20	Cu 2.5–50 mm <sup>2</sup> Al 6–50 mm <sup>2</sup>	1	Cu 160 A, Al 145 A	5 mm	10 Nm	16.4 x 51 x 29.1	0.014	90	6418677181795

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

### Ensto Clampo Apparatus, equipment terminals

Product code	Conductor cross-section	Number of poles	Nominal current	Screw head hexagon	Tightening torque	Dimensions W x L x H (mm)	Weight (kg)	Package size (pcs)	GTIN-13
KE52.2	Al/Cu 16–95 mm <sup>2</sup>	1	270 A	5 mm	14 Nm	20 x 47 x 33	0.030	30	6418677192449
KE53.2	Al/Cu 35–150 mm <sup>2</sup>	1	320 A	8 mm	24 Nm (35–95 mm <sup>2</sup> ), 24 Nm (120–150 mm <sup>2</sup> )	24.5 x 60 x 40	0.050	30	6418677192456
KE54.2	Al/Cu 35–240 mm <sup>2</sup>	1	425 A	8 mm	12 Nm (35–70 mm <sup>2</sup> ), 40 Nm (95–240 mm <sup>2</sup> )	32 x 77 x 48	0.115	15	6418677192463
KE55	Al/Cu 120–300 mm <sup>2</sup>	1	420 A	5 mm	25 Nm	43 x 98 x 84	0.446	15	6418677161957
KE57	Al/Cu 2 x 95–185 mm <sup>2</sup>	1	400 A	5 mm	35 Nm	39 x 83 x 102	0.360	15	6418677161964
KE58	Al/Cu 2 x 150–300 mm <sup>2</sup>	1	630 A	5 mm	35 Nm	45 x 98 x 126	0.561	15	6418677161971

KE57 and KE58 are only suitable for two conductors.

Specified I<sub>cw</sub> value:  
KE57: I<sub>cw</sub> (1.5 s) 20.5 kA  
KE58: I<sub>cw</sub> (2 s) 30.5 kA

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



KE12.12



KE52.2



KE55



KE57



## Ensto Clampo Apparatus, equipment terminals with insulation base

Product code	Conductor cross-section	Number of poles	Nominal current	Nominal insulation voltage	Screw head hexagon	Tightening torque	Dimensions W x L x H (mm)	Weight (kg)	Package size (pcs)	GTIN-13
KE73.2	35–150 mm <sup>2</sup>	1	320 A	750 V	8 mm	24 Nm (35–95 mm <sup>2</sup> ), 24 Nm (120–150 mm <sup>2</sup> )	58 x 63 x 79.7	0.077	15	6418677192470
KE74.2	35–240 mm <sup>2</sup>	1	425 A	750 V	8 mm	12 Nm (35–70 mm <sup>2</sup> ), 40 Nm (95–240 mm <sup>2</sup> )	75 x 78 x 95	0.166	15	6418677192487
KE75	120–300 mm <sup>2</sup>	1	420 A	750 V	5 mm	25 Nm	81 x 114 x 105.5	0.521	10	6418677162008
KE77	2 x 95–185 mm <sup>2</sup>	1	400 A	750 V	5 mm	35 Nm	75 x 95 x 131	0.416	10	6418677162015
KE78	2 x 150–300 mm <sup>2</sup>	1	630 A	750 V	5 mm	35 Nm	81 x 114 x 106	0.615	10	6418677162022

KE57 and KE58 are only suitable for two conductors.

Specified  $I_{cw}$  value:

KE77:  $I_{cw}$  (1.5 s) 20.5 kA

KE78:  $I_{cw}$  (2 s) 30.5 kA

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



KE74.2



KE75



KE77



KE78

## Ensto Clampo Apparatus equipment terminals sets

Packed in convenient retail packages

	Product code	GTIN-13	Description
Cu 2.5 – 50, Al 6 – 50	KE12.12T	6418677181764	Al transition terminal for MCB, bag of 3 pcs
	KE12.20T	6418677181771	Al transition terminal for KSM- and KSR/KST3.63-3.80
Cu/Al 16 – 95	KE52.2T	6418677192494	Equipment terminal, bag of 3 pcs + screw kits
Cu/Al 35 – 150	KE53.2T	6418677192500	Equipment terminal, bag of 3 pcs + screw kits
Cu/Al 35 – 240	KE54.2T	6418677192517	Equipment terminal, bag of 3 pcs + screw kits



KE53.2T includes Ensto Clampo Apparatus equipment terminals.

## Accessories

Product code	Description	Weight (kg)	Package size (pcs)	GTIN-13
<b>Intermediate plates</b>				
PMR1420	For KE73.2	0.016	25	6418677162299
PMR1421	For KE74.2 and KE75	0.024	25	6418677162305
PMR1422	For KE77 and KE78	0.030	25	6418677162312
<b>Fastening screws for attaching insulation bases to each other</b>				
PLP98	For KE73.2	0.001	50	6418677162275
PLP99	For KE74.2, KE75, KE77 and KE78	0.004	50	6418677162282
<b>Screw kits for busbar mounting</b>				
KJ5.10	Incl. 3 pcs. M10 x 35 mm	0.182	10	6418677181863
KJ5.12	Incl. 3 pcs. M12 x 45 mm	0.327	10	6418677181870
<b>Others</b>				
SR1	Contact grease, 225 g tube	0.254	25	6418677405402



Intermediate plate, PMR1422.



Fastening screws, PLP98.



Screw kit, KJ5.10.



Contact grease, SR1.

# Ensto Clampo Tap tapping blocks

## For Cu conductors from 10 mm<sup>2</sup> to 240 mm<sup>2</sup>



### Ensto Clampo Tap tapping blocks in brief:

- Cable blocks for branching and connecting copper conductors (10 – 240 mm<sup>2</sup>)
- Used in low-voltage switchgear/control gear assemblies and equipment
- Can be mounted onto a DIN rail or with screws directly to the surface
- Reliable and simple construction
- With intermediate plates, a creepage distance required by technical standards is achieved, when several terminals are combined to create more extensive units
- Nominal voltage 750 V, tested for 1000 V circuits



The 2-screw saddle terminal in KE82.15 has to be turned around (as shown in the picture on the right) to fit conductors of 16 – 70 mm<sup>2</sup>. Position as shown in the picture on the left fits 95 – 185 mm<sup>2</sup> conductors.

Conformity	
Standards	
All terminals:	EN 60947-7-1
Technical information	
Cross-section range:	Cu 10 – 240 mm <sup>2</sup>
Nominal current range:	270 – 560 A
Nominal insulation voltage:	750 V
Operating temperature:	Max. 80 °C
Pollution degree:	3
Material	
Body:	Zinc-coated steel or tin-coated copper alloy
Base:	Polyamide
Mechanical features	
Screw head:	Nut
Mounting:	Screws or DIN rail

Conductor table can be viewed on page 26.

### Ensto Clampo Tap, tapping blocks, 750 V

Product code	Conductor cross-section	Nominal current	Nominal insulation voltage	Screw head	Key size	Tightening torque	Mounting	Dimensions W x L x H (mm)	Weight (kg)	Package size (pcs)	GTIN-13
KE80	Cu 10–70 mm <sup>2</sup>	270 A	750 V	Nut	8 mm	2 Nm	DIN rail/screw	58 x 59 x 65.5	0.088	25	6418677162220
KE80.15	Cu 10–70 mm <sup>2</sup> + 2.5–70 mm <sup>2</sup>	270 A	750 V	Nut	8 mm	2 Nm + 3 Nm	DIN rail/screw	58 x 71 x 65.5	0.127	25	6418677162237
KE81	Cu 10–150 mm <sup>2</sup>	490 A	750 V	Nut	10 mm	9 Nm	DIN rail/screw	75 x 70 x 88	0.188	20	6418677162244
KE82	Cu 35–240 mm <sup>2</sup>	560 A	750 V	Nut	13 mm	6 Nm	DIN rail/screw	81 x 70 x 102.5	0.348	10	6418677162251
KE82.15	Cu 35–240 mm <sup>2</sup> + 16–185 mm <sup>2</sup>	560 A / 353 A	750 V	Nut	13 mm	6 Nm	DIN rail/screw	81 x 106 x 102.5	0.609	10	6418677162268

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



KE80



KE81



KE82



KE82.15

### Accessories

Product code	Description	Weight (kg)	Package size (pcs)	GTIN-13
<b>Intermediate plates</b>				
PMR1420	For KE80	0.016	25	6418677162299
PMR1421	For KE81 and KE82	0.024	25	6418677162305
<b>Fastening screws</b>				
PLP98	For KE80	0.001	50	6418677162275
PLP99	For KE81 and KE82	0.004	50	6418677162282



Intermediate plate, PMR1421.

# Ensto Clampo Tap tapping terminals

## For Cu conductors from 1.5 mm<sup>2</sup> to 70 mm<sup>2</sup>



### Ensto Clampo Tap tapping terminals in brief:

#### Tapping terminals, 750 V

- One-pole and four-pole terminal plates for 1.5 – 70 mm<sup>2</sup> copper conductors
- Particularly suitable for use with higher voltages or when improved shrouding is required
- Terminals have insulating partitions
- Can be mounted onto a DIN rail

Conformity	
Standards	
All terminals:	EN 60947-7-1
Technical information	
Cross-section range:	Al/Cu 2.5 – 70 mm <sup>2</sup>
Nominal current range:	62 – 192 A
Nominal insulation voltage:	750 V
Operating temperature:	Max. 80 °C
Pollution degree:	3
Material	
Housing:	Polyamide
Body and screws:	Steel
Mechanical features	
Screw head:	Slot head or nut
Mounting:	Screws or DIN rail

Conductor table can be viewed on page 26.

### Ensto Clampo Tap, tapping terminal, 750 V

Product code	Conductor cross-section	Nominal current	Nominal insulation voltage	Screw head	Key size	Tightening torque	Mounting	Dimensions W x L x H (mm)	Weight (kg)	Package size (pcs)	GTIN-13
<b>Four-pole terminal plates</b>											
KF7.10	Cu 2.5 – 16 mm <sup>2</sup>	62 A	750 V	Slot head		2.5 Nm	DIN rail/screw	66 x 63 x 43	0.110	25	6418677162589
KF7.70	Cu 6 – 70 mm <sup>2</sup>	192 A	750 V	Nut	8 mm	4 Nm	DIN rail/screw	122 x 64 x 43	0.160	25	6418677162602
<b>One-pole terminal plates</b>											
KF8.10	Cu 2.5 – 16 mm <sup>2</sup>	62 A	750 V	Slot head		2.5 Nm	DIN rail/screw	21.5 x 54 x 43	0.030	25	6418677162596
KF8.70	Cu 6 – 70 mm <sup>2</sup>	192 A	750 V	Nut	8 mm	4 Nm	DIN rail/screw	38 x 64 x 43	0.050	20	6418677162619

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



KF7.10



KF7.70



KF8.10



KF8.70

### Protective covers

Product code	Description	Length	Weight (kg)	Package size (pcs)	GTIN-13
RDP6	For KF7 and KF8	2 m	0.247	10	6418677162626
KNL6.122	For KF7.70	122 mm	0.017	30	6418677170416
KNL6.161	For KF7.70 and KF8.70	161 mm	0.021	30	6418677170423

Not RoHS compliant



Protective cover, KNL6.122.



# Ensto Clampo Compact terminal blocks

For Cu conductors from 1.5 mm<sup>2</sup> to 35 mm<sup>2</sup>



## Ensto Clampo Compact terminal blocks in brief:

- For 1.5 – 16 mm<sup>2</sup> copper conductors
- Used in controlling, instrumentation and automation applications
- Cost-effective solution
- Compact in size (ideal for installations with limited space)
- Include wire protection (to prevent damage to fine wire strands, while also preventing wires from entering too deeply into the terminal)
- Body of polyamide, heat resistance 105 °C
- Installation onto a DIN rail or directly onto surface
- Easy to mark (either by using marking tape or printing directly onto the terminal body)

## KE33 in brief:

- Series is completed with KE33 terminal for 35 mm<sup>2</sup> copper conductors
- Used in controlling, instrumentation and automation applications

Conformity	
Terminal blocks:	CE     EAC
KE33:	CE    EAC
Standards	
Terminal blocks:	EN 60947-7-1, UL 1059, CSA C22.2 No. 158-1987
KE33, KE33.20:	EN 60947-7-1, UL 1059
KE33.30:	EN 60947-7-2, UL 1059
Technical information	
Cross-section range:	Cu 1.5 – 35 mm <sup>2</sup>
Nominal current range:	17.5 – 135 A
Nominal insulation voltage:	450 – 750 V
Operating temperature:	Max. 105 °C
Material	
Housing:	Polyamide
Body:	Ni-coated brass
Mechanical features	
Screw head:	Slot head
Mounting:	Screws or DIN rail

Conductor table can be viewed on page 26.

## Ensto Clampo Compact, terminal blocks

Product code	Conductor cross-section	Number of poles	Nominal current	Nominal insulation voltage	Screw head slot head	Tightening torque	Mounting	Dimensions W x L x H (mm)	Weight (kg)	Package size (pcs)	GTIN-13
KR5031	Cu 1.5 mm <sup>2</sup>	3	17.5 A	750 V (pollution degree 2)*	M2.6	0.4 Nm	DIN rail/screw	26 x 22 x 18	0.007	200	6418677111402
KR5131	Cu 1.5 mm <sup>2</sup>	12	17.5 A	750 V (pollution degree 2)*	M2.6	0.4 Nm	DIN rail/screw	70.9 x 22 x 18	0.026	50	6418677111426
KR8031	Cu 1.5 – 6 mm <sup>2</sup>	3	41 A	750 V (pollution degree 2)*	M3.5	0.8 Nm	DIN rail/screw	31.4 x 22 x 22	0.015	200	6418677111778
KR8041	Cu 1.5 – 6 mm <sup>2</sup>	4	41 A	750 V (pollution degree 2)*	M3.5	0.8 Nm	DIN rail/screw	38.2 x 22 x 22	0.021	200	6418677111792
KR8121	Cu 1.5 – 6 mm <sup>2</sup>	12	41 A	750 V (pollution degree 2)*	M3.5	0.8 Nm	DIN rail/screw	90.8 x 22 x 22	0.060	100	6418677111822
KR10021	Cu 6 – 16 mm <sup>2</sup>	2	82 A	750 V (pollution degree 2)**	M6	2.5 Nm	DIN rail/screw	34 x 30.8 x 39.5	0.044	100	6418677111334
KR10031	Cu 6 – 16 mm <sup>2</sup>	3	82 A	750 V (pollution degree 2)**	M6	2.5 Nm	DIN rail/screw	45.3 x 30.8 x 39.5	0.065	100	6418677111358

\* Pollution degree 3: nominal insulation voltage 450 V

\*\* Pollution degree 3: nominal insulation voltage 500 V

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



KR5131



KR8041



KR10031



KR10021

## Ensto Clampo Compact, terminal blocks KE33

Product code	Conductor cross-section	Color	Nominal current	Nominal insulation voltage	Screw head slothead	Tightening torque	Mounting	Dimensions W x L x H (mm)	Weight (kg)	Package size (pcs)	GTIN-13
KE33	Cu 1.5 – 35 mm <sup>2</sup>	Grey	135 A	750V	6 mm slot	3.5 Nm	DIN rail	14 x 50 x 44	0.043	100	6418677161704
KE33.20	Cu 1.5 – 35 mm <sup>2</sup>	Blue	135 A	750V	6 mm slot	3.5 Nm	DIN rail	14 x 50 x 44	0.043	100	6418677161735
KE33.30	Cu 1.5 – 35 mm <sup>2</sup>	Yellow/Green			6 mm slot	3.5 Nm	DIN rail	14 x 50 x 44	0.043	100	6418677161759

Pollution degree: 3

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



KE33



KE33.20



KE33.30

## UL recognitions

Product code	Number of poles	Wire type	AWG* 1 wire/terminal	Maximum voltage	Maximum current	Nominal tightening torque	Screwdriver terminal screw	Dimensions (W x L x H)
KR5031	3	Cu	14 – 22	150V	10 A	4.4 lb-in (0.5 Nm)	Max. 3.5 mm slot	1.0 x 0.9 x 0.7 In (26 x 22 x 18 mm)
KR5131	12	Cu	14 – 22	150V	10 A	4.4 lb-in (0.5 Nm)	Max. 3.5 mm slot	2.8 x 0.9 x 0.7 In (70.9 x 22 x 18 mm)
KR8031	3	Cu	8 – 18	150V	50 A	7 lb-in (0.8 Nm)	Max. 5 mm slot	1.2 x 0.9 x 0.9 In (31.4 x 22 x 22 mm)
KR8041	4	Cu	8 – 18	150V	50 A	7 lb-in (0.8 Nm)	Max. 5 mm slot	1.5 x 0.9 x 0.9 In (38.2 x 22 x 22 mm)
KR8121	12	Cu	8 – 18	150V	50 A	7 lb-in (0.8 Nm)	Max. 5 mm slot	3.6 x 0.9 x 0.9 In (90.8 x 22 x 22 mm)
KR10021	2	Cu	6 – 18	300V	65 A	20 lb-in (2.25 Nm)	Max. 6.5 mm slot	1.3 x 1.2 x 1.6 In (34 x 30.8 x 39.5 mm)
KR10031	3	Cu	6 – 18	300V	65 A	20 lb-in (2.25 Nm)	Max. 6.5 mm slot	1.8 x 1.2 x 1.6 In (45.3 x 30.6 x 39.5 mm)
KE33	1	Cu	2 – 16	600V	115 A	40.5 lb-in (4.5 Nm)	Max. 6.5 mm slot	0.6 x 2.0 x 1.7 In (14 x 50 x 44 mm)

Standard UL 1059, UL category XCFR2, file no. E192532.

\* AWG = American Wire Gauge

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

## Accessories

Product code	Description	Weight (kg)	Package size (pcs)	GTIN-13
KRL1505.02	Cross connector, 2-pole, 1.5 mm <sup>2</sup>	0.001	100	6418677111860
KRL6067.02	Cross connector, 2-pole, 6 mm <sup>2</sup>	0.001	100	6418677112003
KRL6067.03	Cross connector, 3-pole, 6 mm <sup>2</sup>	0.002	100	6418677112010
KRL6067.04	Cross connector, 4-pole, 6 mm <sup>2</sup>	0.002	100	6418677112027
KRL7	Adapter for 35 x 7.5 mm DIN rail mounting, grey	0.001	100	6418677112034
KNL7	Adapter for 35 x 15 mm DIN rail mounting, black	0.001	100	6418677193187
KRL8	End holder, fits both DIN 15 and 35 mm rails	0.003	100	6418677112041
PMR143	End plate for direct mounting	0.001	100	6418677112614
PMR370	Spacer plate, fits both DIN 15 and 35 mm rails	0.002	100	6418677112645
KRL6	Spacer plate for KR8121	0.002	100	6418677111952
PP44	DIN rail, 15 mm, steel, length = 2 m	0.290	10	6418677112720



Cross connector, 3-pole, KRL6067.03.



Adapter for 35 x 7.5 mm DIN rail mounting, KRL7.



End holder, fits both DIN 15 and 35 mm rails, KRL8.



End plate for direct mounting, PMR143.



Spacer plate, fits both DIN 15 and 35 mm rails, PMR370.

# Ensto Clampo Eurostrips

## For Cu conductors from 1.5 mm<sup>2</sup> to 16 mm<sup>2</sup>



### Ensto Clampo Eurostrips in brief:

- For 1.5 – 16 mm<sup>2</sup> copper conductors
- For flexible, stranded and solid wires
- Produced as 12-pole
  - can be ordered precut with the required number of poles
- On request individual pole positions can be marked with desired markings
- Available with or without standoff feet
- Available with or without wire protection

### Conformity

Terminal blocks:

### Standards

Terminal blocks: EN 60998-1, EN 60998-2-1, UL1059, UL 486, CSA C22.2 No. 158-1987

### Technical information

Cross-section range: Cu 1.5 – 16 mm<sup>2</sup>  
 Nominal current range: 15 – 65 A  
 Nominal insulation voltage: 450 – 750 V  
 Operating temperature: Max. 80 °C

### Material

Housing: Polyamide  
 Body: Ni-coated brass

### Mechanical features

Screw head: Slot head  
 Mounting: Screws

Conductor table can be viewed on page 26.

## Ensto Clampo Eurostrips

Product code	Conductor cross-section	Flat base or standoff feet	Wire protection	Number of poles	Nominal current	Nominal insulation voltage	Screw head slot head	Tightening torque	Mounting hole diameter (mm)	Dimensions L x W x H (mm)	Weight (kg)	GTIN
KA16.12	1.5 mm <sup>2</sup>	Flat base	No	12	15 A	450 V	M2.6	0.3–0.5 Nm	2.8	93.5 x 18.2 x 13.8	0.0191	6418677102608
KB16.12	1.5 mm <sup>2</sup>	Flat base	Yes	12	15 A	450 V	M2.6	0.3–0.5 Nm	2.8	93.5 x 18.2 x 13.8	0.0191	6418677105593
KA17.12	1.5 mm <sup>2</sup>	Standoff feet	No	12	15 A	450 V	M2.6	0.3–0.5 Nm	2.8	93.5 x 18.2 x 17.3	0.0190	6418677102721
KB17.12	1.5 mm <sup>2</sup>	Standoff feet	Yes	12	15 A	450 V	M2.6	0.3–0.5 Nm	2.8	93.5 x 18.2 x 17.3	0.0200	6418677105715
KA241.12	4 mm <sup>2</sup>	Flat base	No	12	30 A	450 V	M3	0.4–0.6 Nm	3.5	117 x 22.2 x 15.8	0.0320	6418677103445
KB241.12	4 mm <sup>2</sup>	Flat base	Yes	12	30 A	450 V	M3	0.4–0.6 Nm	3.5	117 x 22.2 x 15.8	0.0330	6418677106439
KA242.12	4 mm <sup>2</sup>	Standoff feet	No	12	30 A	450 V	M3	0.4–0.6 Nm	3.5	117 x 22.2 x 19.8	0.0350	6418677103568
KB242.12	4 mm <sup>2</sup>	Standoff feet	Yes	12	30 A	450 V	M3	0.4–0.6 Nm	3.5	117 x 22.2 x 19.8	0.0360	6418677106552
KA460.12	6 mm <sup>2</sup>	Flat base	No	12	40 A	450 V	M3.5	0.6–0.8 Nm	4.2	140 x 23.2 x 17.7	0.0460	6418677104701
KB460.12	6 mm <sup>2</sup>	Flat base	Yes	12	40 A	450 V	M3.5	0.6–0.8 Nm	4.2	140 x 23.2 x 17.7	0.0480	6418677107283
KA463.12	6 mm <sup>2</sup>	Standoff feet	No	12	40 A	450 V	M3.5	0.6–0.8 Nm	4.2	140 x 23.2 x 21.2	0.0480	6418677104824
KB463.12	6 mm <sup>2</sup>	Standoff feet	Yes	12	40 A	450 V	M3.5	0.6–0.8 Nm	4.2	140 x 23.2 x 21.2	0.0490	6418677107405
KA612.12	16 mm <sup>2</sup>	Standoff feet	No	12	65 A	750 V	M5	1.8–2.0 Nm	4.0	176 x 28 x 26.5	0.0920	6418677105302
KB612.12	16 mm <sup>2</sup>	Standoff feet	Yes	12	65 A	750 V	M5	1.8–2.0 Nm	4.0	176 x 28 x 26.5	0.0940	6418677108006

Package size 250 pcs.

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



KA16.12

KA241.12

KA460.12

KA612.12



## UL recognitions

Product code	AWG* 1 wire/terminal	Number of poles	Maximum current	Maximum insulation voltage	Screw head slot head	Tightening torque	Dimensions L x W x H (mm)
KA / KB16.12	12 – 22	12	20 A	300 V	M2.6	0.3 – 0.5 Nm	93.5 x 18.2 x 13.8
KA / KB17.12	12 – 22	12	20 A	600 V	M2.6	0.3 – 0.5 Nm	93.5 x 18.2 x 17.3
KA / KB241.12	10 – 20	12	30 A	300 V	M3	0.4 – 0.6 Nm	117 x 22.2 x 15.8
KA / KB242.12	10 – 20	12	30 A	600 V	M3	0.4 – 0.6 Nm	117 x 22.2 x 19.3
KA / KB460.12	8 – 20	12	40 A	300 V	M3.5	0.6 – 0.8 Nm	140 x 23.2 x 17.7
KA / KB463.12	8 – 20	12	40 A	600 V	M3.5	0.6 – 0.8 Nm	140 x 23.2 x 21.2
KA / KB612.12	6 – 14	12	65 A	600 V	M5	1.8 – 2.0 Nm	176 x 28 x 26.5

Standard UL 1059, UL category XCFR2, file no. E192532.

\* AWG = American Wire Gauge

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

## Accessories

Product code	Description	Weight (kg)	Package size (pcs)	GTIN-13
<b>Cross connectors</b>				
KRL1508.02	2-pole, 1.5 mm <sup>2</sup>	0.0008	100	6418677111891
KRL1508.03	3-pole, 1.5 mm <sup>2</sup>	0.0014	100	6418677111907
KRL4010.02	2-pole, 4 mm <sup>2</sup>	0.0012	100	6418677714856
KRL4010.03	3-pole, 4 mm <sup>2</sup>	0.0019	100	6418677111938
KRL6012.02	2-pole, 6 mm <sup>2</sup>	0.0013	100	6418677111969
KRL6012.03	3-pole, 6 mm <sup>2</sup>	0.0021	100	6418677111983
KRL16015.02	2-pole, 16 mm <sup>2</sup>	0.0018	100	6418677112959
<b>Mounting pins</b>				
AH2242	For KA/KB242, white, total length 20.5 mm, insertion length 14 mm, hole Ø 4.5 mm	0.0002	10 000	6418677100161
AH2463	For KA/KB463, grey, total length 21.5 mm, insertion length 14.5 mm, hole Ø 4.5 mm	0.0003	10 000	6418677100178
AH2512	For KA/KB612, black, total length 24.5 mm, insertion length 19 mm, hole Ø 5.5 mm	0.0003	10 000	6418677100185
<b>Spacer plate</b>				
KA46	For 4–6 mm <sup>2</sup> terminal blocks with standoff feet	0.002	1000	6418677104589



KRL6012.02



Mounting pins



KA46

## Marking plates

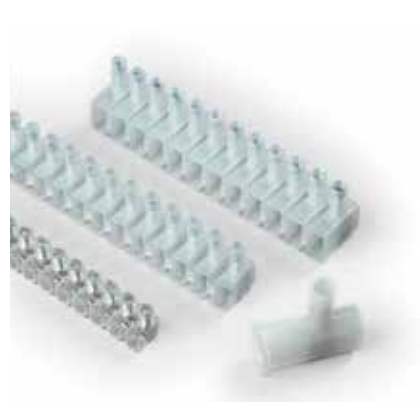
Product code	Single or double	Markings	Nominal cross-section mm <sup>2</sup>	For products	Weight (kg)	Package size (pcs)	GTIN-13
PMK2612	2	Plain	4	241, 242	0.0040	500	6418677112485
PMK2712	2	(1–12)	4	241, 242	0.0040	500	6418677112492
PMK2812	1	Plain	4	241, 242	0.0023	500	6418677112508
PMK2912	1	(1–12)	4	241, 242	0.0023	500	6418677112515
PMK3012	2	Plain	6	460, 463	0.0050	500	6418677112522
PMK3212	1	Plain	6	460, 463	0.0050	500	6418677112546
PMK4412	2	Plain	16	612	0.0080	500	6418677112560
PMK4512	2	(1–12)	16	612	0.0080	500	6418677112577
PMK4612	1	Plain	16	612	0.0040	500	6418677112584



PMK2812, PMK3012

# Ensto Clampo Wire Connectors

## For Cu conductors from 2.5 mm<sup>2</sup> to 16 mm<sup>2</sup>



### Ensto Clampo Wire Connectors in brief:

- For 2.5 – 16 mm<sup>2</sup> copper conductors
- For flexible, stranded and solid wires
- Produced as 12-pole
  - can easily be cut without any tools

Conformity	
Terminal blocks:	CE   EAC
Standards	
Terminal blocks:	EN 60998-1
Technical information	
Cross-section range:	Cu 2.5 – 16 mm <sup>2</sup>
Nominal insulation voltage:	450 V
Operating temperature:	Max. 80 °C
Material	
Housing:	Polyamide (KD160 Polycarbonate)
Body:	Steel (KD160 Ni-coated brass)
Mechanical features	
Screw head:	Slot head
Mounting:	Screws or DIN rail

Conductor table can be viewed on page 26.

### Ensto Clampo Wire Connectors

Product code	Conductor cross-section	Number of poles	Nominal insulation voltage	Screw head slot head	Tightening torque	Dimensions W x L x H (mm)	Weight (kg)	Package size (pcs)	GTIN-13
AL1.12	3 x 2.5 mm <sup>2</sup> / 4 x 1.5 mm <sup>2</sup>	12	450 V	M3.5	0.8 – 1.0 Nm	128.6 x 19.2 x 28.8	0.0545	50	6410019230543
AL2.12	2 x 6 mm <sup>2</sup> / 3 x 4 mm <sup>2</sup> / 4 x 2.5 mm <sup>2</sup>	12	450 V	M4.5	1.8 – 2.0 Nm	130 x 26 x 32.1	0.0812	50	6410019230550
AL13	2 x 16 mm <sup>2</sup> / 2 x 10 mm <sup>2</sup> / 3 x 6 mm <sup>2</sup> / 4 x 4 mm <sup>2</sup>	1	450 V	M6	2.5 – 2.7 Nm	16 x 39.5 x 40	0.0120	500	6410019230604
KD160.01	4 x 1 mm <sup>2</sup> / 3 x 1.5 mm <sup>2</sup> / 2 x 2.5 mm <sup>2</sup>	1	450 V	M4	1.2 – 1.4 Nm	9 x 15.5 x 17	0.0002	2000	6418677109348
KD160.12	4 x 1 mm <sup>2</sup> / 3 x 1.5 mm <sup>2</sup> / 2 x 2.5 mm <sup>2</sup>	12	450 V	M4	1.2 – 1.4 Nm	110 x 15.5 x 17	0.0025	500	6418677109454

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



AL1.12



AL2.12



AL13



KD160.12

# Ensto Clampo Ground N and PE terminals

For Cu conductors from 1.5 mm<sup>2</sup> to 35 mm<sup>2</sup>



## Ensto Clampo Ground N and PE terminals in brief:

- Used in control and panel building applications
- Versatile installation and mounting alternatives
- Products as complete units in wide selection of sizes and markings
- Separate components of terminals also available for special assemblies
- Models with wire protection (to prevent damage to fine wire strands)

Conformity	
Standards	
N busbars:	EN 60947-7-1
PE busbars:	EN 60947-7-2
N and PE busbars:	EN 60947-7-1, EN 60947-7-2
Technical information	
Cross-section range:	Cu 1.5 – 35 mm <sup>2</sup>
Nominal current range:	82 – 135 A
Nominal insulation voltage:	500 V
Operating temperature:	max 80 °C
Pollution degree:	3
Material	
Body:	Polyamide/polycarbonate
Base:	Brass/steel
Mechanical features	
Screw head:	+/-
Mounting:	Screws or DIN rail

Conductor table can be viewed on page 26.

## Ensto Clampo Ground, neutral busbars

Product code	Conductor cross-section	Nominal current	Nominal insulation voltage	Screw head	Tightening torque	Mounting	Dimensions W x L x H (mm)	Weight (kg)	Package size (pcs)	GTIN-13
<b>N busbars with 16 mm<sup>2</sup> and 6 mm<sup>2</sup> pillar terminals</b>										
KNA4.104	Cu 2 x (1 x 16 mm <sup>2</sup> + 3 x 6 mm <sup>2</sup> )	82 A	500 V	+/-	2 Nm/0.8 Nm	DIN rail/screw	40 x 53 x 35	0.063	50	6418677162770
KNA4.106	Cu 2 x (1 x 16 mm <sup>2</sup> + 5 x 6 mm <sup>2</sup> )	82 A	500 V	+/-	2 Nm/0.8 Nm	DIN rail/screw	40 x 65 x 35	0.085	50	6418677162787
KNA4.108	Cu 2 x (1 x 16 mm <sup>2</sup> + 7 x 6 mm <sup>2</sup> )	82 A	500 V	+/-	2 Nm/0.8 Nm	DIN rail/screw	40 x 79 x 35	0.104	25	6418677162794
KNA4.110	Cu 2 x (2 x 16 mm <sup>2</sup> + 8 x 6 mm <sup>2</sup> )	82 A	500 V	+/-	2 Nm/0.8 Nm	DIN rail/screw	40 x 95 x 35	0.130	25	6418677162817
KNA4.112	Cu 2 x (2 x 16 mm <sup>2</sup> + 10 x 6 mm <sup>2</sup> )	82 A	500 V	+/-	2 Nm/0.8 Nm	DIN rail/screw	40 x 106 x 35	0.153	25	6418677162824
KNA4.114	Cu 2 x (3 x 16 mm <sup>2</sup> + 11 x 6 mm <sup>2</sup> )	82 A	500 V	+/-	2 Nm/0.8 Nm	DIN rail/screw	40 x 122 x 35	0.178	25	6418677162831
KNA4.120	Cu 2 x (4 x 16 mm <sup>2</sup> + 16 x 6 mm <sup>2</sup> )	82 A	500 V	+/-	2 Nm/0.8 Nm	DIN rail/screw	40 x 160 x 35	0.243	25	6418677162848
<b>N busbars with 16 mm<sup>2</sup> pillar terminals</b>										
KN4.102	Cu 2 x (2 x 16 mm <sup>2</sup> )	82 A	500 V	+/-	2 Nm/0.8 Nm	DIN rail/screw	40 x 43 x 43	0.052	100	6418677152849
KN4.104	Cu 2 x (4 x 16 mm <sup>2</sup> )	82 A	500 V	+/-	2 Nm/0.8 Nm	DIN rail/screw	40 x 61 x 43	0.088	50	6418677152856
KN4.106	Cu 2 x (6 x 16 mm <sup>2</sup> )	82 A	500 V	+/-	2 Nm/0.8 Nm	DIN rail/screw	40 x 79 x 43	0.122	50	6418677152863
KN4.108	Cu 2 x (8 x 16 mm <sup>2</sup> )	82 A	500 V	+/-	2 Nm/0.8 Nm	DIN rail/screw	40 x 97 x 43	0.162	25	6418677152870
KN4.110	Cu 2 x (10 x 16 mm <sup>2</sup> )	82 A	500 V	+/-	2 Nm/0.8 Nm	DIN rail/screw	40 x 115 x 43	0.198	25	6418677152887
KN4.112	Cu 2 x (12 x 16 mm <sup>2</sup> )	82 A	500 V	+/-	2 Nm/0.8 Nm	DIN rail/screw	40 x 133 x 43	0.230	25	6418677152894
<b>N busbars with 35 mm<sup>2</sup> pillar terminals</b>										
KND4.103N	Cu 2 x (3 x 35 mm <sup>2</sup> )	135 A	500 V	PH2	4 Nm	DIN rail/screw	41.5 x 64 x 41	0.127	50	6418677162855

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



KNA4.110



KN4.106



KND4.103N

## Ensto Clampo Ground, PE busbars

Product code	Conductor cross-section	Screw head	Tightening torque	Mounting	Dimensions W x L x H (mm)	Weight (kg)	Package size (pcs)	GTIN-13
<b>PE busbars with 16 mm<sup>2</sup> and 6 mm<sup>2</sup> pillar terminals</b>								
KNA4.104P	Cu 2 x (1 x 16 mm <sup>2</sup> + 3 x 6 mm <sup>2</sup> )	+/-	2 Nm/0.8 Nm	DIN rail/screw	40 x 58 x 35	0.063	50	6418677152900
KNA4.106P	Cu 2 x (1 x 16 mm <sup>2</sup> + 5 x 6 mm <sup>2</sup> )	+/-	2 Nm/0.8 Nm	DIN rail/screw	40 x 65 x 35	0.085	50	6418677152917
KNA4.108P	Cu 2 x (1 x 16 mm <sup>2</sup> + 7 x 6 mm <sup>2</sup> )	+/-	2 Nm/0.8 Nm	DIN rail/screw	40 x 79 x 35	0.104	25	6418677152924
KNA4.110P	Cu 2 x (2 x 16 mm <sup>2</sup> + 8 x 6 mm <sup>2</sup> )	+/-	2 Nm/0.8 Nm	DIN rail/screw	40 x 95 x 35	0.130	25	6418677152931
KNA4.112P	Cu 2 x (2 x 16 mm <sup>2</sup> + 10 x 6 mm <sup>2</sup> )	+/-	2 Nm/0.8 Nm	DIN rail/screw	40 x 106 x 35	0.153	25	6418677152948
KNA4.114P	Cu 2 x (3 x 16 mm <sup>2</sup> + 11 x 6 mm <sup>2</sup> )	+/-	2 Nm/0.8 Nm	DIN rail/screw	40 x 122 x 35	0.178	25	6418677152955
KNA4.120P	Cu 2 x (4 x 16 mm <sup>2</sup> + 16 x 6 mm <sup>2</sup> )	+/-	2 Nm/0.8 Nm	DIN rail/screw	40 x 160 x 35	0.243	25	6418677152962
<b>PE busbars with 35 mm<sup>2</sup> pillar terminals</b>								
KND4.103P	Cu 2 x (3 x 35 mm <sup>2</sup> )	PH2	4 Nm	DIN rail/screw	41.5 x 64 x 41	0.127	50	6418677152979

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



KNA4.110P



KND4.103P

## Ensto Clampo Ground, N and PE busbars

Product code	Conductor cross-section	Nominal current	Nominal insulation voltage	Screw head	Tightening torque	Mounting	Dimensions W x L x H (mm)	Weight (kg)	Package size (pcs)	GTIN-13
<b>N and PE busbars with 16 mm<sup>2</sup> and 6 mm<sup>2</sup> pillar terminals, 6 mm<sup>2</sup> pillar terminals with wire protection</b>										
KNA5.108	Cu, N 1 x 16 mm <sup>2</sup> + 7 x 6 mm <sup>2</sup> , PE 2 x 16 mm <sup>2</sup> + 7 x 6 mm <sup>2</sup>	82 A	500 V	+/-	2 Nm/0.8 Nm	DIN rail/screw	40 x 121.5 x 35	0.176	25	6418677162954
KNA5.113	Cu, N 1 x 16 mm <sup>2</sup> + 12 x 6 mm <sup>2</sup> , PE 2 x 16 mm <sup>2</sup> + 12 x 6 mm <sup>2</sup>	82 A	500 V	+/-	2 Nm/0.8 Nm	DIN rail/screw	40 x 152 x 35	0.233	25	6418677162961
KNA5.117	Cu, N 1 x 16 mm <sup>2</sup> + 16 x 6 mm <sup>2</sup> , PE 2 x 16 mm <sup>2</sup> + 16 x 6 mm <sup>2</sup>	82 A	500 V	+/-	2 Nm/0.8 Nm	DIN rail/screw	40 x 176.5 x 35	0.276	25	6418677162978
KNA5.120	Cu, N 1 x 16 mm <sup>2</sup> + 19 x 6 mm <sup>2</sup> , PE 2 x 16 mm <sup>2</sup> + 19 x 6 mm <sup>2</sup>	82 A	500 V	+/-	2 Nm/0.8 Nm	DIN rail/screw	40 x 195 x 35	0.309	25	6418677162985
KNA5.125	Cu, N 2 x 16 mm <sup>2</sup> + 23 x 6 mm <sup>2</sup> , PE 3 x 16 mm <sup>2</sup> + 23 x 6 mm <sup>2</sup>	82 A	500 V	+/-	2 Nm/0.8 Nm	DIN rail/screw	40 x 240.5 x 35	0.377	25	6418677162992
KNA5.130	Cu, N 2 x 16 mm <sup>2</sup> + 28 x 6 mm <sup>2</sup> , PE 3 x 16 mm <sup>2</sup> + 28 x 6 mm <sup>2</sup>	82 A	500 V	+/-	2 Nm/0.8 Nm	DIN rail/screw	40 x 271 x 35	0.438	20	6418677163005
KNA5.134	Cu, N 2 x 16 mm <sup>2</sup> + 32 x 6 mm <sup>2</sup> , PE 3 x 16 mm <sup>2</sup> + 32 x 6 mm <sup>2</sup>	82 A	500 V	+/-	2 Nm/0.8 Nm	DIN rail/screw	40 x 295.5 x 35	0.470	20	6418677163012
KNA5.138	Cu, N 2 x 16 mm <sup>2</sup> + 36 x 6 mm <sup>2</sup> , PE 3 x 16 mm <sup>2</sup> + 36 x 6 mm <sup>2</sup>	82 A	500 V	+/-	2 Nm/0.8 Nm	DIN rail/screw	40 x 320 x 35	0.520	10	6418677163029
<b>N and PE busbars with 16 mm<sup>2</sup> and 6 mm<sup>2</sup> pillar terminals</b>										
KNA4.108NP	Cu, N 1 x 16 mm <sup>2</sup> + 7 x 6 mm <sup>2</sup> , PE 1 x 16 mm <sup>2</sup> + 7 x 6 mm <sup>2</sup>	82 A	500 V	+/-	2 Nm	DIN rail/screw	40 x 79 x 35	0.104	25	6418677153105
KNA4.114NP	Cu, N 3 x 16 mm <sup>2</sup> + 11 x 6 mm <sup>2</sup> , PE 3 x 16 mm <sup>2</sup> + 11 x 6 mm <sup>2</sup>	82 A	500 V	+/-	2 Nm	DIN rail/screw	40 x 122 x 35	0.178	25	6418677153112
KNA4.120NP	Cu, N 4 x 16 mm <sup>2</sup> + 16 x 6 mm <sup>2</sup> , PE 4 x 16 mm <sup>2</sup> + 16 x 6 mm <sup>2</sup>	82 A	500 V	+/-	2 Nm	DIN rail/screw	40 x 160 x 35	0.243	25	6418677153129
KNA4.126NP	Cu, N 4 x 16 mm <sup>2</sup> + 22 x 6 mm <sup>2</sup> , PE 4 x 16 mm <sup>2</sup> + 22 x 6 mm <sup>2</sup>	82 A	500 V	+/-	2 Nm	DIN rail/screw	40 x 203 x 35	0.315	25	6418677153136
KNA4.136NP	Cu, N 4 x 16 mm <sup>2</sup> + 32 x 6 mm <sup>2</sup> , PE 4 x 16 mm <sup>2</sup> + 32 x 6 mm <sup>2</sup>	82 A	500 V	+/-	2 Nm	DIN rail/screw	40 x 269 x 35	0.415	25	6418677153143
<b>N and PE busbars with 16 mm<sup>2</sup> pillar terminals</b>										
KN4.204	Cu, N 4 x 16 mm <sup>2</sup> , PE 4 x 16 mm <sup>2</sup>	76 A	500 V	+/-	2 Nm	DIN rail/screw	40 x 68.5 x 40	0.100	50	6418677162909
KN4.206	Cu, N 6 x 16 mm <sup>2</sup> , PE 6 x 16 mm <sup>2</sup>	76 A	500 V	+/-	2 Nm	DIN rail/screw	40 x 86.5 x 40	0.146	25	6418677162916
KN4.208	Cu, N 8 x 16 mm <sup>2</sup> , PE 8 x 16 mm <sup>2</sup>	76 A	500 V	+/-	2 Nm	DIN rail/screw	40 x 104.5 x 40	0.181	25	6418677162923
KN4.210	Cu, N 10 x 16 mm <sup>2</sup> , PE 10 x 16 mm <sup>2</sup>	76 A	500 V	+/-	2 Nm	DIN rail/screw	40 x 122.5 x 40	0.219	25	6418677162930
KN4.212	Cu, N 12 x 16 mm <sup>2</sup> , PE 12 x 16 mm <sup>2</sup>	76 A	500 V	+/-	2 Nm	DIN rail/screw	40 x 140.5 x 40	0.254	25	6418677162947
<b>N and PE busbars with 35 mm<sup>2</sup> pillar terminals</b>										
KND4.103NP	Cu, N 3 x 35 mm <sup>2</sup> , PE 3 x 35 mm <sup>2</sup>	135 A	500 V	PH2	4 Nm	DIN rail/screw	41.5 x 64 x 41	0.127	50	6418677153150

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



KNA5.108



KNA4.120NP



KNA4.206



KND4.103NP



## Neutral terminal

For extending a neutral conductor e.g. in distribution boards.

Product code	Conductor cross-section	Nominal current	Nominal insulation voltage	Screw head	Tightening torque	Mounting	Dimensions W x L x H (mm)	Weight (kg)	Package size (pcs)	GTIN-13
KJ7	Cu 1.5 – 35 mm <sup>2</sup>	135 A	500 V	Slot	3.5	Screw	14.8 x 60 x 38	0.037	250	6418677163524

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

## Neutral terminal, UL recognitions

Product code	Number of poles	Wire type	AWG* 1 wire/terminal	Maximum voltage	Maximum current	Tightening torque	Screwdriver terminal screw	Dimensions (W x H x D)
KJ7**	1	Cu	2 – 16	600 V	115 A	40.5 lb-in (4.5 Nm)	Slot	0.6 x 2.4 x 1.5 In (15 x 60 x 38 mm)

Standard UL1059, UL category XCFR2, file no. E192532.

\* AWG = American Wire Gauge

\*\* KJ7 is suitable for only 300 V if two or more poles are mounted side by side.

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



KJ7

## Ensto Clampo Ground, N and PE busbars in parts

Product code	Description	Nominal current	Tightening torque	Weight (kg)	Package size (pcs)	GTIN-13
<b>N and PE busbars in parts, saddle terminals</b>						
KN2.2	Cu 2 x (1.5–16 mm <sup>2</sup> )	82 A	1.2 Nm	0.019	250	6418677163050
KN2.3	Cu 3 x (1.5–16 mm <sup>2</sup> )	82 A	1.2 Nm	0.028	250	6418677163067
KN2.4	Cu 4 x (1.5–16 mm <sup>2</sup> )	82 A	1.2 Nm	0.035	200	6418677163074
KN2.5	Cu 5 x (1.5–16 mm <sup>2</sup> )	82 A	1.2 Nm	0.045	200	6418677163081
KN2.6	Cu 6 x (1.5–16 mm <sup>2</sup> )	82 A	1.2 Nm	0.052	200	6418677163098
KN2.7	Cu 7 x (1.5–16 mm <sup>2</sup> )	82 A	1.2 Nm	0.061	100	6418677163104
KN2.8	Cu 8 x (1.5–16 mm <sup>2</sup> )	82 A	1.2 Nm	0.070	100	6418677163111
PM58	Support for busbar KN2.x			0.003	2000	6418677163128



N and PE busbar in parts with saddle terminals, KN2.2.

## Terminal saddles

Product code	Description	Nominal current	Weight (kg)	Package size (pcs)	GTIN-13
PPK28	Cu 1.5–25 mm <sup>2</sup>	82 A	0.002	100	6418677166853
PPK9	Cu 1.5–35 mm <sup>2</sup>	135 A	0.003	100	6418677166860
PPK2	Cu 6–70 mm <sup>2</sup>	270 A	0.009	100	6418677166877
PSS63	Cu 16–185 mm <sup>2</sup>	535 A	0.064	10	6418677182068



PPK9

## Pillar terminals

Product code	Description	Nominal current	Tightening torque	Screw head	Weight (kg)	Package size (pcs)	GTIN-13
KJ25	Cu 1–6 mm <sup>2</sup> , width 6 mm	33 A	0.8 Nm	+/-	0.004	1000	6418677163135
KJ25.1	Cu 1–6 mm <sup>2</sup> , with wire protection, width 6 mm	33 A	0.8 Nm	+/-	0.004	1000	6418677163142
KJ18	Cu 1.5–16 mm <sup>2</sup> , width 9 mm	82 A	2 Nm	+/-	0.007	1000	6418677163173
KJ18.1	Cu 1.5–16 mm <sup>2</sup> , with wire protection, width 9 mm	82 A	2 Nm	+/-	0.007	1000	6418677171505
KJ20	Cu 2.5–35 mm <sup>2</sup> , width 13 mm	135 A	4 Nm	PH2	0.011	1000	6418677163425
KJ20.1	Cu 2.5–35 mm <sup>2</sup> , width 13 mm, for hexagonal key	135 A	4 Nm	Hexagon 5 mm	0.012	1000	6418677163043



KJ25



KJ25.1



KJ20



KJ20.1

## Busbar supports

Product code	Description	Weight (kg)	Package size (pcs)	GTIN-13
PMR117	Support for 2 x 10 mm busbar, marked N	0.005	100	6418677163180
PMR117.1	Support for 2 x 10 mm busbar, marked PE	0.005	100	6418677163197
PMR1413	Support for 2 x 10 mm busbar	0.002	100	6418677163203
PMR1427	Support for 2 x 10 mm busbar	0.002	100	6418677163531
KJ19	Support for two 2 x 10 mm busbars, with joint	0.023	100	6418677163234
KNL2	Protective cover support for RDP6, used together with PMR117	0.004	200	6418677163241
RDP6	Protective cover, length 2000 mm	0.247	10	6418677162626



Support for 2 x 10 mm busbar, PMR117.

## Busbars

2 x 10 mm brass busbars.

Product code	Description	Weight (kg)	Package size (pcs)	GTIN-13
PSK20.037	Length 37 mm	0.006	100	6418677163296
PSK20.046	Length 46 mm	0.008	100	6418677163302
PSK20.055	Length 55 mm	0.009	100	6418677163319
PSK20.064	Length 64 mm	0.011	100	6418677163326
PSK20.073	Length 73 mm	0.012	100	6418677163333
PSK20.082	Length 82 mm	0.014	100	6418677163340
PSK20.100	Length 100 mm	0.017	100	6418677163364
PSK20.109	Length 109 mm	0.018	100	6418677163371
PSK20.118	Length 118 mm	0.020	100	6418677163388
PSK20.127	Length 127 mm	0.021	100	6418677163395
PSK20.136	Length 136 mm	0.023	100	6418677163401
PSK20.161	Length 161 mm	0.027	100	6418677163623
PSK20.175	Length 175 mm	0.029	100	6418677163630
PSK152	Length 1000 mm	0.171	10	6418677163418
PSK152.2	Length 2000 mm	0.341	10	6418677163722



PSK20.100

## Other accessories

Product code	Description	Weight (kg)	Package size (pcs)	GTIN-13
PMR281	Support for 3 x 12 mm busbar	0.004	200	6418677163449
PSK131	Busbar, length 2000 mm, 3x12 mm, copper	0.630	10	6418677163456
RDP9	Shroud profile for N and PE busbar, length 2000 mm	0.140	10	6418677163463
PPK225	Earthing bar for connecting pillar terminal to mounting plate, height 24 mm	0.007	100	6418677163036



Support for 3 x 12 mm busbar, PMR281.



Busbar, copper, PSK131.



Shroud profile, RDP9.



Earthing bar, PPK225.

# Ensto Cubo T enclosed terminals

## For Al/Cu conductors from 6 mm<sup>2</sup> to 150 mm<sup>2</sup>



### Ensto Cubo T enclosed terminals in brief:

- Include everything needed for connecting wires, extending or branching cables as well as enclosing
- Available with Ensto Clampo Compact terminal blocks and Ensto Clampo Pro Universal terminals
- Include either Ensto Cubo S or C thermoplastic enclosures
- The enclosure has exactly the right dimensions in terms of the terminals and the required bending space
- Save time choosing products (all of the required items can be ordered with one ordering number only)
- Need less storage space (no separate packages)



Ensto Cubo T1



Ensto Cubo T1

### Conformity

CE

### Standards

Enclosure:	EN 62208
Ensto Clampo Compact terminal:	EN 60947-7-1
Ensto Clampo Pro terminals:	EN 61238-1 for aluminium conductors EN 60947-7-1 for copper conductors

### Cross-section range

Al/Cu	6 mm <sup>2</sup> – 150 mm <sup>2</sup>
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### Material

Enclosure:	Fiberglass reinforced polycarbonate
Housing (terminals):	Polyamide
Body and screws:	Tin-coated aluminium or nickel-coated brass

### Mechanical features

Screw head:	Hexagonal or slot
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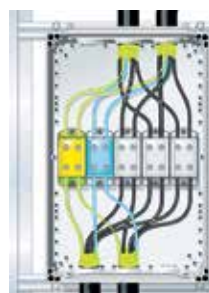
Item	Ensto Cubo T1	Ensto Cubo T2	Ensto Cubo T3	Ensto Cubo T4	Ensto Cubo T5
Product code	TPM131308G001	TPCF203013G002	TPCF304013G003	TPCF304013G004	TPCF306013G005
GTIN-13	6418677182372	6418677182389	6418677182396	6418677182402	6418677182419
Cross-section	Cu 12 x 6 mm <sup>2</sup>	Al/Cu 5 x 6–35 mm <sup>2</sup>	Al/Cu 5 x 16–95 mm <sup>2</sup>	Al/Cu 2 x (5 x 16 – 70) mm <sup>2</sup>	Al/Cu 2 x (5 x 35 – 150) mm <sup>2</sup>
<b>Package content:</b>					
Ensto Cubo enclosure	SPCM131308G	CPCF203013G	CPCF304013G	CPCF304013G	CPCF306013G
Cover screws (pcs)	4	4	4	4	6
Cable glands incl. strain relief	2 x M16, 2 x M20, 1 x M25	-	-	-	-
Counter nuts	2 x M16, 2 x M20, 1 x M25	-	-	-	-
Cover plug	1 x M25	-	-	-	-
Membrane flanges	-	2 x F1201	2 x F2204	2 x F2204	2 x F2204
Flange bolt sets	-	2	2	2	2
Base supports	-	-	2	2	2
Fastening lugs, set	1	1	1	1	1
DIN rails/mounting plate	1 x DIN 15 rail, 13 cm	1 x DIN 35 rail, 16 cm	1 x DIN 35 rail, 26 cm	1 x DIN 35 rail, 26 cm	1 x mounting plate 30 x 40 cm
Mounting screws (pcs)	2	2	2	2	4
End holder	2	2	2	2	-
Terminals	1 x 12-pole, grey (KR81.21)	1 x 3-pole, grey (KE61.03), 1 x blue (KE61.2), 1 x yellow-green (KE61.3)	3 x grey (KE62), 1 x blue (KE62.2), 1 x yellow-green (KE62.3)	3 x grey (KE67), 1 x blue (KE67.2), 1 x yellow-green (KE67.3)	3 x grey (KE68), 1 x blue (KE68.2), 1 x yellow-green (KE68.3)
Marking	1–12	L1, L2, L3	L1, L2, L3	L1, L2, L3	L1, L2, L3
Cross connectors	2 x 3-pole (KRL6067.03)	-	-	-	-



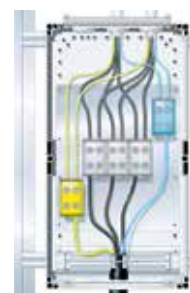
Ensto Cubo T2



Ensto Cubo T3



Ensto Cubo T4



Ensto Cubo T5

# Ensto Clampo conductor table 1/2

## 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 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 industrially-installed terminals (internal connections in a panel), (SGS Fimko).

Product code	Wire type	Cross-sections of conductors (mm <sup>2</sup> ) 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 (2.5–4 mm <sup>2</sup> )
	Cu		3	3	3	3	2	1	1	1							160		12 (6–50 mm <sup>2</sup> )
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 <sup>2</sup> )
	Cu								3	2	1	1	1	1	1		320		30 (120–150 mm <sup>2</sup> )
KE64	Al								1	1	1	1	1	1	1	1	380	800	12 (35–70 mm <sup>2</sup> )
	Cu								3	3	2	1	1	1	1	1	425		45 (95–240 mm <sup>2</sup> )
KE66	Al				1	1	1	1	1	1							145	800	4 (2.5–4 mm <sup>2</sup> )
	Cu		3	3	3	3	2	1	1	1							160		12 (6–50 mm <sup>2</sup> )
KE67	Al						1	1	1	1	1	1					220	800	20
	Cu						3	2	2	1	1	1					245		
KE68	Al								1	1	1	1	1	1			290	800	20 (35–95 mm <sup>2</sup> )
	Cu								3	3	2	1	1	1			320		30 (120–150 mm <sup>2</sup> )
KE69	Al								1	1	1	1	1	1	1	1	380	800	12 (35–70 mm <sup>2</sup> )
	Cu								3	3	2	1	1	1	1	1	425		45 (95–240 mm <sup>2</sup> )
Ensto Clampo Pro 1000 V terminals																			
KE161	Al				1	1	1	1	1	1							145	1000	4 Nm (2.5–4 mm <sup>2</sup> )
	Cu		3	3	3	3	2	1	1	1							160		12 Nm (6–50 mm <sup>2</sup> )
KE162	Al						1	1	1	1	1	1					220	1000	20
	Cu						3	2	2	1	1	1					245		
KE163	Al								1	1	1	1	1	1			290	1000	30 Nm (120–150 mm <sup>2</sup> )
	Cu								3	2	1	1	1	1	1		320		20 Nm (35–95 mm <sup>2</sup> )
Ensto Clampo Apparatus equipment terminals																			
KE12.12, KE12.20	Al				1	1	1	1	1	1							145	750	10
	Cu				1	1	1	1	1	1							160		
KE52.2	Al						1	1	1	1	1	1					270		14
	Cu						3	2	2	1	1	1							
KE53.2	Al								1	1	1	1	1	1			320		14 (35–95 mm <sup>2</sup> )
	Cu								3	2	1	1	1	1					24 (120–150 mm <sup>2</sup> )
KE54.2	Al								1	1	1	1	1	1	1	1	425		12 (35–70 mm <sup>2</sup> )
	Cu								3	3	2	1	1	1	1	1			40 (95–240 mm <sup>2</sup> )
KE55	Al												1	1	1	1	420		25
	Cu												1	1	1	1			
KE57	Al											1	1	1	1		400		35
	Cu											1	1	1	1				2 conductor spaces
KE58	Al													1	1	1	630		35
	Cu													1	1	1			2 conductor spaces
KE73.2	Al								1	1	1	1	1	1			320	750	14 (35–95 mm <sup>2</sup> )
	Cu								3	2	1	1	1	1					24 (120–150 mm <sup>2</sup> )
KE74.2	Al								1	1	1	1	1	1	1	1	425	750	12 (35–70 mm <sup>2</sup> )
	Cu								3	3	2	1	1	1	1	1			40 (95–240 mm <sup>2</sup> )
KE75	Al												1	1	1	1	420	750	25
	Cu												1	1	1	1			
KE77	Al											1	1	1	1		400	750	35
	Cu											1	1	1	1				2 conductor spaces
KE78	Al												1	1	1	1	630	750	35
	Cu												1	1	1	1			2 conductor spaces



# Ensto Clampo conductor table 2/2

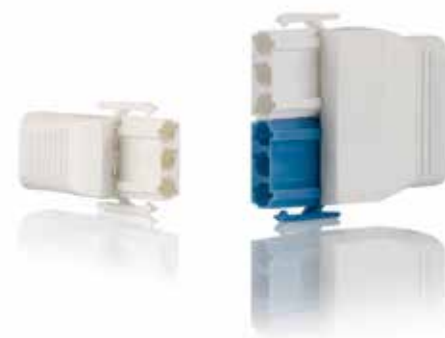
## Conductors that can be used with the terminals: number, cross-section and type.

- 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 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 industrially-installed terminals (internal connections in a panel), (SGS Fimko).

Product code	Wire type	Cross-sections of conductors (mm <sup>2</sup> ) 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				300	
Ensto Clampo Tap tapping blocks																					
KE80	Cu					7	7	5	5	3	<b>3</b>	2						270	750	2	
KE80.15	Cu	See KE80 and PPK2															270	750	2/3		
KE81	Cu				7	7	7	7	7	5	4	3	<b>2</b>	2				490	750	9	
KE82	Cu								7	6	6	4	4	3	2	<b>2</b>	2	560	750	6	
KE82.15	Cu	See KE82 and PSS63															560/353	750	6		
Ensto Clampo Tap tapping terminals																					
KF7.10	Cu		7	6	5	<b>3</b>	2											62	750	2.5	
KF7.70	Cu				7	7	6	4	4	2	<b>2</b>	1						192	750	4	
KF8.10	Cu		7	6	5	<b>3</b>	2											62	750	2.5	
KF8.70	Cu				7	7	6	4	4	2	<b>2</b>	1						192	750	4	
Ensto Clampo Compact terminal blocks																					
KR5031/5121	Cu	<b>1</b>																17.5	450	0.4	
KR8031...8121	Cu	3	2	1	<b>1</b>													41	450	0.8	
KR10021/10031	Cu				1	1	<b>1</b>											82	500	2.5	
KE33	Cu	3	3	3	3	3	2	1	<b>1</b>									135	750	3.5	
Ensto Clampo Eurostrips																					
KA / KB16.12	Cu	<b>1</b>																15	450	0.3 - 0.5	
KA / KB17.12	Cu	<b>1</b>																15	450	0.3 - 0.5	
KA / KB241.12	Cu	1	1	<b>1</b>														30	450	0.4 - 0.6	
KA / KB242.12	Cu	1	1	<b>1</b>														30	450	0.4 - 0.6	
KA / KB460.12	Cu		1	1	<b>1</b>													40	450	0.6 - 0.8	
KA / KB463.12	Cu		1	1	<b>1</b>													40	450	0.6 - 0.8	
KA / KB612.12	Cu				1	1	<b>1</b>											65	750	1.8 - 2.0	
Ensto Clampo Wire connectors																					
AL1.12	Cu	4	<b>3</b>															24	450	0.8 - 1.0	
AL2.12	Cu		4	3	<b>2</b>													41	450	1.8 - 2.0	
AL13	Cu			4	3	2	<b>2</b>											76	450	2.5 - 2.7	
KD160.01	Cu	3	<b>2</b>	1														24	450	1.2 - 1.4	
KD160.12	Cu	3	<b>2</b>	1														24	450	1.2 - 1.4	
Ensto Clampo Ground N and PE terminals																					
KNA4.xx	Cu	See KJ25 and KJ18															82	500	0.8 (KJ25)/2 (KJ18)		
KN4.102...112	Cu	5	5	4	4	2	<b>1</b>											82	500	2	
KNA5.xxx	Cu	See KJ25 and KJ18															82	500	0.8 (KJ25)/2 (KJ18)		
KN4.204...212	Cu	5	5	4	4	2	<b>1</b>											76	500	2	
KND4.103N and P, NP	Cu		5	5	5	4	2	1	<b>1</b>									135	500	4	
KJ7	Cu	3	3	3	3	3	2	1	<b>1</b>									135	500	2.5	
KN2.2...8	Cu	5	5	4	3	2	<b>1</b>	1										82		1.2	
PPK28	Cu	5	5	4	3	2	<b>1</b>	1										82			
PPK9	Cu	5	5	5	5	4	2	1	<b>1</b>	1								135			
PPK2	Cu		5	5	5	5	5	3	2	1	<b>1</b>	1	1					270			
PSS63	Cu						5	5	4	3	2	2	1	1	<b>1</b>	1		535			
KJ25	Cu	5	3	2	<b>2</b>													33		0.8	
KJ18	Cu	5	5	4	4	2	<b>1</b>											82		2	
KJ20	Cu		5	5	5	4	2	1	<b>1</b>									135		4	

# EnstoNet installation couplers

## For Cu conductors from 0.5 mm<sup>2</sup> to 4 mm<sup>2</sup>



### EnstoNet installation couplers in brief:

- Pluggable 2, 3, 4 and 5-pole couplers
- Available as screw, screwless and PCB couplers
- Locking latches ensure the durability of the connection (also available without locking latches)
- Available with and without strain relief
- Color coding for different systems, mechanical compatibility only within the same color system

### Technical features:

- Screw couplers
  - Conductor cross-section: 0.75 – 4 mm<sup>2</sup>
  - For flexible, stranded and solid wires
- Screwless couplers (spring clamp connection)
  - Conductor cross-section: main terminals: 2 x 0.5 – 2.5 mm<sup>2</sup>, auxiliary terminals 1 x 0.5 – 1.5 mm<sup>2</sup>
  - For stranded and solid wires
- PCB couplers
  - PCB couplers can be mounted on the board in either vertical or horizontal position

Conformity	
Standards	
IEC 61535, EN 60998-1	
Technical information	
Cross-section range:	0.5 – 4 mm <sup>2</sup>
Nominal current range:	20 A
Nominal insulation voltage:	400 V
Operating temperature:	Max. +70 °C
Material	
Body:	Polyamide
Terminals	Silver-plated brass

## 2-pole installation couplers

Pole	Colour	Mechanical code	Marking	Screw couplers without strain-relief		Screw couplers with strain-relief		Screw couplers with strain-relief, low		Screwless couplers	
				Plug	Socket	Plug	Socket	Plug	Socket	Plug	Socket
2	White	A	1, N	NAC21.W 6418677109027	NAC22.W 6418677109041	NAC21S.W 6418677109034	NAC22S.W 6418677109058	NAC21SL.W 6418677114861	NAC22SL.W 6418677114878	NAS21.W 6418677113192	NAS22.W 6418677113208
	Black	A	1, N	NAC21.B 6418677113840	NAC22.B 6418677113857	NAC21S.B 6418677113871	NAC22S.B 6418677113888	NAC21SL.B 6418677114885	NAC22SL.B 6418677114892	NAS21.B 6418677115271	NAS22.B 6418677115288
2	Blue	B	A, B	NBC21.S 6418677113680	NBC22.S 6418677113703	NBC21S.S 6418677113697	NBC22S.S 6418677113710			NBS21.S 6418677117022	NBS22.S 6418677117039
2	Grey	C	a+, b-	NCC21.G 6418677117336	NCC22.G 6418677117190	NCC21S.G 6418677117343	NCC22S.G 6418677117183	NCC21SL.G 6418677117381	NCC22SL.G 6418677117473	NCS21.G 6418677117145	NCS22.G 6418677117152
2-pole narrow	White	A	1, N	NAC21H.W 6418677113314	NAC22H.W 6418677113321	NAC21SH.W 6418677113338	NAC22SH.W 6418677113345				

Package size: screw couplers without strain-relief 500 pcs, others 200 pcs

## 3-pole installation couplers

Pole	Colour	Mechanical code	Marking	Screw couplers without strain-relief		Screw couplers with strain-relief		Screw couplers with strain-relief, low		Screwless couplers	
				Plug	Socket	Plug	Socket	Plug	Socket	Plug	Socket
3	White	A	1, PE, N	NAC31.W 6418677109065	NAC32.W 6418677108990	NAC31S.W 6418677109003	NAC32S.W 6418677109072	NAC31SL.W 6418677708473	NAC32SL.W 6418677708480	NAS31.W 6418677707667	NAS32.W 6418677707681
	Black	A	1, PE, N	NAC31.B 6418677113895	NAC32.B 6418677113901	NAC31S.B 6418677113949	NAC32S.B 6418677113956			NAS31.B 6418677707650	NAS32.B 6418677707674
3	Blue	B	A, B, C	NBC31.S 6418677113482	NBC32.S 6418677113475	NBC31S.S 6418677113499	NBC32S.S 6418677113505			NBS31.S 6418677117008	NBS32.S 6418677117015
3	Beige	B	A, B, C	NBC31.F 6418677117985	NBC32.F 6418677117992	NBC31S.F 6418677117558	NBC32S.F 6418677117787			NBS31.F 6418677117794	NBS32.F 6418677117800
3	Grey	C	a+, PE, b-	NCC31.G 6418677117114	NCC32.G 6418677117107	NCC31S.G 6418677117084	NCC32S.G 6418677117091			NCS31.G 6418677117121	NCS32.G 6418677117138
3-pole narrow	White	A	1, PE, N	NAC31H.W 6418677113352	NAC32H.W 6418677113291	NAC31SH.W 6418677113307	NAC32SH.W 6418677113369			NAS31H.W 6418677113536	NAS32H.W 6418677113529
3-pole narrow	Black	A	1, PE, N	NAC31H.B 6418677118081						NAS31H.B 6418677709364	

Package size: 200 pcs

## 4-pole installation couplers

Pole	Colour	Mechanical code	Marking	Screw couplers without strain-relief		Screw couplers with strain-relief		Screw couplers with strain-relief, low		Screwless couplers	
				Plug	Socket	Plug	Socket	Plug	Socket	Plug	Socket
4	White	A	1, PE, N, 2	NAC41.W 6418677113987	NAC42.W 6418677113994	NAC41S.W 6418677114069	NAC42S.W 6418677114076	NAC41SL.W 6418677708497	NAC42SL.W 6418677708503	NAS41.W 6418677114021	NAS42.W 6418677114038
				NAC41.B 6418677114007	NAC42.B 6418677114014	NAC41S.B 6418677114083	NAC42S.B 6418677114090			NAS41.B 6418677115318	NAS42.B 6418677707698
4-pole narrow	White	A	1, PE, N, 2	NAC41H.W 6418677114106	NAC42H.W 6418677114113	NAC41SH.W 6418677114120	NAC42SH.W 6418677114137				

Package size: 100 pcs

## 5-pole installation couplers

Pole	Colour	Mechanical code	Marking	Screw couplers without strain-relief		Screw couplers with strain-relief		Screw couplers with strain-relief, low		Screwless couplers	
				Plug	Socket	Plug	Socket	Plug	Socket	Plug	Socket
5	White	A	1, 2, PE, N, 3	NAC51.W 6418677109089	NAC52.W 6418677109232	NAC51S.W 6418677109225	NAC52S.W 6418677112805	NAC51SL.W 6418677114489	NAC52SL.W 6418677114496	NAS51.W 6418677707704	NAS52.W 6418677707711
				NAC51.B 6418677114151	NAC52.B 6418677114168	NAC51S.B 6418677114182	NAC52S.B 6418677114199	NAC51SL.B 6418677116056	NAC52SL.B 6418677116063	NAS51.B 6418677117565	NAS52.B 6418677118142
5	Blue	B	A, B, C, D, E	NBC51.S 6418677113727	NBC52.S 6418677113741	NBC51S.S 6418677113734	NBC52S.S 6418677113758			NBS51.S 6418677724206	NBS52.S 6418677724237
5	Beige	B	A, B, C, D, E	NBC51.F 6418677118005	NBC52.F 6418677118029	NBC51S.F 6418677118012	NBC52S.F 6418677118036				
5	Grey	C	1, N, PE, a+, b-	NCC51.G 6418677117503	NCC52.G 6418677117527	NCC51S.G 6418677117497	NCC52S.G 6418677117510	NCC51SL.G 6418677117855	NCC52SL.G 6418677117862	NCS51.G 6418677724213	NCS52.G 6418677724244
5-pole narrow	White	A	1, 2, PE, N, 3	NAC51H.W 6418677113376	NAC52H.W 6418677113383	NAC51SH.W 6418677113390	NAC52SH.W 6418677113406			NAS51H.W 6418677113666	NAS52H.W 6418677113673

Package size: 100 pcs



NAC21S.W



NBC52.S



NAC41.W



NCC52S.G

## Combination couplers

Pole	Colour	Mechanical code	Marking	Screw couplers with strain-relief	
				Plug	Socket
3+2	White/blue	A+B	1, PE, N, A, B	NGCST5132 6418677723117	NGCST5232 6418677723124
3+3	White/blue	A+B	1, PE, N, A, B, C	NGCST6133 6418677723131	NGCST6233 6418677723155
4+2	White/blue	A+B	1, PE, N, 2, A, B	NGCST6142 6418677723148	NGCST6242 6418677723162

Package size: NGCST6133 50 pcs, others 10/50 pcs



NGCST5232

## Panel adapters

Colour	2-pole	3-pole	3-pole narrow	4-pole	4-pole narrow	5-pole	5-pole narrow	6-pole
White	NK2PW 6418677113062	NK3PW 6418677113079	NK3PF.W 6418677113086	NK4PW 6418677114045	NK4PF.W 6418677114144	NK5PW 6418677113093	NK5PF.W 6418677114205	NK6PW 6418677719523
	NK2PB 6418677113864	NK3PB 6418677113918	NK3PF.B 6418677115868	NK4PB 6418677114052	NK4PF.B 6418677115912	NK5PB 6418677114175	NK5PF.B 6418677115967	
Grey	NK2PG 6418677701559	NK3PG 6418677700309	NK3PF.G 6418677701566			NK5PG 6418677700293		
	NK2PK 6418677114724	NK3PK 6418677114250	NK3PF.K 6418677115875	NK4PK 6418677114755	NK4PF.K 6418677115929	NK5PK 6418677114298	NK5PF.K 6418677115974	
Red	NK2PP 6418677114731	NK3PP 6418677114281	NK3PF.P 6418677115882	NK4PP 6418677114762	NK4PF.P 6418677115936	NK5PP 6418677114328	NK5PF.P 6418677115981	
	NK2PS 6418677114717	NK3PS 6418677114274	NK3PF.S 6418677115899	NK4PS 6418677114779		NK5PS 6418677114311	NK5PF.S 6418677115998	
Green	NK2PV 6418677114748	NK3PV 6418677114267	NK3PF.V 6418677115905	NK4PV 6418677114786		NK5PV 6418677114304	NK5PF.V 6418677116001	

Package size: 2 and 3-pole 100/200 pcs, 4-6-pole 50/100 pcs.

Narrow for couplers without latches.



NK5P.P



NK35PL.W

## Special panel adapters

Product code	Description	Package size (pcs)	GTIN-13
NK35PL.W	3-pole panel mounting adaptor for 5-pole aperture	100	6418677709203

## Accessories

Product code	Description	Package size (pcs)	GTIN-13
<b>Separate locking devices</b>			
NK2F.W	For narrow 2-pole couplers, white	1000	6418677113109
NK3F.W	For narrow 3-, 4- and 5-pole couplers, white	1000	6418677113116
<b>Strain-reliefs</b>			
NS3M.W	Strain-relief of 3-pole couplers for 4 mm <sup>2</sup> cables, white	200	641867712258
NS3M.P	Strain-relief of 3-pole couplers for 4 mm <sup>2</sup> cables, red	200	641867715792
NS3D.W	3-pole strain-relief of screwless couplers for two cables, for 7 - 11 mm cables, white	200	6418677118128
NS3DL.W	3-pole strain-relief of screwless couplers for two cables, for 4 - 8,5 mm cables, white	200	6418677118135
NS5M.W	5-pole strain-relief for 4 mm <sup>2</sup> cables, for 12,0 -17,5 mm cables, white	100	641867712265
NS5M.P	5-pole strain-relief for 4 mm <sup>2</sup> cables, for 12,0 -17,5 mm cables, red	200	641867715808
NS5M2L.W	5-pole strain-relief for 4 mm <sup>2</sup> cables, for 8,0 -11,0 mm cables, white	200	641867720079
<b>Blanking caps for panel mounting adapter</b>			
NK3CP.W	3-pole, white	1000	6418677113970
NK3CP.B	3-pole, black	1000	6418677117206
<b>Blanking caps</b>			
NK3C.W	3-pole, white	1000	6418677113963
NK5C.W	5-pole, white	1000	6418677700736
<b>Mounting pads</b>			
NKB.W	White	1000	6418677114243
NKB.B	Black	1000	6418677115127
<b>Blind panel mounting adapters</b>			
NK3PB.W	3-pole, white	200	6418677114397
NK5PB.W	5-pole, white	200	6418677700729
<b>Safety devices for locking latches</b>			
NK3FH.W	3-pole, white	1000	6418677116605
NK5FH.W	5-pole, white	1000	6418677116612
<b>Other accessories</b>			
NAK3A.W	3-pole intermediate coupling, white	200	6418677113833
NAK5A.W	5-pole intermediate coupling, white	100	6418677681240
NCK5A.G	5-pole intermediate coupling, grey	100	6418677681257



NK2F.W



NS5M.W



NKB.W

## PCB couplers

Pole	Colour	Mechanical code	Marking	Vertical		Vertical, one latch	Horizontal		Horizontal, one latch
				Plug	Socket	Socket	Plug	Socket	Socket
2	White	A	1, N		NAE22V.W 6418677116674	NAE22V.W 6418677116674		NAE22H.W 6418677116650	NAE22H.W 6418677116650
2	Blue	B	A, B		NBE22V.S 6418677116872	NBE22VH1.S 6418677116896		NBE22H.S 6418677116841	NBE22HH1.S 6418677116865
2	Grey	C	a+, b-		NCE22V.G 6418677701306			NCE22H.G 6418677701276	NCE22HH1.G 6418677701290
3	White	A	1, PE, N	NAE31V.W 6418677723575	NAE32V.W 6418677116711	NAE32VH2.W 6418677116735	NAE31H.W 6418677723551	NAE32H.W 6418677113925	NAE32HH2.W 6418677116704
3	Blue	B	A, B, C	NBE31V.S 6418677723612	NBE32V.S 6418677116933	NBE32VH1.S 6418677116957	NBE31H.S 6418677723599	NBE32H.S 6418677116902	NBE32HH1.S 6418677116926
3	Grey	C	a+, PE, b-	NCE31V.G 6418677723650	NCE32V.G 6418677701344	NCE32VH1.G 6418677701368	NCE31H.G 6418677723636	NCE32H.G 6418677701313	NCE32HH1.G 6418677701337
3	Red	C	1, PE, N	NCE31V.P 6418677724275			NCE31H.P 6418677724268		
4	White	A	1, PE, N, 2		NAE42V.W 6418677116773	NAE42VH2.W 6418677116797		NAE42H.W 6418677116742	NAE42HH2.W 6418677116766
5	White	A	1, 2, PE, N, 3	NAE51V.W 6418677701016	NAE52V.W 6418677116827	NAE52H.W 6418677116803	NAE51H.W 6418677700996		
5	Blue	B	A, B, C, D, E	NBE51V.S 6418677701177	NBE52V.S 6418677116988	NBE52H.S 6418677116964	NBE51H.S 6418677701153		
6	White	A+B	1, PE, N, A, B, C		NGE6233V.W 6418677709296				

Package size: 2-4-pole 200 pcs, 5-pole 100 pcs, 6-pole 250 pcs.



NBE31V.S



NAE32HH2.W



NKTE.W

## Accessories

Product code	Description	Package size (pcs)	GTIN-13
NKTE.W	PCB-coupler support, white	1000	6418677708268



# Load break switches

Our range of load break switches consists of three-pole switch disconnectors, additional poles and accessories. The switches are certified according to EN 60947-3. Our product range also includes UL-listed motor controllers suitable as motor disconnect (UL 508, File # 164205) with a strong position on the North American market in particular.

## Benefits of using our switch disconnectors



### Combined switch and disconnector

The switches are suitable for both isolating and making/breaking. They can be used as the only switch with motors.



### Designed and tested to work as a disconnector

The switches can be used for isolating a circuit for maintenance, for example. They protect from overvoltage when in the 0-position.



### Load break switch for demanding use

The switches connect and break even with overcurrent. They are suitable as a main switch of a motor.



### Suitable for overvoltage category IV

The rated impulse withstand voltage  $U_{imp}$  for the switches is 8 kV. They are suitable for service entrance level with normal supply voltages. The switches' air gap is big enough to provide adequate disconnecting properties.



### Compact size

The switches take little space in the switch gear assembly.



### Reliable 0/I-position indicator

The switches have mechanical indication, avoiding the possibility of misunderstandings.



# Ensto Compact switch disconnectors

## Rotary switches from 16 A to 125 A



### Ensto Compact switch disconnectors in brief:

- The frame of the 16 – 63 A switches is only two modules wide, 63 A – 125 A with a width of three modules
- The series also includes:
  - Direct door mounted switches
  - Switches with factory-mounted neutral pole
- Wide range of accessories available (including e.g. 4th pole, switched neutral pole, auxiliary contact, handle, changeover mechanism)
- UL-listed versions available
- Compact in size
- Advanced design with two frame sizes
- Handle padlockable in 0-position

Conformity	
Standards	
EN 60947-3	
Technical information	
Nominal current range:	16 – 125 A
Cross-section range:	Cu 1.5 – 50 mm <sup>2</sup>
Rated insulation voltage:	800 V
Mechanical features	
Screw head:	+/-
Mounting:	Screws or DIN rail

### Ensto Compact switch disconnectors, three-pole, panel and DIN rail mounted

Product code	Amperage	Conductor cross-section	Tightening torque	Mounting	Dimensions W x L x H (mm)	Weight (kg)	Package size (pcs)	GTIN-13
<b>Three-pole with direct handle</b>								
KS3.16	3 x 16 A	Cu 1.5–16 mm <sup>2</sup>	2 Nm	Din rail/screw	36 x 81 x 76	0.133	50	6418677171345
KS3.20	3 x 20 A	Cu 1.5–16 mm <sup>2</sup>	2 Nm	Din rail/screw	36 x 81 x 76	0.133	50	6418677171352
KS3.25	3 x 25 A	Cu 1.5–16 mm <sup>2</sup>	2 Nm	Din rail/screw	36 x 81 x 76	0.133	50	6418677170003
KS3.32	3 x 32 A	Cu 1.5–16 mm <sup>2</sup>	2 Nm	Din rail/screw	36 x 81 x 76	0.133	50	6418677171420
KS3.40	3 x 40 A	Cu 1.5–16 mm <sup>2</sup>	2 Nm	Din rail/screw	36 x 81 x 76	0.133	50	6418677170010
KS3.63	3 x 63 A	Cu 1.5–16 mm <sup>2</sup>	2 Nm	Din rail/screw	36 x 81 x 76	0.133	50	6418677170027
KSM3.63	3 x 63 A	Cu 10–50 mm <sup>2</sup>	4 Nm	Din rail/screw	52 x 100 x 80	0.266	50	6418677169748
KSM3.80	3 x 80 A	Cu 10–50 mm <sup>2</sup>	4 Nm	Din rail/screw	52 x 100 x 80	0.266	50	6418677169755
KSM3.100	3 x 100 A	Cu 10–50 mm <sup>2</sup>	4 Nm	Din rail/screw	52 x 100 x 80	0.266	50	6418677169762
KSM3.125	3 x 125 A	Cu 10–50 mm <sup>2</sup>	4 Nm	Din rail/screw	52 x 100 x 80	0.266	50	6418677169779
<b>Three-pole, yellow with red handle</b>								
KS3.16RY	3 x 16 A	Cu 1.5–16 mm <sup>2</sup>	2 Nm	Din rail/screw	36 x 81 x 76	0.133	50	6418677171444
KS3.20RY	3 x 20 A	Cu 1.5–16 mm <sup>2</sup>	2 Nm	Din rail/screw	36 x 81 x 76	0.133	50	6418677171451
KS3.25RY	3 x 25 A	Cu 1.5–16 mm <sup>2</sup>	2 Nm	Din rail/screw	36 x 81 x 76	0.133	50	6418677171468
KS3.32RY	3 x 32 A	Cu 1.5–16 mm <sup>2</sup>	2 Nm	Din rail/screw	36 x 81 x 76	0.133	50	6418677171475
KS3.40RY	3 x 40 A	Cu 1.5–16 mm <sup>2</sup>	2 Nm	Din rail/screw	36 x 81 x 76	0.133	50	6418677171482
KS3.63RY	3 x 63 A	Cu 1.5–16 mm <sup>2</sup>	2 Nm	Din rail/screw	36 x 81 x 76	0.133	50	6418677171499
KSM3.63RY	3 x 63 A	Cu 10–50 mm <sup>2</sup>	4 Nm	Din rail/screw	52 x 100 x 80	0.266	50	6418677169847
KSM3.80RY	3 x 80 A	Cu 10–50 mm <sup>2</sup>	4 Nm	Din rail/screw	52 x 100 x 80	0.266	50	6418677169854
KSM3.100RY	3 x 100 A	Cu 10–50 mm <sup>2</sup>	4 Nm	Din rail/screw	52 x 100 x 80	0.266	50	6418677169861
KSM3.125RY	3 x 125 A	Cu 10–50 mm <sup>2</sup>	4 Nm	Din rail/screw	52 x 100 x 80	0.266	50	6418677169878
<b>Three-pole without handle</b>								
KS31.16	3 x 16 A	Cu 1.5–16 mm <sup>2</sup>	2 Nm	Din rail/screw	36 x 81 x 70	0.129	50	6418677171284
KS31.20	3 x 20 A	Cu 1.5–16 mm <sup>2</sup>	2 Nm	Din rail/screw	36 x 81 x 70	0.129	50	6418677171291
KS31.25	3 x 25 A	Cu 1.5–16 mm <sup>2</sup>	2 Nm	Din rail/screw	36 x 81 x 70	0.129	50	6418677171307
KS31.32	3 x 32 A	Cu 1.5–16 mm <sup>2</sup>	2 Nm	Din rail/screw	36 x 81 x 70	0.129	50	6418677171314
KS31.40	3 x 40 A	Cu 1.5–16 mm <sup>2</sup>	2 Nm	Din rail/screw	36 x 81 x 70	0.129	50	6418677171321
KS31.63	3 x 63 A	Cu 1.5–16 mm <sup>2</sup>	2 Nm	Din rail/screw	36 x 81 x 70	0.129	50	6418677171338
KSM31.63	3 x 63 A	Cu 10–50 mm <sup>2</sup>	4 Nm	Din rail/screw	52 x 100 x 70	0.260	50	6418677169700
KSM31.80	3 x 80 A	Cu 10–50 mm <sup>2</sup>	4 Nm	Din rail/screw	52 x 100 x 70	0.260	50	6418677169717
KSM31.100	3 x 100 A	Cu 10–50 mm <sup>2</sup>	4 Nm	Din rail/screw	52 x 100 x 70	0.260	50	6418677169724
KSM31.125	3 x 125 A	Cu 10–50 mm <sup>2</sup>	4 Nm	Din rail/screw	52 x 100 x 70	0.260	50	6418677169731



KSM3.63



KS3.16RY



KSM31.63

### Ensto Compact switch disconnectors, three-pole with factory-mounted switched neutral pole and handle

Product code	Amperage	Conductor cross-section	Tightening torque	Mounting	Dimensions W x L x H (mm)	Weight (kg)	Package size (pcs)	GTIN-13
KS3.40N	3 x 40 A	Cu 1.5–16 mm <sup>2</sup>	2 Nm	Din rail/screw	49 x 81 x 76	0.177	50	6438100099343
KS3.63N	3 x 63 A	Cu 1.5–16 mm <sup>2</sup>	2 Nm	Din rail/screw	49 x 81 x 76	0.177	50	6438100099350
KSM3.80N	3 x 80 A	Cu 10–50 mm <sup>2</sup>	4 Nm	Din rail/screw	70 x 100 x 80	0.362	50	6438100099381
KSM3.100N	3 x 100 A	Cu 10–50 mm <sup>2</sup>	4 Nm	Din rail/screw	70 x 100 x 80	0.362	50	6438100099398



KS3.40N

## Ensto Compact switch disconnectors, fourth pole

Product code	Amperage (A)	Conductor cross-section (mm <sup>2</sup> )	Tightening torque	Mounting	Dimensions W x L x H (mm)	Weight (kg)	Package size (pcs)	GTIN-13
KS1.16	16 A	Cu 1.5–16 mm <sup>2</sup>	2 Nm	Din rail/screw	13 x 71.5 x 55.3	0.046	50	6418677171253
KS1.20	20 A	Cu 1.5–16 mm <sup>2</sup>	2 Nm	Din rail/screw	13 x 71.5 x 55.3	0.046	50	6418677171260
KS1.25	25 A	Cu 1.5–16 mm <sup>2</sup>	2 Nm	Din rail/screw	13 x 71.5 x 55.3	0.046	50	6418677170065
KS1.32	32 A	Cu 1.5–16 mm <sup>2</sup>	2 Nm	Din rail/screw	13 x 71.5 x 55.3	0.046	50	6418677171277
KS1.40	40 A	Cu 1.5–16 mm <sup>2</sup>	2 Nm	Din rail/screw	13 x 71.5 x 55.3	0.046	50	6418677170072
KS1.63	63 A	Cu 1.5–16 mm <sup>2</sup>	2 Nm	Din rail/screw	13 x 71.5 x 55.3	0.046	50	6418677170089
KSM1.63	63 A	Cu 10–50 mm <sup>2</sup>	4 Nm	Din rail/screw	17.5 x 83 x 62	0.095	50	6418677169786
KSM1.80	80 A	Cu 10–50 mm <sup>2</sup>	4 Nm	Din rail/screw	17.5 x 83 x 62	0.095	50	6418677169793
KSM1.100	100 A	Cu 10–50 mm <sup>2</sup>	4 Nm	Din rail/screw	17.5 x 83 x 62	0.095	50	6418677169809
KSM1.125	125 A	Cu 10–50 mm <sup>2</sup>	4 Nm	Din rail/screw	17.5 x 83 x 62	0.095	50	6418677169816



KS1.63

## Additional poles

Product code	Description	Amperage (A)	Tightening torque (Nm)	Weight (kg)	Package size (pcs)	GTIN-13
<b>Switched neutral poles</b>						
KS1N	For KS3- and KS31 switches	Max. 63 A	2 Nm	0.046	50	6438100094300
KSM1N	For KSM switch	Max. 125 A	4 Nm	0.095	50	6438100094324
<b>Fixed neutral poles</b>						
KSN1	For KS3- and KS31 switches	Max. 63 A	2 Nm	0.042	50	6418677170126
KSMN1	For KSM switch	Max. 125 A	4 Nm	0.087	50	6418677169823
<b>Fixed PE poles</b>						
KSP1	For KS3- and KS31 switches	Max. 63 A	2 Nm	0.042	50	6418677170140
KSMP1	For KSM switch	Max. 125 A	4 Nm	0.087	50	6418677169830
<b>Standard auxiliary contact</b>						
KSA1	NO+NC auxiliary contact 16 A for 16–125 A switches	16 A	2 Nm	0.051	50	6418677170164



Switched neutral pole, KS1N.



Fixed neutral pole, KSN1.



Fixed PE pole KSP1.



Standard auxiliary contact, KSA1.

## Handles

Product code	Description	Weight (kg)	Package size (pcs)	GTIN-13
<b>Direct handles</b>				
PMR241B	Direct handle for KS switch	0.005	100	6418677171437
PMR301B	Direct handle for KSM switch	0.006	100	6418677169915
<b>External handles</b>				
KSH29	Not padlockable, IP54, 0I1, black	0.033	100	6418677170188
KSH48	Padlockable, IP65, yellow with red handle, 0 OFF11 ON	0.043	100	6418677170195
KSH48.01	Padlockable, IP65, black, 0 OFF11 ON	0.043	100	6418677170201
KSH75	Pistol grip handle, black, padlockable, IP65, 0 OFF11 ON	0.070	50	6418677169885
KSH75RY	Pistol grip handle, yellow with red handle, padlockable, IP65, 0 OFF11 ON	0.070	50	6418677169892



Small direct handle for KS switch, PMR241B.



External handle, not padlockable, KSH29.



External handle, padlockable, KSH48.



External handle, padlockable, KSH48.01.



Pistol grip handle, padlockable, KSH75RY.



## Extension shafts

Product code	Description	Weight (kg)	Package size (pcs)	GTIN-13
KS23.055	55 mm for KSH29, KSH48 and KSH75 handles	0.014	100	6418677170232
KS23.070	70 mm for KSH29, KSH48 and KSH75 handles	0.017	100	6418677170249
KS23.090	90 mm for KSH29, KSH48 and KSH75 handles	0.021	100	6418677170256
KS23.150	150 mm for KSH29, KSH48 and KSH75 handles	0.032	100	6418677170263
KS23.200	200 mm for KSH29, KSH48 and KSH75 handles	0.042	100	6418677170270
KS23.300	300 mm for KSH29, KSH48 and KSH75 handles	0.061	100	6418677170287



KS23.055

## Other accessories

Product code	Description	Weight (kg)	Package size (pcs)	GTIN-13
PMR121	Terminal shroud for KS1 and KS11 poles	0.004	100	6418677171598
PMR123	Terminal shroud for KS3, KS31 and KS13 switch	0.008	100	6418677171604
PMR111	Terminal shroud for KSM1 pole	0.006	100	6418677171611
PMR113	Terminal shroud for KSM3 and KSM31 switch	0.013	100	6418677171628
KK66	Parallel mechanism for mounting two switches to work simultaneously	0.078	1	6418677171642
KK102.712	Changeover kit incl. shafts and black handle	0.234	20	6418677169922
KK102.7RY12	Changeover kit incl. shafts and red/yellow handle	0.234	20	6418677169939



Terminal shroud for KS1 and KS11 poles, PMR121.



Terminal shroud for KS3, KS31 and KS13 switch, PMR123.



Parallel mechanism, KK66.



Changeover kit, KK102.712.



Changeover kit, KK102.7RY12.

## Ensto Compact switch disconnectors, three-pole, direct door mounted

Product code	Amperage	Conductor cross-section	Tightening torque	Mounting	Dimensions W x L x H (mm)	Weight (kg)	Package size (pcs)	GTIN-13
KS13.16	3 x 16 A	Cu 1.5–16 mm <sup>2</sup>	2 Nm	Din rail/screw	39.4 x 80 x 72	0.149	50	6418677171161
KS13.20	3 x 20 A	Cu 1.5–16 mm <sup>2</sup>	2 Nm	Din rail/screw	39.4 x 80 x 72	0.149	50	6418677171178
KS13.25	3 x 25 A	Cu 1.5–16 mm <sup>2</sup>	2 Nm	Din rail/screw	39.4 x 80 x 72	0.149	50	6418677170034
KS13.32	3 x 32 A	Cu 1.5–16 mm <sup>2</sup>	2 Nm	Din rail/screw	39.4 x 80 x 72	0.149	50	6418677171246
KS13.40	3 x 40 A	Cu 1.5–16 mm <sup>2</sup>	2 Nm	Din rail/screw	39.4 x 80 x 72	0.149	50	6418677170041
KS13.63	3 x 63 A	Cu 1.5–16 mm <sup>2</sup>	2 Nm	Din rail/screw	13 x 71.5 x 55.3	0.149	50	6418677170058



KS13.16

## Ensto Compact switch disconnectors, fourth pole

Product code	Amperage	Conductor cross-section	Tightening torque	Mounting	Dimensions W x L x H (mm)	Weight (kg)	Package size (pcs)	GTIN-13
KS11.16	16 A	Cu 1.5–16 mm <sup>2</sup>	2 Nm	Din rail/screw	13 x 71.5 x 55.3	0.045	50	6418677171130
KS11.20	20 A	Cu 1.5–16 mm <sup>2</sup>	2 Nm	Din rail/screw	13 x 71.5 x 55.3	0.045	50	6418677171147
KS11.25	25 A	Cu 1.5–16 mm <sup>2</sup>	2 Nm	Din rail/screw	13 x 71.5 x 55.3	0.045	50	6418677170096
KS11.32	32 A	Cu 1.5–16 mm <sup>2</sup>	2 Nm	Din rail/screw	13 x 71.5 x 55.3	0.045	50	6418677171154
KS11.40	40 A	Cu 1.5–16 mm <sup>2</sup>	2 Nm	Din rail/screw	13 x 71.5 x 55.3	0.045	50	6418677170102
KS11.63	63 A	Cu 1.5–16 mm <sup>2</sup>	2 Nm	Din rail/screw	13 x 71.5 x 55.3	0.045	50	6418677170119



KS11.16

## Accessories

Product code	Description	Amperage	Tightening torque	Weight (kg)	Package size (pcs)	GTIN-13
<b>Additional poles</b>						
KS11N	Switched neutral pole	Max. 63 A	2 Nm	0.046	50	6438100094317
KS111	Fixed neutral pole	Max. 63 A	2 Nm	0.042	50	6418677170133
KSP11	Fixed PE pole	Max. 63 A	2 Nm	0.042	50	6418677170157
KSA11	NO+NC auxiliary contact	16 A	2 Nm	0.051	50	6418677170171
<b>Handles</b>						
KSH48	Padlockable, IP65, yellow with red handle, 0 OFF/1 ON			0.043	100	6418677170195
KSH48.01	Padlockable, IP65, black, 0 OFF/1 ON			0.043	100	6418677170201
<b>Terminal shrouds</b>						
PMR121	Terminal shroud for KS1 and KS11 poles			0.004	100	6418677171598
PMR123	Terminal shroud for KS3, KS31 and KS13 switch			0.008	100	6418677171604



KSH48.01

# Electrical and mechanical characteristics

According to EN 60947-3

		3-pole	KS3.16 KS31.16 KS13.16	KS3.20 KS31.20 KS13.20	KS3.25 KS31.25 KS13.25	KS3.32 KS31.32 KS13.32	KS3.40 KS31.40 KS13.40	KS3.40N	KS3.63 KS31.63 KS13.63	KS3.63N	KS1N KS11N
		4th pole	KS1.16 KS11.16	KS1.20 KS11.20	KS1.25 KS11.25	KS1.32 KS11.32	KS1.40 KS11.40		KS1.63 KS11.63		
Conventional free air thermal current $I_{th}$	A		16	20	25	32	40	40	63	63	63
Rated insulation voltage $U_i$	V		800	800	800	800	800	800	800	800	800
Rated impulse withstand voltage $U_{imp}$	kV		8	8	8	8	8	6	8	6	6
Rated operational current $I_e$ 415V	A		16	20	25	32	40	40	63	63	63
AC 21 A	500V 690V	A	16 16	20 20	25 25	32 32	40 40	40 40	63 63	63 63	63 63
AC 22 A	415V 500V 690V	A	16 16 16	20 20 20	25 25 25	32 32 32	40 40 40	40 40 40	63 63 63	63 63 63	63 63 63
AC 23 A	415V 500V 690V	A	16 16 16	20 20 20	25 25 25	32 32 25	40 40 25	40 40 25	63 40 25	63 40 25	63 40 25
Rated operational power $P_e$ 415V	kW		7.5	7.5	11	15	18.5	18.5	30	30	30
AC 23 A	500V	kW	7.5	11	15	18.5	22	22	22	22	22
(for standard motor)	690V	kW	11	15	22	22	22	22	22	22	22
Short-circuit characteristics (415 VAC)											
Rated short-time withstand current, 1s, $I_{cw}$	Arms		1260	1260	1260	1260	1260	1260	1260	1260	1260
Rated conditional short-circuit current	kArms		50	50	50	50	50	50	20/50	20/50	20/50
Max. fuse (gG)	A		16	20	25	32	40	40	63/40	63/40	63/40
Max. cut-off current	kA <sub>peak</sub>		6	6	6	6	6	6	6/6	6/6	6/6
Max. Joule integral	kA <sup>2</sup> s		6.8	6.8	6.8	6.8	6.8	6.8	15/6.8	15/6.8	15/6.8
Making and breaking characteristics											
Making capacity	415V AC 23 A	A	160	200	250	320	400	400	630	630	630
Breaking capacity	415V AC 23 A	A	128	160	200	256	320	320	504	504	504
Endurance (number of operations)											
Mechanical			100 000	100 000	100 000	100 000	100 000	100 000	100 000	100 000	100 000
Electrical			3 000	3 000	3 000	3 000	3 000	3 000	3 000	3 000	3 000
Terminals (Cu)	mm <sup>2</sup>		1.5–16	1.5–16	1.5–16	1.5–16	1.5–16	1.5–16	1.5–16	1.5–16	1.5–16
Tightening torque	Nm		2	2	2	2	2	2	2	2	2

		3-pole	KSM3.63 KSM31.63	KSM3.80 KSM31.80	KSM3.80N	KSM3.100 KSM31.100	KSM3.100N		KSM3.125 KSM31.125	
		4th pole	KSM1.63	KSM1.80		KSM1.100		KSM1N	KSM1.125	
Conventional free air thermal current $I_{th}$	A		63	80	80	100	100	100	125	
Rated insulation voltage $U_i$	V		800	800	800	800	800	800	800	
Rated impulse withstand voltage $U_{imp}$	kV		8	8	6	8	6	6	8	
Rated operational current $I_e$ 415V	A		63	80	80	100	100	100	125	
AC 21 A	500V 690V	A	63 63	80 80	80 80	100 100	100 100	100 100	125 125	
AC 22 A	415V 500V 690V	A	63 63 63	80 80 80	80 80 80	100 100 100	100 100 100	100 100 100	125 125 100	
AC 23 A	415V 500V 690V	A	63 63 50	80 63 50	80 63 50	80 63 50	80 63 50	80 63 50	80 63 50	
Rated operational power $P_e$ 415V	kW		30	45	45	45	45	45	45	
AC 23 A	500V	kW	37	37	37	37	37	37	37	
(for standard motor)	690V	kW	45	45	45	45	45	45	45	
Short-circuit characteristics (415 VAC)										
Rated short-time withstand current, 1s, $I_{cw}$	A <sub>rms</sub>		1500	1500	1500	1500	1500	1500	1500	
Rated conditional short-circuit current	kA <sub>rms</sub>		25	25	25	25	25	25	11	
Max. fuse (gG)	A		63	80	80	100	100	100	125	
Max. cut-off current	kA <sub>peak</sub>		9	9	9	9	9	9	9	
Max. Joule integral	kA <sup>2</sup> s		49.8	49.8	49.8	49.8	49.8	49.8	83	
Making and breaking characteristics										
Making capacity	415V AC 23 A	A	630	800	800	800	800	800	800	
Breaking capacity	415V AC 23 A	A	504	640	640	640	640	640	640	
Endurance (number of operations)										
Mechanical			30 000	30 000	30 000	30 000	30 000	30 000	30 000	
Electrical			1 500	1 500	1 500	1 500	1 500	1 500	1 500	
Terminals (Cu)	mm <sup>2</sup>		10–50	10–50	10–50	10–50	10–50	10–50	10–50	
Tightening torque	Nm		4	4	4	4	4	4	4	



# Fuse bases

Our range of fuse bases covers ceramic single fuse bases and fuse blocks suitable for D-type (Diazed) fuses of sizes DII and DIII. The fuse bases are certified according to standards EN 60269-1 and HD 60269-3.

## Benefits of using D-type fuses

50 kA

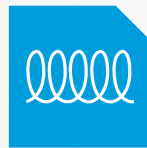
### High breaking capacity

D-type fuses have a breaking capacity up to 50 kA, which means they can be used in more demanding applications than miniature circuit breakers (MCB) that typically have a breaking capacity of only 6–10 kA.



### Reliable isolation

The clearance between open contacts is wide, making D-type fuses a reliable isolating point in the circuit. Reliable isolation is required for a safe working environment while doing maintenance in the circuit.



### Flexibility

By only changing the gauge pieces on the bottom of the fuse bases, you can choose different current ratings (2–25 A or 35–63 A). The gauge pieces also prevent the use of a bigger fuse-link by accident.

25  
20  
16  
10  
6

### Good selectivity

D-type fuses act quickly and therefore it is easy to select fuses so they operate in the correct order in the case of a faulty current (downstream fuses act first).



### Reliable and secure protection

D-type fuses and the fuse bases are made of materials that are slow aging. There are no mechanically working parts either that could fatigue. When a fuse burns, it is replaced with a new one, ensuring that the function remains at the desired level.

# Fuse bases

## 25 A and 63 A



### Fuse bases in brief:

- Particularly used in industrial panel building
- The range includes:
  - Traditional ceramic single fuse bases with a 50 kA short-circuit rating
  - Fuse blocks of up to eight fuse bases
- For Diazed fuses of sizes DII (max. 25 A) and DIII (max. 63 A)
- The series includes a range of accessories, such as covers and DIN rail clips

### Technical features:

- High quality materials with a long lifetime
- Reliable structure with simplistic design
- Many versions with different positions for connection points
- Versions suitable for aluminium conductors

### Conformity



### Standards

All fuse bases:	EN 60269-1 HD 60269-3
-----------------	--------------------------

### Technical information

Nominal current range:	25 A and 63 A
Nominal insulation voltage:	500 V

### Material

Housing:	Porcelain
Body:	Ni-coated brass

### Mechanical features

Screw head:	+/-
Mounting:	Screws or DIN rail

### Single fuse bases

Product code	Description	Weight (kg)	Package size (pcs)	GTIN-13
<b>Single fuse bases, 25 A</b>				
KVC1.1	1 x 25 A	0.092	140	6418677160776
KVC1.2	1 x 25 A	0.092	140	6418677160783
KVC30	1 x 25 A fuse base with cover	0.126	50	6418677160790
KV25.1	1 x 25 A	0.101	140	6418677160875
KV25.2	1 x 25 A	0.096	140	6418677160882
KV25.211	1 x 25 A	0.102	100	6418677160905
KV25.291	1 x 25 A	0.100	100	6418677160899
<b>Single fuse bases, 63 A</b>				
KV63.1	1 x 63 A	0.160	100	6418677160912
KV63.2	1 x 63 A	0.160	100	6418677160929
KV63.211	1 x 63 A	0.156	75	6418677160936
KV63.291	1 x 63 A	0.158	75	6418677160943
<b>Single fuse bases with DIN rail fixing</b>				
KVC1.7	1 x 25 A, with DIN rail fixing	0.100	100	6418677160950
KV63.7	1 x 63 A, with DIN rail fixing	0.168	100	6418677160967
<b>Single fuse bases with Al/Cu terminal</b>				
KVC1.5	1 x 25 A, with Al/Cu terminal, max. Al 50 mm <sup>2</sup> , Cu 35 mm <sup>2</sup>	0.102	50	6418677160974
KVC1.57	1 x 25 A, with DIN rail fixing and Al/Cu terminal, max. Al 50 mm <sup>2</sup> , Cu 35 mm <sup>2</sup>	0.114	50	6418677160981
KV63.5	1 x 63 A, with Al/Cu terminal, max. Al 50 mm <sup>2</sup> , Cu 35 mm <sup>2</sup>	0.172	100	6418677160998
KV63.57	1 x 63 A, with DIN rail fixing and Al/Cu terminal, max. Al 50 mm <sup>2</sup> , Cu 35 mm <sup>2</sup>	0.172	100	6418677161001



KV63.2



KV63.57



## Fuse blocks

Product code	Description	Weight (kg)	Package size (pcs)	GTIN-13
<b>Fuse blocks, 25 A</b>				
KVC421	2 x 25 A	0.185	70	6418677160806
KVC431	3 x 25 A	0.280	50	6418677160813
KVC441	4 x 25 A	0.360	35	6418677160820
KVC451	5 x 25 A	0.456	25	6418677160837
KVC461	6 x 25 A	0.544	25	6418677160844
KVC471	7 x 25 A	0.648	20	6418677160851
KVC481	8 x 25 A	0.726	20	6418677160868
<b>Fuse blocks, 63 A</b>				
KV63.421	2 x 63 A	0.306	50	6418677161018
KV63.431	3 x 63 A	0.480	35	6418677161025
KV63.441	4 x 63 A	0.645	24	6418677161032
KV63.451	5 x 63 A	0.796	24	6418677161049
KV63.461	6 x 63 A	0.950	15	6418677161056
<b>Fuse blocks with DIN rail fixing</b>				
KV63.721	2 x 63 A, with DIN rail fixing	0.320	50	6418677181016
KV63.731	3 x 63 A, with DIN rail fixing	0.481	35	6418677181023
KV63.741	4 x 63 A, with DIN rail fixing	0.655	24	6418677181030
KV63.751	5 x 63 A, with DIN rail fixing	0.809	24	6418677181047
KV63.761	6 x 63 A, with DIN rail fixing	0.970	15	6418677181054
<b>Combined fuse blocks</b>				
KVC1.31	3 x 25 A + 1 x 63 A	0.465	30	6418677161063



KVC461



KVC1.31

## Porcelain rings

Product code	Description	Weight (kg)	Package size (pcs)	GTIN-13
<b>Porcelain rings</b>				
PR2.25	For 25 A fuse base with slot	0.024	480	6418677161223
PR4.63	For 63 A fuse base with slot	0.038	280	6418677161247
<b>Fixing springs</b>				
PJ3.25	For ring PR2.25	0.002	500	6418677161254
PJ4.63	For ring PR4.63	0.002	500	6418677161261



Porcelain ring with slot, PR4.63.

## Protective covers

Product code	Description	Weight (kg)	Package size (pcs)	GTIN-13
PMR450	50 x 45 mm, for KVC fuse blocks	0.012	500	6418677161285
PMR450.1	52.5 x 45 mm, for KVC single fuse bases	0.013	500	6418677161292
PMR450.3	150 x 45 mm, for KVC fuse blocks	0.034	100	6418677161308
PMR595	52.5 x 45 mm, for 63 A single fuse bases	0.011	500	6418677161315
PMR595.1	60 x 45 mm, for 63 A fuse blocks	0.011	500	6418677161322
PMR597	For 25 A, KVC1.x single fuse bases	0.024	100	6418677161339
PMR77	For 63 A, KV single fuse bases	0.042	50	6418677161346
PMR2	Cover for the Al/Cu terminal	0.005	10	6418677170386



Protective cover for fuse blocks, PMR450.3.

## Other accessories

Product code	Description	Weight (kg)	Package size (pcs)	GTIN-13
<b>DIN rail fixings</b>				
KW2	Metallic spring	0.006	100	6418677161360
PMR447	Plastic snap-on device, for KVC fuse bases and blocks	0.004	500	6418677161377
KW21	Plastic snap-on device, for 4–8 x 25 A KVC fuse blocks	0.005	500	6418677161384
PMR824	Plastic snap-on device, KW21 without screw	0.004	500	6418677161391
PLP4	Screw for KW21	0.002	500	6418677161407
<b>Name plate holders</b>				
PMR550.25	6-piece, for 25 A fuse blocks, self-adhesive	0.010	300	6418677161445
PMR550.63	6-piece, for 63 A fuse blocks, self-adhesive	0.013	300	6418677161452
<b>Sealing covers</b>				
KW20	Sealing cover, for sealing 25 A bases	0.025	50	6418677161469
PMR11	Sealing cover for MCB, 1-pole	0.006	200	6418677161278
<b>Other accessories</b>				
ST1	Locking device, for MCB	0.004	500	6418677167546
ST1T	Locking device set, for MCB, set of 10 devices	0.035	1	6418677167799



DIN rail fixing, metallic spring, KW2.



Sealing cover, KW20.

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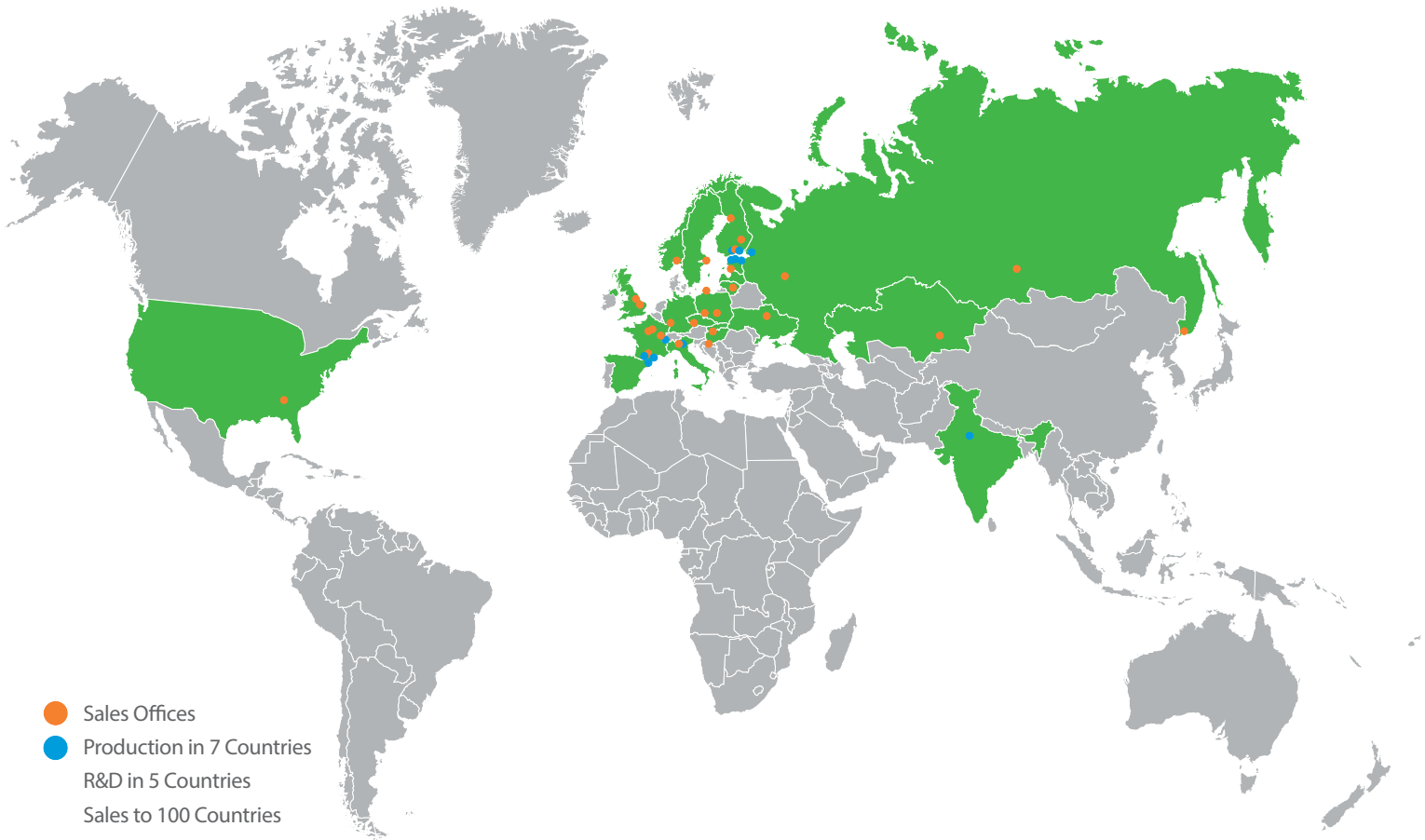
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## Facts

- Established in 1958
- 1600 people in Europe, Asia and Americas
- Local presence in 20 countries
- Turnover EUR 263 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.



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