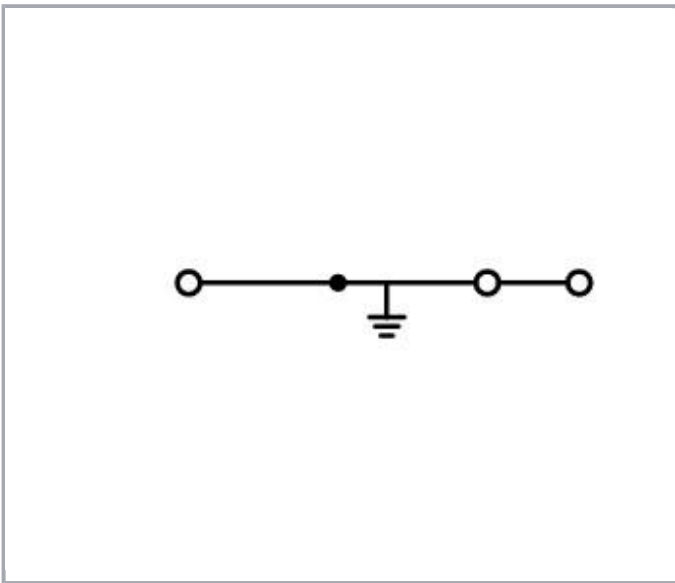
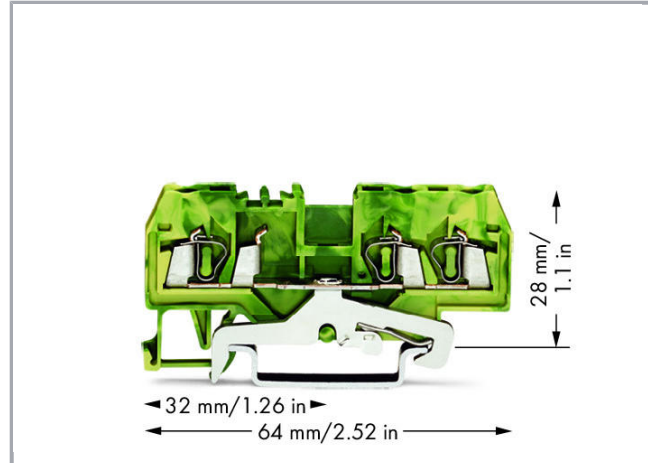


Data sheet | Item number: 280-687

3-conductor ground terminal block; 2.5 mm²; center marking; for DIN-rail 35 x 15 and 35 x 7.5; CAGE CLAMP®; 2,50 mm²; green-yellow



www.wago.com/280-687



Item description

Note:
Terminating Aluminum Conductors

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.



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.

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 60947-7-2
-------------	------------------

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	1
Number of levels	1
Wiring type	Front-entry wiring
Note (conductor cross-section)	12 AWG: THHN, THWN

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

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Geometrical Data

Width	5 mm / 0.197 inch
Height from upper-edge of DIN-rail	28 mm / 1.102 inch
Depth	64 mm / 2.52 inch

Mechanical data

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

Material Data



Color	green-yellow
Insulation material	Polyamide 66 (PA 66)
Fire load	0.11 MJ
Weight	11.3 g

Commercial data

Product Group	1 (Rail Mounted Terminal Blocks)
Packaging type	BOX
Country of origin	DE
GTIN	4045454100148
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

Certificate

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

Logo	Approval	Additional Approval Text	name
	ABS American Bureau of Shipping	EN 60947	20- HG1941090- PDA
	BV Bureau Veritas S.A.	EN 60947	07436/E0 BV
	DNV GL Det Norske Veritas, Germanischer Lloyd	-	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

ferrule

Item no.: 216-101

Ferrule; Sleeve for 0.5 mm² / AWG 22; uninsulated; electro-tin plated

www.wago.com/216-101

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

WAGO Kontakttechnik GmbH & Co. KG

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	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 Ferrule; Sleeve for 1.5 mm ² / AWG 16; uninsulated; electro-tin plated	www.wago.com/216-104
	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.: 216-202 Ferrule; Sleeve for 0.75 mm ² / 18 AWG; insulated; electro-tin plated; gray	www.wago.com/216-202
	Item no.: 216-203 Ferrule; Sleeve for 1 mm ² / AWG 18; insulated; electro-tin plated; red	www.wago.com/216-203
	Item no.: 216-204 Ferrule; Sleeve for 1.5 mm ² / AWG 16; insulated; electro-tin plated; black	www.wago.com/216-204
	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; green	www.wago.com/216-302
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
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

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

	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.: 209-128 Adaptor; gray	www.wago.com/209-128
	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.: 209-185 Adaptor; gray	www.wago.com/209-185
	Item no.: 249-105 Group marker carrier; gray	www.wago.com/249-105
	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

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



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



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

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



















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

type; violet

















check

	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
	Item no.: 249-106 B-type test plug module; modular; 1,50 mm ² ; gray	www.wago.com/249-106
	Item no.: 249-107 B-type spacer module; modular; e.g., for bridging commoned terminal blocks; gray	www.wago.com/249-107
	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.: 249-142 L-type end module; modular; with rigid contact pin; End module; 1,50 mm ² ; gray	www.wago.com/249-142
	Item no.: 249-143 L-type spacer module; modular; e.g., bridging commoned terminal blocks; gray	www.wago.com/249-143
	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
	Item no.: 280-418 Test plug module; modular; suitable for all WAGO 280 and 780 Series rail-mounted terminal blocks with jumper slots in the current bar; gray	www.wago.com/280-418
	Item no.: 280-419 Spacer module; modular; bridging commoned terminal blocks; gray	www.wago.com/280-419
	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
Jumper		
	Item no.: 280-402 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.: 280-482 Comb-style jumper bar; insulated; 2-way; IN = IN terminal block; gray	www.wago.com/280-482
	Item no.: 280-483 Comb-style jumper bar; insulated; 3-way; IN = IN terminal block; gray	www.wago.com/280-483
	Item no.: 280-484 Comb-style jumper bar; insulated; 4-way; IN = IN terminal block; gray	www.wago.com/280-484
	Item no.: 280-485 Comb-style jumper bar; insulated; 5-way; IN = IN terminal block; gray	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; 2.5 mm ² ; insulated; black	www.wago.com/709-110
	Item no.: 709-111 Wire commoning chain; 2.5 mm ² ; insulated; black	www.wago.com/709-111
	Item no.: 709-112 Wire commoning chain; 2.5 mm ² ; insulated; 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 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

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

	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
End plate		
	Item no.: 280-344 Separator plate; 2 mm thick; oversized; gray	www.wago.com/280-344
	Item no.: 280-346 Separator plate; 2 mm thick; oversized; orange	www.wago.com/280-346
assembling		
	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
	Item no.: 709-153 Cover; Type 1; suitable for cover carrier, type 1; 1 m long; transparent	www.wago.com/709-153
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
Push-In type wire 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.: 249-125 Push-in type wire jumper; insulated; 60 mm long; black	www.wago.com/249-125
	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
Insulation stop		

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



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



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

www.wago.com/280-472

Downloads

Documentation

Bid Text

280-687 doc - Datei	Feb 28, 2017	doc 24.6 kB	Download
280-687 GAEB X81 - Datei	Feb 19, 2019	xml 3.2 kB	Download

CAD/CAE-Data

CAD data

2D/3D Models 280-687	URL	Download
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CAE data

EPLAN Data Portal 280-687	URL	Download
WSCAD Universe 280-687	URL	Download

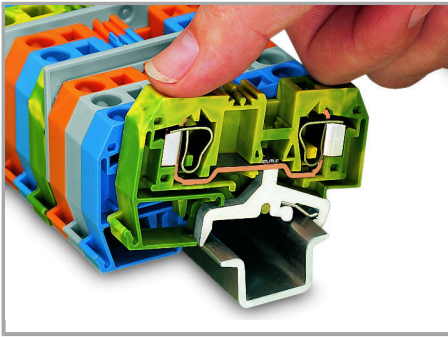
Installation Notes

Installation

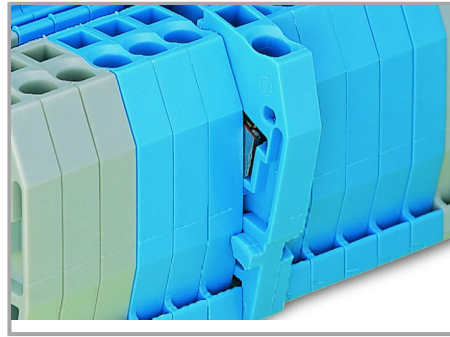
Subject to changes. Please also observe the further product documentation!

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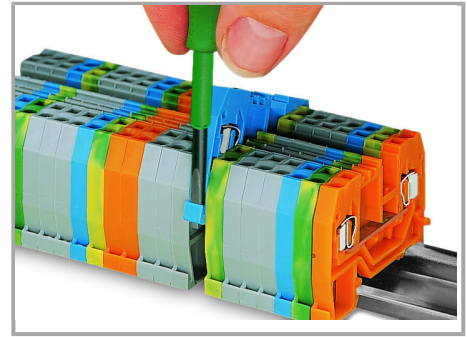
Do you have any questions about our products?
We are always happy to take your call at +49 (571) 887-44222.



By snapping a ground conductor terminal block onto the carrier rail, a direct electrical connection is automatically made to the rail.

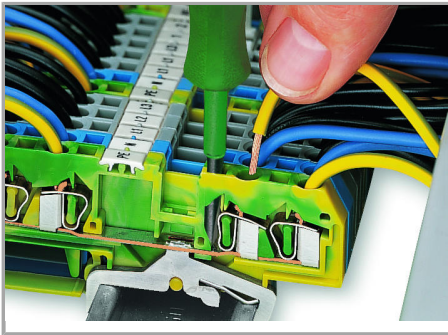


Quick assembly keys prevent reverse mounting.



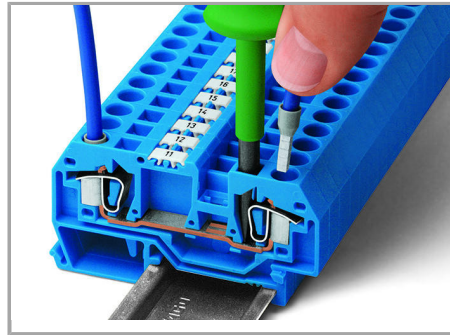
Removing a terminal block from the assembly.

Conductor termination



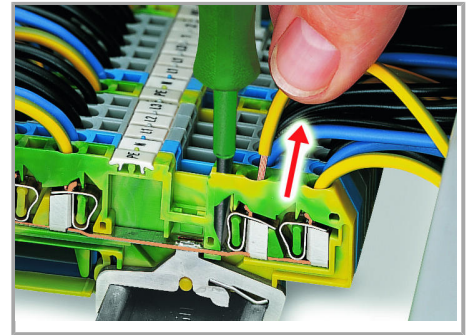
CAGE CLAMP® connection

Inserting a conductor.



CAGE CLAMP® connection

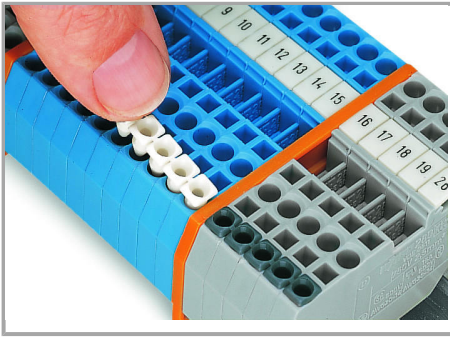
Inserting a conductor.



CAGE CLAMP® connection
Removing a conductor.

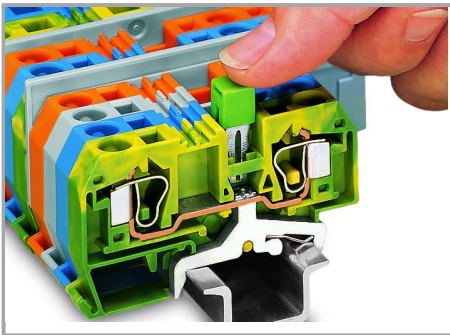
With ferruled conductors, it is necessary to use a terminal block one size larger than the conductor's nominal cross-section.

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

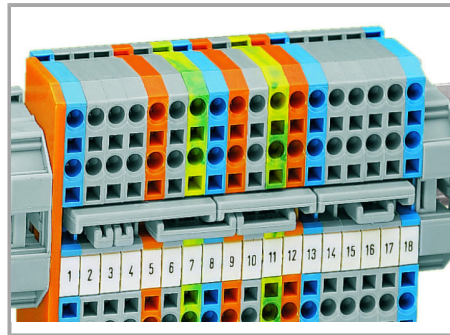


Inserting insulation stops.

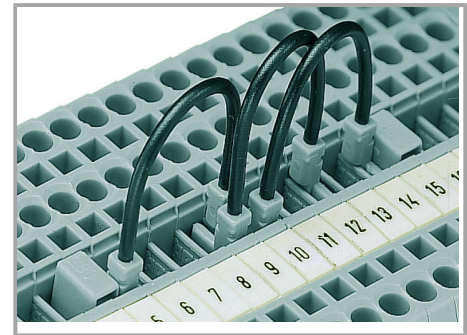
Commoning



Commoning ground conductor terminal blocks with through terminal blocks is possible in one direction only (via rear side of terminal block) using adjacent jumpers. In addition to the required marking of these blocks, use yellow-green adjacent jumpers.



Staggered jumpers for sophisticated circuit requirements – push jumpers down until fully inserted.



Wire jumpers

When installing machines or control systems, it is often necessary to make an additional connection between two terminal blocks that are not next to each other on the rail. In such cases, WAGO's touch-proof, push-in type wire jumpers are the ideal solution.

These jumpers are compatible with the following rail-mount terminal blocks:

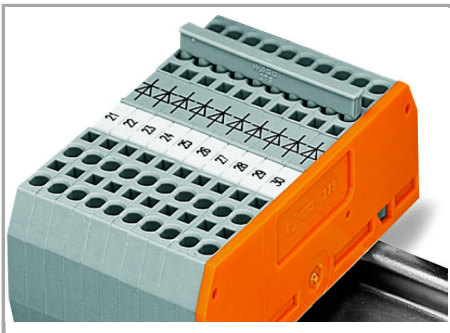
- 279 Series (1.5 mm²/16 AWG),
-
- 280/775/780 Series (2.5 mm²/14 AWG)

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

-
- 281/769/776/777/781 and 880 Series (4 mm²/12 AWG)
-

They are available in three conductor lengths (60, 110 and 250 mm), allowing up to 60 terminal blocks to be commoned depending on their width (see table on the right).

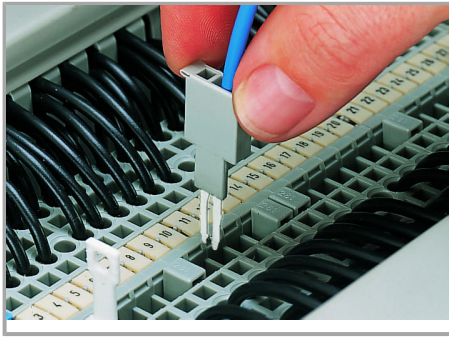
Compared with the 279 Series, the 280/775/780 and 281/776/777/781 Series can also accommodate two wire jumpers, allowing the use of commoning chains. Furthermore, the 280/769/775/780/880 and 281/776/777/781 Series allow both wire jumper and adjacent jumper to be simultaneously plugged into a same terminal block.



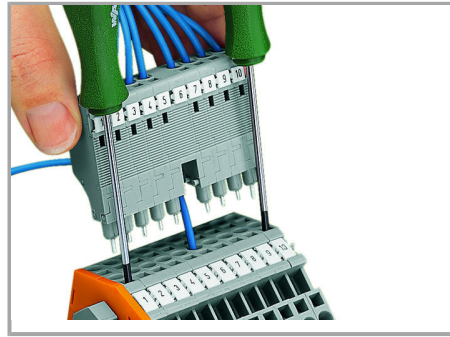
Commoning using comb-style jumper bars.
Push comb-style jumper bars down until fully inserted.

Testing

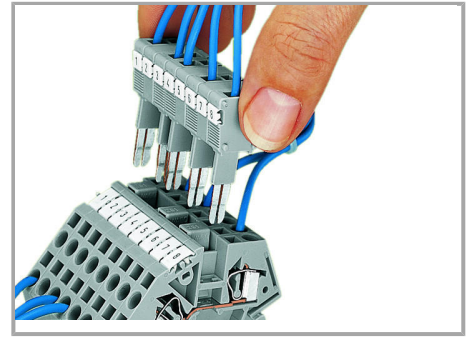
Subject to changes. Please also observe the further product documentation!



Testing with a test plug

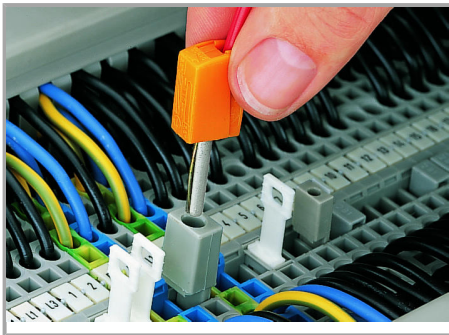


L-type test plug modules fitted with CAGE CLAMP®



B-type test plug modules fitted with CAGE CLAMP®

(picture shows a test plug fitted with CAGE CLAMP®).

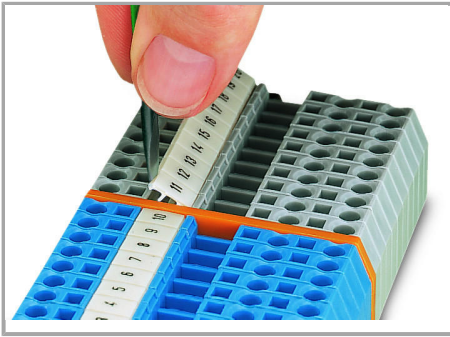


Testing with a test plug

(picture shows 209-170 Test Plug Adapter).

Marking

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



Marking via WMB Multi Marking System.

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