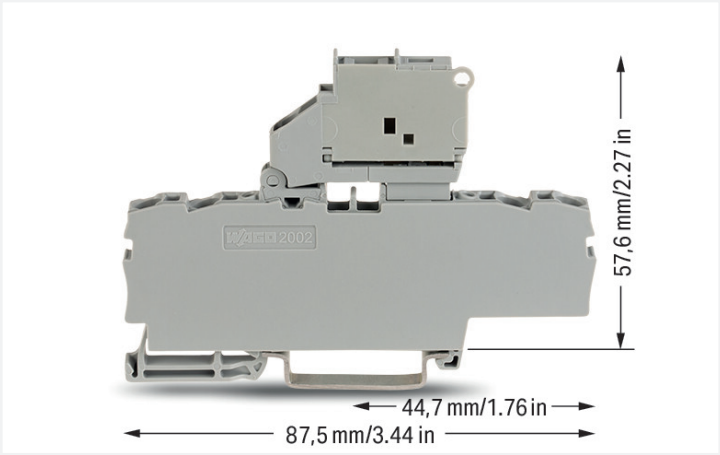
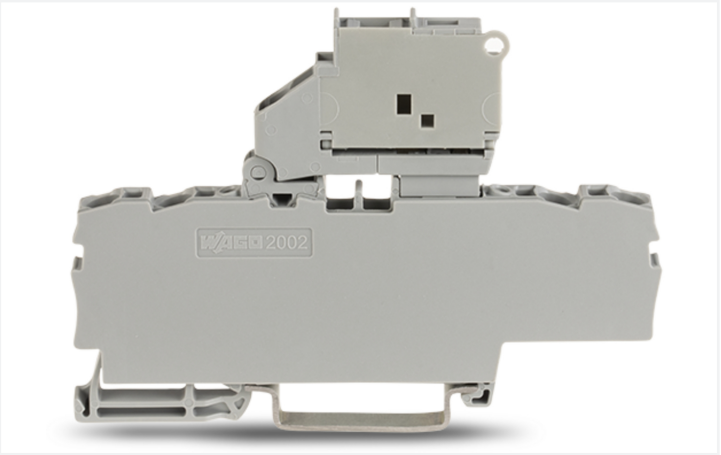
Data Sheet | Item Number: 2002-1811

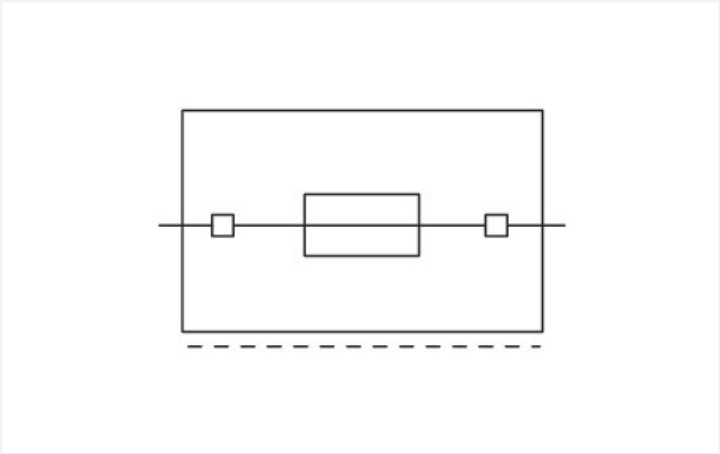
4-conductor fuse terminal block; with pivoting fuse holder; and end plate; for 5 x 20 mm miniature metric fuse; without blown fuse indication; for DIN-rail 35 x 15 and 35 x 7.5; 2.5 mm²; Push-in CAGE CLAMP®; 2,50 mm²; gray

https://www.wago.com/2002-1811





Color: gray



Fuse terminal block, 2002 Series, gray

Our fuse terminal block (item number 2002-1811) simplifies electrical installations. Ensure that the strip lengths are between 10 mm and 12 mm when connecting conductors to this fuse terminal block. This product features conductor terminals and utilizes Push-in CAGE CLAMP®. Push-in CAGE CLAMP® technology provides a universal connection solution for any type of conductor. It allows both solid and fine-stranded conductors with ferrules to be inserted directly into the clamping point without the need for tools. This fuse terminal block is suitable for conductor cross sections ranging from 0.25 mm² to 4 mm². It features one level and four clamping points for connecting a single potential. The gray housing is made of polyamide (PA66) for insulation. These function terminal blocks are mounted using DIN-35 rails.. This product is designed for specific Ex applications (please refer to the product datasheet).

Notes

Safety Information	The 2 mm test slot is only approved for high impedance measurement up to max. 100 mA.

Electrical data

Ratings per	IEC/EN 60947-7-3		
Overvoltage category	III	III	II
Pollution degree	3	2	2
Nominal voltage	250 V	-	-
Rated surge voltage	6 kV	-	-
Rated current	6.3 A	-	-

Ratings per IEC/EN – Notes	
Ratings (note)	Electrical ratings are given by the fuse.

Approvals per	UL 1059		
Use group	B	C	D
Rated voltage	250 V	250 V	250 V
Rated current	10 A	10 A	10 A

Approvals per	CSA 22.2 No 158		
Use group	B	C	D
Rated voltage	-	250 V	-
Rated current	-	6.3 A	-

Ex information

Reference to hazardous areas	See “Downloads – Documentation – Additional Information: Technical Section; Technical Explications”
Ratings per	ATEX: KIWA 17 ATEX 0030 U / IECEx: KIWA 17.0014U (Ex ec IIC Gc)
Rated voltage EN (Ex e II)	275 V
Rated current (Ex e II)	6.3 A

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.
Maximum power loss P_{loss} of fuse insert for overload and short-circuit protection (individual arrangement)	1.6 W
Maximum power loss P_{loss} of fuse insert for overload and short-circuit protection (block arrangement)	1.6 W
Power loss P_l max. short-circuit protection (individual arrangement)	2.5 W
Power loss P_{loss} (max.) of fuse cartridge for short-circuit protection (block arrangement)	2.5 W

General information

Fuse receptacle	pivoting
Fuse type	Cylindrical fuse; 5 x 20 mm

Connection data

Clamping units	4
Total number of potentials	1
Number of levels	1
Number of jumper slots	2

Connection 1

Connection technology	Push-in CAGE CLAMP®
Actuation type	Operating tool
Connectable conductor materials	Copper
Nominal cross-section	2.5 mm²
Solid conductor	0.25 … 4 mm² / 22 … 12 AWG
Solid conductor; push-in termination	0.75 … 4 mm² / 18 … 12 AWG
Fine-stranded conductor	0.25 … 4 mm² / 22 … 12 AWG
Fine-stranded conductor; with insulated ferrule	0.25 … 2.5 mm² / 22 … 14 AWG
Fine-stranded conductor; with ferrule; push-in termination	1 … 2.5 mm² / 18 … 14 AWG
Note (conductor cross-section)	Depending on the conductor characteristic, a conductor with a smaller cross-section can also be inserted via push-in termination.
Strip length	10 … 12 mm / 0.39 … 0.47 inches
Wiring direction	Front-entry wiring

Physical data

Width	6.2 mm / 0.244 inches
Height	87.5 mm / 3.445 inches
Depth from upper-edge of DIN-rail	57.6 mm / 2.268 inches

Mechanical data

Mounting type	DIN-35 rail
Marking level	Center/side marking

Material data

Note (material data)	Information on material specifications can be found here
Color	gray
Material group	I
Insulation material (main housing)	Polyamide (PA66)
Flammability class per UL94	V0
Fire load	0.341 MJ
Weight	16.1 g

Environmental requirements

Processing temperature	-35 … +85 °C
Continuous operating temperature	-60 … +105 °C

Environmental Testing

Test specification: Railway applications – Rolling stock – Electronic equipment	DIN EN 50155 (VDE 0115-200):2022-06
Test procedure: Railway applications – Rolling stock equipment – Vibration and shock tests	DIN EN 61373 (VDE 0115-0106):2011-04
Spectrum/Mounting location	Service life test, Category 1, Class A/B
Functional test with noise-like oscillations	Test passed according to Section 8 of the standard
Frequency	f_1 = 5 Hz to f_2 = 150 Hz
Acceleration	0.101g (highest test level used for all axes)
Test duration per axis	10 min.
Test directions	X, Y and Z axes
Monitoring of contact faults and interruptions	Passed
Voltage drop measurement before and after each axis	Passed
Simulated service life test through increased levels of noise-like oscillations	Test passed according to Section 9 of the standard
Frequency	f_1 = 5 Hz to f_2 = 150 Hz
Acceleration	0.572g (highest test level used for all axes)
Test duration per axis	5 h
Test directions	X, Y and Z axes
Extended testing: Monitoring of contact faults and interruptions	Passed
Extended testing: Voltage drop measurement before and after each axis	Passed
Shock test	Test passed according to Section 10 of the standard
Shock pulse form	Half sine
Acceleration	5g (highest test level used for all axes)
Shock duration	30 ms
Number of shocks (per axis)	3 pos. und 3 neg.
Test directions	X, Y and Z axes

Environmental Testing

Extended testing: Monitoring of contact faults and interruptions	Passed
Extended testing: Voltage drop measurement before and after each axis	Passed
Vibration and shock stress for rolling stock equipment	Passed

Commercial data

PU (SPU)	50 pcs
Packaging type	Box
Country of origin	CN
GTIN	4045454974763
Customs tariff number	85369095000

Product Classification

UNSPSC	39121410
eCl@ss 10.0	27-14-11-16
eCl@ss 9.0	27-14-11-16
ETIM 9.0	EC000899
ETIM 8.0	EC000899
ECCN	NO US CLASSIFICATION

Environmental Product Compliance

RoHS Compliance Status	Compliant,No Exemption

Approvals / Certificates

General approvals

Approval	Standard	Certificate Name
CCA DEKRA Certification B.V.	EN 60947	NTR NL-8054
CSA CSA Group	C22.2 No. 158	154112
KEMA/KEUR DEKRA Certification B.V.	EN 60947	71-124163
UL Underwriters Laboratories Inc.	UL 1059	E45172

Declarations of conformity and manufacturer's declarations

Approval	Standard	Certificate Name
ATEX-Attestation of Conformity WAGO GmbH & Co. KG	-	-
ATEX-Attestation of Conformity WAGO GmbH & Co. KG	-	-
EU-Declaration of Conformity WAGO GmbH & Co. KG	-	-
Railway WAGO GmbH & Co. KG	-	Railway Ready
UK-Declaration of Conformity WAGO GmbH & Co. KG	-	-

Approvals for marine applications

Approval	Standard	Certificate Name
ABS American Bureau of Shipping	EN 60947	24-0152298-PDA
DNV GL Det Norske Veritas, Germanischer Lloyd	-	TAE00001V2

Approvals for hazardous areas

Approval	Standard	Certificate Name
AEx Underwriters Laboratories Inc.	UL 60079	E185892 (AEx eb IIC resp. Ex eb IIC)
ATEX KIWA Netherlands B.V.	EN 60079	KIWA 17ATEX0030 U
CCC CNEX	GB/T 3836.3	2020312313000180 (Ex ec IIC Gc)
IECEx KIWA Netherlands B.V.	EN 60079	IECEx KIWA 17.0014U (Ex ec IIC Gc)

Downloads

Environmental Product Compliance

Compliance Search

Environmental Product Compliance 2002-1811

Documentation

Bid Text

2002-1811	24.04.2019	xml 4.11 KB
2002-1811	23.04.2019	docx 15.47 KB

CAD/CAE-Data

CAD data

2D/3D Models 2002-1811

CAE data

EPLAN Data Portal 2002-1811

WSCAD Universe 2002-1811

ZUKEN Portal 2002-1811

1 Compatible Products

1.1 Required Accessories

1.1.1 End plate

1.1.1.1 End plate

Item No.: 2002-991
End plate for fuse terminal blocks; 2 mm thick; gray

Item No.: 2002-992
End plate for fuse terminal blocks; 2 mm thick; orange

Item No.: 209-191
Separator for Ex e/Ex i applications; 3 mm thick; 120 mm wide; orange

1.2 Optional Accessories

1.2.1 DIN-rail

1.2.1.1 Mounting accessories

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

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

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

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

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

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

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

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

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

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

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

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

1.2.2 Ferrule

1.2.2.1 Ferrule

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

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

Item No.: 216-262
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

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

Item No.: 216-263
Ferrule; Sleeve for 1 mm² / AWG 18; insulated; electro-tin plated; electrolytic copper; gastight crimped; acc. to DIN 46228, Part 4/09.90; red

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

Item No.: 216-264
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

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

Item No.: 216-266
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

1.2.3 Installation

1.2.3.1 Cover

Item No.: 709-156
Cover; Type 3; suitable for cover carrier, type 3; 1 m long; transparent

1.2.3.2 Cover carrier

Item No.: 709-169
Cover carrier; Type 3; 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

1.2.4 Insulation stop

1.2.4.1 Insulation stop

Item No.: 2002-171
Insulation stop; 0.25 - 0.5 mm²; 5 pieces/ strip; light gray

Item No.: 2002-172
Insulation stop; 0.75 - 1 mm²; 5 pieces/ strip; dark gray

1.2.5 Jumper

1.2.5.1 Jumper

Item No.: 2004-406/020-000
Delta jumper; insulated; light gray

Item No.: 2004-410
Jumper; 10-way; insulated; light gray

Item No.: 2004-402
Jumper; 2-way; insulated; light gray

Item No.: 2004-403
Jumper; 3-way; insulated; light gray

Item No.: 2004-404
Jumper; 4-way; insulated; light gray

Item No.: 2004-405
Jumper; 5-way; insulated; light gray

Item No.: 2004-406
Jumper; 6-way; insulated; light gray

Item No.: 2004-407
Jumper; 7-way; insulated; light gray

Item No.: 2004-408
Jumper; 8-way; insulated; light gray

Item No.: 2004-409
Jumper; 9-way; insulated; light gray

Item No.: 2004-440
Jumper; from 1 to 10; insulated; light gray

Item No.: 2004-433
Jumper; from 1 to 3; insulated; light gray

Item No.: 2004-434
Jumper; from 1 to 4; insulated; light gray

Item No.: 2004-435
Jumper; from 1 to 5; insulated; light gray

Item No.: 2004-436
Jumper; from 1 to 6; insulated; light gray

Item No.: 2004-437
Jumper; from 1 to 7; insulated; light gray

Item No.: 2004-438
Jumper; from 1 to 8; insulated; light gray

Item No.: 2004-439
Jumper; from 1 to 9; insulated; light gray

Item No.: 2004-405/011-000
Star point jumper; 3-way; insulated; light gray

Item No.: 210-103
Wire commoning chain; insulated; black

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

1.2.6 Locking system

1.2.6.1 Locking system

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

1.2.7 Marking

1.2.7.1 Marker

Item No.: 2009-145/000-006
Mini-WSB Inline; for Smart Printer; 1700 pieces on roll; stretchable 5 - 5.2 mm; plain; snap-on type; blue

Item No.: 2009-145/000-007
Mini-WSB Inline; for Smart Printer; 1700 pieces on roll; stretchable 5 - 5.2 mm; plain; snap-on type; gray

Item No.: 2009-145/000-023
Mini-WSB Inline; for Smart Printer; 1700 pieces on roll; stretchable 5 - 5.2 mm; plain; snap-on type; green

Item No.: 2009-145/000-012
Mini-WSB Inline; for Smart Printer; 1700 pieces on roll; stretchable 5 - 5.2 mm; plain; snap-on type; orange

Item No.: 2009-145/000-005
Mini-WSB Inline; for Smart Printer; 1700 pieces on roll; stretchable 5 - 5.2 mm; plain; snap-on type; red

Item No.: 2009-145/000-024
Mini-WSB Inline; for Smart Printer; 1700 pieces on roll; stretchable 5 - 5.2 mm; plain; snap-on type; violet

Item No.: 2009-145
Mini-WSB Inline; for Smart Printer; 1700 pieces on roll; stretchable 5 - 5.2 mm; plain; snap-on type; white

Item No.: 2009-145/000-002
Mini-WSB Inline; for Smart Printer; 1700 pieces on roll; stretchable 5 - 5.2 mm; plain; snap-on type; yellow

Item No.: 248-501/000-006
Mini-WSB marking card; as card; not stretchable; plain; snap-on type; blue

Item No.: 248-501/000-007
Mini-WSB marking card; as card; not stretchable; plain; snap-on type; gray

Item No.: 248-501/000-023
Mini-WSB marking card; as card; not stretchable; plain; snap-on type; green

Item No.: 248-501/000-017
Mini-WSB marking card; as card; not stretchable; plain; snap-on type; light green

Item No.: 248-501/000-012
Mini-WSB marking card; as card; not stretchable; plain; snap-on type; orange

Item No.: 248-501/000-005
Mini-WSB marking card; as card; not stretchable; plain; snap-on type; red

Item No.: 248-501/000-024
Mini-WSB marking card; as card; not stretchable; plain; snap-on type; violet

Item No.: 248-501
Mini-WSB marking card; as card; not stretchable; plain; snap-on type; white

Item No.: 248-501/000-002
Mini-WSB marking card; as card; not stretchable; plain; snap-on type; yellow

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

Item No.: 793-5501/000-014
WMB marking card; as card; for terminal block width 5 - 17.5 mm; stretchable 5 - 5.2 mm; plain; snap-on type; brown

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

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

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

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

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

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

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

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

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

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

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

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

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

Item No.: 2009-115/000-005
WMB-Inline; for Smart Printer; 1500 pieces on roll; stretchable 5 - 5.2 mm; plain; snap-on type; red

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

Item No.: 2009-115
WMB-Inline; for Smart Printer; 1500 pieces on roll; stretchable 5 - 5.2 mm; plain; snap-on type; white

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

1.2.7.2 Marking strip

Item No.: 2009-110
Marking strips; for Smart Printer; on reel; not stretchable; plain; snap-on type; white

1.2.8 Protective warning marker

1.2.8.1 Cover

Item No.: 2002-115
Protective warning marker; for 5 terminal blocks; with high-voltage symbol, black; yellow

1.2.9 Screwless end stop

1.2.9.1 Mounting accessories

Item No.: 249-117
Screwless end stop; 10 mm wide; for DIN-rail 35 x 15 and 35 x 7.5; gray

Item No.: 249-116
Screwless end stop; 6 mm wide; for DIN-rail 35 x 15 and 35 x 7.5; gray

1.2.10 Test and measurement

1.2.10.1 Testing accessories

Item No.: 210-136
Test plug; 2 mm Ø; with 500 mm cable; red

1.2.11 Tool

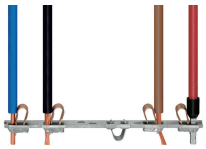
1.2.11.1 Operating tool

Item No.: 210-658
Operating tool; Blade: 3.5 x 0.5 mm; with a partially insulated shaft; angled; short; multicoloured

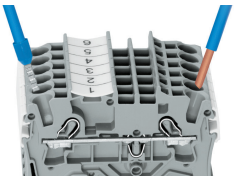
Item No.: 210-720
Operating tool; Blade: 3.5 x 0.5 mm; with a partially insulated shaft; multicoloured

Installation Notes

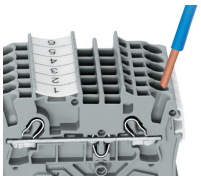
Conductor termination



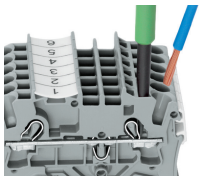
All conductor types at a glance



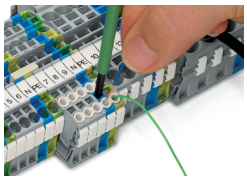
Push-in termination of solid and ferruled conductors



Inserting a conductor via push-in termination:
Solid conductors with cross-sections from either one size above, or up to two sizes below, the rated cross-section can be simply pushed in – no tools needed.

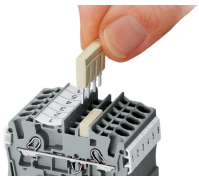


Inserting a conductor via operating tool:
Connecting fine-stranded conductors without ferrules, or small cross-sectional conductors that cannot be pushed in, is performed similarly to the original CAGE CLAMP® – just use an operating tool.
Advantage:
To open the clamp, the operating tool is inserted vertically. The conductor entry is less than 15 degrees for easier wiring.

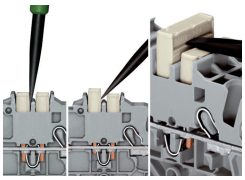


Conductor termination – insulation stop

Commoning

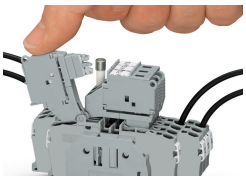


Insert push-in type jumper bar and push down until it hits backstop.



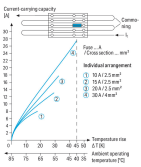
Removing a push-in type jumper bar:
Insert the operating tool between the jumper and partition wall of the dual jumper slots, then lift up the jumper.
Place the operating tool in the center of jumpers for up to five contacts (see above), or alternately on both sides for jumpers with more than five contacts.

Fuse terminal blocks with a width of 6.2 mm/0.244 in can be assembled adjacently. If there is no adjacent fuse terminal block at the end of the assembly, an end plate must be used.

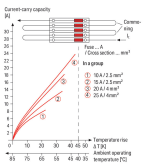


Fused Disconnect Terminal Block with a Pivoting Fuse Holder
Pivot the fuse holder into the locked open position.

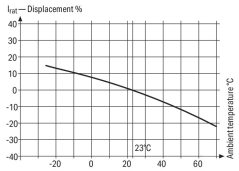
Fused disconnect terminal block with a pivoting fuse holder
Fuse replacement



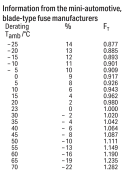
Application Notes on Terminal Blocks for Glass Cartridge Fuses
Diagram: “Individual Arrangement”



Application Notes on Terminal Blocks for Glass Cartridge Fuses
Diagram: “Block Arrangement”

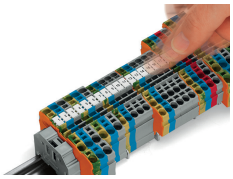


Application Notes on Terminal Blocks for Glass Cartridge Fuses
Nominal current ratings for fuse cartridges are defined differently in international standards. This is why the recommended continuous current-carrying capacity of the fuses is a max. 80% of their nominal current according to DIN 72581/ Part 3 (for a surrounding air temperature of 23°C).
Selecting the correct fuse cartridge is important for product safety within applications, as well as for fuse cartridge service life and reliability. Fuse cartridges will only operate perfectly as protection components (break-off point) if they are properly selected and used as intended (i.e., according to the state of the technology and valid specifications, as well as data sheet characteristics), according to basic safety requirements (i.e., persons, animals and property must be protected against hazards).



Concerning product safety, fuse cartridges must generally be tested under both normal and faulty operating conditions within your application.

Marking



Snapping WMB Inline markers into marker slots.