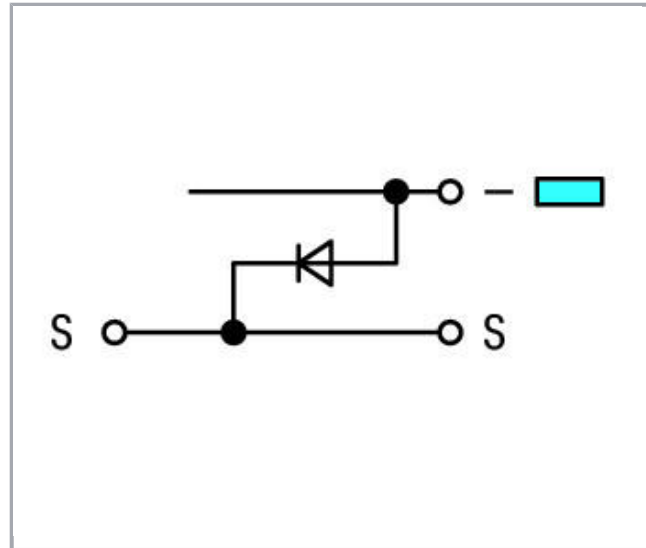
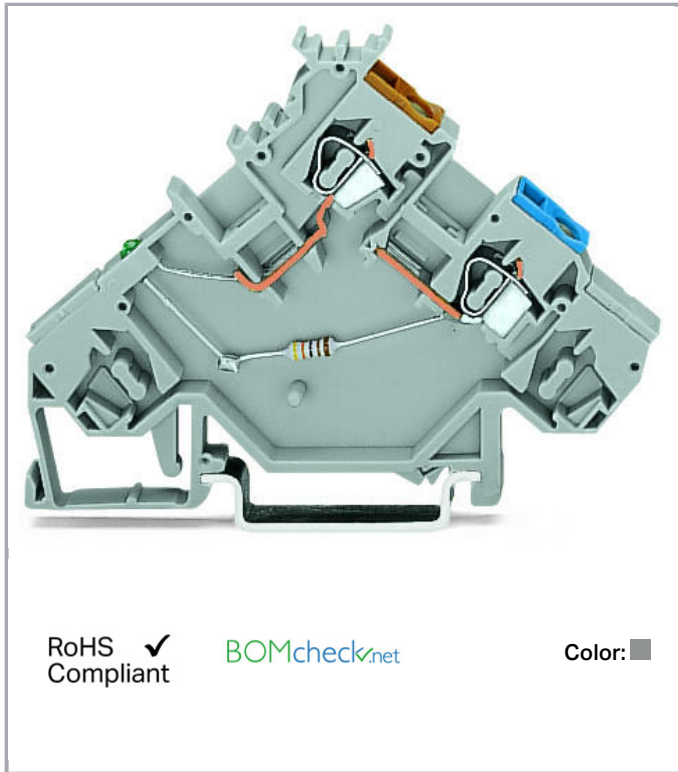


Data sheet | Item number: 280-562/281-411

2-conductor actuator terminal block; with 1N4007 recovery diode; with colored conductor entries; 2.5 mm²; CAGE CLAMP®; 2,50 mm²; gray



www.wago.com/280-562/281-411



Item description

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 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.

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

WAGO Kontakttechnik 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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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 (14 AWG) = 16 A

4 mm² (12 AWG) = 22 A

Data

Electrical data

Ratings per IEC/EN 60664-1

Rated voltage (III / 3)	400 V
Rated impulse voltage (III / 3)	6 kV
Rated current	20 A
Rated voltage (III / 3) 2	250 V
Rated impulse voltage (III / 3) 2	4 kV
Rated current (2)	20 A
Legend (ratings)	(III / 3) ≙ Overvoltage category III / Pollution degree 3

Connection data

Connection technology	CAGE CLAMP®
Actuation type	Operating tool
Connectable conductor materials	Copper Aluminum
Solid conductor	0,08 ... 2,5 mm ² / 28 ... 12 AWG
Fine-stranded conductor	0,08 ... 2,5 mm ² / 28 ... 12 AWG
Strip length	8 ... 9 mm / 0.31 ... 0.35 inch
Total number of connection points	3
Total number of potentials	2
Number of levels	3
Type of wiring	Front-entry wiring
Note (conductor cross-section)	12 AWG: THHN, THWN

Geometrical Data

Width	5 mm / 0.197 inch
Height from upper-edge of DIN-35 rail	55,5 mm / 2.185 inch
Depth	80 mm / 3.15 inch

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Mechanical data

Design	angled
Type of mounting	DIN-35 rail
Marking level	Center marking

Material Data


Color	gray
Insulating material	Polyamide 66 (PA 66)
Fire load	0.198 MJ
Weight	10.1 g

Commercial data



Product Group	1 (Rail Mounted Terminal Blocks)
Packaging type	BOX
Country of origin	DE
GTIN	4045454194550
Customs Tariff No.	85369010000

Approvals / Certificates

Country specific Approvals

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


Ship Approvals

Logo	Approval	Additional Approval Text	Certificate name
	ABS American Bureau of Shipping	EN 60947	20- HG1941090- PDA
	DNV GL Det Norske Veritas, Germanischer Lloyd	-	TAE00001V2

UL-Approvals

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







Logo	Approval	Additional Approval Text	Certificate name
	UR Underwriters Laboratories Inc.	UL 1059	20190731- E45172

Counterpart

Compatible products










Marking accessories

	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.: 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.: 2009-115/000-006 WMB-Inline; for Smart Printer; 1500 pieces on roll; stretchable 5 - 5.2 mm; plain; snap-on type; white	www.wago.com/2009-115/000-006
	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
	Item no.: 2009-115/000-012 WMB-Inline; for Smart Printer; 1500 pieces on roll; stretchable 5 - 5.2 mm; plain; snap-on type; white	www.wago.com/2009-115/000-012
	Item no.: 2009-115/000-017 WMB-Inline; for Smart Printer; 1500 pieces on roll; stretchable 5 - 5.2 mm; plain; snap-on type; white	www.wago.com/2009-115/000-017
	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	www.wago.com/2009-115/000-023







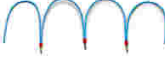







Subject to changes. Please also observe the further product documentation!

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	<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; white</p>	<p>www.wago.com/2009-115/000-024</p>
	<p>Item no.: 793-501 WMB marking card; as card; not stretchable; plain; snap-on type; white</p>	<p>www.wago.com/793-501</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.: 793-501/000-005 WMB marking card; as card; not stretchable; plain; snap-on type; red</p>	<p>www.wago.com/793-501/000-005</p>
	<p>Item no.: 793-501/000-006 WMB marking card; as card; not stretchable; plain; snap-on type; blue</p>	<p>www.wago.com/793-501/000-006</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>
	<p>Item no.: 793-501/000-012 WMB marking card; as card; not stretchable; plain; snap-on type; orange</p>	<p>www.wago.com/793-501/000-012</p>
	<p>Item no.: 793-501/000-017 WMB marking card; as card; not stretchable; plain; snap-on type; light green</p>	<p>www.wago.com/793-501/000-017</p>
	<p>Item no.: 793-501/000-023 WMB marking card; as card; not stretchable; plain; snap-on type; green</p>	<p>www.wago.com/793-501/000-023</p>
	<p>Item no.: 793-501/000-024 WMB marking card; as card; not stretchable; plain; snap-on type; violet</p>	<p>www.wago.com/793-501/000-024</p>
	<p>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</p>	<p>www.wago.com/793-5501</p>
	<p>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</p>	<p>www.wago.com/793-5501/000-002</p>
	<p>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</p>	<p>www.wago.com/793-5501/000-005</p>
	<p>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</p>	<p>www.wago.com/793-5501/000-006</p>

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

	<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>	www.wago.com/793-5501/000-007
	<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>	www.wago.com/793-5501/000-012
	<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; green</p>	www.wago.com/793-5501/000-017
	<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; light green</p>	www.wago.com/793-5501/000-023
	<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>	www.wago.com/793-5501/000-024
Jumper		
	<p>Item no.: 210-103 Wire commoning chain; insulated; 50 connections; black</p>	www.wago.com/210-103
	<p>Item no.: 210-123 Wire commoning chain; insulated; 50 connections</p>	www.wago.com/210-123
	<p>Item no.: 249-123 Push-in type wire jumper; insulated; wire length 180 mm; Conductor cross section 0.75 mm²</p>	www.wago.com/249-123
	<p>Item no.: 249-125 Push-in type wire jumper; insulated; wire length 60 mm; Conductor cross section 0.75 mm²</p>	www.wago.com/249-125
	<p>Item no.: 249-126 Push-in type wire jumper; insulated; wire length 110 mm; Conductor cross section 0.75 mm²</p>	www.wago.com/249-126
	<p>Item no.: 249-127 Push-in type wire jumper; insulated; wire length 250 mm; Conductor cross section 0.75 mm²</p>	www.wago.com/249-127
	<p>Item no.: 280-402 Adjacent jumper; insulated; IN = IN terminal block; gray</p>	www.wago.com/280-402
	<p>Item no.: 280-482 Comb-style jumper bar; insulated; 2-way; IN = IN terminal block; gray</p>	www.wago.com/280-482
	<p>Item no.: 280-483 Comb-style jumper bar; insulated; 3-way; IN = IN terminal block; gray</p>	www.wago.com/280-483
	<p>Item no.: 280-484 Comb-style jumper bar; insulated; 4-way; IN = IN terminal block; gray</p>	www.wago.com/280-484
	<p>Item no.: 280-485 Comb-style jumper bar; insulated; 5-way; IN = IN terminal block; gray</p>	www.wago.com/280-485

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



Item no.: 280-490
Comb-style jumper bar; insulated; 10-way; IN = IN terminal block; gray

www.wago.com/280-490

Item no.: 280-492
Alternate comb-style jumper bar; insulated; 2-way; IN = IN terminal block; gray

www.wago.com/280-492

Item no.: 709-110
Wire commoning chain; insulated; 4 connections; 3 x 110 mm; black

www.wago.com/709-110



Item no.: 709-111
Wire commoning chain; insulated; 3 connections; 2 x 120 mm; black

www.wago.com/709-111

Item no.: 709-112
Wire commoning chain; insulated; 3 connections; 2 x 170 mm; black

www.wago.com/709-112

Item no.: 780-452
Staggered jumper; insulated; from 1 to 2; Spacing: 5 mm; suitable for 2-conductor female plugs; gray

www.wago.com/780-452

Item no.: 780-453
Staggered jumper; insulated; from 1 to 3; Spacing: 5 mm; suitable for 2-conductor female plugs; gray

www.wago.com/780-453



Item no.: 780-454
Staggered jumper; insulated; from 1 to 4; Spacing: 5 mm; suitable for 2-conductor female plugs; gray

www.wago.com/780-454



Item no.: 780-455
Staggered jumper; insulated; from 1 to 5; Spacing: 5 mm; suitable for 2-conductor female plugs; gray

www.wago.com/780-455



Item no.: 780-456
Staggered jumper; insulated; from 1 to 6; Spacing: 5 mm; suitable for 2-conductor female plugs; gray

www.wago.com/780-456

Item no.: 780-457
Staggered jumper; insulated; from 1 to 7; Spacing: 5 mm; suitable for 2-conductor female plugs; gray

www.wago.com/780-457



Item no.: 780-458
Staggered jumper; insulated; from 1 to 8; Spacing: 5 mm; suitable for 2-conductor female plugs; gray

www.wago.com/780-458

Carrier rail

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

www.wago.com/210-112

Item no.: 210-113
Steel carrier rail; 35 x 7.5 mm; 1 mm thick; 2 m long; unslotted; according to EN 60715

www.wago.com/210-113

Item no.: 210-114
Steel carrier rail; 35 x 15 mm; 1.5 mm thick; 2 m long; unslotted; similar to EN 60715

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











www.wago.com/210-115

Item no.: 210-118
Steel carrier rail; 35 x 15 mm; 2.3 mm thick; 2 m long; unslotted; according to EN 60715

www.wago.com/210-118

Item no.: 210-196

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

	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
	Item no.: 210-197 Steel carrier rail; 35 x 15 mm; 1.5 mm thick; 2 m long; slotted; similar to EN 60715	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
	Item no.: 210-504 Steel carrier rail; 35 x 7.5 mm; 1 mm thick; 2 m long; slotted; galvanized; according to EN 60715	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	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	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	www.wago.com/210-508
Insulation stop		
	Item no.: 280-470 Insulation stop; 0.08 - 0.2 mm ² "s" (0.14 mm ² "f-st"); 5 pieces/strip; white	www.wago.com/280-470
	Item no.: 280-471 Insulation stop; 0.25 - 0.5 mm ² ; 5 pieces/strip; light gray	www.wago.com/280-471
	Item no.: 280-472 Insulation stop; 0.75 - 1 mm ² ; 5 pieces/strip	www.wago.com/280-472
Protective Warning Marker		
	Item no.: 280-415 Protective warning marker; with high-voltage symbol, black; for 5 terminal blocks; yellow	www.wago.com/280-415
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
ferrule		
	Item no.: 216-101 Ferrule; Sleeve for 0.5 mm ² / AWG 22; uninsulated; electro-tin plated	www.wago.com/216-101
	Item no.: 216-102 Ferrule; Sleeve for 0.75 mm ² / AWG 20; uninsulated; electro-tin plated	www.wago.com/216-102
	Item no.: 216-103 Ferrule; Sleeve for 1 mm ² / AWG 18; uninsulated; electro-tin plated	www.wago.com/216-103
	Item no.: 216-104	

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

Ferrule; Sleeve for 1.5 mm² / AWG 16; uninsulated; electro-tin plated

www.wago.com/216-104



Item no.: 216-201

Ferrule; Sleeve for 0.5 mm² / 20 AWG; insulated; electro-tin plated; white

www.wago.com/216-201



Item no.: 216-202

Ferrule; Sleeve for 0.75 mm² / 18 AWG; insulated; electro-tin plated; gray

www.wago.com/216-202

Item no.: 216-203

Ferrule; Sleeve for 1 mm² / AWG 18; insulated; electro-tin plated; red

www.wago.com/216-203

Item no.: 216-204

Ferrule; Sleeve for 1.5 mm² / AWG 16; insulated; electro-tin plated; black

www.wago.com/216-204

Item no.: 216-301

Ferrule; Sleeve for 0.25 mm² / AWG 24; insulated; electro-tin plated; yellow

www.wago.com/216-301

Item no.: 216-302

Ferrule; Sleeve for 0.34 mm² / 22 AWG; insulated; electro-tin plated; green

www.wago.com/216-302

assembling

Item no.: 709-154

Cover; Type 2; suitable for cover carrier, type 2; 1 m long; transparent

www.wago.com/709-154

tools

Item no.: 210-657

Operating tool; Blade: 3.5 x 0.5 mm; with a partially insulated shaft; short

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

www.wago.com/210-658

Item no.: 210-720

Operating tool; Blade: 3.5 x 0.5 mm; with a partially insulated shaft

www.wago.com/210-720

Downloads

Documentation

Additional Information

Technical explanations

Apr 3, 2019

pdf
2.1 MB

Download

CAD/CAE-Data

CAD data

2D/3D Models 280-562/281-411

URL

Download

CAE data

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

WAGO Kontakttechnik GmbH & Co. KG

Hansastr. 27

32423 Minden

Phone: +49571 887-0 | Fax: +49571 887-169

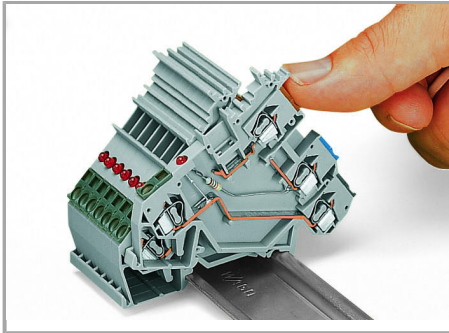
Email: info.de@wago.com | Web: www.wago.com

Do you have any questions about our products?

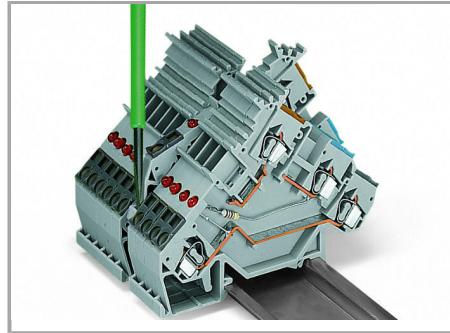
We are always happy to take your call at +49 (571) 887-44222.

Installation Notes

Installation

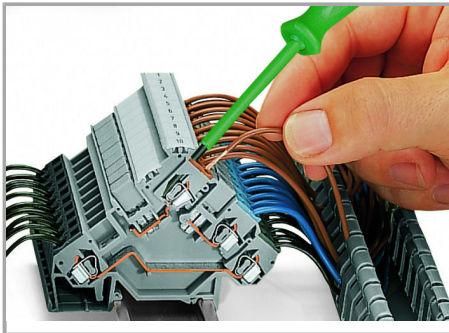


Snapping a terminal block onto the carrier rail – terminal blocks with a grounding foot automatically establish a direct contact to the rail.



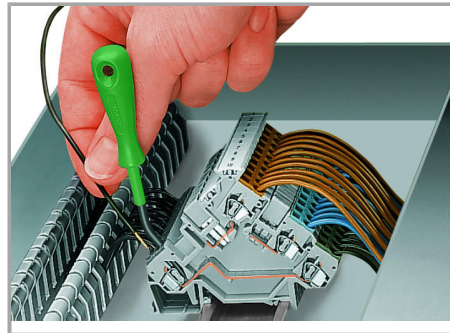
Removing a terminal block from the carrier rail. Notice: Remove jumper contacts first.

Conductor termination



CAGE CLAMP® connection

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

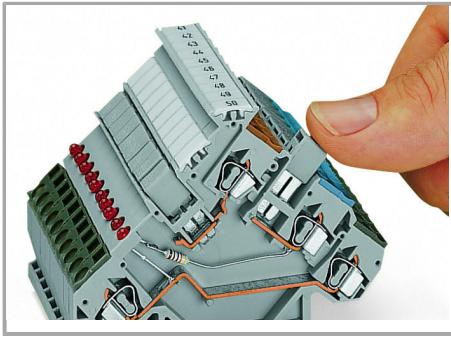


CAGE CLAMP® connection

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

Commoning

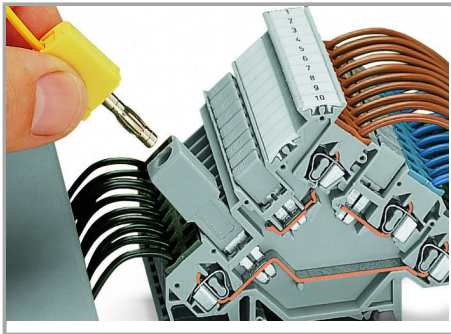
Subject to changes. Please also observe the further product documentation!



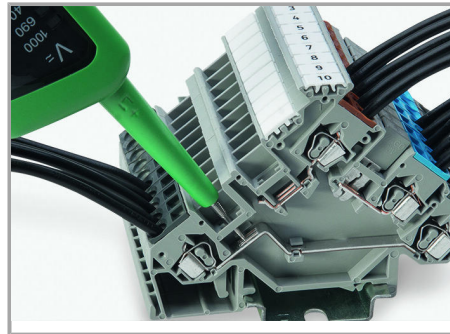
Commoning using an adjacent jumper (280-402).

Push jumper down until fully inserted.

Testing



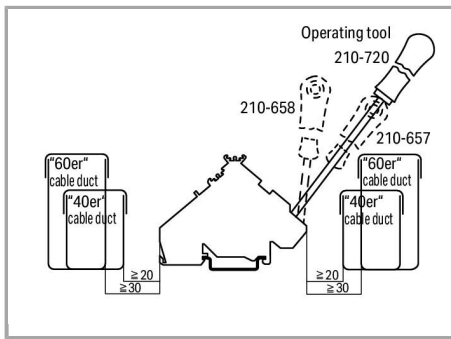
Testing via banana plug and test plug adapter (209-170).



Testing via voltage tester directly on the current bar.

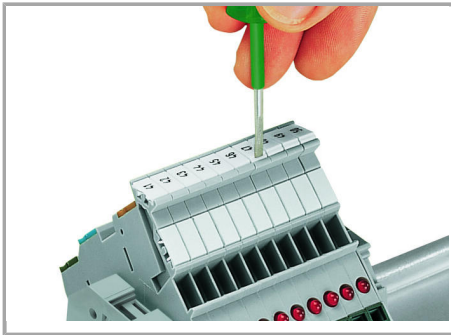
Installation

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!