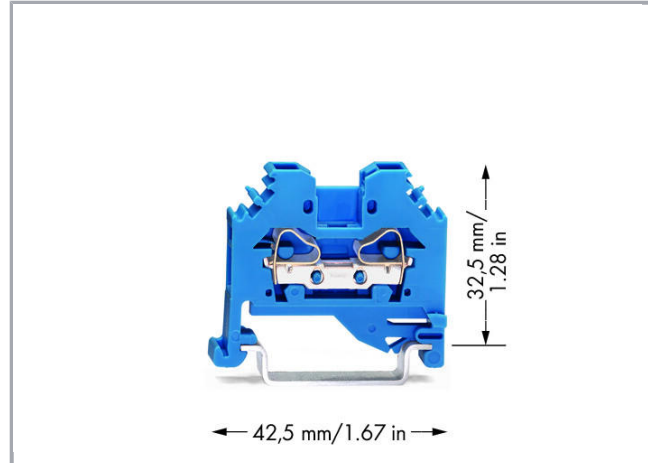
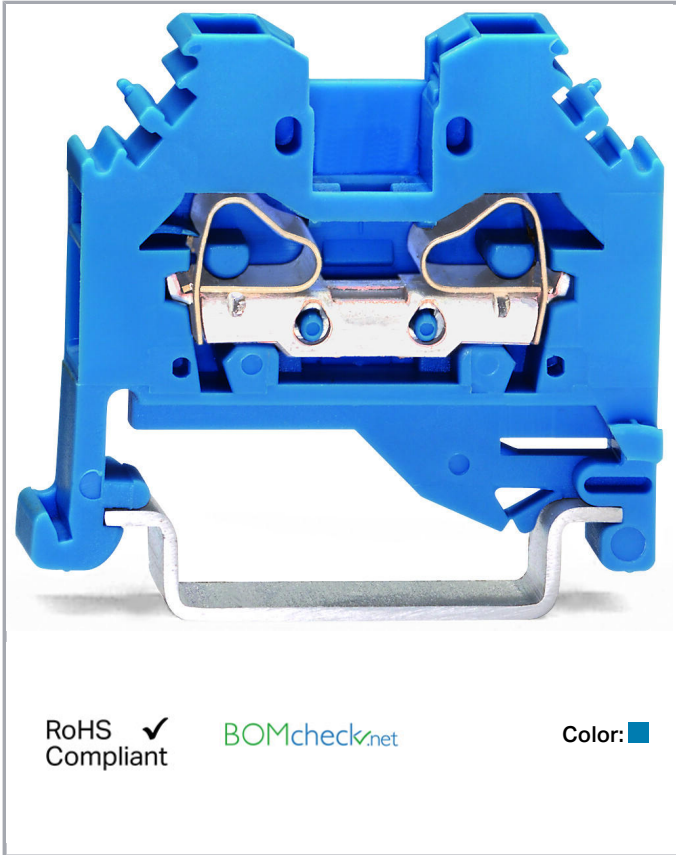


Data sheet | Item number: 281-104

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



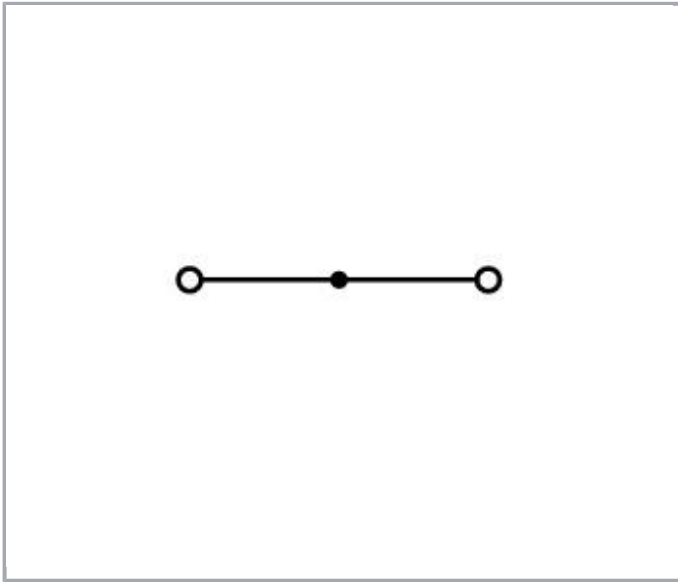
www.wago.com/281-104



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

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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.

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 (14 AWG) = 16 A

4 mm² (12 AWG) = 22 A

Data

Electrical data

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



Ratings per IEC/EN 60664-1

Ratings per	IEC/EN 60947-7-1
Rated voltage (III / 3)	800 V
Rated impulse voltage (III / 3)	8 kV
Rated current	32 A
Legend (ratings)	(III / 3) \triangleq 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 ... 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
Total number of connection points	2
Total number of potentials	1
Number of levels	1
Type of wiring	Side-entry wiring

Geometrical Data

Width	6 mm / 0.236 inch
Height from upper-edge of DIN-35 rail	32,5 mm / 1.28 inch
Depth	42,5 mm / 1.673 inch

Mechanical data

Design	horizontal
Type of mounting	DIN-35 rail
Marking level	Side marking

Material Data

Color	blue
Insulating material	Polyamide 66 (PA 66)
Fire load	0.108 MJ
Weight	6.1 g

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

Commercial data





Packaging type	BOX
Country of origin	IN
GTIN	4045454076054
Customs Tariff No.	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

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/E0 BV
	DNV GL Det Norske Veritas, Germanischer Lloyd	-	TAE00001V2
	LR Lloyds Register	EN 60947	91/20112 (E9)

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UL-Approvals

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

Counterpart

Compatible products








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; white	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; white	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; white	www.wago.com/2009-115/000-017

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

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	<p>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</p>	<p>www.wago.com/2009-115/000-023</p>
	<p>Item no.: 2009-115/000-024 WMB-Inline; for Smart Printer; 1500 pieces on roll; stretchable 5 - 5.2 mm; plain; snap-on type; white</p>	<p>www.wago.com/2009-115/000-024</p>
	<p>Item no.: 209-140 Group marker carrier; gray</p>	<p>www.wago.com/209-140</p>
	<p>Item no.: 209-141 Group marker carrier; gray</p>	<p>www.wago.com/209-141</p>
	<p>Item no.: 209-142 Group marker carrier; gray</p>	<p>www.wago.com/209-142</p>
	<p>Item no.: 249-105 Group marker carrier; gray</p>	<p>www.wago.com/249-105</p>
	<p>Item no.: 793-501 WMB marking card; as card; not stretchable; plain; snap-on type; white</p>	<p>www.wago.com/793-501</p>
	<p>Item no.: 793-501/000-002 WMB marking card; as card; not stretchable; plain; snap-on type; yellow</p>	<p>www.wago.com/793-501/000-002</p>
	<p>Item no.: 793-501/000-005 WMB marking card; as card; not stretchable; plain; snap-on type; red</p>	<p>www.wago.com/793-501/000-005</p>
	<p>Item no.: 793-501/000-006 WMB marking card; as card; not stretchable; plain; snap-on type; blue</p>	<p>www.wago.com/793-501/000-006</p>
	<p>Item no.: 793-501/000-007 WMB marking card; as card; not stretchable; plain; snap-on type; gray</p>	<p>www.wago.com/793-501/000-007</p>
	<p>Item no.: 793-501/000-012 WMB marking card; as card; not stretchable; plain; snap-on type; orange</p>	<p>www.wago.com/793-501/000-012</p>
	<p>Item no.: 793-501/000-017 WMB marking card; as card; not stretchable; plain; snap-on type; light green</p>	<p>www.wago.com/793-501/000-017</p>
	<p>Item no.: 793-501/000-023 WMB marking card; as card; not stretchable; plain; snap-on type; green</p>	<p>www.wago.com/793-501/000-023</p>
	<p>Item no.: 793-501/000-024 WMB marking card; as card; not stretchable; plain; snap-on type; violet</p>	<p>www.wago.com/793-501/000-024</p>

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



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

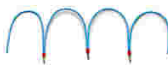
Item no.: 793-5501/000-024

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

Jumper

Item no.: 210-103

Wire commoning chain; insulated; 50 connections; black www.wago.com/210-103



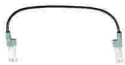
Item no.: 210-123

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 mm² www.wago.com/249-123



Item no.: 249-125

Push-in type wire jumper; insulated; wire length 60 mm; Conductor cross section 0.75 mm² www.wago.com/249-125

Item no.: 249-126

Push-in type wire jumper; insulated; wire length 110 mm; Conductor cross section 0.75 mm² www.wago.com/249-126

Item no.: 249-127

Push-in type wire jumper; insulated; wire length 250 mm; Conductor cross section 0.75 mm² www.wago.com/249-127

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

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Item no.: 281-402 Adjacent jumper; insulated; IN = IN terminal block; gray	www.wago.com/281-402
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Item no.: 281-409 Alternate jumper; insulated; IN = IN terminal block; gray	www.wago.com/281-409
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Item no.: 281-422 Adjacent jumper; insulated; IN = IN terminal block; yellow-green	www.wago.com/281-422
--	--

Item no.: 283-414 Step-down jumper; insulated; from 16 mm ² to 4 mm ² ; Nominal current 32 A; gray	www.wago.com/283-414
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Item no.: 284-413 Step-down jumper; insulated; from 10/6 mm ² to 6/4 mm ² ; Nominal current 30 A; gray	www.wago.com/284-413
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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
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Item no.: 709-110 Wire commoning chain; insulated; 4 connections; 3 x 110 mm; black	www.wago.com/709-110
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Item no.: 709-111 Wire commoning chain; insulated; 3 connections; 2 x 120 mm; black	www.wago.com/709-111
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Item no.: 709-112 Wire commoning chain; insulated; 3 connections; 2 x 170 mm; black	www.wago.com/709-112
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Item no.: 781-452 Staggered jumper; insulated; from 1 to 2; Spacing: 6 mm; gray	www.wago.com/781-452
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Item no.: 781-453 Staggered jumper; insulated; from 1 to 3; Spacing: 6 mm; gray	www.wago.com/781-453
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Item no.: 781-454 Staggered jumper; insulated; from 1 to 4; Spacing: 6 mm; gray	www.wago.com/781-454
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Item no.: 781-455 Staggered jumper; insulated; from 1 to 5; Spacing: 6 mm; gray	www.wago.com/781-455
---	--

Item no.: 781-456 Staggered jumper; insulated; from 1 to 6; Spacing: 6 mm; gray	www.wago.com/781-456
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Test 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
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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
--	--

General accessories

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

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

assembling

Item no.: 209-106

Mounting carrier; for isolated mounting on DIN 35 rails; gray

www.wago.com/209-106



Item no.: 709-153

Cover; Type 1; suitable for cover carrier, type 1; 1 m long; transparent

www.wago.com/709-153

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



Item no.: 281-322

Separator plate; 2 mm thick; oversized; orange

www.wago.com/281-322

Item no.: 281-332

Separator plate; 2 mm thick; oversized; gray

www.wago.com/281-332

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

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

www.wago.com/281-336

Protective Warning Marker

Item no.: 281-405

Protective warning marker; with high-voltage symbol, black; for 5 terminal blocks; yellow

www.wago.com/281-405

ferrule

Item no.: 216-106

Ferrule; Sleeve for 2.5 mm² / AWG 14; uninsulated; electro-tin plated

www.wago.com/216-106

Item no.: 216-201

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

www.wago.com/216-201



Item no.: 216-202

Ferrule; Sleeve for 0.75 mm² / 18 AWG; insulated; electro-tin plated; gray

www.wago.com/216-202

Item no.: 216-203

Ferrule; Sleeve for 1 mm² / AWG 18; insulated; electro-tin plated; red

www.wago.com/216-203



Item no.: 216-204

Ferrule; Sleeve for 1.5 mm² / AWG 16; insulated; electro-tin plated; black

www.wago.com/216-204



Item no.: 216-205

Ferrule; Sleeve for 2.08 mm² / AWG 14; insulated; electro-tin plated; yellow

www.wago.com/216-205

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

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



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	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
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
	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	

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

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

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

Downloads

Documentation

Additional Information

Technical explanations

Apr 3, 2019

pdf
2.1 MB

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CAD/CAE-Data

CAD data

2D/3D Models 281-104

[URL](#)

[Download](#)

CAE data

EPLAN Data Portal 281-104

[URL](#)

[Download](#)

WSCAD Universe 281-104

[URL](#)

[Download](#)

Installation Notes

Installation

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

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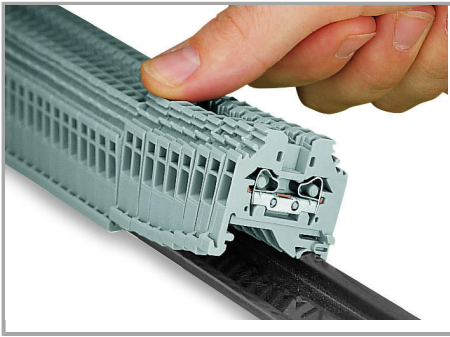
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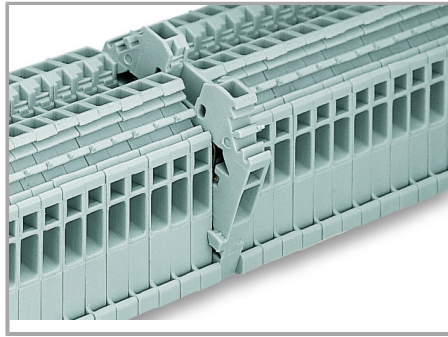
Email: info.de@wago.com | Web: www.wago.com

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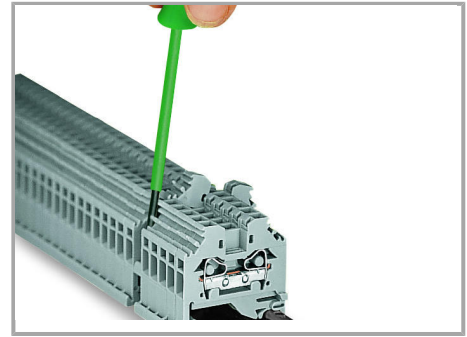
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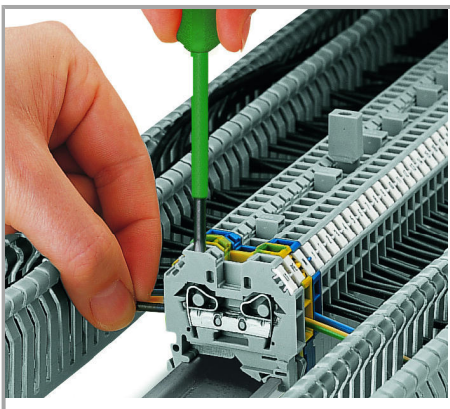
Snapping side-entry rail-mount terminal blocks onto the carrier rail.



Quick assembly keys prevent reverse mounting.



Removing a terminal block from the assembly.



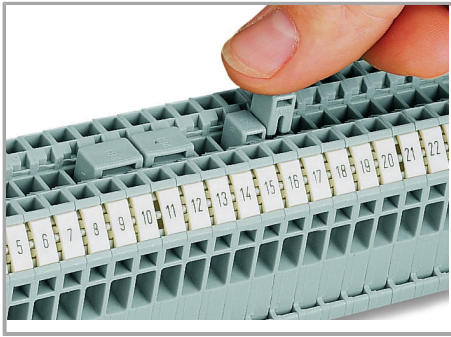
CAGE CLAMP® connection

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

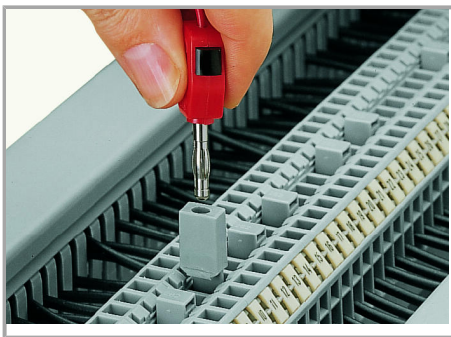
Subject to changes. Please also observe the further product documentation!



Commoning using an adjacent jumper (280-402).

Push jumper down until fully inserted.

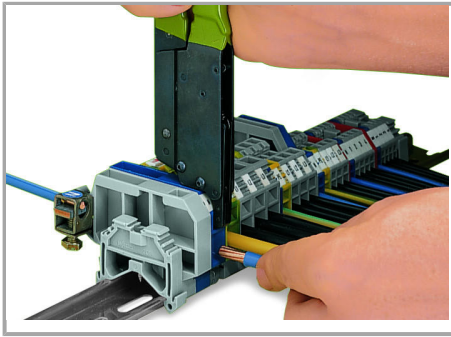
Testing



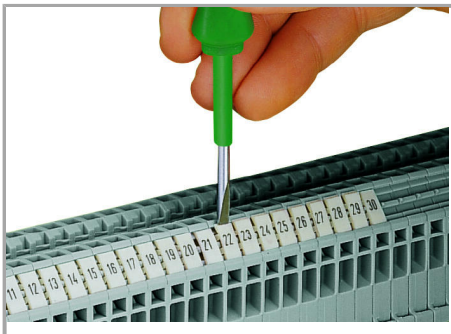
Testing with a test plug

(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!