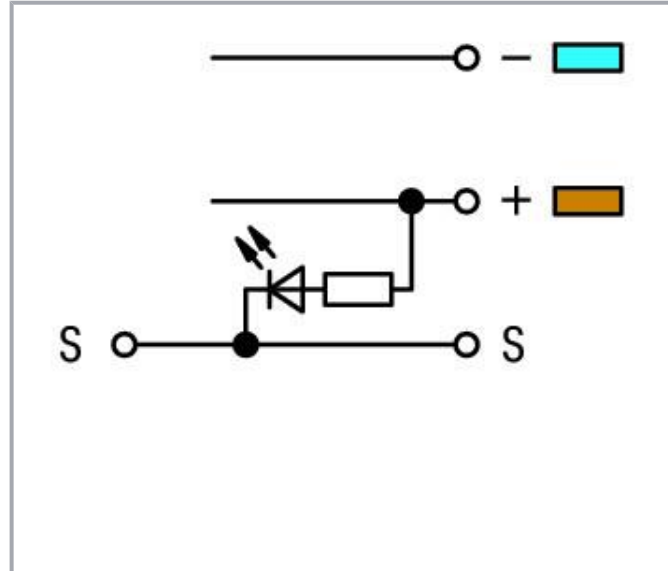
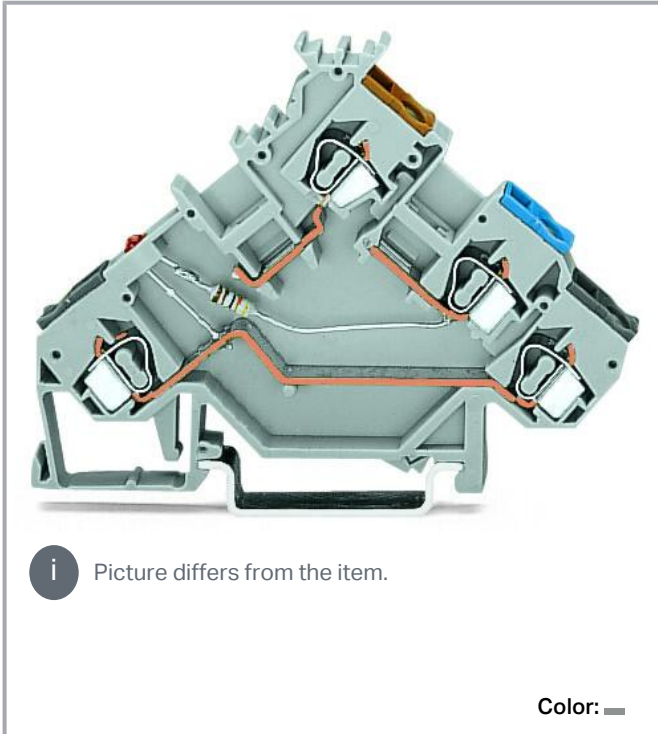


Data sheet | Item number: 280-561/281-413

3-conductor sensor terminal block; LED (red); for NPN-(low-side) switching sensors; with colored conductor entries; 2.5 mm²; CAGE CLAMP®; 2,50 mm²; gray



www.wago.com/280-561/281-413



Data

Electrical data

Ratings per IEC/EN

Rated current	20 A
Note (rated current)	LED power consumption: 4.8 mA

Power loss

Power loss, per pole (potential)	0.532 W
Rated current I_N for specified power loss	20 A
Resistance value for specified, current-dependent power loss	0.001 Ω

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

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General

Voltage type 1	DC
Nominal voltage	24 V

Connection data

Connection points	2
Total number of potentials	2
Number of levels	3

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 mm²/12 AWG if WAGO "Alu-Plus" Contact Paste 249-130 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.

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

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

Physical data

Width	5 mm / 0.197 inches
Height	80 mm / 3.15 inches
Depth from upper-edge of DIN-rail	55.5 mm / 2.185 inches

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	0.263 MJ
Weight	10.5 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	27-14-11-28
eCl@ss 9.0	27-14-11-28
ETIM 8.0	EC000900
ETIM 7.0	EC000900

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PU (SPU)	50 pcs
Packaging type	box
Country of origin	DE
GTIN	4045454299262
Customs tariff number	85369010000

Environmental Product Compliance



RoHS Compliance Status	Compliant, No Exemption
------------------------	-------------------------

Approvals / Certificates


General approvals

Logo	Approval	Additional Approval Text	Certificate name
	CCA DEKRA Certification B.V.	EN 60947	2160584.53
	UR 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- PDA

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DNV GL
Det Norske Veritas, Germanischer Lloyd

TAE00001V2

Required accessories

End plate

End plate



Item no.: 280-319

End and intermediate plate; 1 mm thick; for triple-deck terminal blocks; gray

www.wago.com/280-319

Item no.: 280-321

End and intermediate plate; 1 mm thick; for triple-deck terminal blocks; orange

www.wago.com/280-321

Optional accessories

Insulation stop

Insulation stop



Item no.: 280-472

Insulation stop; 0.75 - 1 mm²; 5 pieces/strip; blackwww.wago.com/280-472

Item no.: 280-470

Insulation stop; 0.08 - 0.2 mm² "s" (0.14 mm² "f-st"); 5 pieces/strip; whitewww.wago.com/280-470

Item no.: 280-471

Insulation stop; 0.25 - 0.5 mm²; 5 pieces/strip; light graywww.wago.com/280-471

Ferrule

Ferrule



Item no.: 216-101

Ferrule; Sleeve for 0.5 mm² / AWG 22; uninsulated; electro-tin plated; silver-coloredwww.wago.com/216-101

Item no.: 216-104

Ferrule; Sleeve for 1.5 mm² / AWG 16; uninsulated; electro-tin plated; silver-coloredwww.wago.com/216-104

Item no.: 216-102

Ferrule; Sleeve for 0.75 mm² / AWG 20; uninsulated; electro-tin plated; silver-coloredwww.wago.com/216-102

Item no.: 216-103

Ferrule; Sleeve for 1 mm² / AWG 18; uninsulated; electro-tin platedwww.wago.com/216-103

Item no.: 216-203

Ferrule; Sleeve for 1 mm² / AWG 18; insulated; electro-tin plated; redwww.wago.com/216-203

Item no.: 216-202

Ferrule; Sleeve for 0.75 mm² / 18 AWG; insulated; electro-tin plated; graywww.wago.com/216-202

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

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	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
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
Testing and measuring		
Testing accessories		
	Item no.: 209-170 Test plug adapter; 8.3 mm wide; for 4 mm Ø test plugs; suitable for 1.5 mm ² - 10 mm ² tbs; gray	www.wago.com/209-170
Mounting		
Cover carrier		
	Item no.: 709-168 Cover carrier; Type 2; incl. fixing/retaining screws and knurled nut; suitable for 283 to 285 Series rail-mounted terminal blocks; suitable for 279 to 281 Series double- and triple-deck terminal blocks; suitable for 780 to 785, 775, 776 and 777 Series TOPJOB® rail-mounted terminal blocks; suitable for 280 Series sensor and actuator terminal blocks; suitable for 282 Series disconnect/test terminal blocks for transformer circuits; gray	www.wago.com/709-168
Cover		
	Item no.: 709-154 Cover; Type 2; suitable for cover carrier, type 2; 1 m long; transparent	www.wago.com/709-154
Mounting accessories		
	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
Marking accessories		
Marker		
	Item no.: 2009-115/000-002 WMB-Inline; for Smart Printer; 1500 pieces on roll; stretchable 5 - 5.2 mm; plain; snap-on type; yellow	www.wago.com/2009-115/000-002
	Item no.: 2009-115/000-007 WMB-Inline; for Smart Printer; 1500 pieces on roll; stretchable 5 - 5.2 mm; plain; snap-on type; gray	www.wago.com/2009-115/000-007

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

	<p>Item no.: 2009-115/000-017 WMB-Inline; for Smart Printer; 1500 pieces on roll; stretchable 5 - 5.2 mm; plain; snap-on type; light green</p>	<p>www.wago.com/2009-115/000-017</p>
	<p>Item no.: 2009-115/000-023 WMB-Inline; for Smart Printer; 1500 pieces on roll; stretchable 5 - 5.2 mm; plain; snap-on type; green</p>	<p>www.wago.com/2009-115/000-023</p>
	<p>Item no.: 2009-115/000-024 WMB-Inline; for Smart Printer; 1500 pieces on roll; stretchable 5 - 5.2 mm; plain; snap-on type; violet</p>	<p>www.wago.com/2009-115/000-024</p>
	<p>Item no.: 2009-115 WMB-Inline; for Smart Printer; 1500 pieces on roll; stretchable 5 - 5.2 mm; plain; snap-on type; white</p>	<p>www.wago.com/2009-115</p>
	<p>Item no.: 793-5501/000-007 WMB marking card; as card; for terminal block width 5 - 17.5 mm; stretchable 5 - 5.2 mm; plain; snap-on type; gray</p>	<p>www.wago.com/793-5501/000-007</p>
	<p>Item no.: 793-5501/000-012 WMB marking card; as card; for terminal block width 5 - 17.5 mm; stretchable 5 - 5.2 mm; plain; snap-on type; orange</p>	<p>www.wago.com/793-5501/000-012</p>
	<p>Item no.: 793-5501/000-017 WMB marking card; as card; for terminal block width 5 - 17.5 mm; stretchable 5 - 5.2 mm; plain; snap-on type; light green</p>	<p>www.wago.com/793-5501/000-017</p>
	<p>Item no.: 793-5501/000-023 WMB marking card; as card; for terminal block width 5 - 17.5 mm; stretchable 5 - 5.2 mm; plain; snap-on type; green</p>	<p>www.wago.com/793-5501/000-023</p>
	<p>Item no.: 793-5501/000-024 WMB marking card; as card; for terminal block width 5 - 17.5 mm; stretchable 5 - 5.2 mm; plain; snap-on type; violet</p>	<p>www.wago.com/793-5501/000-024</p>
	<p>Item no.: 793-501/000-002 WMB marking card; as card; not stretchable; plain; snap-on type; yellow</p>	<p>www.wago.com/793-501/000-002</p>
	<p>Item no.: 793-501/000-007 WMB marking card; as card; not stretchable; plain; snap-on type; gray</p>	<p>www.wago.com/793-501/000-007</p>

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



Item no.: 793-501/000-017

WMB marking card; as card; not stretchable; plain; snap-on type; light green

www.wago.com/793-501/000-017



Item no.: 793-501/000-012

WMB marking card; as card; not stretchable; plain; snap-on type; orange

www.wago.com/793-501/000-012



Item no.: 793-501/000-023

WMB marking card; as card; not stretchable; plain; snap-on type; green

www.wago.com/793-501/000-023



Item no.: 793-501/000-006

WMB marking card; as card; not stretchable; plain; snap-on type; blue

www.wago.com/793-501/000-006



Item no.: 793-501/000-005

WMB marking card; as card; not stretchable; plain; snap-on type; red

www.wago.com/793-501/000-005



Item no.: 793-501

WMB marking card; as card; not stretchable; plain; snap-on type; white

www.wago.com/793-501



Item no.: 793-501/000-024

WMB marking card; as card; not stretchable; plain; snap-on type; violet

www.wago.com/793-501/000-024



Item no.: 793-5501/000-005

WMB marking card; as card; for terminal block width 5 - 17.5 mm; stretchable 5 - 5.2 mm; plain; snap-on type; red

www.wago.com/793-5501/000-005



Item no.: 793-5501/000-002

WMB marking card; as card; for terminal block width 5 - 17.5 mm; stretchable 5 - 5.2 mm; plain; snap-on type; yellow

www.wago.com/793-5501/000-002



Item no.: 793-5501/000-006

WMB marking card; as card; for terminal block width 5 - 17.5 mm; stretchable 5 - 5.2 mm; plain; snap-on type; blue

www.wago.com/793-5501/000-006



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

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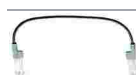
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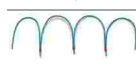








	Item no.: 2009-115/000-012 WMB-Inline; for Smart Printer; 1500 pieces on roll; stretchable 5 - 5.2 mm; plain; snap-on type; orange	www.wago.com/2009-115/000-012
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	Item no.: 2009-115/000-006 WMB-Inline; for Smart Printer; 1500 pieces on roll; stretchable 5 - 5.2 mm; plain; snap-on type; blue	www.wago.com/2009-115/000-006
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Push-in type wire jumper

Jumper		
	Item no.: 249-123 Push-in type wire jumper; 0.75 mm ² ; insulated; 180 mm long; black	www.wago.com/249-123
	Item no.: 249-126 Push-in type wire jumper; 0.75 mm ² ; insulated; 110 mm long; black	www.wago.com/249-126
	Item no.: 249-127 Push-in type wire jumper; 0.75 mm ² ; insulated; 250 mm long; black	www.wago.com/249-127
	Item no.: 249-125 Push-in type wire jumper; insulated; 60 mm long; black	www.wago.com/249-125

Jumpers

Jumper		
	Item no.: 210-123 Wire commoning chain; insulated; blue	www.wago.com/210-123
	Item no.: 280-402 Jumper; insulated; gray	www.wago.com/280-402
	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

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



Item no.: 709-110
Wire commoning chain; 2.5 mm²; insulated; black

www.wago.com/709-110



Item no.: 709-112
Wire commoning chain; 2.5 mm²; insulated; black

www.wago.com/709-112



Item no.: 709-111
Wire commoning chain; 2.5 mm²; insulated; black

www.wago.com/709-111



Item no.: 780-454
Staggered jumper; from 1 to 4; insulated; gray

www.wago.com/780-454



Item no.: 780-452
Staggered jumper; from 1 to 2; insulated; gray

www.wago.com/780-452



Item no.: 780-453
Staggered jumper; from 1 to 3; insulated; gray

www.wago.com/780-453



Item no.: 780-457
Staggered jumper; from 1 to 7; insulated; gray

www.wago.com/780-457



Item no.: 780-456
Staggered jumper; from 1 to 6; insulated; gray

www.wago.com/780-456



Item no.: 780-455
Staggered jumper; from 1 to 5; insulated; gray

www.wago.com/780-455



Item no.: 780-458
Staggered jumper; from 1 to 8; insulated; gray

www.wago.com/780-458

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

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

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

	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
	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
	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

Downloads

Documentation

Bid Text

280-561/281-413 X81 - Datei	2019 Feb 19	xml 3.5 kB	Download
280-561/281-413 doc - Datei	2017 Mar 14	doc 25.6 kB	Download

Additional Information

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

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Technical Section

Technical explanations

pdf
2.2 MB

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CAD/CAE-Data

CAE data

EPLAN Data Portal 280-561/281-413

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WSCAD Universe 280-561/281-413

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ZUKEN Portal 280-561/281-413

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WSCAD Universe 280-561/281-413

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CAD data

2D/3D Models 280-561/281-413

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Environmental Product Compliance

Compliance Search

Environmental Product Compliance 280-561/281-413

[URL](#)

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3-conductor sensor terminal block; LED (red); for NPN-(low-side) switching sensors; with colored conductor entries; 2.5 mm²; CAGE CLAMP®; 2,50 mm²; gray

Installation Notes

Installation

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

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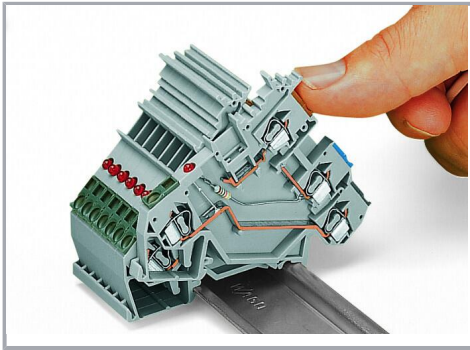
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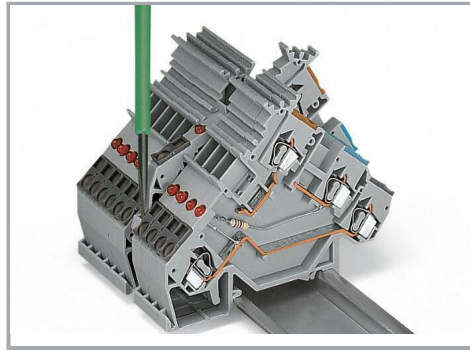
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Snapping a terminal block onto the DIN-rail.

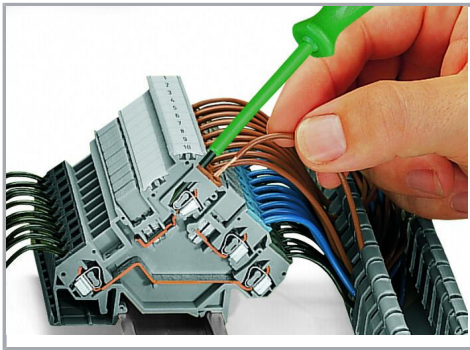
Terminal blocks with a grounding foot automatically establish a direct contact to the rail.



Removing the terminal block from DIN-rail.

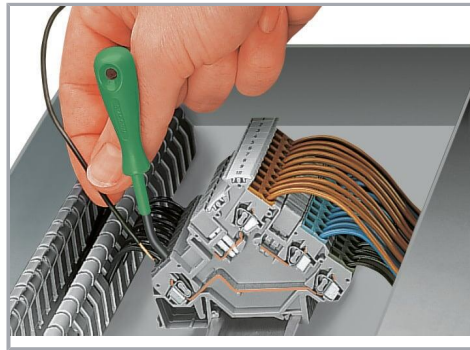
Notice: Remove jumper contacts first!

Conductor termination



CAGE CLAMP® connection

Inserting a conductor via straight operating tool (210-720).

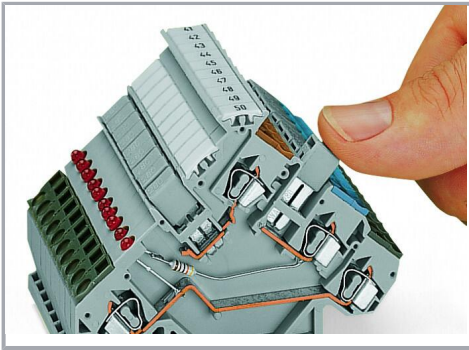


CAGE CLAMP® connection

Inserting a conductor via angled operating tool (210-658).

Commoning

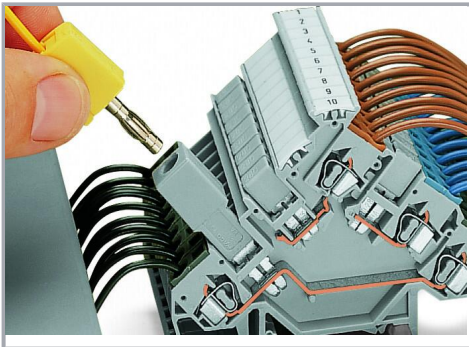
Subject to changes. Please also observe the further product documentation!



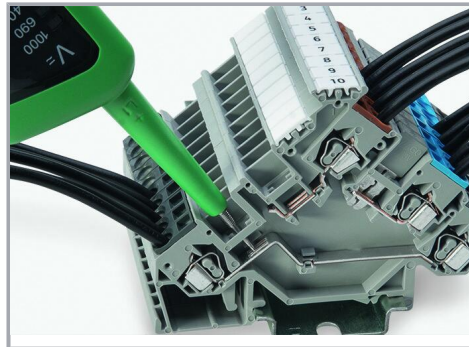
Commoning using an adjacent jumper (280-402).

Push jumper down until fully inserted.

Testing



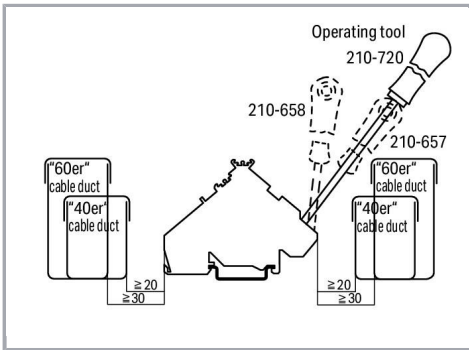
Testing via banana plug and test plug adapter (209-170).



Testing via voltage tester directly on the current bar.

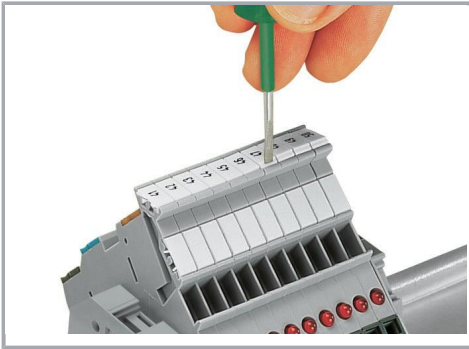
Installation

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



Min. mounting distance – terminal blocks to cable duct

Marking



Labeling via WMB Multi Marking System.

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