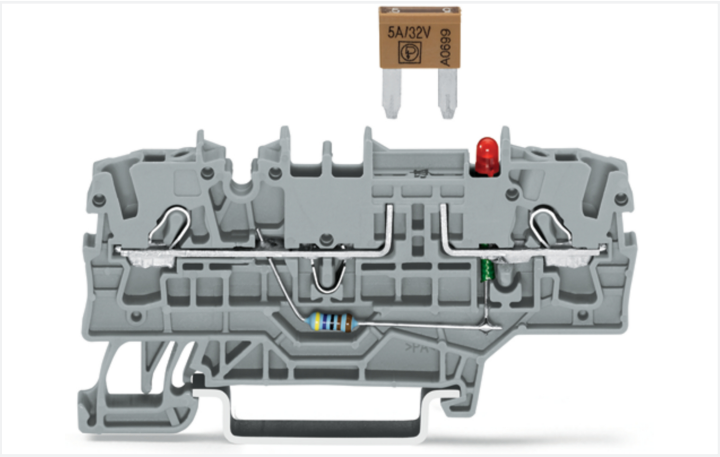
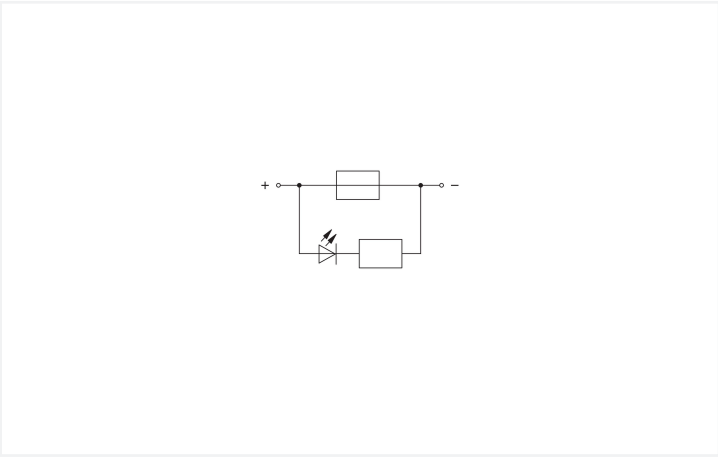
Data Sheet | Item Number: 2002-1981/1000-435

2-conductor fuse terminal block; for mini-automotive blade-style fuses; with test option; with blown fuse indication by LED; 48 V; for DIN-rail 35 x 15 and 35 x 7.5; 2.5 mm²; Push-in CAGE CLAMP®; gray

https://www.wago.com/2002-1981/1000-435





Color: gray

Similar to illustration

Fuse terminal block, 2002 Series, gray

Quick and easy connections are guaranteed with this fuse terminal block (item number 2002-1981/1000-435). Ensure that the strip lengths are between 10 and 12 mm when connecting conductors to this fuse terminal block. This product features conductor terminals and utilizes Push-in CAGE CLAMP®. Our Push-in CAGE CLAMP® is a universal, maintenance-free connection solution for all conductor types, boasting a key feature: both solid and fine-stranded conductors with ferrules can be directly inserted without the need for tools or any preparation, such as crimping the ferrule. This fuse terminal block is suitable for conductor cross sections ranging from 0.25 mm² to 4 mm².

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	400 V	-	-
Rated impulse withstand voltage	6 kV	-	-
Rated current	10 A	-	-

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

Ratings per IEC/EN 2	
Ratings (note)	Blade-style fuses: Observe touch-proof protection for 42 V and higher voltages! ▪ 10 A (individual arrangement) ▪ 5 A (block arrangement)

Approvals per	UL 1059		
Use group	B	C	D
Rated voltage	48 V	48 V	-
Rated current	10 A	10 A	-

General information

Fuse receptacle	pluggable
Fuse type	Mini flat plug-in fuse; 10.9 x 3.6 x 16.3 mm
Number/type of diode/LED	Red LED
Wiring direction	Front-entry wiring
Alignment	Left-side anode

Connection Data

Clamping units	2
Total number of potentials	2
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	5.2 mm / 0.205 inches
Height	72.9 mm / 2.87 inches
Depth from upper-edge of DIN-rail	32.9 mm / 1.295 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	0.16 MJ
Weight	8.2 g

Continued on next page

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
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

Product Group	22 (TOPJOB S)
PU (SPU)	50 pcs
Packaging type	Box
Country of origin	CN
GTIN	4050821089339
Customs tariff number	85369095000

Continued on next page

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 10.0	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
DEKRA DEKRA Certification B.V.	EN 60947	71-149763
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
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
PRS Polski Rejestr Statków	-	TE/1094/880590/23

Continued on next page

Downloads

Environmental Product Compliance

Compliance Search

Environmental Product Compliance 2002-1981/1000-435

Documentation

Bid Text

2002-1981/1000-435	23.04.2019	xml 4.53 KB
2002-1981/1000-435	23.04.2019	docx 16.09 KB

CAD/CAE-Data

CAD data

2D/3D Models 2002-1981/1000-435

CAE data

EPLAN Data Portal 2002-1981/1000-435

WSCAD Universe 2002-1981/1000-435

ZUKEN Portal 2002-1981/1000-435

1 Compatible Products

1.1 Required Accessories

1.1.1 End plate

1.1.1.1 End plate



Item No.: 2002-1991
End and intermediate plate; 1 mm thick; gray



Item No.: 2002-1992
End and intermediate plate; 1 mm thick; 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

Continued on next page

1.2.1.1 Mounting accessories



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

Continued on next page

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.: 2002-400
Continuous jumper; 2-way; insulated; light gray



Item No.: 2002-413
Continuous jumper; 3-way; insulated; light gray



Item No.: 2002-415
Continuous jumper; 5-way; insulated; light gray



Item No.: 2002-423/000-006
Continuous jumper; from 1 to 3; insulated; blue



Item No.: 2002-423
Continuous jumper; from 1 to 3; insulated; light gray



Item No.: 2002-423/000-005
Continuous jumper; from 1 to 3; insulated; red



Item No.: 2002-424/000-006
Continuous jumper; from 1 to 4; insulated; blue



Item No.: 2002-424
Continuous jumper; from 1 to 4; insulated; light gray



Item No.: 2002-424/000-005
Continuous jumper; from 1 to 4; insulated; red



Item No.: 2002-406/020-000
Delta jumper; insulated; light gray



Item No.: 2002-410/000-006
Jumper; 10-way; insulated; blue



Item No.: 2002-410
Jumper; 10-way; insulated; light gray



Item No.: 2002-410/000-005
Jumper; 10-way; insulated; red



Item No.: 2002-402/000-006
Jumper; 2-way; insulated; blue



Item No.: 2002-402
Jumper; 2-way; insulated; light gray



Item No.: 2002-402/000-005
Jumper; 2-way; insulated; red



Item No.: 2002-403/000-006
Jumper; 3-way; insulated; blue

Item No.: 2002-403
Jumper; 3-way; insulated; light gray



Item No.: 2002-403/000-005
Jumper; 3-way; insulated; red



Item No.: 2002-404/000-006
Jumper; 4-way; insulated; blue



Item No.: 2002-404
Jumper; 4-way; insulated; light gray



Item No.: 2002-404/000-005
Jumper; 4-way; insulated; red



Item No.: 2002-405/000-006
Jumper; 5-way; insulated; blue



Item No.: 2002-405
Jumper; 5-way; insulated; light gray



Item No.: 2002-405/000-005
Jumper; 5-way; insulated; red



Item No.: 2002-406/000-006
Jumper; 6-way; insulated; blue



Item No.: 2002-406
Jumper; 6-way; insulated; light gray



Item No.: 2002-406/000-005
Jumper; 6-way; insulated; red



Item No.: 2002-407/000-006
Jumper; 7-way; insulated; blue



Item No.: 2002-407
Jumper; 7-way; insulated; light gray



Item No.: 2002-407/000-005
Jumper; 7-way; insulated; red



Item No.: 2002-408/000-006
Jumper; 8-way; insulated; blue



Item No.: 2002-408
Jumper; 8-way; insulated; light gray



Item No.: 2002-408/000-005
Jumper; 8-way; insulated; red



Item No.: 2002-409/000-006
Jumper; 9-way; insulated; blue



Item No.: 2002-409
Jumper; 9-way; insulated; light gray



Item No.: 2002-409/000-005
Jumper; 9-way; insulated; red

Item No.: 2002-440
Jumper; from 1 to 10; insulated; light gray

Item No.: 2002-433
Jumper; from 1 to 3; insulated; light gray

Item No.: 2002-434
Jumper; from 1 to 4; insulated; light gray

Item No.: 2002-435
Jumper; from 1 to 5; insulated; light gray

Item No.: 2002-436
Jumper; from 1 to 6; insulated; light gray

Item No.: 2002-437
Jumper; from 1 to 7; insulated; light gray

Item No.: 2002-438
Jumper; from 1 to 8; insulated; light gray

Continued on next page

1.2.5.1 Jumper

Item No.: 2002-439
Jumper; from 1 to 9; insulated; light gray



Item No.: 2002-480
Staggered jumper; 10-way; insulated; light gray



Item No.: 2002-481
Staggered jumper; 11-way; insulated; light gray



Item No.: 2002-482
Staggered jumper; 12-way; insulated; light gray



Item No.: 2002-473/011-000
Staggered jumper; 2-way; from 1 to 3; insulated; light gray



Item No.: 2002-472
Staggered jumper; 2-way; insulated; light gray



Item No.: 2002-473
Staggered jumper; 3-way; insulated; light gray



Item No.: 2002-475/011-000
Staggered jumper; 3-way; insulated; light gray



Item No.: 2002-474
Staggered jumper; 4-way; insulated; light gray



Item No.: 2002-475
Staggered jumper; 5-way; insulated; light gray



Item No.: 2002-476
Staggered jumper; 6-way; insulated; light gray



Item No.: 2002-477
Staggered jumper; 7-way; insulated; light gray



Item No.: 2002-478
Staggered jumper; 8-way; insulated; light gray



Item No.: 2002-479
Staggered jumper; 9-way; insulated; light gray



Item No.: 2002-477/011-000
Staggered jumper; insulated; light gray



Item No.: 2002-479/011-000
Staggered jumper; insulated; light gray



Item No.: 2002-481/011-000
Staggered jumper; insulated; light gray



Item No.: 2002-405/011-000
Star point jumper; 3-way; insulated; light gray



Item No.: 210-103
Wire commoning chain; 0.5 mm²; insulated; black



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

1.2.6 Marking

1.2.6.1 Group marker carrier



Item No.: 2009-191
Group marker carrier; gray



Item No.: 2009-192
Group marker carrier; gray



Item No.: 2009-193
Group marker carrier; gray

1.2.6.2 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

Continued on next page

1.2.6.2 Marker



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

1.2.6.3 Marker carrier



Item No.: 2002-121
Adaptor; gray



Item No.: 2002-161
Adaptor; gray



Item No.: 2009-198
Adaptor; gray

1.2.6.4 Marking strip



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

1.2.7 Protective warning marker

1.2.7.1 Cover



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

Continued on next page

1.2.8 Push-in type wire jumper

1.2.8.1 Jumper



Item No.: 2009-414
Push-in type wire jumper; 1.5 mm²; insulated; 110 mm long; black



Item No.: 2009-414/000-005
Push-in type wire jumper; 1.5 mm²; insulated; 110 mm long; black



Item No.: 2009-416
Push-in type wire jumper; 1.5 mm²; insulated; 250 mm long; black



Item No.: 2009-414/000-006
Push-in type wire jumper; insulated; 110 mm long; black



Item No.: 2009-412
Push-in type wire jumper; insulated; 60 mm long; black

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.: 2002-560
Modular TOPJOB®S connector; modular; for jumper contact slot; 10-pole; gray



Item No.: 2002-511
Modular TOPJOB®S connector; modular; for jumper contact slot; 1-pole; gray



Item No.: 2002-552
Modular TOPJOB®S connector; modular; for jumper contact slot; 2-pole; gray



Item No.: 2002-553
Modular TOPJOB®S connector; modular; for jumper contact slot; 3-pole; gray



Item No.: 2002-554
Modular TOPJOB®S connector; modular; for jumper contact slot; 4-pole; gray



Item No.: 2002-555
Modular TOPJOB®S connector; modular; for jumper contact slot; 5-pole; gray



Item No.: 2002-556
Modular TOPJOB®S connector; modular; for jumper contact slot; 6-pole; gray



Item No.: 2002-557
Modular TOPJOB®S connector; modular; for jumper contact slot; 7-pole; gray



Item No.: 2002-558
Modular TOPJOB®S connector; modular; for jumper contact slot; 8-pole; gray



Item No.: 2002-559
Modular TOPJOB®S connector; modular; for jumper contact slot; 9-pole; gray



Item No.: 2002-549
Spacer module; modular; e.g., for bridging commoned terminal blocks; gray

Item No.: 2009-174
Test plug adapter; for 4 mm Ø test plugs; for testing TOPJOB®S rail-mounted terminal blocks; gray



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



Item No.: 2009-182
Testing tap; for max. 2.5 mm²; tool-free connection for individual test wires 0.08 - 2.5 mm; gray



Item No.: 2002-649
TOPJOB®S L-type spacer module; modular; e.g., for bridging commoned terminal blocks; gray



Item No.: 2002-611
TOPJOB®S L-type test plug module; modular; 1-pole; gray

1.2.11 Tool

1.2.11.1 Operating tool



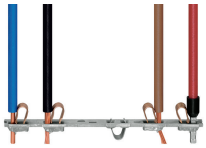
Item No.: 210-658
Operating tool; Blade: 3.5 x 0.5 mm; with a partially insulated shaft; angled; short; multicoloured



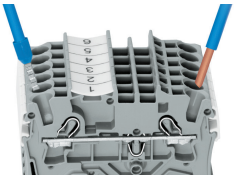
Item No.: 210-720
Operating tool; Blade: 3.5 x 0.5 mm; with a partially insulated shaft; multicoloured

Installation Notes

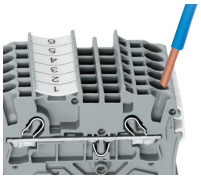
Conductor termination



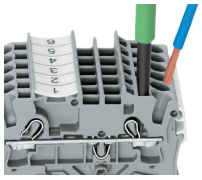
All conductor types at a glance



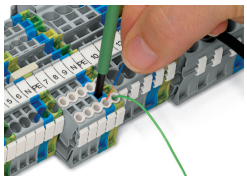
Push-in termination of solid and ferruled conductors



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.

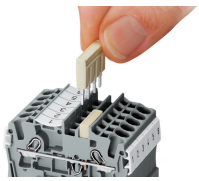


Inserting a conductor via operating tool:
Connecting fine-stranded conductors without ferrules, or small cross-sectional conductors that cannot be pushed in, is performed similarly to the original CAGE CLAMP® – just use an operating tool.
Advantage:
To open the clamp, the operating tool is inserted vertically.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

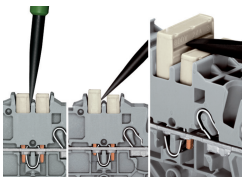


Conductor termination – insulation stop

Commoning

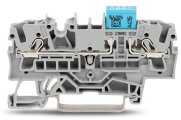


Insert push-in type jumper bar and push down until it hits backstop.

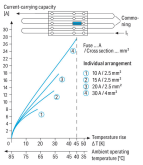


Removing a push-in type jumper bar:
Insert the operating tool between the jumper and partition wall of the dual jumper slots, then lift up the jumper.
Place the operating tool in the center of jumpers for up to five contacts (see above), or alternately on both sides for jumpers with more than five contacts.

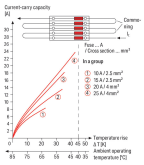
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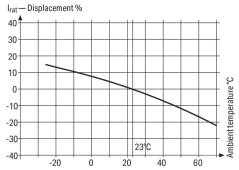
Selecting the correct fuse cartridge is important for product safety within applications, as well as for fuse cartridge service life and reliability. Fuse cartridges can operate perfectly as protection (break-off point) if they are properly selected and used according to manufacturer specifications.
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).
Concerning product safety, fuse cartridges must generally be tested under both normal and faulty operating conditions within your application.



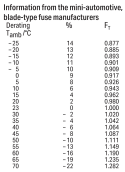
Application Notes on Terminal Blocks for Glass Cartridge Fuses
Diagram: "Individual Arrangement"



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



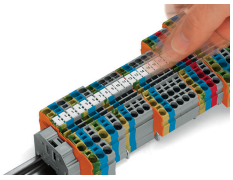
Application Notes on Terminal Blocks for Glass Cartridge Fuses
Nominal current ratings for fuse cartridges are defined differently in international standards. This is why the recommended continuous current-carrying capacity of the fuses is a max. 80% of their nominal current according to DIN 72581/Part 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).


Information from the mini-automotive, blade-type fuse manufacturers

Derating Tamb °C	%	F_T
- 25	14	0.877
- 20	13	0.885
- 15	12	0.893
- 10	11	0.901
- 5	10	0.909
0	9	0.917
5	8	0.926
10	6	0.943
15	4	0.962
20	2	0.980
23	0	1.000
30	- 2	1.020
35	- 4	1.042
40	- 6	1.064
45	- 8	1.087
50	- 10	1.111
55	- 13	1.149
60	- 16	1.190
65	- 19	1.235
70	- 22	1.282

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.

