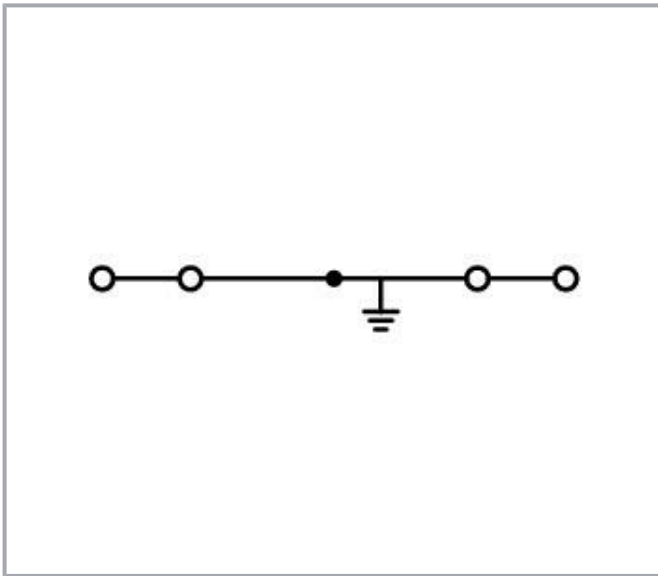
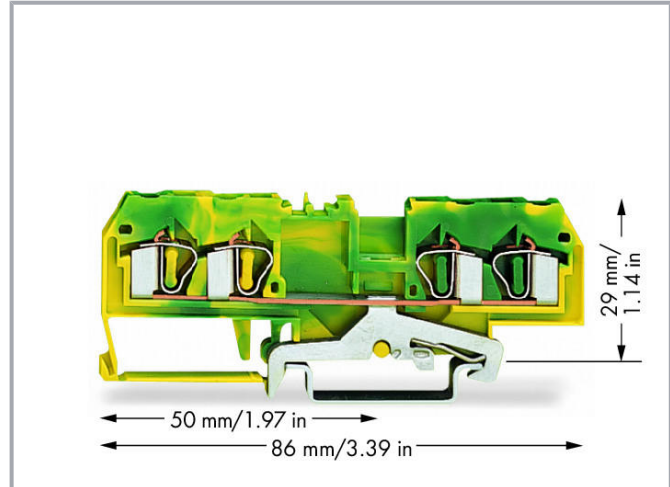


Data sheet | Item number: 281-657

4-conductor ground terminal block; 4 mm²; center marking; for DIN-rail 35 x 15 and 35 x 7.5; CAGE CLAMP®; 4,00 mm²; green-yellow



www.wago.com/281-657



Data

Electrical data

Ratings per IEC/EN

Ratings per

IEC/EN 60947-7-2

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

WAGO Kontakttechnik GmbH & Co. KG
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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.



Connection data

Total number of 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
Anschließbare Leiterwerkstoffe Hinweis	<p>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:</p> <ul style="list-style-type: none"> ■ 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. <p>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</p>
Solid conductor	0.08 ... 4 mm ² / 28 ... 12 AWG
Fine-stranded conductor	0.08 ... 4 mm ² / 28 ... 12 AWG
Strip length	9 ... 10 mm / 0.35 ... 0.39 inch
Wiring direction	Front-entry wiring

Physical data

Width	6 mm / 0.236 inch
Height	86 mm / 3.386 inch

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

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Depth from upper edge of DIN-rail	29 mm / 1.142 inch
-----------------------------------	--------------------

Mechanical data

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

Material data




Color	green-yellow
Insulation material	Polyamide (PA66)
Flammability class per UL94	V0
Fire load	0.193 MJ
Weight	17.6 g

Commercial data

Product Group	1 (Rail Mounted Terminal Blocks)
PU (SPU)	50 Stück
Packaging type	box
Country of origin	DE
GTIN	4044918512008
Customs tariff number	85369010000




Approvals / Certificates

Country specific Approvals


Logo	Approval	Additional Approval Text	Certificate name
	CCA DEKRA Certification B.V.	EN 60947, IEC 60947	NTR NL-7454/A1
	CSA DEKRA Certification B.V.	C22.2 No. 158	1505034
	KEMA/KEUR DEKRA Certification B.V.	EN 60947	71-107288

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

Ship Approvals



Logo	Approval	Additional Approval Text	Certificate name
	ABS American Bureau of Shipping	-	20- HG1941090- PDA
	BV Bureau Veritas S.A.	EN 60947	07436/F0 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

Required accessories

End plate


















	Item no.: 281-334 End and intermediate plate; 2.5 mm thick; gray	www.wago.com/281-334
	Item no.: 281-335 End and intermediate plate; 2.5 mm thick; orange	www.wago.com/281-335

Optional accessories











End plate

	Item no.: 281-338 Separator plate; 2 mm thick; oversized; gray	www.wago.com/281-338
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Subject to changes. Please also observe the further product documentation!

	Item no.: 281-339 Separator plate; 2 mm thick; oversized; orange	www.wago.com/281-339
Testing and measuring		
	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.: 249-144 L-type test plug module; modular; with spring-loaded contact pin; Center module; 2,50 mm ² ; gray	www.wago.com/249-144
	Item no.: 249-145 L-type end module; modular; with rigid contact pin; End module; 2,50 mm ² ; gray	www.wago.com/249-145
	Item no.: 249-146 L-type spacer module; modular; e.g., bridging commoned terminal blocks; gray	www.wago.com/249-146
	Item no.: 249-147 B-type test plug module; modular; 2,50 mm ² ; gray	www.wago.com/249-147
	Item no.: 249-148 B-type spacer module; modular; e.g., for bridging commoned terminal blocks; gray	www.wago.com/249-148
	Item no.: 280-404 Test plug adapter; 5 mm wide; for test plug (2.3 mm Ø); suitable for 1.5 mm ² - 4 mm ² tbs; gray	www.wago.com/280-404
	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
	Item no.: 281-418 Test plug module; modular; suitable for all WAGO 281, 776, 777 and 781 series rail-mounted terminal blocks with jumper slots in the current bar; gray	www.wago.com/281-418
	Item no.: 281-419 Spacer module; modular; bridging commoned terminal blocks; gray	www.wago.com/281-419
Ferrule		
	Item no.: 216-106 Ferrule; Sleeve for 2.5 mm ² / AWG 14; uninsulated; electro-tin plated; silver-colored	www.wago.com/216-106
	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.: 216-205 Ferrule; Sleeve for 2.08 mm ² / AWG 14; insulated; electro-tin plated; yellow	www.wago.com/216-205


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


	Item no.: 216-206 Ferrule; Sleeve for 2.5 mm ² / AWG 14; insulated; electro-tin plated; blue	www.wago.com/216-206
	Item no.: 216-241 Ferrule; Sleeve for 0.5 mm ² / 20 AWG; insulated; electro-tin plated; electrolytic copper; gastight crimped; acc. to DIN 46228, Part 4/09.90; white	www.wago.com/216-241
	Item no.: 216-242 Ferrule; Sleeve for 0.75 mm ² / 18 AWG; insulated; electro-tin plated; electrolytic copper; gastight crimped; acc. to DIN 46228, Part 4/09.90; gray	www.wago.com/216-242
	Item no.: 216-243 Ferrule; Sleeve for 1 mm ² / AWG 18; insulated; electro-tin plated; electrolytic copper; gastight crimped; acc. to DIN 46228, Part 4/09.90; red	www.wago.com/216-243
	Item no.: 216-244 Ferrule; Sleeve for 1.5 mm ² / AWG 16; insulated; electro-tin plated; electrolytic copper; gastight crimped; acc. to DIN 46228, Part 4/09.90; black	www.wago.com/216-244
	Item no.: 216-246 Ferrule; Sleeve for 2.5 mm ² / AWG 14; insulated; electro-tin plated; electrolytic copper; gastight crimped; acc. to DIN 46228, Part 4/09.90; blue	www.wago.com/216-246
	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
Insulation stop		
	Item no.: 281-470 Insulation stop; 0.08 - 0.2 mm ² "s" (0.14 mm ² "f-st"); 5 pieces/strip; white	www.wago.com/281-470
	Item no.: 281-471 Insulation stop; 0.25 - 0.5 mm ² ; 5 pieces/strip; light gray	www.wago.com/281-471
	Item no.: 281-472 Insulation stop; 0.75 - 1.5 mm ² ; 5 pieces/strip; dark gray	www.wago.com/281-472
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; silver-colored	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; silver-colored	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; 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.: 210-118 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.: 210-196	


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; 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


 **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

Protective warning marker

 **Item no.: 281-415**
Protective warning marker; for 5 terminal blocks; with high-voltage symbol, black; yellow www.wago.com/281-415

Jumpers

 **Item no.: 210-103**
Wire commoning chain; insulated; black www.wago.com/210-103

 **Item no.: 210-123**
Wire commoning chain; insulated; blue www.wago.com/210-123


 **Item no.: 281-402**
Jumper; insulated; gray www.wago.com/281-402


 **Item no.: 281-409**
Jumper; insulated; gray www.wago.com/281-409

 **Item no.: 281-422**
Jumper; insulated; yellow-green www.wago.com/281-422













 **Item no.: 281-482**
Jumper; insulated; gray www.wago.com/281-482

 **Item no.: 281-483**
Jumper; 3-way; insulated; gray www.wago.com/281-483
















 **Item no.: 281-485**
Jumper; 5-way; insulated; gray www.wago.com/281-485

 **Item no.: 281-490**
Jumper; 10-way; insulated; gray www.wago.com/281-490













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

	Item no.: 281-492 Jumper; 2-way; insulated; gray	www.wago.com/281-492
	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.: 781-452 Staggered jumper; from 1 to 2; insulated; gray	www.wago.com/781-452
	Item no.: 781-453 Staggered jumper; from 1 to 3; insulated; gray	www.wago.com/781-453
	Item no.: 781-454 Staggered jumper; from 1 to 4; insulated; gray	www.wago.com/781-454
	Item no.: 781-455 Staggered jumper; from 1 to 5; insulated; gray	www.wago.com/781-455
	Item no.: 781-456 Staggered jumper; from 1 to 6; insulated; gray	www.wago.com/781-456
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
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



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

	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.: 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
	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

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.: 793-501/000-023 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 type; violet	www.wago.com/793-5501/000-024

Mounting

	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

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



	Item no.: 709-153 Cover; Type 1; suitable for cover carrier, type 1; 1 m long; transparent	www.wago.com/709-153
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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

Downloads

Documentation

Bid Text

281-657 doc - Datei	2017 Feb 28	doc 24.6 kB	Download
281-657 X81 - Datei	2019 Feb 19	xml 3.1 kB	Download
Additional Information Technical explanations	2019 Apr 3	pdf 2.2 MB	Download

CAD/CAE-Data

CAD data

2D/3D Models 281-657	URL	Download
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CAE data

EPLAN Data Portal 281-657	URL	Download
WSCAD Universe 281-657	URL	Download
ZUKEN Portal 281-657	URL	Download

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.

Environmental Product Compliance

Compliance Search

Environmental Product Compliance 281-657

URL

Download

4-conductor ground terminal block; 4 mm²; center marking; for DIN-rail 35 x 15 and 35 x 7.5; CAGE CLAMP®; 4,00 mm²; green-yellow

Installation Notes

Installation



Snapping a ground conductor block onto the DIN-rail automatically makes a direct electrical connection to the rail.

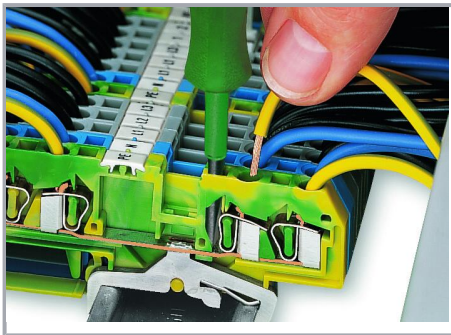


Quick assembly keys prevent reverse mounting.



Removing a terminal block from the assembly.

Conductor termination



CAGE CLAMP® connection

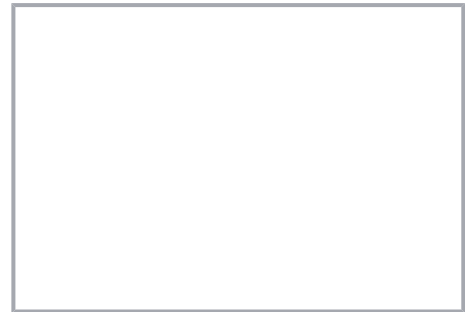
Inserting a conductor.



CAGE CLAMP® connection

Inserting a conductor.

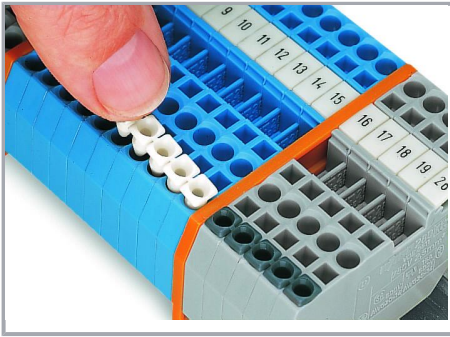
With ferruled conductors, it is necessary to use a terminal block one size larger than the conductor's nominal cross-section.



CAGE CLAMP® connection

Removing a solid conductor.

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

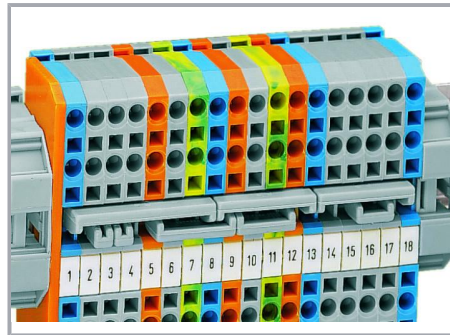


Inserting insulation stops.

Commoning

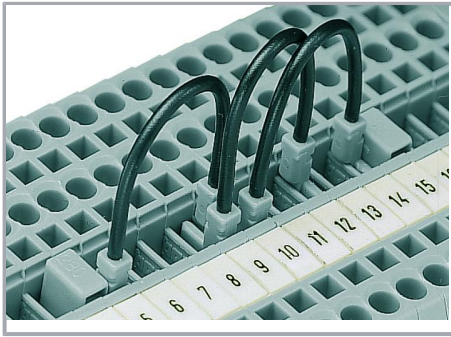


Commoning ground conductor terminal blocks with through terminal blocks is possible in one direction only (via rear side of terminal block) using adjacent jumpers. WAGO recommends using yellow-green adjacent jumpers in addition to the required marking of these blocks.



Staggered jumpers are suitable for sophisticated circuit requirements. Push jumpers down until fully inserted!

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



Push-In Type 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.

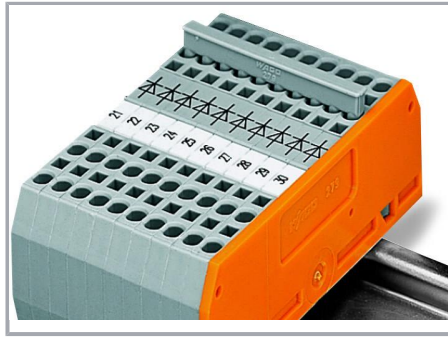
These jumpers are compatible with the following rail-mount terminal blocks:

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

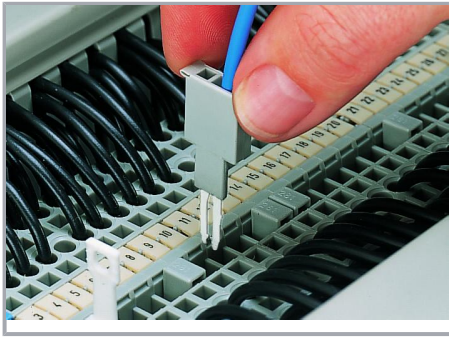
The 280/775/780 and 281/776/777/781 Series Terminal Blocks accept two wire jumpers, allowing the use of commoning chains. Furthermore, the 280/769/775/780 /880 and 281/776/777/781 Series allow both wire jumper and adjacent jumper to be simultaneously plugged into a same terminal block.

Testing



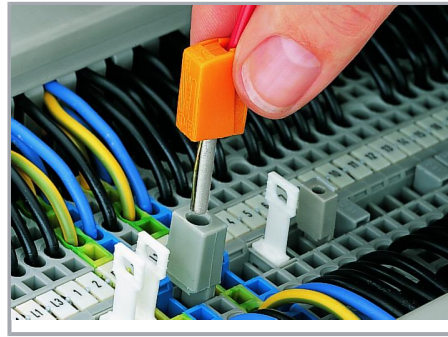
Commoning using comb-style jumper bars:
Push comb-style jumper bars down until fully inserted.

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



Testing with a test plug.

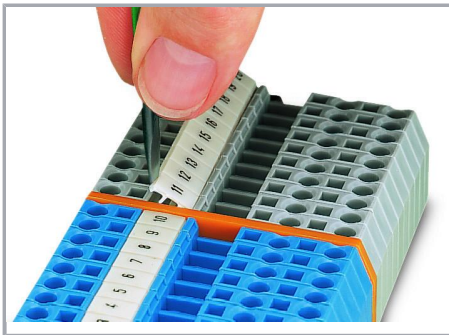
Picture shows a test plug fitted with CAGE CLAMP®.



Testing with a test plug.

Picture shows a test plug adapter (209-170).

Marking



Labeling via WMB Multi Marking System.

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