

Data sheet | Item number: 281-104

2-conductor through terminal block; 4 mm²; suitable for Ex i applications;
lateral marker slots; for DIN-rail 35 x 15 and 35 x 7.5; CAGE CLAMP®; 4,00
mm²; blue

www.wago.com/281-104



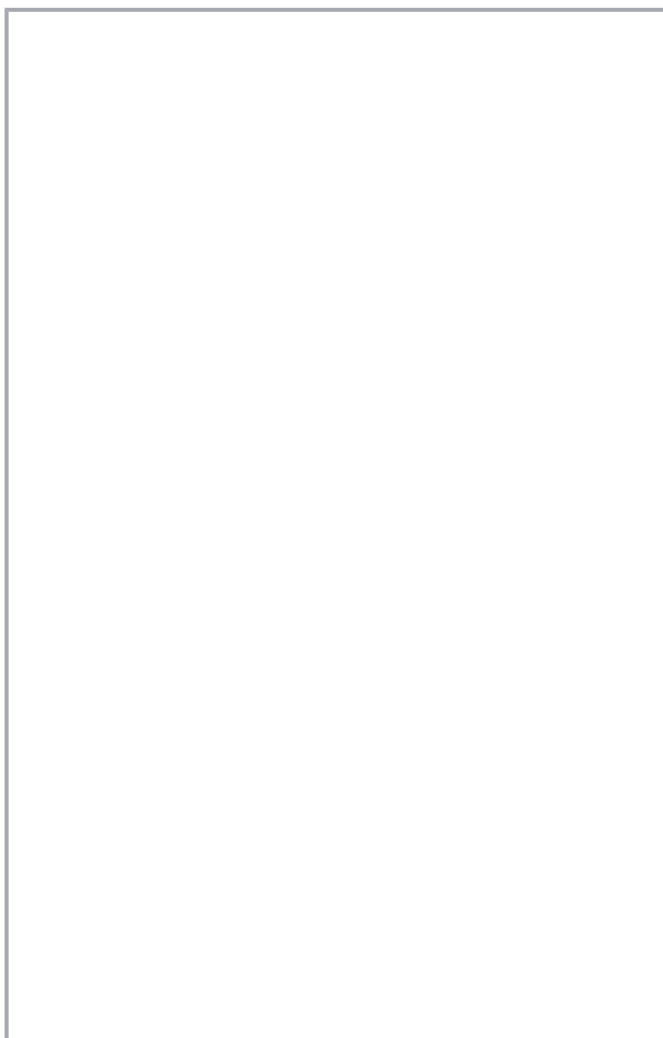
Color:



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

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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	32 A
Legend (ratings)	(III / 3) ≙ Overvoltage category III / Pollution degree 3

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Power Loss

Power loss, per pole (potential)	1.024 W
Rated current I_N for specified power loss	32 A
Resistance value for specified, current-dependent power loss	0.001 Ω

Connection data

Connection points	2
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:

- 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.

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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

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 inches
Wiring direction	Side-entry wiring

Physical data

Width	6 mm / 0.236 inches
Height	42.5 mm / 1.673 inches
Depth from upper-edge of DIN-rail	32.5 mm / 1.28 inches

Mechanical Data

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

Material Data

Note (material data)	Information on material specifications can be found here
Color	blue
Material group	I
Insulation material	Polyamide (PA66)
Flammability class per UL94	V0
Fire load	0.105 MJ
Weight	6.1 g

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



Environmental requirements

Processing temperature	-35 ... +85 °C
Continuous operating temperature	-60 ... +105 °C

Commercial data

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 pcs
Packaging type	box
Country of origin	IN
GTIN	4045454076054
Customs tariff number	85369010000

Environmental Product Compliance

RoHS Compliance Status	Compliant, No Exemption
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Approvals / Certificates

General approvals

Logo	Approval	Additional Approval Text	Certificate name
	CCA DEKRA Certification B.V.	IEC 60947	NTR NL-7454/A1
	CSA CSA Group	C22.2	1505034
	CSA DEKRA Certification B.V.	C22.2 No. 158	1505034
	KEMA/KEUR DEKRA Certification B.V.	EN 60947	71-107288
	UL UL International Germany GmbH	UL 1059	E45172

Declarations of conformity and manufacturer's declarations

Logo	Approval	Additional Approval Text	Certificate name
	EU-Declaration of Conformity WAGO GmbH & Co. KG	-	-
	UK-Declaration of Conformity	-	-

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Approvals for marine applications

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)

Required accessories

End plate

End plate	
Item no.: 281-301 End and intermediate plate; 3 mm thick; gray	www.wago.com/281-301
Item no.: 281-302 End and intermediate plate; 3 mm thick; orange	www.wago.com/281-302

Optional accessories

Ferrule

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.: 216-203 Ferrule; Sleeve for 1 mm ² / AWG 18; insulated; electro-tin plated; red	www.wago.com/216-203
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.: 216-202 Ferrule; Sleeve for 0.75 mm ² / 18 AWG; insulated; electro-tin plated; gray	www.wago.com/216-202
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

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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.: 216-241 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; light turquoise	www.wago.com/216-302

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 mm ² - 10 mm ² tbs; gray	www.wago.com/209-170
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.: 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

Push-in type wire jumper

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.: 249-126 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
Item no.: 249-125 Push-in type wire jumper; insulated; 60 mm long; black	www.wago.com/249-125

Tool

Operating tool

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

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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

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
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

Jumpers

Jumper

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

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Wire commoning chain; insulated; blue

Item no.: 210-103

Wire commoning chain; insulated; black

www.wago.com/210-103**Item no.: 281-402**

Jumper; insulated; gray

www.wago.com/281-402**Item no.: 283-414**

Step-down jumper; from 283 to 281 series; insulated; gray

www.wago.com/283-414**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.: 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 mm²; insulated; blackwww.wago.com/709-110**Item no.: 709-112**Wire commoning chain; 2.5 mm²; insulated; blackwww.wago.com/709-112**Item no.: 709-111**Wire commoning chain; 2.5 mm²; insulated; blackwww.wago.com/709-111**Item no.: 781-453**

Staggered jumper; from 1 to 3; insulated; gray

www.wago.com/781-453**Item no.: 781-452**

Staggered jumper; from 1 to 2; insulated; gray

www.wago.com/781-452**Item no.: 781-455**

Staggered jumper; from 1 to 5; insulated; gray

www.wago.com/781-455**Item no.: 781-454**

Staggered jumper; from 1 to 4; insulated; gray

www.wago.com/781-454**Item no.: 781-456**

Staggered jumper; from 1 to 6; insulated; gray

www.wago.com/781-456**Mounting**

Cover carrier

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; suitable for 270 Series sensor and actuator terminal blocks; gray

www.wago.com/709-167

Cover

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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Mounting accessories

Item no.: 209-106 Mounting carrier; for isolated mounting on DIN 35 rails; gray	www.wago.com/209-106
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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
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Protective warning marker

Cover

Item no.: 281-405 Protective warning marker; with high-voltage symbol, black; for 5 terminal blocks; yellow	www.wago.com/281-405
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End plate

End plate

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

Marker

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
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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
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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
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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
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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
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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
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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
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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; light 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; 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
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.: 793-501/000-007 WMB marking card; as card; not stretchable; plain; snap-on type; gray	www.wago.com/793-501/000-007
Item no.: 793-501/000-017 WMB marking card; as card; not stretchable; plain; snap-on type; light green	www.wago.com/793-501/000-017
Item no.: 793-501/000-012 WMB marking card; as card; not stretchable; plain; snap-on type; orange	www.wago.com/793-501/000-012
Item no.: 793-501/000-023 WMB marking card; as card; not stretchable; plain; snap-on type; green	www.wago.com/793-501/000-023
Item no.: 793-501/000-006 WMB marking card; as card; not stretchable; plain; snap-on type; blue	www.wago.com/793-501/000-006
Item no.: 793-501/000-005 WMB marking card; as card; not stretchable; plain; snap-on type; red	www.wago.com/793-501/000-005
Item no.: 793-501 WMB marking card; as card; not stretchable; plain; snap-on type; white	www.wago.com/793-501
Item no.: 793-501/000-024 WMB marking card; as card; not stretchable; plain; snap-on type; violet	www.wago.com/793-501/000-024
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

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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.: 793-5501/000-006 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 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.: 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.: 2009-115/000-006 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
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

Downloads

Documentation

Bid Text

281-104 X81 - Datei	2019 年2月19 日	xml 3.3 kB	Download
281-104 doc - Datei	2017 年6月12 日	doc 24.6 kB	Download

Additional Information

pdf
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CAD/CAE-Data

CAD data

2D/3D Models 281-104	URL	Download
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CAE data

EPLAN Data Portal 281-104	URL	Download
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WSCAD Universe 281-104	URL	Download
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ZUKEN Portal 281-104	URL	Download
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Environmental Product Compliance

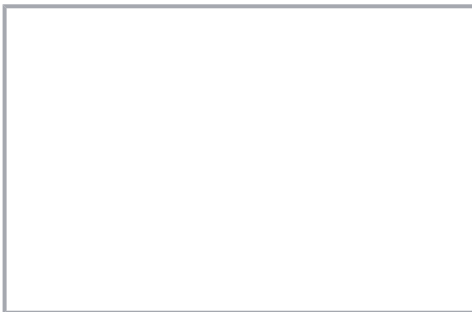
Compliance Search

Environmental Product Compliance 281-104	URL	Download
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2-conductor through terminal block; 4 mm²; suitable for Ex i applications; lateral marker slots; for DIN-rail 35 x 15 and 35 x 7.5; CAGE CLAMP®; 4,00 mm²; blue

Installation Notes

Installation



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



Quick assembly keys prevent reverse mounting.

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



Removing a terminal block from the assembly.

Conductor termination



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

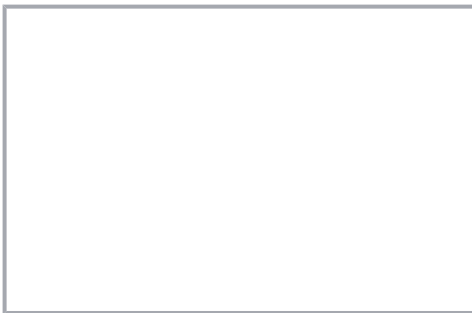
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Commoning using an adjacent jumper
(280-402).

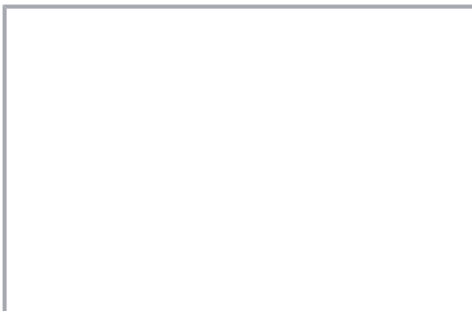
Push jumper down until fully inserted.

Testing



Testing with a test plug.

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



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

Marking

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



Labeling via WMB Multi Marking System.

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