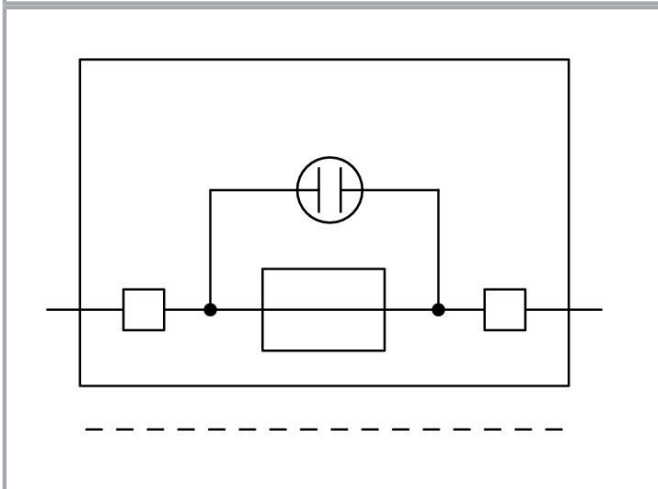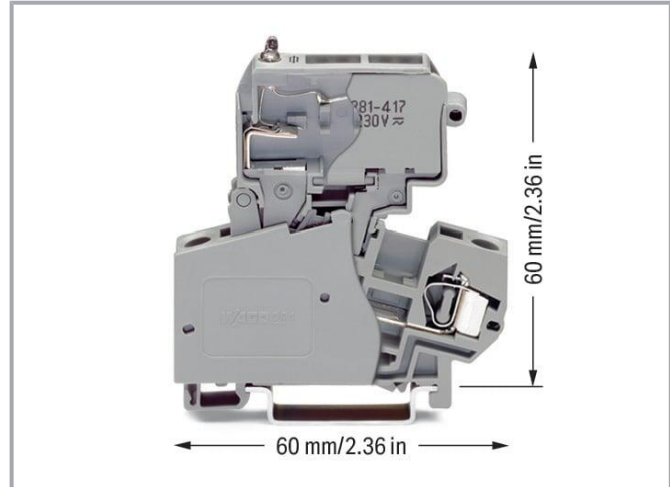# Data sheet | Item number: 281-613/281-417

2-conductor fuse terminal block; with pivoting fuse holder; for miniature metric fuse 1/4 x 1 mm; with blown fuse indication by neon lamp; 230 V; for DIN-rail 35 x 15 and 35 x 7.5; 4 mm²; CAGE CLAMP®; 4,00 mm²; gray
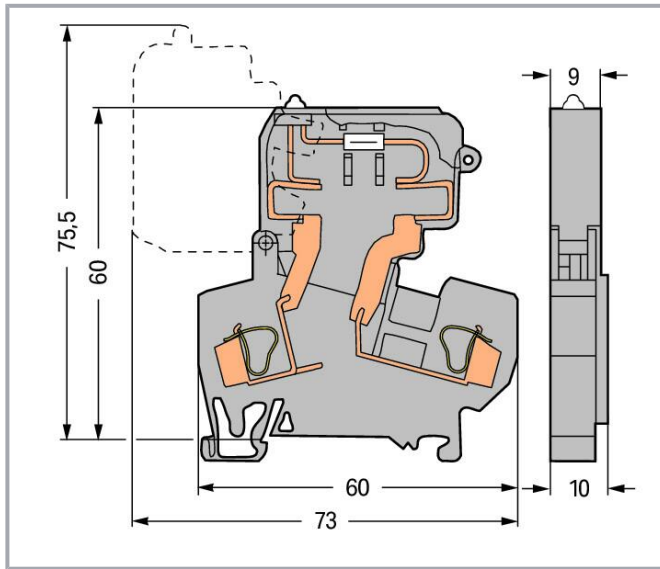
www.wago.com/281-613/281-417

Color: ▬

60 mm/2.36 in

60 mm/2.36 in

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 60947-7-3
Ratings (note)	Electrical ratings are given by the fuse and blown fuse indication.
Nominal voltage (III/3)	800 V
Rated impulse voltage (III/3)	8 kV
Rated current	10 A
Note (rated current)	Leakage current in case of a blown fuse: Neon lamp < 0.4 mA
Operation status indicator	230 V
Legend (ratings)	(III / 3) ≙ Overvoltage category III / Pollution degree 3

Power loss

Power loss (max.) $P_{l\,(max.)}$ (note)	When selecting glass cartridge fuses, make sure that the maximum power loss listed below is not exceeded. The power loss is determined according to IEC or EN 60947-7-3/VDE 0611-6 at 23°C. The temperature rise of the terminal block must be checked according to their application and mounting. Higher ambient temperatures represent an additional impact on miniature fuses. Therefore, in such applications, the rated current must be reduced if necessary. More details are available from the manufacturers.
Power loss P_l max. overload and short-circuit protection (individual	2.5 W

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

arrangement)

Power loss P_l max. overload and short-circuit protection (group arrangement)	1.6 W
Power loss P_l max. short-circuit protection (individual arrangement)	4 W
Power loss P_l max. short-circuit protection (group arrangement)	2.5 W

General

Fuse receptacle	pivoting
Fuse type	Cylindrical fuse; ¼" x 1"

Connection data

Connection points	2
Total number of potentials	2
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.

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

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 mm² / 28 … 12 AWG
Fine-stranded conductor	0.08 … 4 mm² / 28 … 12 AWG
Strip length	9 … 10 mm / 0.35 … 0.39 inches
Wiring direction	Front-entry wiring

Physical data

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

Mechanical Data

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

Material Data

Note (material data)	
	Information on material specifications can be found here
Color	gray
Material group	I
Insulation material	Polyamide (PA66)
Flammability class per UL94	V0
Fire load	0.382 MJ
Weight	20.1 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

Product Group	1 (Rail Mounted Terminal Blocks)
eCl@ss 10.0	27-14-11-16
eCl@ss 9.0	27-14-11-16
ETIM 8.0	EC000899
ETIM 7.0	EC000899
PU (SPU)	50 pcs
Packaging type	box
Country of origin	DE
GTIN	4045454197025
Customs tariff number	85369095000

Environmental Product Compliance

RoHS Compliance Status	Compliant,No Exemption

Approvals / Certificates

General 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	NTR NL-7135
	KEMA/KEUR DEKRA Certification B.V.	EN 60947	2160584.31
	UR UL International Germany GmbH	UL 1059	E45172

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

Declarations of conformity and manufacturer's declarations

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

Approvals for marine applications

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

Optional accessories

End plate

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

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

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

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Item no.: 709-153

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

www.wago.com/709-153

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

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

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.: 2009-115/000-017

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
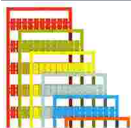
www.wago.com/2009-115 /000-024

Item no.: 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.: 793-5501/000-007

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; light green

www.wago.com/793-5501 /000-017

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

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

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WAGO

	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

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

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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.: 793-5501/000-002

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

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

Subject to changes. Please also observe the further product documentation!
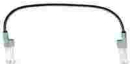
Item no.: 210-118

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

Ferrule

Ferrule

Item no.: 216-106

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

www.wago.com/216-106

Item no.: 216-203

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

www.wago.com/216-203

Item no.: 216-206

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

www.wago.com/216-206

Item no.: 216-202

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

www.wago.com/216-202

Item no.: 216-204

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

Item no.: 216-201

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

www.wago.com/216-201

Item no.: 216-241

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

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

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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; 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

Locking levers

Locking system

Item no.: 210-254
Interlocking link; mechanically locks multiple links; 1 m long; transparent

www.wago.com/210-254

Testing and measuring

Testing accessories

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.: 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

Jumpers

Jumper

Item no.: 210-123
Wire commoning chain; insulated; blue

www.wago.com/210-123

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.: 709-110
Wire commoning chain; 2.5 mm²; insulated; black

www.wago.com/709-110

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

	Item no.: 709-112	www.wago.com/709-112
	Wire commoning chain; 2.5 mm²; insulated; black	

	Item no.: 709-111	www.wago.com/709-111
	Wire commoning chain; 2.5 mm²; insulated; black	

Tool

Operating tool

	Item no.: 210-657	www.wago.com/210-657
	Operating tool; Blade: 3.5 x 0.5 mm; with a partially insulated shaft; short; multicoloured	

	Item no.: 210-658	www.wago.com/210-658
	Operating tool; Blade: 3.5 x 0.5 mm; with a partially insulated shaft; angled; short; multicoloured	

	Item no.: 210-720	www.wago.com/210-720
	Operating tool; Blade: 3.5 x 0.5 mm; with a partially insulated shaft; multicoloured	

Downloads

Documentation

Bid Text

281-613/281-417	2019 Feb 19	xml	Download
X81 - Datei		3.7 kB	

281-613/281-417	2017 Mar 14	doc	Download
doc - Datei		26.6 kB	

Additional Information

Technical Section		pdf	Download
Technical explanations		2.2 MB	

CAD/CAE-Data

CAD data

2D/3D Models 281-613/281-417	URL	Download

CAE data

EPLAN Data Portal 281-613/281-417

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

|	URL	Download
WSCAD Universe 281-613/281-417	URL	Download
ZUKEN Portal 281-613/281-417	URL	Download
EPLAN Data Portal 281-613/281-417	URL	Download
WSCAD Universe 281-613/281-417	URL	Download

Environmental Product Compliance

Compliance Search

	URL	Download
Environmental Product Compliance 281-613/281-417	URL	Download

2-conductor fuse terminal block; with pivoting fuse holder; for miniature metric fuse 1
/4 x 1 mm; with blown fuse indication by neon lamp; 230 V; for DIN-rail 35 x 15 and 35
x 7.5; 4 mm²; CAGE CLAMP®; 4,00 mm²; gray

Installation Notes

Conductor termination
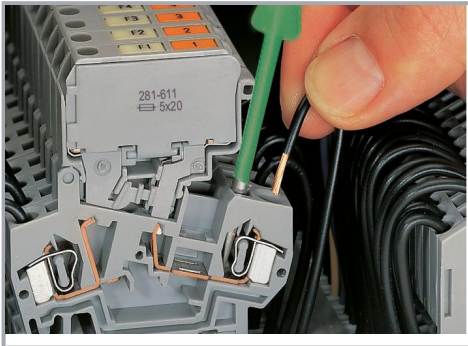
CAGE CLAMP® connection

Inserting a conductor.

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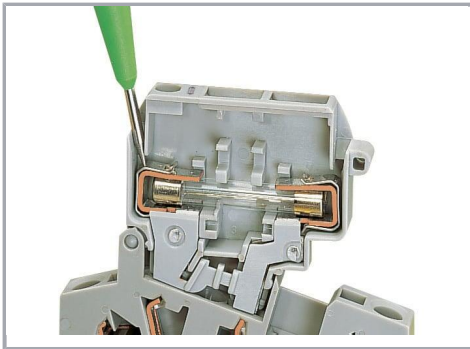conductor's nominal cross-section.

Commoning

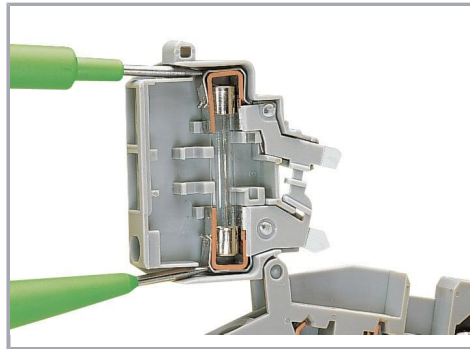Subject to changes. Please also observe the further product documentation!

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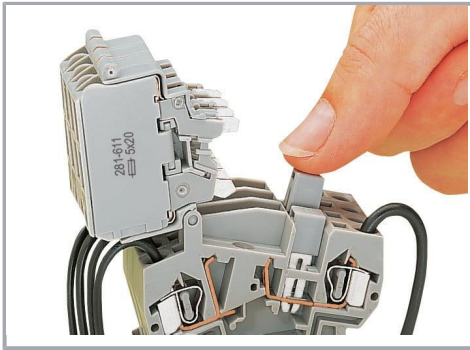
Commoning

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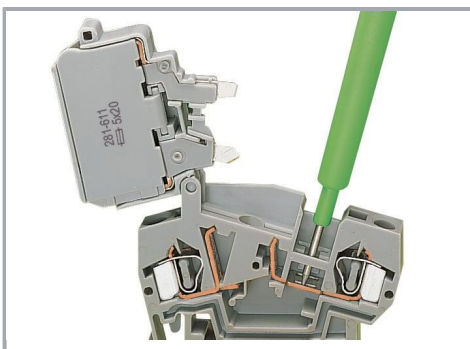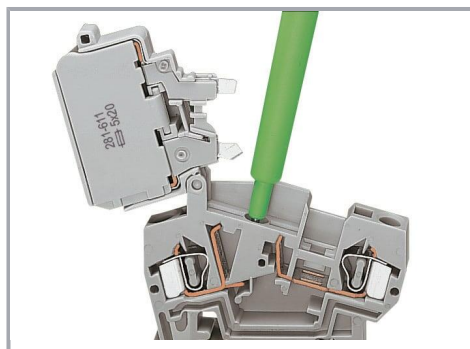
Testing

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

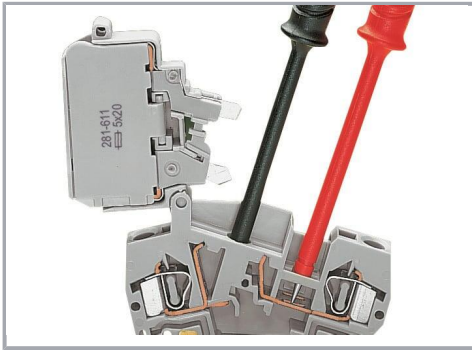Through test with fuse holder in open position (no voltage)

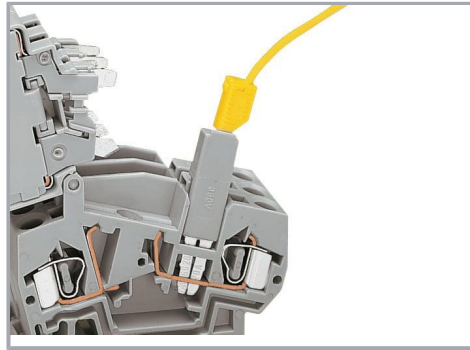Voltage test at input in the test slot of the current bar

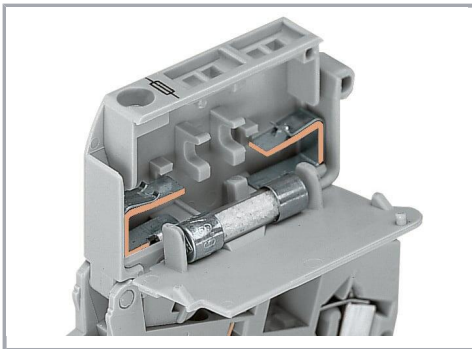Testing voltage at the output via separate test slot.

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

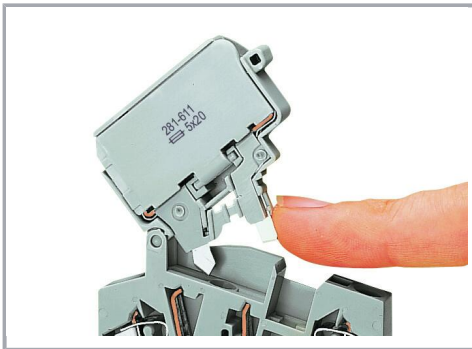Measuring current between jumper slot and separate test slot.

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 ¼" x 1" fuse holders are fitted with stops on the inside of the cover.
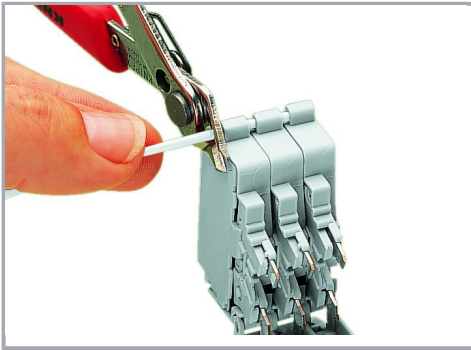
Security

Touch-proof protection in all positions of the fuse holder

Fuse holder will remain safely locked open in vertical assemblies.

Locking system

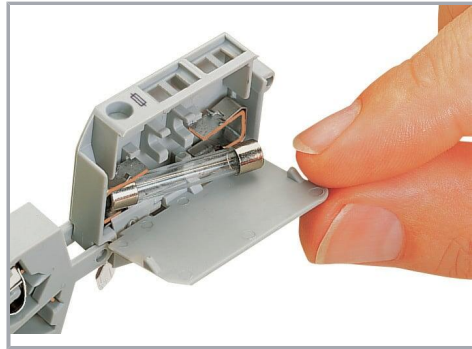Subject to changes. Please also observe the further product documentation!

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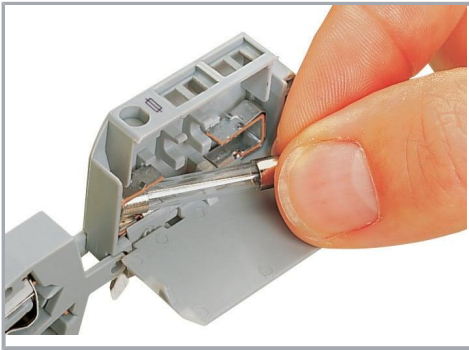

Fuse replacement:

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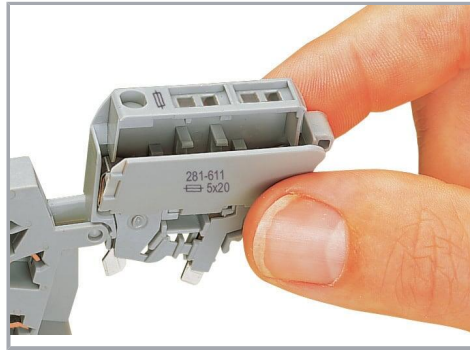

Fuse replacement:

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

Subject to changes. Please also observe the further product documentation!
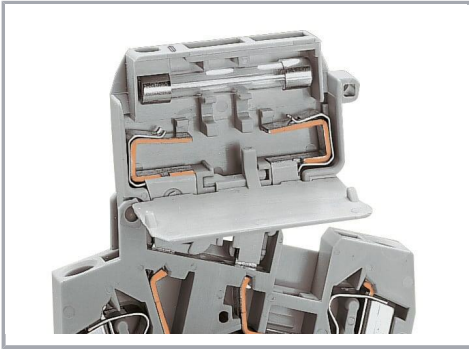
WAGO GmbH & Co. KG
Hansastr. 27
32423 Minden
Phone: +49571 887-0 | Fax: +49571 887-169
Email: info.de@wago.com | Web: www.wago.com

Do you have any questions about our products?
We are always happy to take your call at +49 (571) 887-44222.

Fuse replacement:
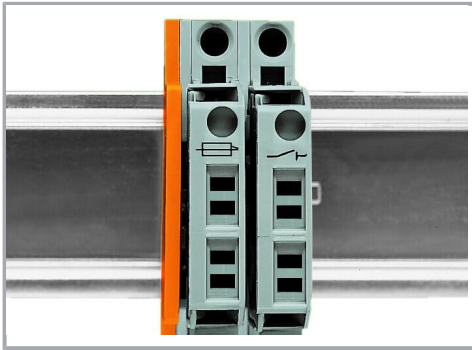
Easily removing a fuse by hand.

Fuse replacement:

Insert a new fuse and snap the cover closed.

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

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

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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

All fuse holders are printed with correct fuse size.
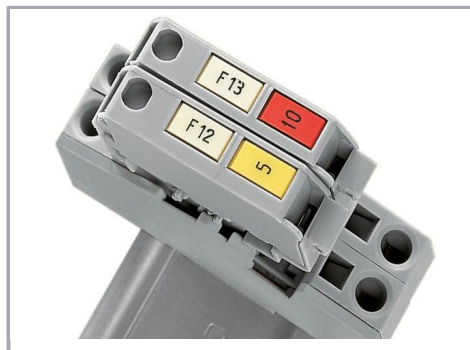
Each fuse holder features two marker slots for custom WMB Multi markers (example shows 8 mm wide terminal blocks).

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

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