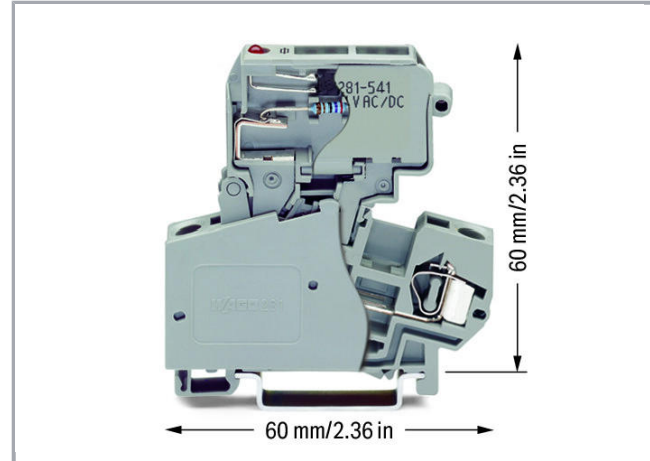
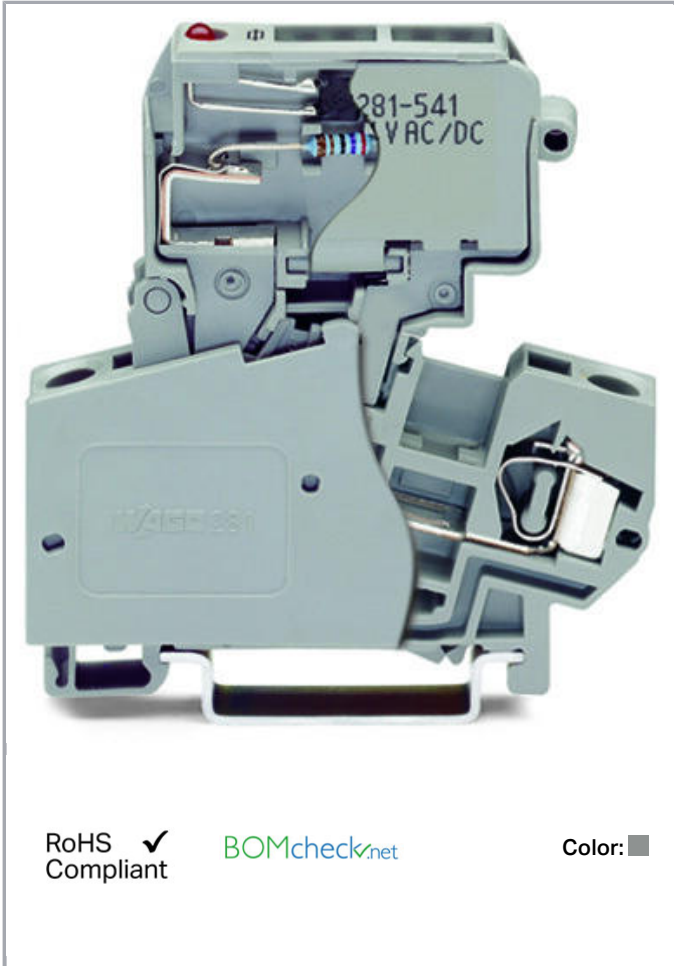


Data sheet | Item number: 281-613/281-541

2-conductor fuse terminal block; with pivoting fuse holder; for miniature metric fuse 1/4 x 1 mm; with blown fuse indication by LED; 15 - 30 V; for DIN-rail 35 x 15 and 35 x 7.5; 4 mm²; CAGE CLAMP®; 4,00 mm²; gray



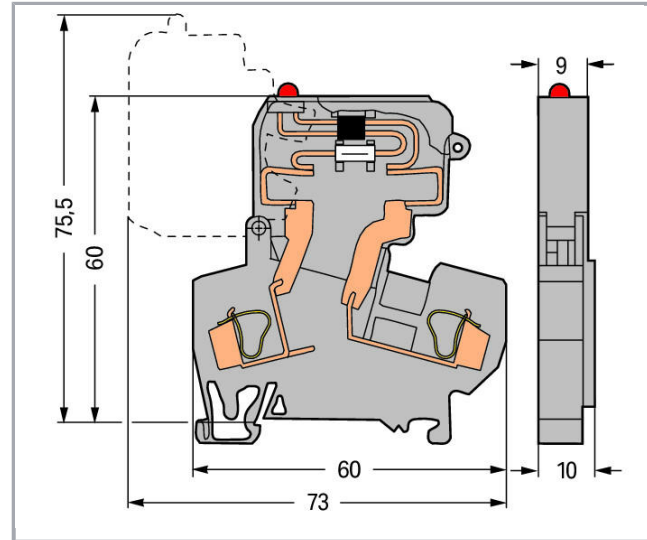
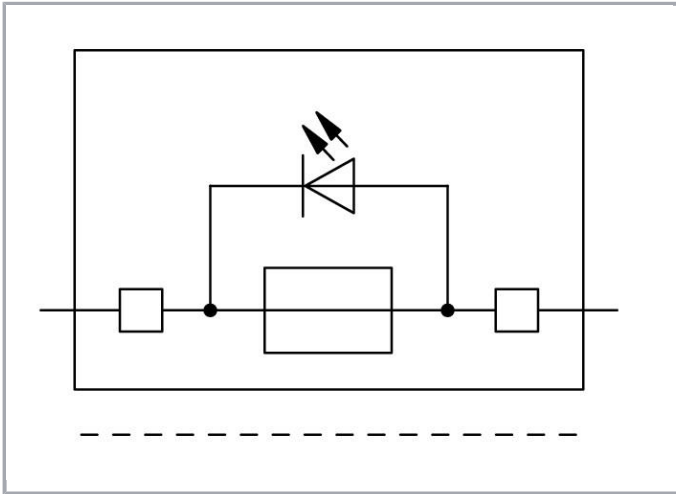
www.wago.com/281-613/281-541



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 = 16 A

4 mm² = 22 A

Safety information 1:

Electrical ratings are given by the fuse and blown fuse indication.

Safety information 2:

Leakage current in case of a blown fuse: LED 6 mA

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

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Data

Electrical data

Ratings per IEC/EN 60664-1

Ratings per	IEC/EN 60947-7-3
Rated voltage (III / 3)	800 V
Rated impulse voltage (III / 3)	8 kV
Rated current	10 A
Operation status indicator	15 ... 30 V
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	2
Number of levels	1
Type of wiring	Front-entry wiring

Geometrical Data

Width	10 mm / 0.394 inch
Height from upper-edge of DIN-35 rail	60 mm / 2.362 inch
Depth	60 mm / 2.362 inch

Mechanical data

Design	angled
Type of mounting	DIN-35 rail
Marking level	Center marking

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

Material Data




Color	gray
Insulating material	Polyamide 66 (PA 66)
Fire load	0.398 MJ
Weight	20.2 g

Commercial data


Product Group	1 (Rail Mounted Terminal Blocks)
Packaging type	BOX
Country of origin	DE
GTIN	4045454319441
Customs Tariff No.	85369095990

Approvals / Certificates

Country specific Approvals

Logo	Approval	Additional Approval Text	Certificate name
	CSA DEKRA Certification B.V.	C22.2 No. 158	1505034
	KEMA/KEUR DEKRA Certification B.V.	EN 60947	2160584.31
	KEMA/KEUR DEKRA Certification B.V.	EN 60947	NTR NL-7135


Ship Approvals

Logo	Approval	Additional Approval Text	Certificate name
	ABS American Bureau of Shipping	-	20-HG1941090-PDA
	DNV GL Det Norske Veritas, Germanischer Lloyd	-	TAE00001V2

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





UL-Approvals

Logo	Approval	Additional Approval Text	Certificate name
	UR Underwriters Laboratories Inc.	UL 1059	E45172

Counterpart

Compatible products

ferrule

	Item no.: 216-106 Ferrule; Sleeve for 2.5 mm ² / AWG 14; uninsulated; electro-tin plated	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
	Item no.: 216-206 Ferrule; Sleeve for 2.5 mm ² / AWG 14; insulated; electro-tin plated; blue	www.wago.com/216-206

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

**Item no.: 216-241**

Ferrule; Sleeve for 0.5 mm² / 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 mm² / 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 mm² / 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 mm² / 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 mm² / 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 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; green

www.wago.com/216-302**General accessories****Item no.: 249-120**

Group marker carrier; white

www.wago.com/249-120**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**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

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

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Item no.: 2009-115/000-017 www.wago.com/2009-115/000-017
WMB-Inline; for Smart Printer; 1500 pieces on roll; stretchable 5 - 5.2 mm; plain; snap-on type; white

Item no.: 2009-115/000-023 www.wago.com/2009-115/000-023
WMB-Inline; for Smart Printer; 1500 pieces on roll; stretchable 5 - 5.2 mm; plain; snap-on type; green

Item no.: 2009-115/000-024 www.wago.com/2009-115/000-024
WMB-Inline; for Smart Printer; 1500 pieces on roll; stretchable 5 - 5.2 mm; plain; snap-on type; white



Item no.: 793-501 www.wago.com/793-501
WMB marking card; as card; not stretchable; plain; snap-on type; white

Item no.: 793-501/000-002 www.wago.com/793-501/000-002
WMB marking card; as card; not stretchable; plain; snap-on type; yellow

Item no.: 793-501/000-005 www.wago.com/793-501/000-005
WMB marking card; as card; not stretchable; plain; snap-on type; red

Item no.: 793-501/000-006 www.wago.com/793-501/000-006
WMB marking card; as card; not stretchable; plain; snap-on type; blue



Item no.: 793-501/000-007 www.wago.com/793-501/000-007
WMB marking card; as card; not stretchable; plain; snap-on type; gray

Item no.: 793-501/000-012 www.wago.com/793-501/000-012
WMB marking card; as card; not stretchable; plain; snap-on type; orange

Item no.: 793-501/000-017 www.wago.com/793-501/000-017
WMB marking card; as card; not stretchable; plain; snap-on type; light green

Item no.: 793-501/000-023 www.wago.com/793-501/000-023
WMB marking card; as card; not stretchable; plain; snap-on type; green



Item no.: 793-501/000-024 www.wago.com/793-501/000-024
WMB marking card; as card; not stretchable; plain; snap-on type; violet



Item no.: 793-5501 www.wago.com/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

Item no.: 793-5501/000-002 www.wago.com/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

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



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

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.: 281-309

End and intermediate plate; 2.5 mm thick; orange

www.wago.com/281-309

Item no.: 281-311

End and intermediate plate; 2.5 mm thick; gray

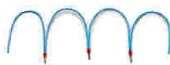
www.wago.com/281-311

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

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

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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

Item no.: 281-402

Adjacent jumper; insulated; IN = IN terminal block; gray

www.wago.com/281-402

Item no.: 709-110

Wire commoning chain; insulated; 4 connections; 3 x 110 mm; black

www.wago.com/709-110



Item no.: 709-111

Wire commoning chain; insulated; 3 connections; 2 x 120 mm; black

www.wago.com/709-111

Item no.: 709-112

Wire commoning chain; insulated; 3 connections; 2 x 170 mm; black

www.wago.com/709-112

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

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

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

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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

Test Accessories



Item no.: 210-137

Test plug; 2.3 mm Ø; with 500 mm cable; yellow

www.wago.com/210-137

Item no.: 280-404

Test plug adapter; 5 mm wide; for test plug 210-137 (2.3 mm Ø); suitable for 1.5 mm² - 4 mm² tbs; gray

www.wago.com/280-404

N-busbar

Item no.: 210-254

Interlocking link; mechanically locks multiple links; 1 m long; transparent

www.wago.com/210-254

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	Download
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CAD/CAE-Data

CAD data

2D/3D Models 281-613/281-541	URL	Download
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CAE data

EPLAN Data Portal 281-613/281-541	URL	Download
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WSCAD Universe 281-613/281-541	URL	Download
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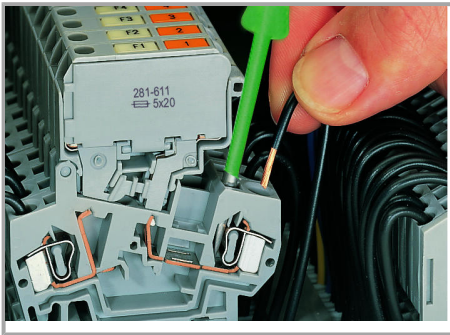
Subject to changes. Please also observe the further product documentation!

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Installation Notes

Conductor termination

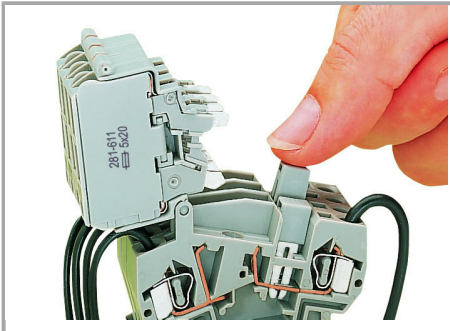


CAGE CLAMP® connection

Inserting a conductor via screwdriver.

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

Commoning

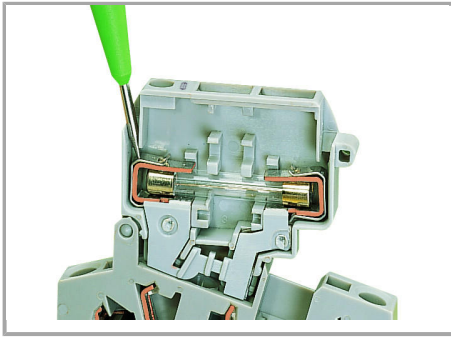


Commoning:

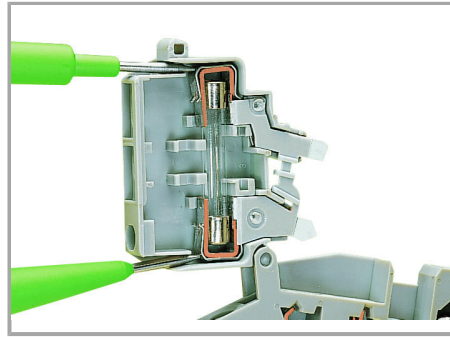
Distributing current to several fuse-protected circuits via insulated push-in type jumpers.

Testing

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



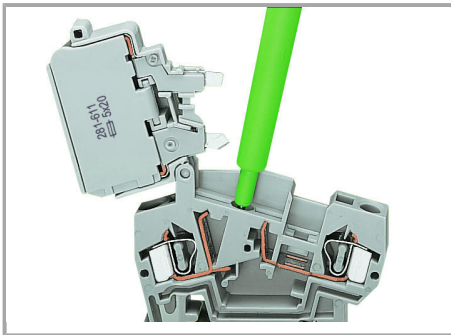
Voltage test, either at input or output with fuse holder in closed position (live)



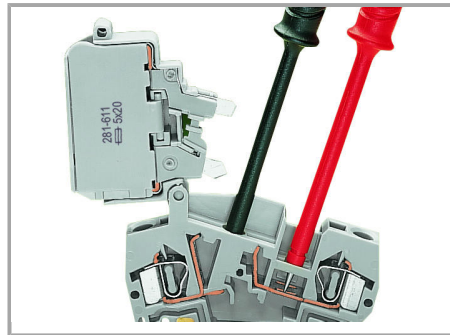
Through test with fuse holder in open position (no voltage)



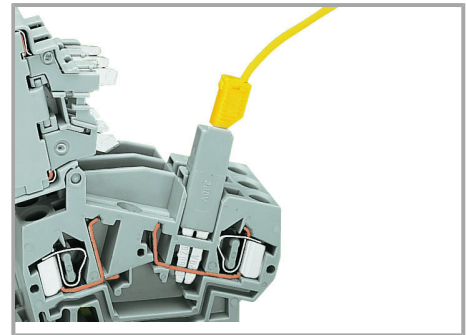
Voltage test at input in the test slot of the current bar



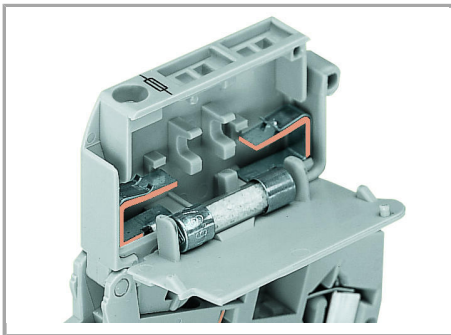
Testing voltage at the output via separate test slot.



Measuring current between jumper slot and separate test slot.



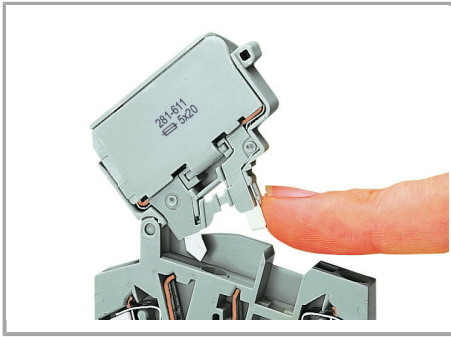
Testing voltage (input side) via test plug adapter (280-404, shown) or test plug (281-407).



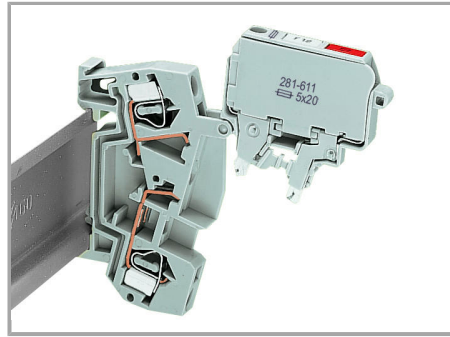
5 x 20 mm, 5 x 25 mm and 1/4" x 1" fuse holders are fitted with stops on the inside of the cover.

Safety

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

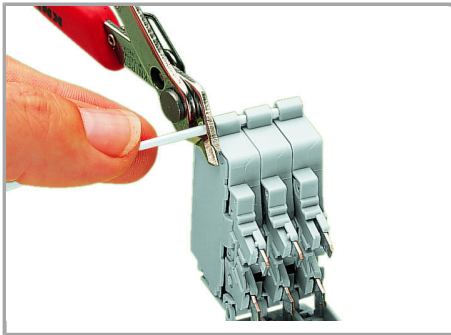


Touch-proof protection in all positions of the fuse holder



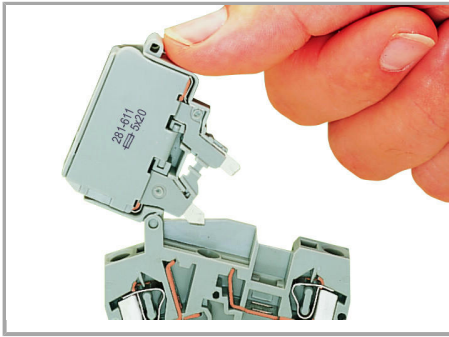
Fuse holder will remain safely locked open in vertical assemblies.

Locking lever

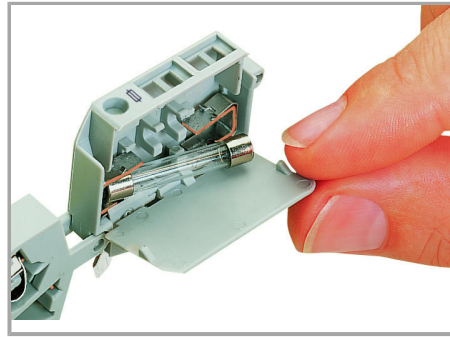


Ganging several fuse holders with an interlocking link (example shows 8 mm wide terminal blocks).

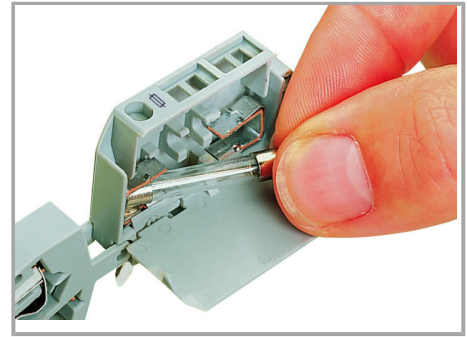
Subject to changes. Please also observe the further product documentation!



Fuse replacement:



Fuse replacement:

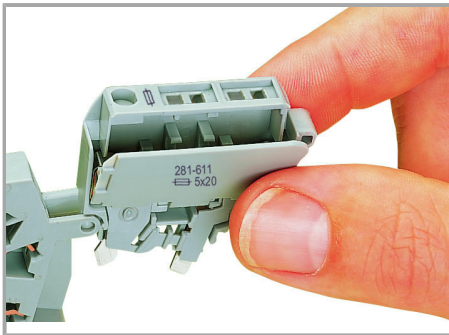


Fuse replacement:

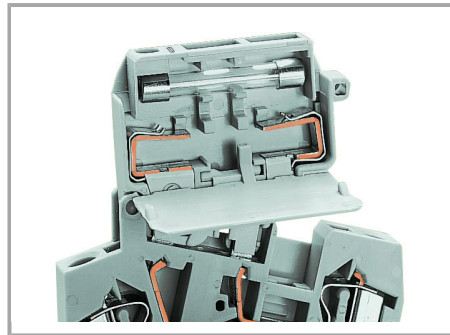
Before replacing a fuse, pivot the fuse holder into the locked open position.

One end of the fuse is automatically ejected from the holder when opening the cover.

Easily removing a fuse by hand.



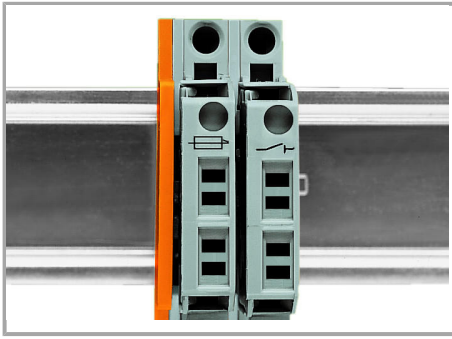
Fuse replacement:



Storing a spare fuse (fuse holder without blown fuse indication).

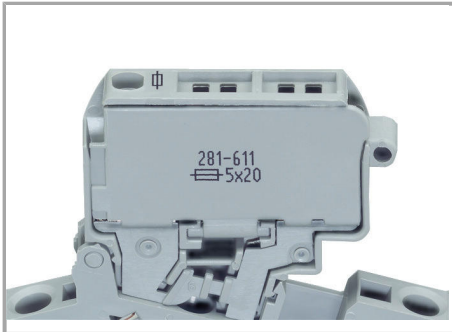
Insert a new fuse and snap the cover closed.

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

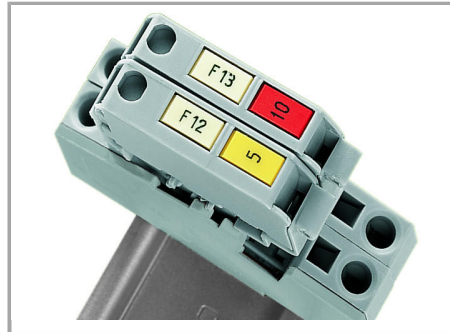


An intermediate plate is supplied with all 10 mm wide fused disconnect terminal blocks. At the end of an assembly or if there is **no** adjacent fused disconnect terminal block, an end or intermediate plate must be used.

Marking



Fuse holders are printed with correct fuse size.



Each fuse holder features two marker slots for custom WMB Multi markers (example shows 8 mm wide terminal blocks).

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