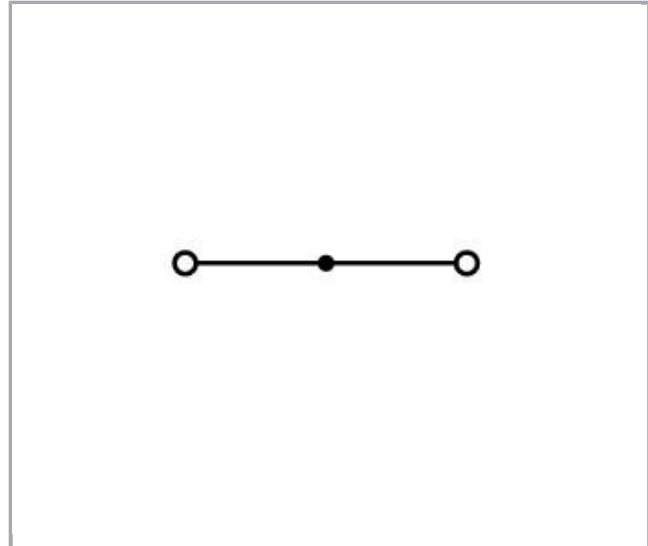
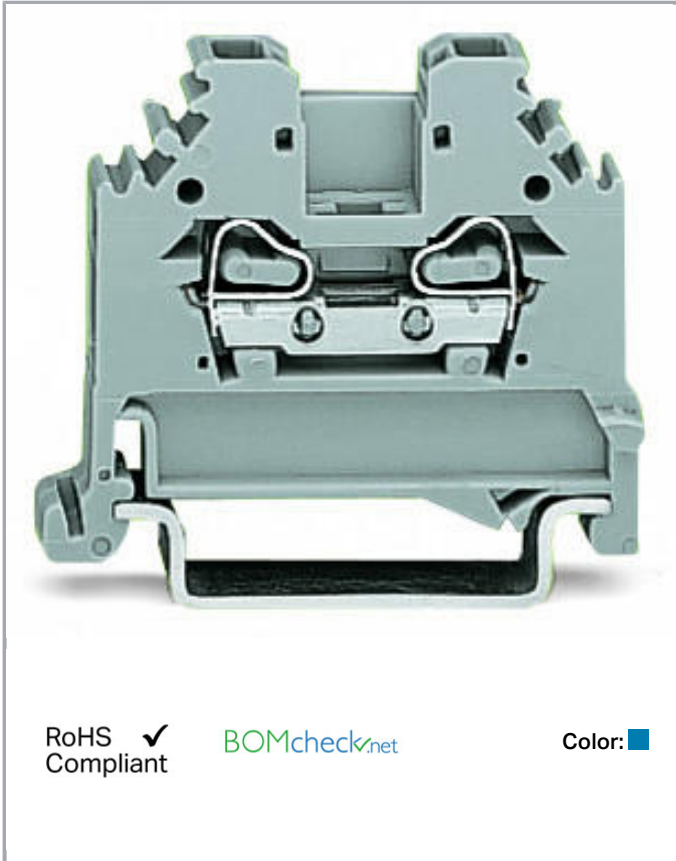


Data sheet | Item number: 280-104

2-conductor through terminal block; 2.5 mm²; suitable for Ex i applications; lateral marker slots; for DIN-rail 35 x 15 and 35 x 7.5; CAGE CLAMP®; 2,50 mm²; blue



www.wago.com/280-104



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.

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

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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

Data

Electrical data

Ratings per IEC/EN 60664-1

Ratings per	IEC/EN 60947-7-1
Nominal voltage (III/3)	800 V
Rated surge voltage (III/3)	8 kV
Rated current	24 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	2
Total number of potentials	1
Number of levels	1
Wiring type	Side-entry wiring
Note (conductor cross-section)	12 AWG: THHN, THWN

Geometrical Data

Width	5 mm / 0.197 inch
Height from upper-edge of DIN-rail	30,5 mm / 1.201 inch
Depth	42,5 mm / 1.673 inch

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Mechanical data

Design	horizontal type
Mounting type	DIN-35 rail
Marking level	Side marking

Material Data



Color	blue
Insulation material	Polyamide 66 (PA 66)
Fire load	0.08 MJ
Weight	3.9 g

Commercial data


Packaging type	BOX
Country of origin	IN
GTIN	4045454044503
Customs tariff number	85369010000

Approvals / Certificates

Country specific Approvals

Logo	Approval	Additional Approval Text	Certificate name
	CCA DEKRA Certification B.V.	EN 60947	2157201.01
	CSA DEKRA Certification B.V.	C22.2	1536071

Ship Approvals

Logo	Approval	Additional Approval Text	Certificate name
	ABS American Bureau of Shipping	EN 60947	20- HG1941090- PDA
	BV	EN 60947	07436/E0 BV

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



Bureau Veritas S.A.



DNV GL

Det Norske Veritas, Germanischer Lloyd

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TAE00001V2



LR


Lloyds Register

EN 60947

91/20112

(E9)




UL-Approvals

Logo	Approval	Additional Approval Text	Certificate name
	UL UL International Germany GmbH	UL 1059	20190731- E45172

Counterpart

Compatible products

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

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

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






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	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 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




General accessories

	Item no.: 281-407 Test plug; 6 mm wide; Nominal current 24 A; for 0.08 mm ² - 2.5 mm ² ; 2,50 mm ² ; gray	www.wago.com/281-407
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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

End plate

	Item no.: 280-322 Separator plate; 2 mm thick; oversized; orange	www.wago.com/280-322
	Item no.: 280-332 Separator plate; 2 mm thick; oversized; gray	www.wago.com/280-332
	Item no.: 281-333 Step-down intermediate plate; 1 mm thick; "only for 4 mm terminal blocks; gray	www.wago.com/281-333
	Item no.: 281-336	

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



Step-down intermediate plate; 1 mm thick; "only for 4 mm terminal blocks; orange

www.wago.com/281-336

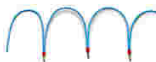
ferrule

**Item no.: 216-101**Ferrule; Sleeve for 0.5 mm² / AWG 22; uninsulated; electro-tin platedwww.wago.com/216-101**Item no.: 216-102**Ferrule; Sleeve for 0.75 mm² / AWG 20; uninsulated; electro-tin platedwww.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.: 216-104**Ferrule; Sleeve for 1.5 mm² / AWG 16; uninsulated; electro-tin platedwww.wago.com/216-104**Item no.: 216-201**Ferrule; Sleeve for 0.5 mm² / 20 AWG; insulated; electro-tin plated; whitewww.wago.com/216-201**Item no.: 216-202**Ferrule; Sleeve for 0.75 mm² / 18 AWG; insulated; electro-tin plated; graywww.wago.com/216-202**Item no.: 216-203**Ferrule; Sleeve for 1 mm² / AWG 18; insulated; electro-tin plated; redwww.wago.com/216-203**Item no.: 216-204**Ferrule; Sleeve for 1.5 mm² / AWG 16; insulated; electro-tin plated; blackwww.wago.com/216-204**Item no.: 216-301**Ferrule; Sleeve for 0.25 mm² / AWG 24; insulated; electro-tin plated; yellowwww.wago.com/216-301**Item no.: 216-302**Ferrule; Sleeve for 0.34 mm² / 22 AWG; insulated; electro-tin plated; greenwww.wago.com/216-302

Jumper

**Item no.: 210-103**

Wire commoning chain; insulated; 50 connections; black

www.wago.com/210-103**Item no.: 210-123**

Wire commoning chain; insulated; 50 connections

www.wago.com/210-123**Item no.: 249-123**Push-in type wire jumper; insulated; wire length 180 mm; Conductor cross section 0.75 mm²www.wago.com/249-123**Item no.: 249-125**Push-in type wire jumper; insulated; wire length 60 mm; Conductor cross section 0.75 mm²www.wago.com/249-125**Item no.: 249-126**Push-in type wire jumper; insulated; wire length 110 mm; Conductor cross section 0.75 mm²www.wago.com/249-126**Item no.: 249-127**Push-in type wire jumper; insulated; wire length 250 mm; Conductor cross section 0.75 mm²www.wago.com/249-127**Item no.: 280-402**

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

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	Adjacent jumper; insulated; IN = IN terminal block; gray	www.wago.com/280-402
	Item no.: 280-409 Alternate jumper; insulated; IN = IN terminal block; gray	www.wago.com/280-409
	Item no.: 280-422 Adjacent jumper; insulated; IN = IN terminal block; yellow-green	www.wago.com/280-422
	Item no.: 284-414 Step-down jumper; insulated; from 10/6 mm ² to 4/2.5/1.5 mm ² ; Nominal current 15 A; gray	www.wago.com/284-414
	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
assembling		
	Item no.: 209-106 Mounting carrier; for isolated mounting on DIN 35 rails; gray	www.wago.com/209-106
	Item no.: 210-148 Angled support bracket; without screw	www.wago.com/210-148
	Item no.: 709-153 Cover; Type 1; suitable for cover carrier, type 1; 1 m long; transparent	www.wago.com/709-153

check		
	Item no.: 209-170	

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

	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
	Item no.: 280-404 Test plug adapter; 5 mm wide; for test plug 210-137 (2.3 mm Ø); suitable for 1.5 mm ² - 4 mm ² tbs; gray	www.wago.com/280-404
Protective Warning Marker		
	Item no.: 280-405 Protective warning marker; with high-voltage symbol, black; for 5 terminal blocks; yellow	www.wago.com/280-405
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; blue	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; orange	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; light green	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
	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	www.wago.com/2009-115/000-024
	Item no.: 209-140 Group marker carrier; gray	www.wago.com/209-140
	Item no.: 209-141 Group marker carrier; gray	www.wago.com/209-141
	Item no.: 209-142 Group marker carrier; gray	www.wago.com/209-142
	Item no.: 249-105 Group marker carrier; gray	www.wago.com/249-105

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

	Item no.: 793-501 WMB marking card; as card; not stretchable; plain; snap-on type; white	www.wago.com/793-501
	Item no.: 793-501/000-002 WMB marking card; as card; not stretchable; plain; snap-on type; yellow	www.wago.com/793-501/000-002
	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.: 793-501/000-006 WMB marking card; as card; not stretchable; plain; snap-on type; blue	www.wago.com/793-501/000-006
	Item no.: 793-501/000-007 WMB marking card; as card; not stretchable; plain; snap-on type; gray	www.wago.com/793-501/000-007
	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.: 793-501/000-017 WMB marking card; as card; not stretchable; plain; snap-on type; light green	www.wago.com/793-501/000-017
	Item no.: 793-501/000-023 WMB marking card; as card; not stretchable; plain; snap-on type; green	www.wago.com/793-501/000-023
	Item no.: 793-501/000-024 WMB marking card; as card; not stretchable; plain; snap-on type; violet	www.wago.com/793-501/000-024
	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
	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.: 793-5501/000-005 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.: 793-5501/000-006 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.: 793-5501/000-007 WMB marking card; as card; for terminal block width 5 - 17.5 mm; stretchable 5 - 5.2 mm; plain; snap-on type; gray	www.wago.com/793-5501/000-007

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

on type; gray



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

www.wago.com/793-5501/000-012



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

www.wago.com/793-5501/000-017



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

www.wago.com/793-5501/000-023



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

www.wago.com/793-5501/000-024

Downloads

Documentation

Bid Text

280-104 GAEB X81 - Datei	Feb 19, 2019	xml 3.4 kB	Download
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280-104 doc - Datei	May 31, 2017	doc 24.6 kB	Download
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Additional Information

Technical explanations	Apr 3, 2019	pdf 2.1 MB	Download
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CAD/CAE-Data

CAD data

2D/3D Models 280-104	URL	Download
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CAE data

EPLAN Data Portal 280-104	URL	Download
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WSCAD Universe 280-104	URL	Download
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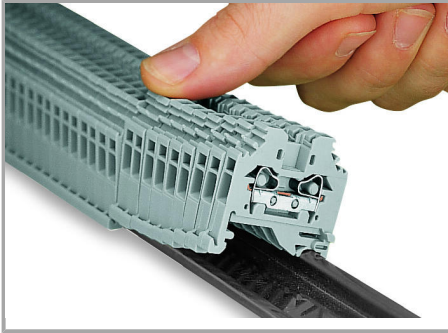
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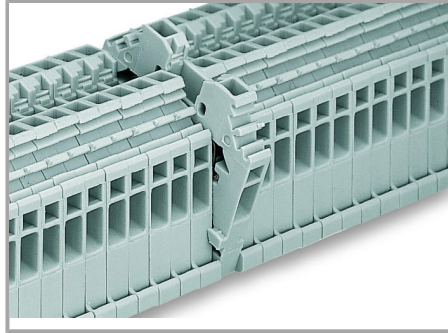
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Handling Instructions

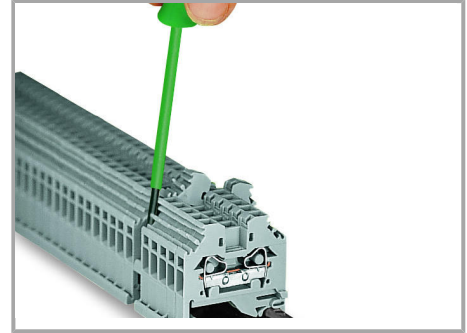
Installation



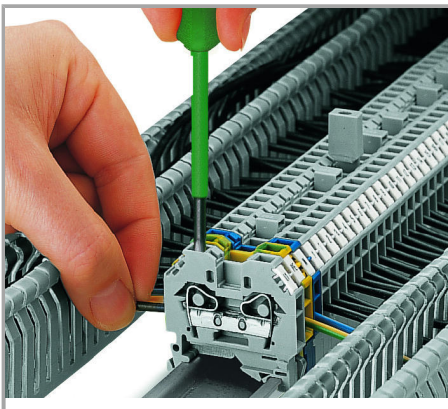
Snapping side-entry rail-mount terminal blocks onto the carrier rail.



Quick assembly keys prevent reverse mounting.



Removing a terminal block from the assembly.



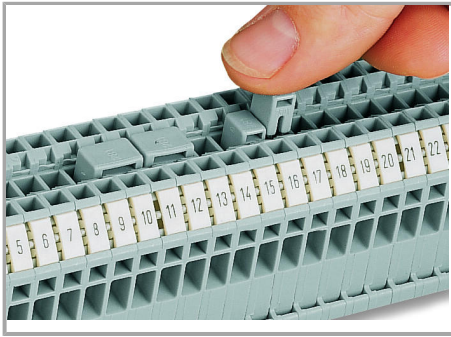
CAGE CLAMP® connection

Inserting a conductor.

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

Commoning

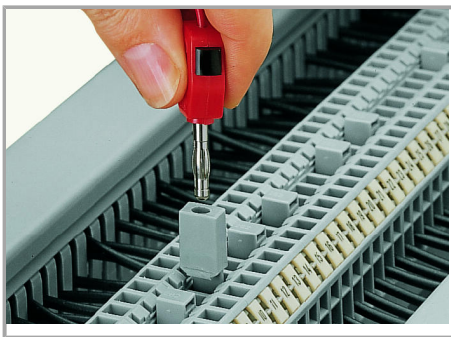
Subject to changes. Please also observe the further product documentation!



Commoning using an adjacent jumper (280-402).

Push jumper down until fully inserted.

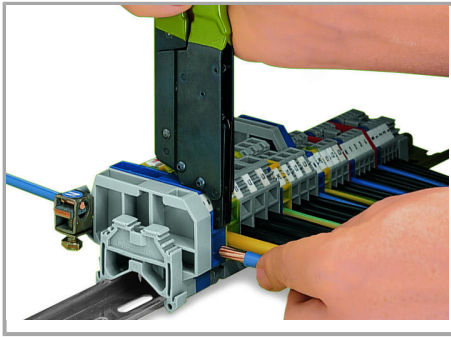
Testing



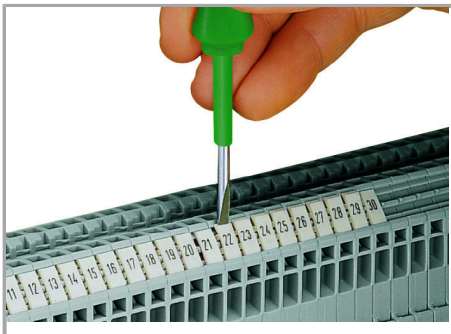
Testing with a test plug

(picture shows 209-170 Test Plug Adapter).

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



When operating the handles beyond the locked position, the ratchet allows the tool to open and be removed from the terminal block.



Labeling via WMB Multi Marking System.

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