

Data sheet | Item number: 281-612

2-conductor fuse terminal block; with pivoting fuse holder; without blown fuse indication; for DIN-rail 35 x 15 and 35 x 7.5; 4 mm²; CAGE CLAMP®; 4,00 mm²; gray

www.wago.com/281-612



Data

Electrical data

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

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Ratings per IEC/EN

Ratings per	IEC/EN 60947-7-3
Ratings (note)	Electrical ratings are given by the fuse.
Nominal voltage (III/3)	800 V
Rated impulse voltage (III/3)	8 kV
Rated current	10 A
Operation status indicator	None
Legend (ratings)	(III / 3) $\hat{=}$ Overvoltage category III / Pollution degree 3

Power Loss

Power loss (max.) $P_{I(max)}$ (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_I max. overload and short-circuit protection (individual arrangement)	2.5 W
Power loss P_I max. overload and short-circuit protection (group arrangement)	1.6 W
Power loss P_I max. short-circuit protection (individual arrangement)	4 W
Power loss P_I max. short-circuit protection (group arrangement)	4 W

General information

Fuse receptacle	pivoting
Fuse type	Cylindrical fuse; 5 x 25 mm

Connection data

Connection points	2
Total number of potentials	2
Number of levels	1

Connection 1

Connection technology	CAGE CLAMP®
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Subject to changes. Please also observe the further product documentation!



Actuation type	Operating tool
Connectable conductor materials	Copper Aluminum
Connectable conductor materials (note)	<p>Terminating Aluminum Conductors</p> <p>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.</p> <p>"Alu-Plus" Contact Paste Advantages:</p> <ul style="list-style-type: none"> ■ 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. <p>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.</p> <p>It is also possible to apply WAGO "Alu-Plus" additionally on the whole surface of the aluminum conductor before termination.</p> <p>Please note that the nominal currents must be adapted to the reduced conductivity of the aluminum conductors::</p> <p>2.5 mm² = 16 A 4 mm² = 22 A</p>
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	Front-entry wiring

Physical data

Width	8 mm / 0.315 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

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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	0.318 MJ
Weight	17 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	27-14-11-16
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	IN
GTIN	4045454871482
Customs tariff number	85369095000

Environmental Product Compliance

RoHS Compliance Status	Compliant, No Exemption
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Approvals / Certificates

General approvals

Logo	Approval	Additional Approval Text	Certificate name
	CSA	C22.2	1505034

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CSA Group			
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

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 WAGO GmbH & Co. KG	-	-

Approvals for marine applications

Logo	Approval	Additional Approval Text	Certificate name
	ABS American Bureau of Shipping	-	20- HG1941090- PDA

Required 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

Optional accessories

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

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

**Item no.: 281-402**

Jumper; insulated; gray

www.wago.com/281-402**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**Locking levers**

Locking system

Item no.: 210-254

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

www.wago.com/210-254**Push-in type wire jumper**

Jumper

Item no.: 249-123Push-in type wire jumper; 0.75 mm²; insulated; 180 mm long; blackwww.wago.com/249-123**Item no.: 249-126**Push-in type wire jumper; 0.75 mm²; insulated; 110 mm long; blackwww.wago.com/249-126**Item no.: 249-127**Push-in type wire jumper; 0.75 mm²; insulated; 250 mm long; blackwww.wago.com/249-127**Item no.: 249-125**

Push-in type wire jumper; insulated; 60 mm long; black

www.wago.com/249-125**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

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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**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**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

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

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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
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

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
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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
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

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-	www.wago.com/210-198

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



colored

Item no.: 210-504Steel 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**Ferrule**

Ferrule

Item no.: 216-106Ferrule; 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

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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

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

Testing and measuring

Testing accessories

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

Downloads**Documentation****Bid Text**

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Additional Information				
		pdf	2.3 MB	Download

CAD/CAE-Data

CAD data

2D/3D Models 281-612		URL		Download
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CAE data

EPLAN Data Portal 281-612		URL		Download
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WSCAD Universe 281-612		URL		Download
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ZUKEN Portal 281-612		URL		Download
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Environmental Product Compliance

Compliance Search

Environmental Product Compliance 281-612		URL		Download
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2-conductor fuse terminal block; with pivoting fuse holder; without blown fuse indication; for DIN-rail 35 x 15 and 35 x 7.5; 4 mm²; CAGE CLAMP®; 4,00 mm²; gray

Installation Notes

Conductor termination

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



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



Commoning

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

Testing

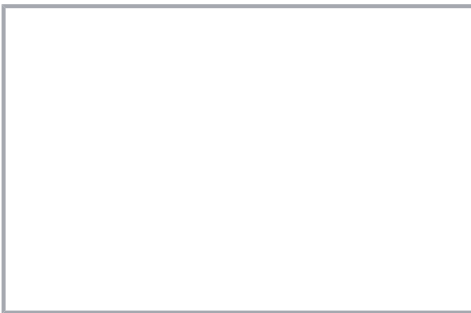
Subject to changes. Please also observe the further product documentation!



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.

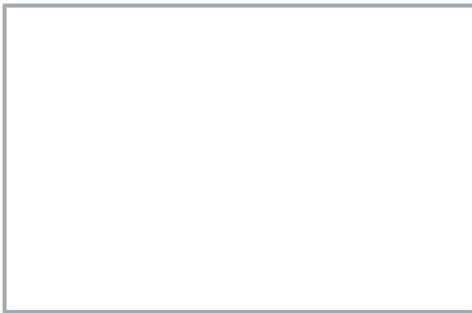
Subject to changes. Please also observe the further product documentation!



Measuring current between jumper slot and separate test slot.

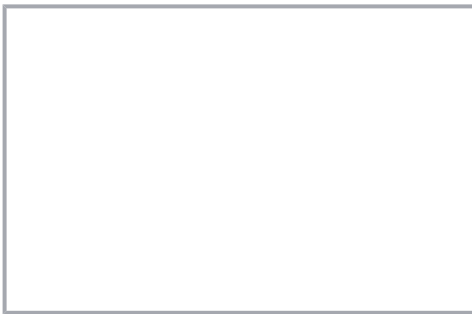


Testing voltage (input side) via test plug adapter (280-404, shown) or test plug (281-407).



5 x 20 mm, 5 x 25 mm and 1/4" 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



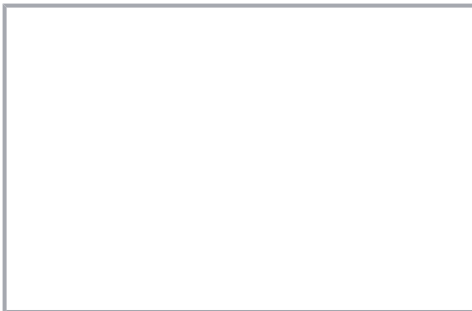
Fuse holder will remain safely locked open in vertical assemblies.

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).



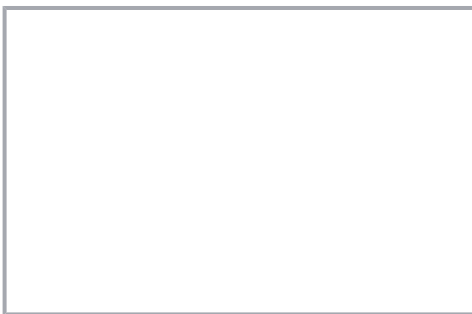
Fuse replacement:

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



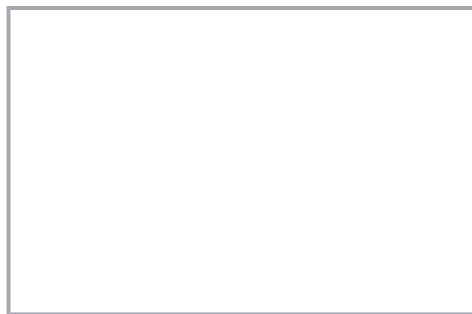
Fuse replacement:

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



Fuse replacement:

Easily removing a fuse by hand.



Fuse replacement:

Insert a new fuse and snap the cover closed.

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

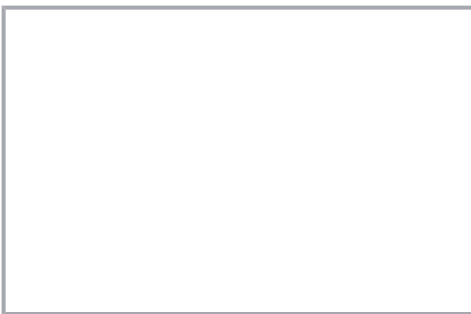


Storing a spare fuse (fuse holder without blown fuse indication).



Fused disconnect or disconnect terminal blocks with a width of 8 mm can be assembled adjacently. At the end of an assembly, or if there is **no** adjacent fused disconnect or 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!