

Data sheet | Item number: 281-613

2-conductor fuse terminal block; with pivoting fuse holder; for miniature metric fuse 1/4 x 1 mm; 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/281-613



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 60947-7-3
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

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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; 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)	<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>

"Alu-Plus" Contact Paste Advantages:

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



- 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

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	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

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



Material group	I
Insulation material	Polyamide (PA66)
Flammability class per UL94	V0
Fire load	0.376 MJ
Weight	19.6 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
Recupel Type	
PU (SPU)	50 pcs
Packaging type	box
Country of origin	CN
GTIN	4045454871499
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 CSA Group	C22.2	1505034
	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

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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

Optional accessories

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

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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

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



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

Cover

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

Locking levers

Locking system

Item no.: 210-254

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

www.wago.com/210-254

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

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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
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
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

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



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 mm ² ; insulated; black	www.wago.com/709-110
Item no.: 709-112 Wire commoning chain; 2.5 mm ² ; insulated; black	www.wago.com/709-112
Item no.: 709-111 Wire commoning chain; 2.5 mm ² ; insulated; black	www.wago.com/709-111

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	

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



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; www.wago.com/210-115
silver-colored

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

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

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 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

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281-613	2019 年2月19 日	xml	Download
X81 - Datei		3.5 kB	

281-613	2017 年3月14 日	doc	Download
doc - Datei		25.6 kB	

Additional Information

pdf Download

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CAD/CAE-Data

CAD data

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

EPLAN Data Portal 281-613	URL	Download
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WSCAD Universe 281-613	URL	Download
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ZUKEN Portal 281-613	URL	Download
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Environmental Product Compliance

Compliance Search

Environmental Product Compliance 281-613	URL	Download
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2-conductor fuse terminal block; with pivoting fuse holder; for miniature metric fuse 1 /4 x 1 mm; 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

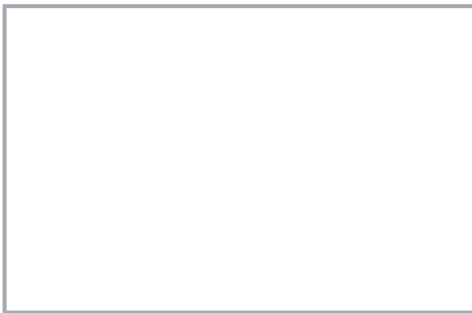
Subject to changes. Please also observe the further product documentation!



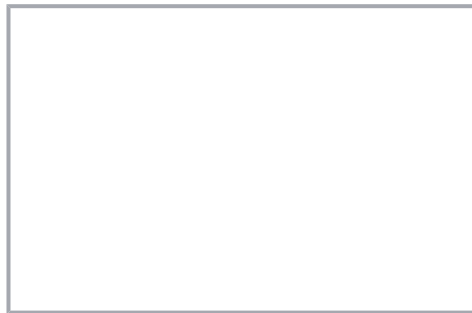
Voltage test, either at input or output with fuse holder in closed position (live)



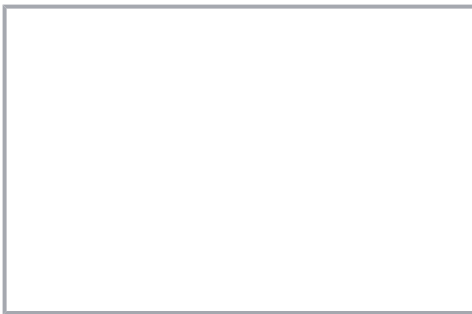
Through test with fuse holder in open position (no voltage)



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



Testing voltage at the output via separate test slot.



Measuring current between jumper slot and separate test slot.

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

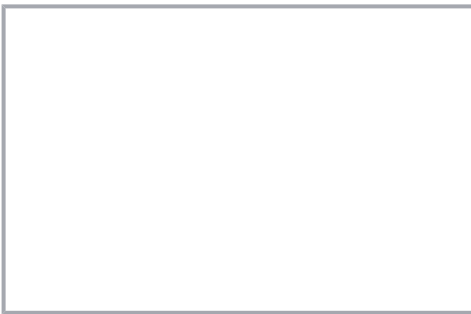


Testing voltage (input side) via test plug adapter (280-404, shown) or test plug (281-407).



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.



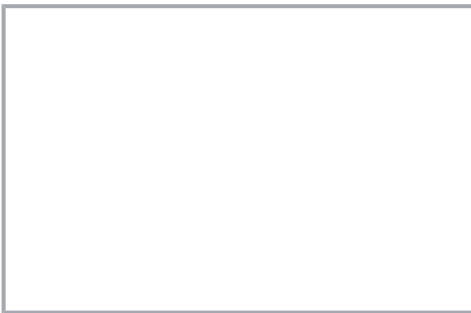
Fuse replacement:

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).



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!