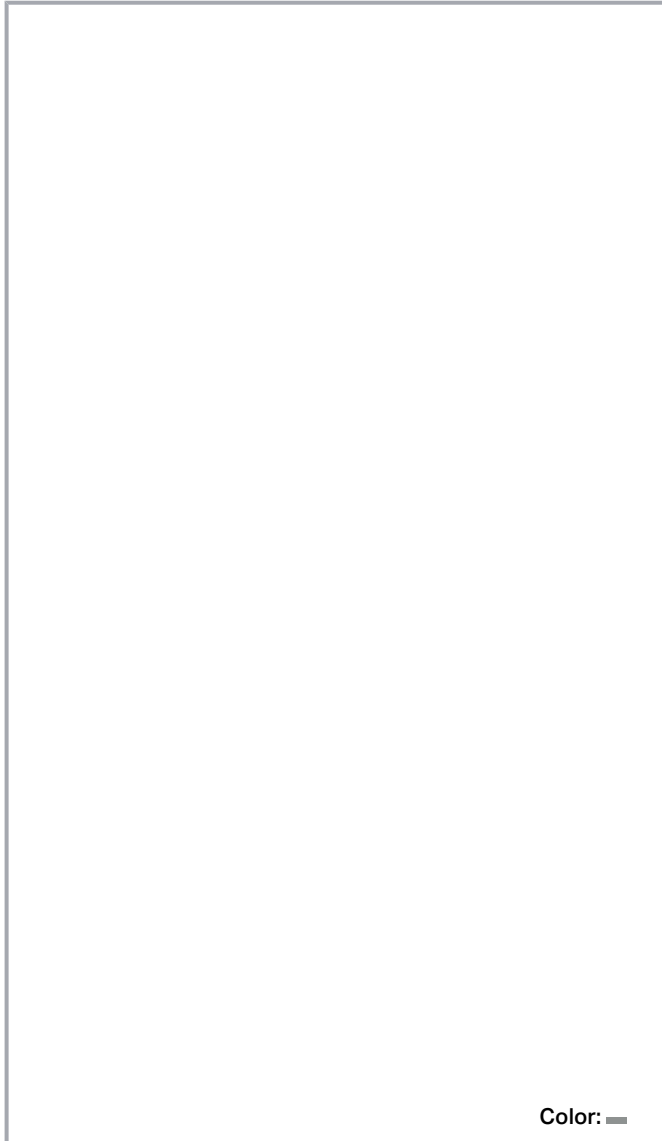


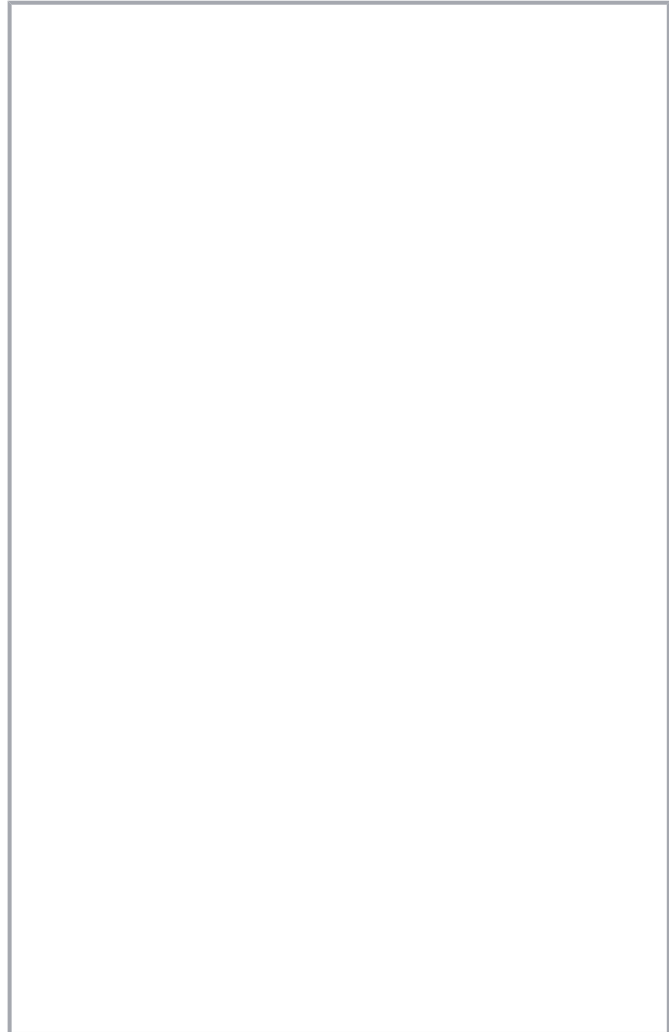
Data sheet | Item number: 280-833

4-conductor through terminal block; 2.5 mm²; center marking; for DIN-rail 35 x 15 and 35 x 7.5; CAGE CLAMP®; 2,50 mm²; gray

www.wago.com/280-833



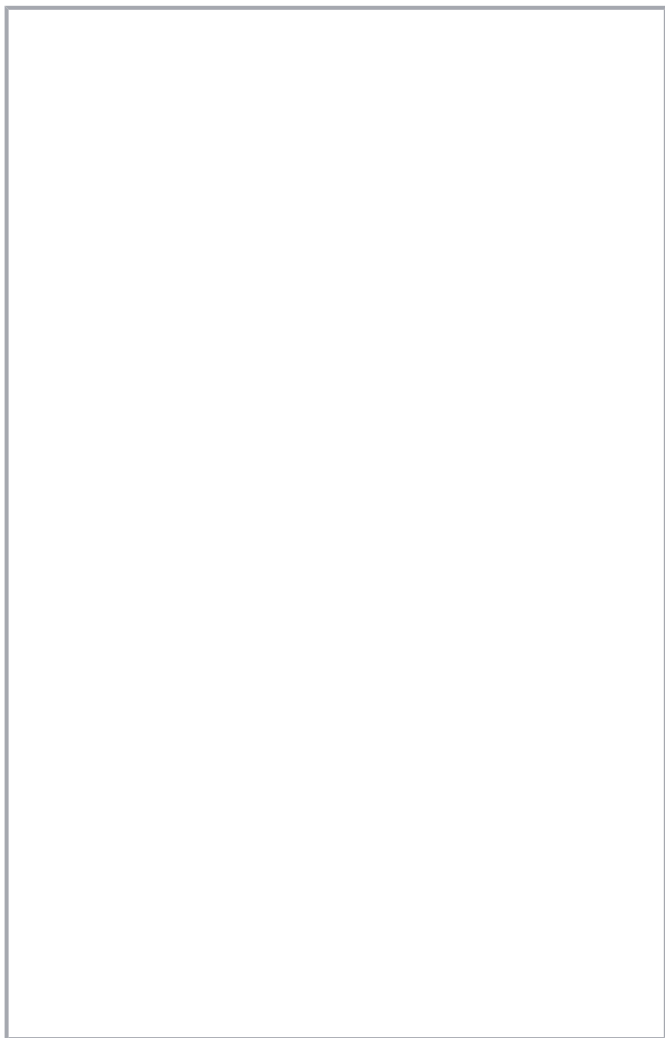
Color: 



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

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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.



Data

Electrical data

Ratings per IEC/EN

Ratings per	IEC/EN 60947-7-1
Nominal voltage (III/3)	800 V
Rated impulse voltage (III/3)	8 kV
Rated current	20 A
Legend (ratings)	(III / 3) ≙ Overvoltage category III / Pollution degree 3

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

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Ratings per UL

Approvals per	UL 1059
Rated voltage UL (Use Group C)	600 V
Rated current UL (Use Group C)	20 A

Ratings per CSA

Approvals per	CSA 22.2 No 158
Rated voltage CSA (Use Group C)	600 V
Rated current CSA (Use Group C)	24 A

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

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

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:

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



- 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

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	75 mm / 2.953 inches
Depth from upper-edge of DIN-rail	28 mm / 1.102 inches

Mechanical data

Mounting type	DIN-35 rail
Marking level	Center marking

Material data

Note (material data)	Information on material data can be found here
Color	gray
Material group	I
Insulation material	Polyamide (PA66)

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

Flammability class per UL94	V0
Fire load	0.147 MJ
Weight	9.2 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	27-14-11-20
eCl@ss 9.0	27-14-11-20
ETIM 8.0	EC000897
ETIM 7.0	EC000897
PU (SPU)	100 Stück
Packaging type	box
Country of origin VKOrg Germany	DE
GTIN	4044918311328
Customs tariff number VKOrg Germany	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

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



	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 Underwriters Laboratories Inc.	UL 1059	E45172


Required accessories

End plate

End plate		
	Item no.: 280-314 End and intermediate plate; 2.5 mm thick; gray	www.wago.com/280-314
	Item no.: 280-315 End and intermediate plate; 2.5 mm thick; orange	www.wago.com/280-315

Optional accessories

Mounting

Mounting accessories		
	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
	Item no.: 709-167 Cover carrier; Type 1; incl. fixing/retaining screws and knurled nut; suitable for 279 to 282 and 880 Series rail-mounted terminal blocks; suitable for 264 Series miniature rail-mounted terminal blocks;	www.wago.com/709-167

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

suitable for 270 Series sensor and actuator terminal blocks; gray

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.: 280-409 Jumper; insulated; gray		www.wago.com/280-409
Item no.: 280-422 Jumper; insulated; yellow-green		www.wago.com/280-422
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
Item no.: 284-414 Step-down jumper; from 284/282 to 281/280/279 series; insulated; gray		www.wago.com/284-414
Item no.: 709-110 Wire commoning chain; 2.5 mm ² ; insulated; black		www.wago.com/709-110
Item no.: 709-112 Wire commoning chain; 2.5 mm ² ; insulated; black		www.wago.com/709-112
Item no.: 709-111 Wire commoning chain; 2.5 mm ² ; 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

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



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
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 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	

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

Insulation stop

Insulation stop

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

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

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 mm² - 10 mm² tbs; gray www.wago.com/209-170

Item no.: 281-407
Test plug; 6 mm wide; Nominal current 24 A; for 0.08 mm² - 2.5 mm²; 2,50 mm²; gray www.wago.com/281-407



Item no.: 249-106
B-type test plug module; modular; 1,50 mm²; 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 mm²; gray www.wago.com/249-141

Item no.: 249-143
L-type spacer module; modular; e.g., bridging commoned terminal blocks; gray www.wago.com/249-143

Item no.: 249-142
L-type end module; modular; with rigid contact pin; End module; 1,50 mm²; gray www.wago.com/249-142

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.: 280-404
Test plug adapter; 5 mm wide; for test plug (2.3 mm Ø); suitable for 1.5 mm² - 4 mm² tbs; gray www.wago.com/280-404

Item no.: 280-419
Spacer module; modular; bridging commoned terminal blocks; gray www.wago.com/280-419

Marking accessories

Double marker carrier

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

Item no.: 209-128 Adaptor; gray	www.wago.com/209-128
Marker	
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.: 793-501 WMB marking card; as card; not stretchable; plain; snap-on type; white	www.wago.com/793-501
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
Group marker carrier	
Item no.: 209-142 Group marker carrier; gray	www.wago.com/209-142
Item no.: 209-141 Group marker carrier; gray	www.wago.com/209-141
Item no.: 209-140 Group marker carrier; gray	www.wago.com/209-140
Item no.: 249-105 Group marker carrier; gray	www.wago.com/249-105
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
Plugs	
Neon indicator module	
Item no.: 280-803/281-417 Component plug; 2-pole; 10 mm wide; gray	www.wago.com/280-803/281-417
Item no.: 280-803/281-418 Component plug; 2-pole; 10 mm wide; gray	www.wago.com/280-803/281-418
Diode plug	
Item no.: 280-803/281-420 Component plug; 2-pole; with rectifier diode and LED; 10 mm wide; gray	www.wago.com/280-803/281-420

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

**Item no.: 280-803/281-421**

Component plug; 2-pole; with rectifier diode and LED; 10 mm wide; gray

www.wago.com/280-803/281-421

LED plug

Item no.: 280-803/281-411

Component plug; 2-pole; with diode 1N4007; 10 mm wide; gray

www.wago.com/280-803/281-411**Item no.: 280-803/281-414**

Component plug; 2-pole; LED (red); 48 VDC; 10 mm wide; gray

www.wago.com/280-803/281-414**Item no.: 280-803/281-413**

Component plug; 2-pole; LED (red); 24 VDC; 10 mm wide; gray

www.wago.com/280-803/281-413**Item no.: 280-803/281-415**

Component plug; 2-pole; LED (red); 10 mm wide; gray

www.wago.com/280-803/281-415**Item no.: 280-803/281-416**

Component plug; 2-pole; LED (red); 10 mm wide; gray

www.wago.com/280-803/281-416

Empty component plug housing

Item no.: 280-803

Empty component plug housing; 10 mm wide; Type 4; 2-pole; gray

www.wago.com/280-803

Ferrule

Ferrule

Item no.: 216-101Ferrule; 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**Item no.: 216-204**Ferrule; Sleeve for 1.5 mm² / AWG 16; insulated; electro-tin plated; blackwww.wago.com/216-204**Item no.: 216-201**

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

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

www.wago.com/216-201

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; light turquoise

www.wago.com/216-302

Push-in type wire jumper

Jumper

Item no.: 249-123

Push-in type wire jumper; 0.75 mm²; insulated; 180 mm long; black

www.wago.com/249-123

Item no.: 249-126

Push-in type wire jumper; 0.75 mm²; insulated; 110 mm long; black

www.wago.com/249-126

Item no.: 249-127

Push-in type wire jumper; 0.75 mm²; 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

Downloads

Documentation

Bid Text

280-833 X81 - Datei	2019 Feb 19	xml 3.3 kB	Download
280-833 doc - Datei	2017 Feb 28	doc 24.6 kB	Download

Additional Information

Technical Section Technical explanations		pdf 2.2 MB	Download
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CAD/CAE-Data

CAD data

2D/3D Models 280-833		URL	Download
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CAE data

EPLAN Data Portal 280-833		URL	Download
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Subject to changes. Please also observe the further product documentation!

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WSCAD Universe 280-833	URL	Download
ZUKEN Portal 280-833	URL	Download

Environmental Product Compliance

Compliance Search

Environmental Product Compliance 280-833	URL	Download
4-conductor through terminal block; 2.5 mm ² ; center marking; for DIN-rail 35 x 15 and 35 x 7.5; CAGE CLAMP®; 2,50 mm ² ; gray		

Installation Notes

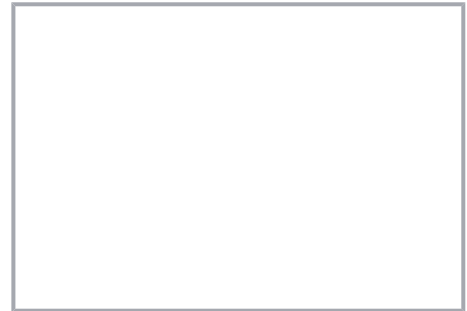
Installation



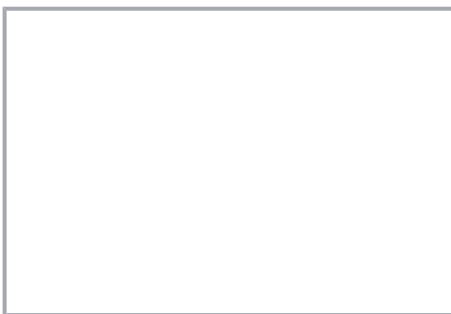
Snapping a terminal block onto the DIN-rail.



Quick assembly keys prevent reverse mounting.



Removing a terminal block from the assembly.



Steel DIN-rails are not suited for PEN (ground and N-conductor) applications per EN 60947-7-2 (VDE 0611, Part 3).

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

Conductor termination



CAGE CLAMP® connection

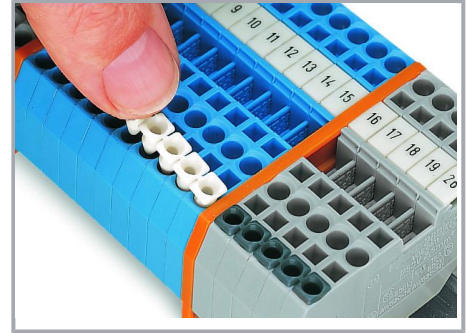
Inserting a conductor.



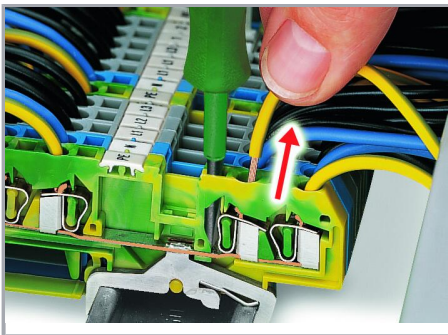
CAGE CLAMP® connection

Inserting a conductor.

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



Inserting insulation stops.

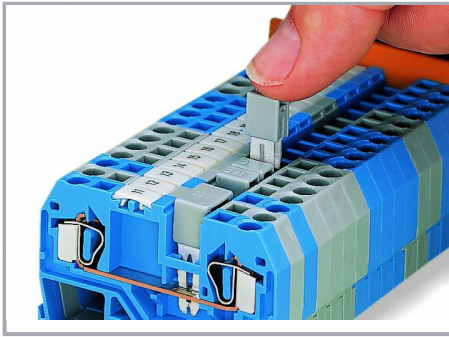


CAGE CLAMP® connection

Removing a solid conductor.

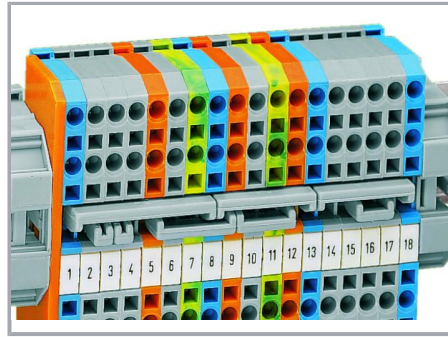
Commoning

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

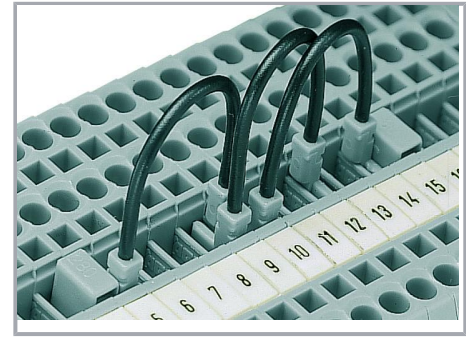


Commoning using an adjacent jumper.

Push jumper down until fully inserted!



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



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.

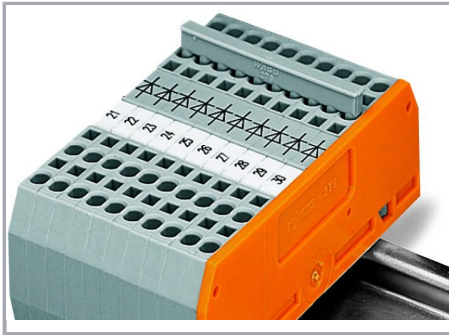
These jumpers are compatible with the following rail-mount terminal blocks:

- 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)

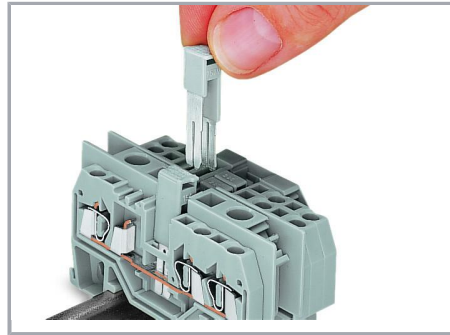
They are available in three conductor lengths (60, 110 and 250 mm), allowing up to 60 terminal blocks to be commoned depending on their width (see table on the right).

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.

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

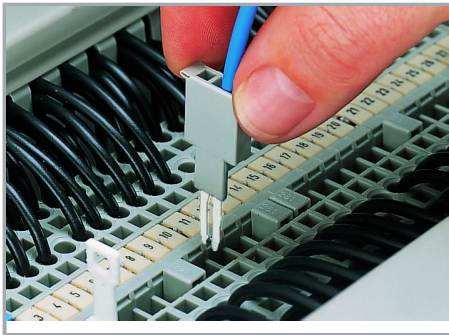


Commoning using comb-style jumper bars: Push comb-style jumper bars down until fully inserted.



Commoning terminal blocks of different sizes via step-down jumpers.

Testing

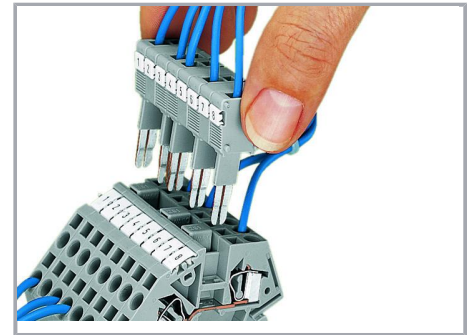


Testing with a test plug.

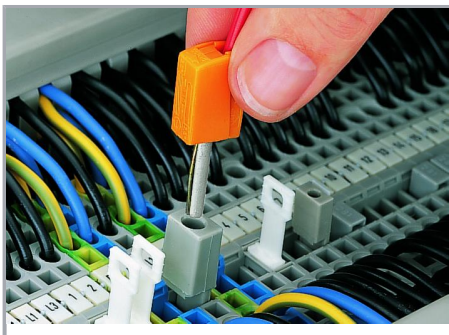
Picture shows a test plug fitted with CAGE CLAMP®.



L-type test plug modules fitted with CAGE CLAMP®

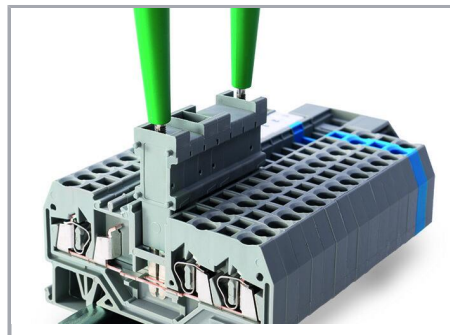


B-type test plug modules fitted with CAGE CLAMP®



Testing with a test plug.

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



Test plugs modules are directly plugged into the jumper contact slot of the current bar.

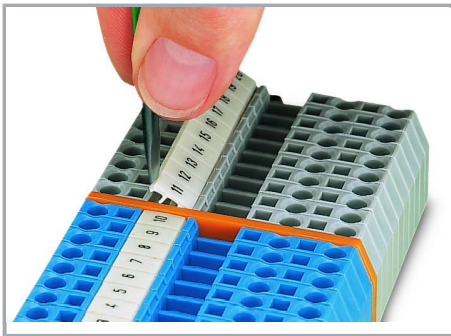
Cover

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

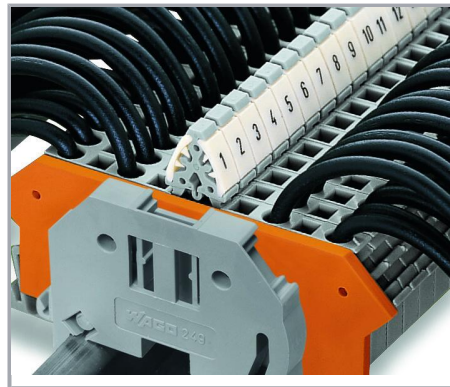


Protective warning markers inserted into the operating slots

Marking



Labeling via WMB Multi Marking System.



Terminal block marking with double marker carriers (209 128) Terminal blocks with side marking

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