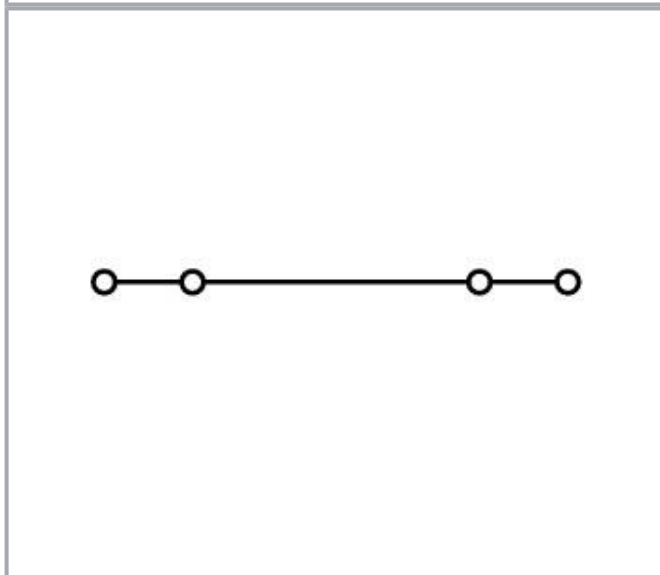
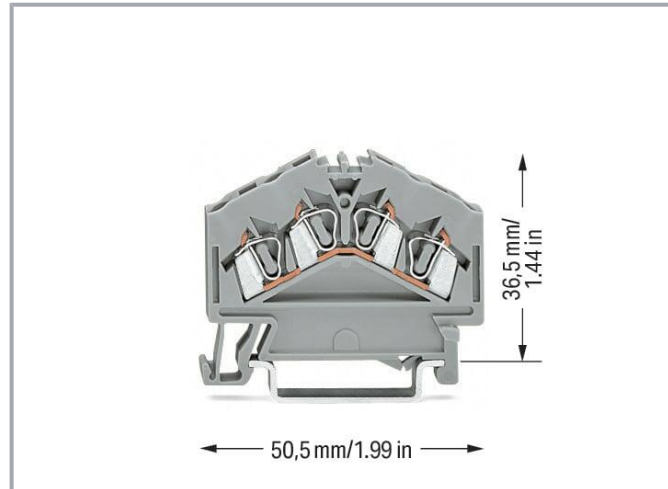
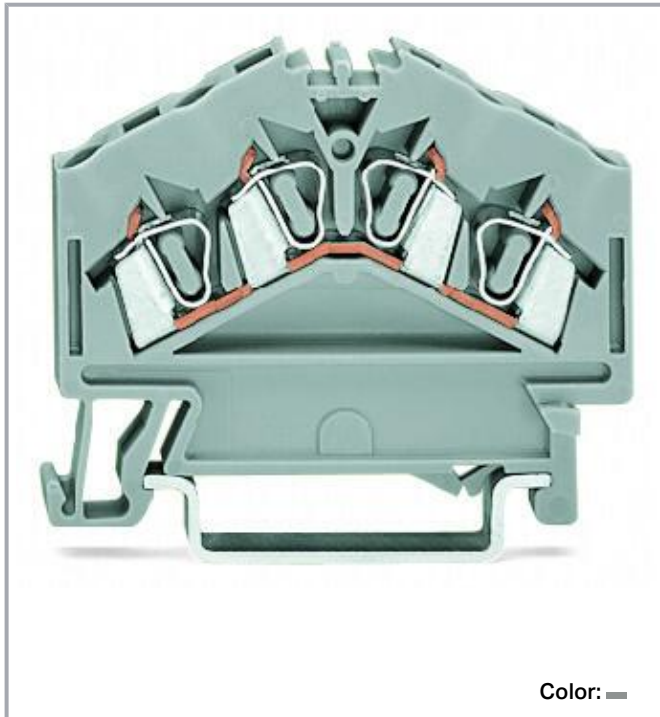


Data sheet | Item number: 280-646

4-conductor through terminal block; 2.5 mm²; center marking; for DIN-rail 35 x 15 and 35 x 7.5; CAGE CLAMP®; 2,50 mm²; gray



www.wago.com/280-646



Subject to changes. Please also observe the further product documentation!

WAGO GmbH & Co. KG
Hansastr. 27
32423 Minden
Phone: +49571 887-0 | Fax: +49571 887-169
Email: info.de@wago.com | Web: www.wago.com

Do you have any questions about our products?
We are always happy to take your call at +49 (571) 887-44222.



Data

Notes

Safety information

Notice: This terminal block cannot be commoned with adjacent jumpers.

Electrical data

Ratings per IEC/EN

Ratings per	IEC/EN 60947-7-1
Nominal voltage (III/3)	800 V
Rated impulse voltage (III/3)	8 kV
Rated current	24 A
Legend (ratings)	(III / 3) ≙ Overvoltage category III / Pollution degree 3

Power Loss

Power loss, per pole (potential)	0.766 W
Rated current I_N for specified power loss	24 A
Resistance value for specified, current-dependent power loss	0.001 Ω

Connection data

Connection points	4
Total number of potentials	1
Number of levels	1

Connection 1

Connection technology	CAGE CLAMP®
Actuation type	Operating tool
Connectable conductor materials	Copper Aluminum
Connectable conductor materials (note)	Terminating Aluminum Conductors WAGO spring clamp terminal blocks are suitable for solid aluminum conductors up to 4 mm ² /12 AWG if WAGO "Alu-Plus" Contact Paste 249-130 is used for termination.

"Alu-Plus" Contact Paste Advantages:

Subject to changes. Please also observe the further product documentation!



- Automatically destroys the oxide film during clamping.
- Prevents fresh oxidation at the clamping point.
- Prevents electrolytic corrosion between aluminum and copper conductors (in the same terminal block).
- Provides long-term protection against corrosion.

Using terminal blocks with CAGE CLAMP® Spring Pressure Connection Technology, **aluminum conductors must first be cleaned with a blade** and then immediately be inserted into the clamping units filled with "Alu-Plus" Contact Paste.

It is also possible to apply WAGO "Alu-Plus" **additionally** on the whole surface of the aluminum conductor before termination.

Please note that the nominal currents must be adapted to the reduced conductivity of the aluminum conductors::

2.5 mm² = 16 A

4 mm² = 22 A

Terminating Aluminum Conductors WAGO spring clamp terminal blocks are suitable for solid aluminum conductors up to 4 mm² /12 AWG if WAGO "Alu-Plus" Contact Paste is used for termination. "Alu-Plus" Contact Paste Advantages:

- Automatically destroys the oxide film during clamping.
- Prevents fresh oxidation at the clamping point.
- Prevents electrolytic corrosion between aluminum and copper conductors (in the same terminal block).
- Provides long-term protection against corrosion.

Using terminal blocks with CAGE CLAMP® Spring Pressure Connection Technology, aluminum conductors must first be cleaned with a blade and then immediately be inserted into the clamping units filled with "Alu-Plus" Contact Paste. For spring clamp connections with PUSH WIRE® connection technology, WAGO recommends that the aluminum conductor first be cleaned and then immediately inserted into the clamping unit filled with "Alu-Plus" contact paste. It is also possible to apply WAGO "Alu-Plus" additionally on the whole surface of the aluminum conductor before termination. Please note that the nominal currents must be adapted to the reduced conductivity of the aluminum conductors:: 2.5 mm² = 16 A 4 mm² = 22 A

Solid conductor	0.08 ... 2.5 mm ² / 28 ... 12 AWG
Fine-stranded conductor	0.08 ... 2.5 mm ² / 28 ... 12 AWG
Note (conductor cross-section)	12 AWG: THHN, THWN

Subject to changes. Please also observe the further product documentation!



Strip length	8 ... 9 mm / 0.31 ... 0.35 inches 8 ... 9 mm / 0.31 ... 0.35 inch
Wiring direction	Front-entry wiring, angled

Physical data

Width	5 mm / 0.197 inches 5 mm / 0.197 inch
Height	50.5 mm / 1.988 inches 50.5 mm / 1.988 inch
Depth from upper-edge of DIN-rail	36.5 mm / 1.437 inches 36.5 mm / 1.437 inch

Mechanical Data

Design	angled
Mounting type	DIN-35 rail
Marking level	Center marking

Material Data

Note (material data)	Information on material specifications can be found here
Color	gray
Material group	I
Insulation material	Polyamide (PA66)
Flammability class per UL94	V0
Fire load	0.136 MJ 0.129 MJ
Weight	7.4 g

Environmental requirements

Processing temperature	-35 ... +85 °C
Continuous operating temperature	-60 ... +105 °C

Commercial data

Product Group	1 (Rail Mounted Terminal Blocks)
eCl@ss 10.0	27-14-11-20
eCl@ss 9.0	27-14-11-20

Subject to changes. Please also observe the further product documentation!



ETIM 8.0	EC000897
ETIM 7.0	EC000897
PU (SPU)	100 pcs 100 Stück
Packaging type	box
Country of origin	DE
GTIN	4044918456920
Customs tariff number	85369010000

Environmental Product Compliance



RoHS Compliance Status	Compliant, No Exemption
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Approvals / Certificates

General approvals

Logo	Approval	Additional Approval Text	Certificate name
	CCA DEKRA Certification B.V.	EN 60947	2157201.01
	UL Underwriters Laboratories Inc.	UL 1059	E45172

Declarations of conformity and manufacturer's declarations


Logo	Approval	Additional Approval Text	Certificate name
	EU-Declaration of Conformity WAGO GmbH & Co. KG	-	-
	UK-Declaration of Conformity WAGO GmbH & Co. KG	-	-

Approvals for marine applications

Logo	Approval	Additional Approval Text	Certificate name
	ABS American Bureau of Shipping	EN 60947	20- HG1941090-

Subject to changes. Please also observe the further product documentation!




	BV Bureau Veritas S.A.	EN 60947	07436/F0 BV
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	DNV GL Det Norske Veritas, Germanischer Lloyd	-	TAE00001V2
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	LR Lloyds Register	EN 60947	91/20112 (E9)
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Required accessories

End plate

End plate



Item no.: 280-312 End and intermediate plate; 2.5 mm thick; gray	www.wago.com/280-312
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Item no.: 280-318 Separator plate; 2.5 mm thick; oversized; orange	www.wago.com/280-318
--	--



Item no.: 280-313 End and intermediate plate; 2.5 mm thick; orange	www.wago.com/280-313
--	--

Optional accessories

Carrier rail

Mounting accessories



Item no.: 210-197 Steel carrier rail; 35 x 15 mm; 1.5 mm thick; 2 m long; slotted; similar to EN 60715; silver-colored	www.wago.com/210-197
--	--
















Item no.: 210-198 Copper carrier rail; 35 x 15 mm; 2.3 mm thick; 2 m long; unslotted; according to EN 60715; copper-colored	www.wago.com/210-198
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Item no.: 210-504 Steel carrier rail; 35 x 7.5 mm; 1 mm thick; 2 m long; slotted; galvanized; according to EN 60715; silver-colored	www.wago.com/210-504
---	--

Subject to changes. Please also observe the further product documentation!

	Item no.: 210-505 Steel carrier rail; 35 x 7.5 mm; 1 mm thick; 2 m long; unslotted; galvanized; according to EN 60715; silver-colored	www.wago.com/210-505
	Item no.: 210-506 Steel carrier rail; 35 x 15 mm; 1.5 mm thick; 2 m long; unslotted; galvanized; similar to EN 60715; silver-colored	www.wago.com/210-506
	Item no.: 210-508 Steel carrier rail; 35 x 15 mm; 1.5 mm thick; 2 m long; slotted; galvanized; similar to EN 60715; silver-colored	www.wago.com/210-508
	Item no.: 210-113 Steel carrier rail; 35 x 7.5 mm; 1 mm thick; 2 m long; unslotted; according to EN 60715; silver-colored	www.wago.com/210-113
	Item no.: 210-118 Steel carrier rail; 35 x 15 mm; 2.3 mm thick; 2 m long; unslotted; according to EN 60715; silver-colored	www.wago.com/210-118
	Item no.: 210-112 Steel carrier rail; 35 x 7.5 mm; 1 mm thick; 2 m long; slotted; according to EN 60715; "Hole width 25 mm; silver-colored	www.wago.com/210-112
	Item no.: 210-114 Steel carrier rail; 35 x 15 mm; 1.5 mm thick; 2 m long; unslotted; similar to EN 60715; silver-colored	www.wago.com/210-114
	Item no.: 210-115 Steel carrier rail; 35 x 7.5 mm; 1 mm thick; 2 m long; slotted; according to EN 60715; "Hole width 18 mm; silver-colored	www.wago.com/210-115
	Item no.: 210-196 Aluminum carrier rail; 35 x 8.2 mm; 1.6 mm thick; 2 m long; unslotted; similar to EN 60715; silver-colored	www.wago.com/210-196
Mounting		
Cover carrier		
	Item no.: 709-167 Cover carrier; Type 1; incl. fixing/retaining screws and knurled nut; suitable for 279 to 282 and 880 Series rail-mounted terminal blocks; suitable for 264 Series miniature rail-mounted terminal blocks; suitable for 270 Series sensor and actuator terminal blocks; gray	www.wago.com/709-167
Cover		
	Item no.: 709-153 Cover; Type 1; suitable for cover carrier, type 1; 1 m long; transparent	www.wago.com/709-153
Mounting accessories		
	Item no.: 209-106 Mounting carrier; for isolated mounting on DIN 35 rails; gray	www.wago.com/209-106
	Item no.: 249-116 Screwless end stop; 6 mm wide; for DIN-rail 35 x 15 and 35 x 7.5; gray	www.wago.com/249-116
Insulation stop		
Insulation stop		

Subject to changes. Please also observe the further product documentation!



Item no.: 280-472
Insulation stop; 0.75 - 1 mm²; 5 pieces/strip; black

www.wago.com/280-472



Item no.: 280-470
Insulation stop; 0.08 - 0.2 mm² "s" (0.14 mm² "f-st"); 5 pieces/strip; white

www.wago.com/280-470



Item no.: 280-471
Insulation stop; 0.25 - 0.5 mm²; 5 pieces/strip; light gray

www.wago.com/280-471

Marking accessories

Double marker carrier



Item no.: 209-128
Adaptor; gray

www.wago.com/209-128

Marker



Item no.: 2009-115
WMB-Inline; for Smart Printer; 1500 pieces on roll; stretchable 5 - 5.2 mm; plain; snap-on type; white

www.wago.com/2009-115



Item no.: 793-501
WMB marking card; as card; not stretchable; plain; snap-on type; white

www.wago.com/793-501



Item no.: 793-5501
WMB marking card; as card; for terminal block width 5 - 17.5 mm; stretchable 5 - 5.2 mm; plain; snap-on type; white

www.wago.com/793-5501

Group marker carrier



Item no.: 249-105
Group marker carrier; gray

www.wago.com/249-105

Protective warning marker

Cover



Item no.: 280-415
Protective warning marker; for 5 terminal blocks; with high-voltage symbol, black; yellow

www.wago.com/280-415

Ferrule

Ferrule



Item no.: 216-101
Ferrule; Sleeve for 0.5 mm² / AWG 22; uninsulated; electro-tin plated; silver-colored

www.wago.com/216-101



Item no.: 216-104
Ferrule; Sleeve for 1.5 mm² / AWG 16; uninsulated; electro-tin plated; silver-colored

www.wago.com/216-104



Item no.: 216-102
Ferrule; Sleeve for 0.75 mm² / AWG 20; uninsulated; electro-tin plated; silver-colored

















www.wago.com/216-102



Item no.: 216-103
Ferrule; Sleeve for 1 mm² / AWG 18; uninsulated; electro-tin plated

www.wago.com/216-103

Subject to changes. Please also observe the further product documentation!

	Item no.: 216-203 Ferrule; Sleeve for 1 mm ² / AWG 18; insulated; electro-tin plated; red	www.wago.com/216-203
	Item no.: 216-202 Ferrule; Sleeve for 0.75 mm ² / 18 AWG; insulated; electro-tin plated; gray	www.wago.com/216-202
	Item no.: 216-204 Ferrule; Sleeve for 1.5 mm ² / AWG 16; insulated; electro-tin plated; black	www.wago.com/216-204
	Item no.: 216-201 Ferrule; Sleeve for 0.5 mm ² / 20 AWG; insulated; electro-tin plated; white	www.wago.com/216-201
	Item no.: 216-301 Ferrule; Sleeve for 0.25 mm ² / AWG 24; insulated; electro-tin plated; yellow	www.wago.com/216-301
	Item no.: 216-302 Ferrule; Sleeve for 0.34 mm ² / 22 AWG; insulated; electro-tin plated; light turquoise	www.wago.com/216-302
Jumpers		
Jumper		
	Item no.: 210-123 Wire commoning chain; insulated; blue	www.wago.com/210-123
	Item no.: 210-103 Wire commoning chain; insulated; black	www.wago.com/210-103
	Item no.: 280-492 Jumper; 2-way; insulated; gray	www.wago.com/280-492
	Item no.: 280-482 Jumper; 2-way; insulated; gray	www.wago.com/280-482
	Item no.: 280-484 Jumper; 4-way; insulated; gray	www.wago.com/280-484
	Item no.: 280-490 Jumper; 10-way; insulated; gray	www.wago.com/280-490
	Item no.: 280-485 Jumper; 5-way; insulated; gray	www.wago.com/280-485
	Item no.: 280-483 Jumper; 3-way; insulated; gray	www.wago.com/280-483
	Item no.: 709-110 Wire commoning chain; 2.5 mm ² ; insulated; black	www.wago.com/709-110
	Item no.: 709-112 Wire commoning chain; 2.5 mm ² ; insulated; black	www.wago.com/709-112

Subject to changes. Please also observe the further product documentation!






Item no.: 709-111

Wire commoning chain; 2.5 mm²; insulated; black

www.wago.com/709-111




Testing and measuring

Testing accessories

	Item no.: 249-141 L-type test plug module; modular; with spring-loaded contact pin; Center module; 1,50 mm ² ; gray	www.wago.com/249-141
	Item no.: 249-143 L-type spacer module; modular; e.g., bridging commoned terminal blocks; gray	www.wago.com/249-143
	Item no.: 249-142 L-type end module; modular; with rigid contact pin; End module; 1,50 mm ² ; gray	www.wago.com/249-142

Tool

Operating tool

	Item no.: 210-657 Operating tool; Blade: 3.5 x 0.5 mm; with a partially insulated shaft; short; multicoloured	www.wago.com/210-657
	Item no.: 210-658 Operating tool; Blade: 3.5 x 0.5 mm; with a partially insulated shaft; angled; short; multicoloured	www.wago.com/210-658
	Item no.: 210-720 Operating tool; Blade: 3.5 x 0.5 mm; with a partially insulated shaft; multicoloured	www.wago.com/210-720

Downloads

Documentation

Bid Text

280-646 X81 - Datei	19 Feb 2019	xml 3.5 kB	Download
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280-646 doc - Datei	28 Feb 2017	doc 25.1 kB	Download
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Additional Information

pdf 2.2 MB	Download
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CAD/CAE-Data

CAE data

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WAGO GmbH & Co. KG
Hansastr. 27
32423 Minden
Phone: +49571 887-0 | Fax: +49571 887-169
Email: info.de@wago.com | Web: www.wago.com

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EPLAN Data Portal 280-646	URL	Download
ZUKEN Portal 280-646	URL	Download
WSCAD Universe 280-646	URL	Download
CAD data		
2D/3D Models 280-646	URL	Download

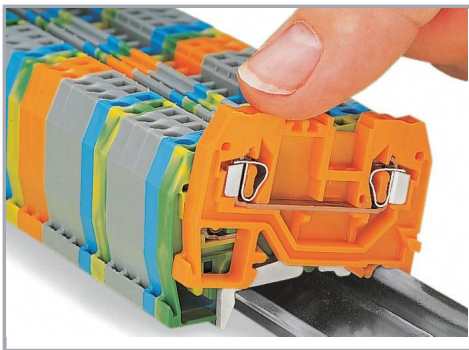
Environmental Product Compliance

Compliance Search

Environmental Product Compliance 280-646	URL	Download
4-conductor through terminal block; 2.5 mm ² ; center marking; for DIN-rail 35 x 15 and 35 x 7.5; CAGE CLAMP®; 2,50 mm ² ; gray		

Installation Notes

Installation

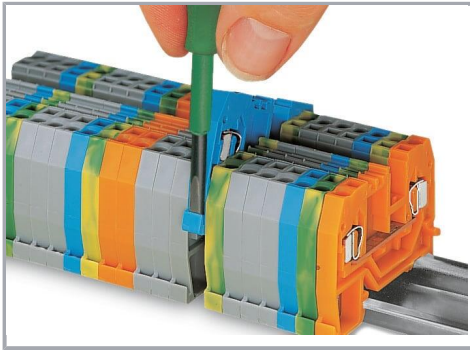


Snapping a terminal block onto the DIN-rail.

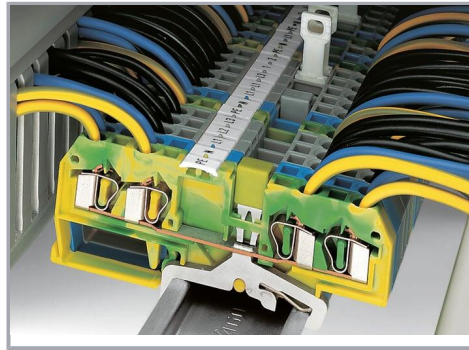


Quick assembly keys prevent reverse mounting.

Subject to changes. Please also observe the further product documentation!

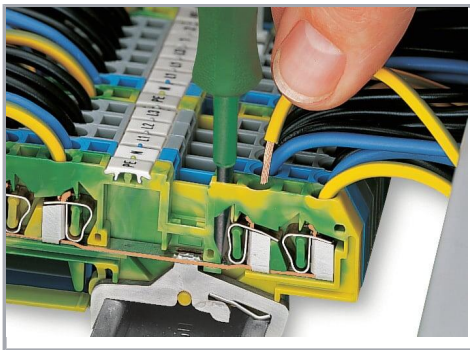


Removing a terminal block from the assembly.



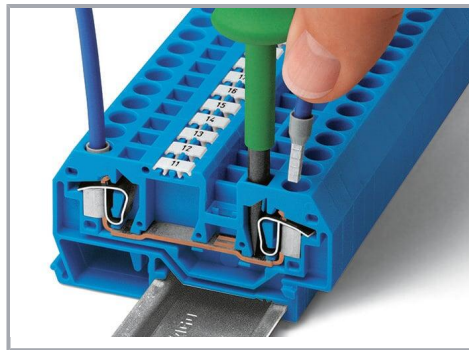
Steel DIN-rails are not suited for PEN (ground and N-conductor) applications per EN 60947-7-2 (VDE 0611, Part 3).

Conductor termination



CAGE CLAMP® connection

Inserting a conductor.

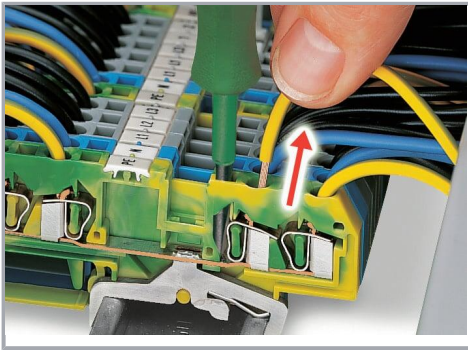


CAGE CLAMP® connection

Inserting a conductor.

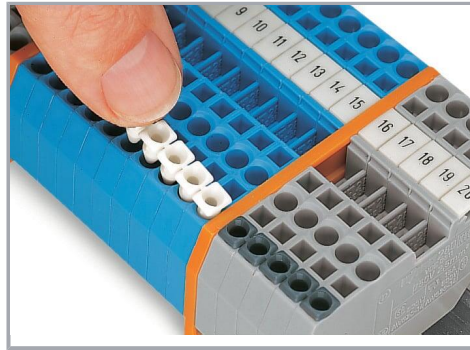
With ferruled conductors, it is necessary to use a terminal block one size larger than the conductor's nominal cross-section.

Subject to changes. Please also observe the further product documentation!



CAGE CLAMP® connection

Removing a solid conductor.



Inserting insulation stops.

Commoning

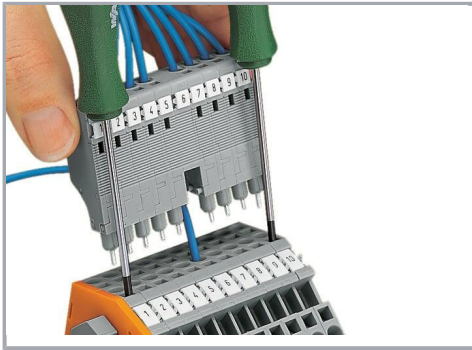


4-conductor through terminal blocks, angled type,

formation of groups with 3-way, comb-style jumper bars

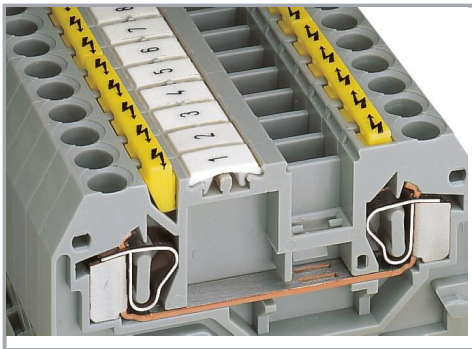
Testing

Subject to changes. Please also observe the further product documentation!



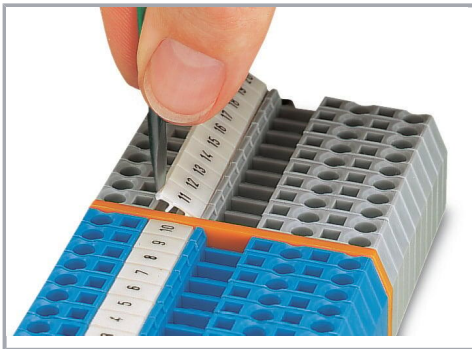
L-type test plug modules fitted with CAGE CLAMP®

Cover



Protective warning markers inserted into the operating slots

Marking



Labeling via WMB Multi Marking System.

Product family

Subject to changes. Please also observe the further product documentation!



Classic

EPSITRON® CLASSIC POWER: The Robust Power Supply – with Integrated TopBoost (Optional)

[Show all products from the family](#)

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WAGO GmbH & Co. KG
Hansastr. 27
32423 Minden
Phone: +49571 887-0 | Fax: +49571 887-169
Email: info.de@wago.com | Web: www.wago.com

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