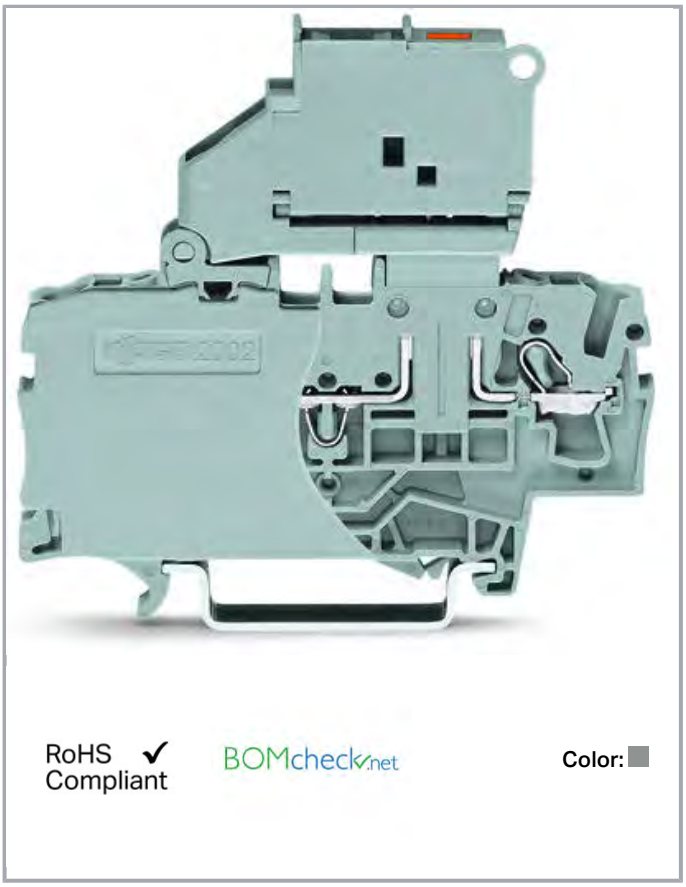
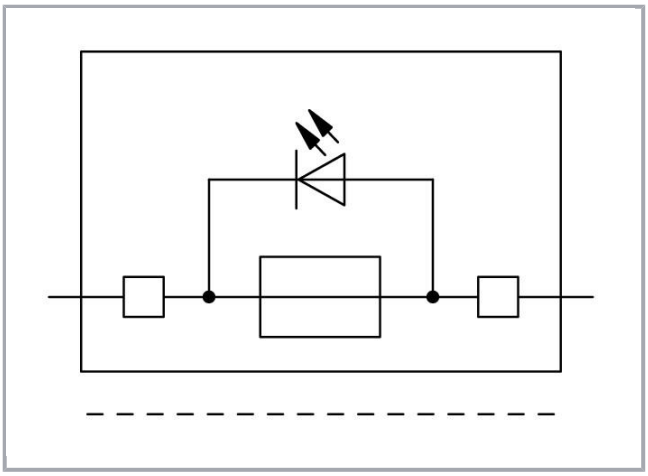
Data sheet | Item number: 2002-1611/1000-867

2-conductor fuse terminal block; with pivoting fuse holder; with end plate; for 5 x 20 mm miniature metric fuse; with blown fuse indication by LED; 120 V; for DIN-rail 35 x 15 and 35 x 7.5; 2.5 mm²; Push-in CAGE CLAMP®; 2,50 mm²; gray





Item description

Safety information 1:
Electrical ratings are given by the fuse and blown fuse indication.
Safety information 2:
Leakage current in case of a blown fuse: LED 2 mA

Data

Electrical data

Ratings per IEC/EN 60664-1

Ratings per	IEC/EN 60947-7-3

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

Rated voltage (III / 3)	250 V
Rated impulse voltage (III / 3)	6 kV
Rated current	6.3 A
Operation status indicator	120 V
Legend (ratings)	(III / 3) ≙ Overvoltage category III / Pollution degree 3

Approvals per UL 1059

Rated voltage UL (Use Group B)	120 V
Rated current UL (Use Group B)	6.3 A
Rated voltage UL (Use Group C)	120 V
Rated current UL (Use Group C)	6.3 A
Rated voltage UL (Use Group D)	120 V
Rated current UL (Use Group D)	6.3 A
Approvals per	UL 1059

Connection data

Connection technology	Push-in CAGE CLAMP®
Actuation type	Push-in Open Tool Slot
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 ferrule with plastic collar	1 … 2,5 mm² / 18 … 12 AWG
Fine-stranded conductor with ferrule, push-in termination, from	1 … 2,5 mm² / 18 … 12 AWG
Strip length	10 … 12 mm / 0.39 … 0.47 inch
Total number of connection points	2
Total number of potentials	1
Number of levels	1
Type of wiring	Front-entry wiring
Note (conductor cross-section)	Depending on the conductor characteristic, a conductor with a smaller cross-section can also be inserted via push-in termination.
Number of jumper slots	2

Geometrical Data

Width	6,2 mm / 0.244 inch

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

Height from upper-edge of DIN-35 rail	57,2 mm / 2.252 inch
Depth	66,1 mm / 2.602 inch

Mechanical data

Design	horizontal type
Type of mounting	DIN-35 rail
Marking level	Center/side marking

Material Data

Color	gray
Insulating material	Polyamide 66 (PA 66)
Weight	13.6 g

Commercial data

Product Group	22 (TOPJOB S)
Packaging type	BOX
Country of origin	DE
GTIN	4050821214298
Customs Tariff No.	85369095990

Approvals / Certificates

Ex-Approvals

Logo	Approval	Additional Approval Text	Certificate name
	AEx Underwriters Laboratories Inc.	UL 60079	E185892
PTB 0102 Ex ec IIC Gc II 3 G	**ATEX** KIWA Netherlands B.V.	EN 60079	KIWA 17ATEX0030 U
IECEx	**IECEx** KIWA Netherlands B.V.	EN 60079	IECEx KIWA 17.0014U

Country specific Approvals

Logo	Approval	Additional Approval Text	Certificate name
	CCA	EN 60947	NTR NL

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

	DEKRA Certification B.V.		7730
	CSA DEKRA Certification B.V.	C22.2 No. 158	1536069
	KEMA/KEUR DEKRA Certification B.V.	EN 60947	71-107687

Ship Approvals

Logo	Approval	Additional Approval Text	Certificate name
	ABS American Bureau of Shipping	EN 60947	20-HG1941090-PDA
	DNV GL Det Norske Veritas, Germanischer Lloyd	-	TAE00001V2

UL-Approvals

Logo	Approval	Additional Approval Text	Certificate name
	UR Underwriters Laboratories Inc.	UL 1059	E45172

Counterpart

Compatible products

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

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

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

tools

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

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

Jumper

Item no.: 2004-402
Push-in type jumper bar; insulated; 2-way; Nominal current 32 A; light gray

Item no.: 2004-403
Push-in type jumper bar; insulated; 3-way; Nominal current 32 A; light gray

Item no.: 2004-404
Push-in type jumper bar; insulated; 4-way; Nominal current 32 A; light gray

Item no.: 2004-405
Push-in type jumper bar; insulated; 5-way; Nominal current 32 A; light gray

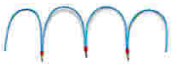
Item no.: 2004-405/011-000
Star point jumper; insulated; 3-way (1-3-5); IN = IN terminal block; light gray

Item no.: 2004-406
Push-in type jumper bar; insulated; 6-way; Nominal current 32 A; light gray

Item no.: 2004-406/020-000
Delta jumper; insulated; 1-2 3-4 5-6; IN = IN terminal block; light gray

Item no.: 2004-407
Push-in type jumper bar; insulated; 7-way; Nominal current 32 A; light gray

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

	**Item no.: 2004-408** Push-in type jumper bar; insulated; 8-way; Nominal current 32 A; light gray
	**Item no.: 2004-409** Push-in type jumper bar; insulated; 9-way; Nominal current 32 A; light gray
	**Item no.: 2004-410** Push-in type jumper bar; insulated; 10-way; Nominal current 32 A; light gray
	**Item no.: 2004-433** Push-in type jumper bar; insulated; from 1 to 3; Nominal current 32 A; light gray
	**Item no.: 2004-434** Push-in type jumper bar; insulated; from 1 to 4; Nominal current 32 A; light gray
	**Item no.: 2004-435** Push-in type jumper bar; insulated; from 1 to 5; Nominal current 32 A; light gray
	**Item no.: 2004-436** Push-in type jumper bar; insulated; from 1 to 6; Nominal current 32 A; light gray
	**Item no.: 2004-437** Push-in type jumper bar; insulated; from 1 to 7; Nominal current 32 A; light gray
	**Item no.: 2004-438** Push-in type jumper bar; insulated; from 1 to 8; Nominal current 32 A; light gray
	**Item no.: 2004-439** Push-in type jumper bar; insulated; from 1 to 9; Nominal current 32 A; light gray
	**Item no.: 2004-440** Push-in type jumper bar; insulated; from 1 to 10; Nominal current 32 A; light gray
	**Item no.: 210-103** Wire commoning chain; insulated; 50 connections; black
	**Item no.: 210-123** Wire commoning chain; insulated; 50 connections

Carrier rail

	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
	**Item no.: 210-113** Steel carrier rail; 35 x 7.5 mm; 1 mm thick; 2 m long; unslotted; according to EN 60715
	**Item no.: 210-114** Steel carrier rail; 35 x 15 mm; 1.5 mm thick; 2 m long; unslotted; similar to EN 60715
	**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

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

Item no.: 210-118
Steel carrier rail; 35 x 15 mm; 2.3 mm thick; 2 m long; unslotted; according to EN 60715

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.: 210-197
Steel carrier rail; 35 x 15 mm; 1.5 mm thick; 2 m long; slotted; similar to EN 60715

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.: 210-504
Steel carrier rail; 35 x 7.5 mm; 1 mm thick; 2 m long; slotted; galvanized; according to EN 60715

Item no.: 210-505
Steel carrier rail; 35 x 7.5 mm; 1 mm thick; 2 m long; unslotted; galvanized; according to EN 60715

Item no.: 210-506
Steel carrier rail; 35 x 15 mm; 1.5 mm thick; 2 m long; unslotted; galvanized; similar to EN 60715

Item no.: 210-508
Steel carrier rail; 35 x 15 mm; 1.5 mm thick; 2 m long; slotted; galvanized; similar to EN 60715

Marking accessories

Item no.: 2009-110
Marking strips; on reel; not stretchable; plain; snap-on type; white

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

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.: 2009-115/000-006
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.: 2009-115/000-012
WMB-Inline; for Smart Printer; 1500 pieces on roll; stretchable 5 - 5.2 mm; plain; snap-on type; orange

Item no.: 2009-115/000-017

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

WMB-Inline; for Smart Printer; 1500 pieces on roll; stretchable 5 - 5.2 mm; plain; snap-on type; light green

Item no.: 2009-115/000-023
WMB-Inline; for Smart Printer; 1500 pieces on roll; stretchable 5 - 5.2 mm; plain; snap-on type; green

Item no.: 2009-115/000-024
WMB-Inline; for Smart Printer; 1500 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.: 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.: 2009-145/000-006
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.: 2009-145/000-012
Mini-WSB Inline; for Smart Printer; 1700 pieces on roll; stretchable 5 - 5.2 mm; plain; snap-on type; orange

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

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

Item no.: 248-501
Miniature WSB Quick marking system; plain; Marker width 5 mm; 10 strips with 10 markers per card

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

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

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

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.: 248-501/000-012
Mini-WSB marking card; as card; not stretchable; plain; snap-on type; orange

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

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

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

Item no.: 793-501
WMB marking card; as card; not stretchable; plain; snap-on type; white

Item no.: 793-501/000-002
WMB marking card; as card; not stretchable; plain; snap-on type; yellow

Item no.: 793-501/000-005
WMB marking card; as card; not stretchable; plain; snap-on type; red

Item no.: 793-501/000-006
WMB marking card; as card; not stretchable; plain; snap-on type; blue

Item no.: 793-501/000-007
WMB marking card; as card; not stretchable; plain; snap-on type; gray

Item no.: 793-501/000-012
WMB marking card; as card; not stretchable; plain; snap-on type; orange

Item no.: 793-501/000-017
WMB marking card; as card; not stretchable; plain; snap-on type; light green

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

Item no.: 793-501/000-023
WMB marking card; as card; not stretchable; plain; snap-on type; green

Item no.: 793-501/000-024
WMB marking card; as card; not stretchable; 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.: 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.: 793-5501/000-006
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.: 793-5501/000-007
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.: 793-5501/000-012
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.: 793-5501/000-014
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.: 793-5501/000-017
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.: 793-5501/000-023
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.: 793-5501/000-024
WMB marking card; as card; for terminal block width 5 - 17.5 mm; stretchable 5 - 5.2 mm; plain; snap-on type; violet

Push-In type wire jumper

Item no.: 2009-412
Push-in type wire jumper; insulated; wire length 60 mm; Conductor cross section 1.5 mm²; suitable for 2001, 2002, 2003 and 2022 Series rail-mounted terminal blocks; black

Item no.: 2009-414

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

Push-in type wire jumper; insulated; wire length 110 mm; Conductor cross section 1.5 mm²; suitable for 2001, 2002, 2003 and 2022 Series rail-mounted terminal blocks; black

Item no.: 2009-416
Push-in type wire jumper; insulated; wire length 250 mm; Conductor cross section 1.5 mm²; suitable for 2001, 2002, 2003 and 2022 Series rail-mounted terminal blocks; black

N-busbar

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

Protective Warning Marker

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

check

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

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.: 216-243
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.: 216-244
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.: 216-246
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.: 216-262
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.: 216-263
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.: 216-264
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.: 216-266
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

Downloads

Documentation

Additional Information

Technical explanations	Apr 3, 2019

CAD/CAE-Data

CAD data

2D/3D Models 2002-1611/1000-867

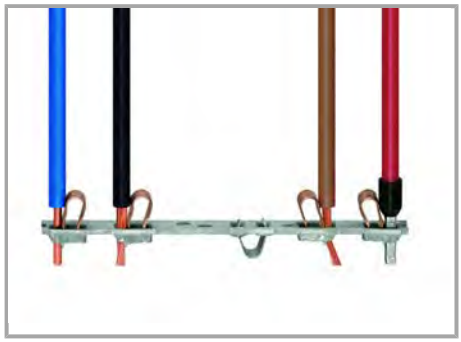
CAE data

EPLAN Data Portal 2002-1611/1000-867

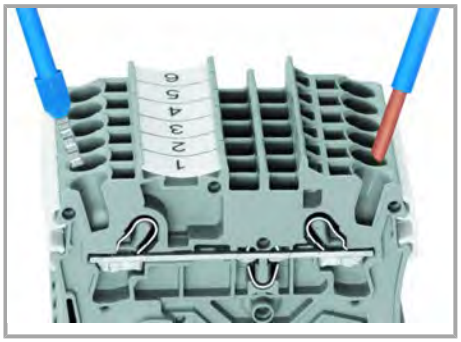
WSCAD Universe 2002-1611/1000-867

Installation Notes

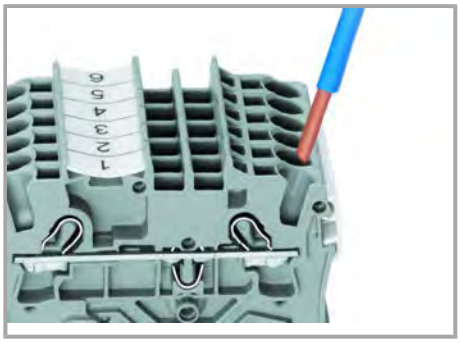
Conductor termination



All conductor types at a glance



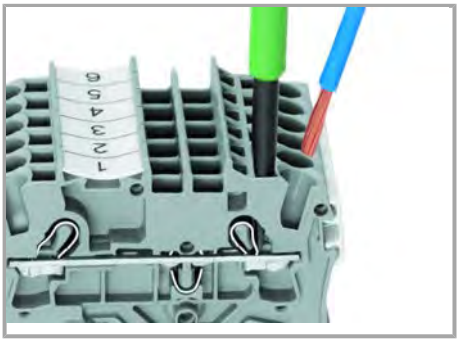
Terminating solid and ferruled conductors via push-in connection.



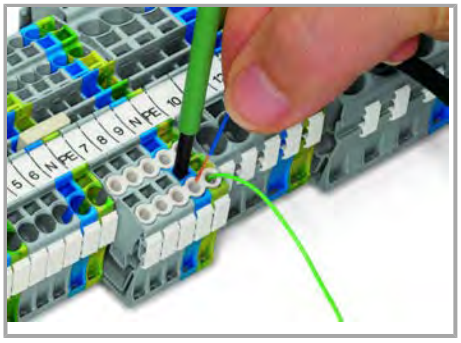
Inserting conductors via push-in termination.

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.

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



Inserting a conductor via operating tool.



Conductor termination – Insulation stop.

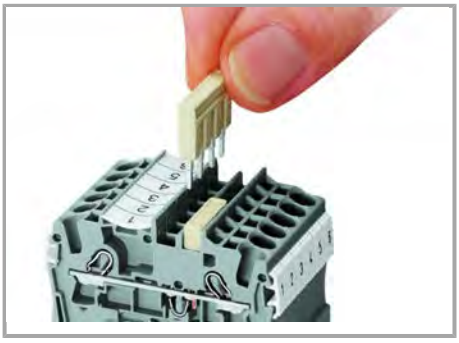
Connecting fine-stranded conductors without ferrules, or small cross-sectional conductors that cannot be pushed in, is performed similarly to the original CAGE CLAMP® – just use an operating tool.

The smart feature:

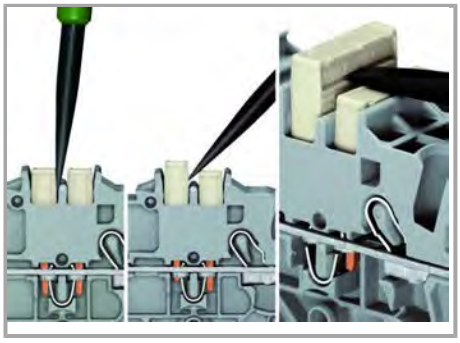
To open the clamp, the operating tool is inserted vertically. The conductor entry is less than 15 degrees for easier wiring.

Commoning

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



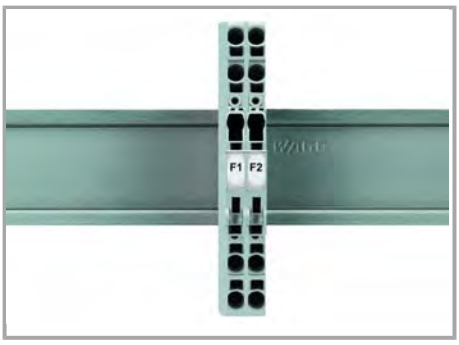
The push-in type jumper bar system is based on the common plug and socket principle. Each terminal block is spring-loaded with a double socket and a resilient CrNi steel spring. The jumper contact material is pure electrolytic copper, which allows for an extremely small design capable of carrying the full-rated current of the terminal block. Ground terminal blocks can also be commoned using the same jumper system. Custom jumpers are created by breaking and removing jumper contacts (2000, 2001, 2002, 2004 Series).



Removing a push-in type jumper bar.

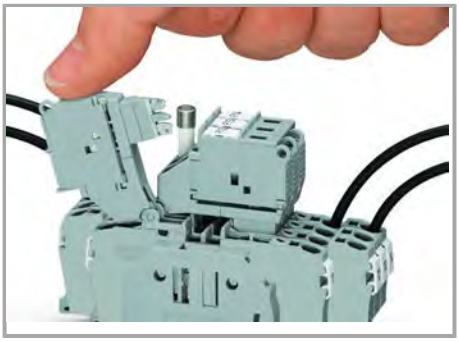
Insert the operating tool between the jumper and and partition wall of the dual jumper slots, then lift up the jumper.

Place the operating tool in the center of jumpers 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 can be assembled adjacently. If there is no adjacent fuse terminal block at the end of the assembly, an end plate must be used.

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



Fused disconnect terminal block with a pivoting fuse holder – pivoting the fuse holder into the locked open position.

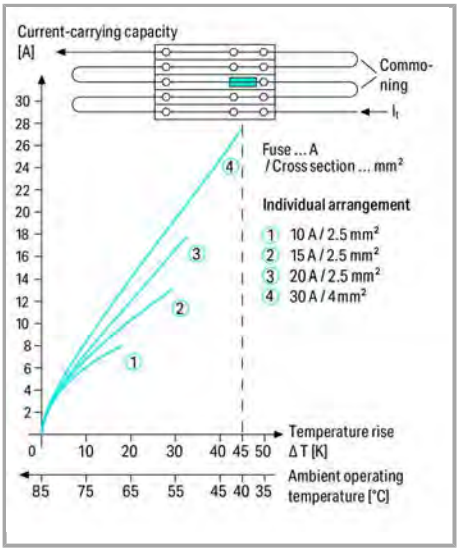
Fused disconnect terminal block with a pivoting fuse holder – replacing a fuse.

Glass cartridge fuse 5 x 20

Series Item No.	Overload and short circuit protection		Short circuit protection only	
	Individual argmt.	Group argmt.	Individual argmt.	Group argmt.
	Fuse terminal blocks			
2002-1611 2002-1711 2002-1811 2002-1611/....-.... 2002-1711/....-.... 2002-1811/....-....	1.6 W 1.6 W 	1.6 W 1.6 W 	2.5 W 2.5 W 	2.5 W 2.5 W

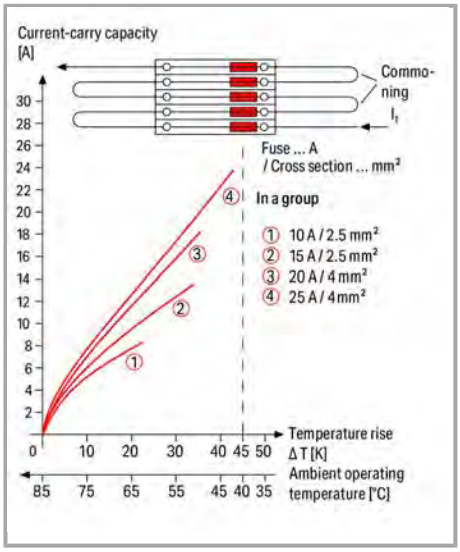
When selecting miniature metric fuses, make sure that the maximum power loss listed above is not exceeded. The power loss is determined according to IEC or EN 60947-7-3/VDE 0611-6 at 23 °C. The temperature rise of the terminal blocks must be checked according to their application and mounting. Higher ambient temperatures place additional strain on fuse cartridges. Therefore, in such applications, the rated current must be reduced if necessary. More details are available from the fuse manufacturers.

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



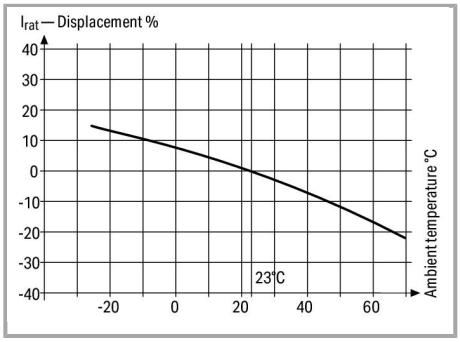
Application Notes on Terminal Blocks for Miniature Metric Fuses

Diagram: Individual arrangement



Application Notes on Terminal Blocks for Miniature Metric Fuses

Diagram: Block arrangement



Application Notes on Terminal Blocks for Miniature Metric Fuses

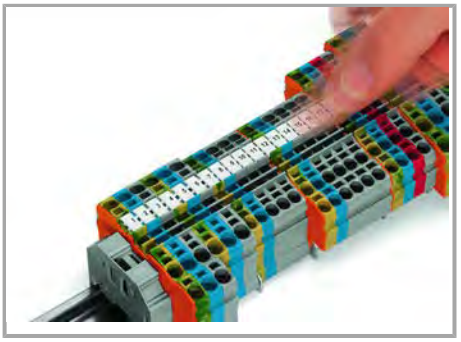
Nominal current ratings for fuse cartridges are defined differently in international standards. This is why the recommended continuous current-carrying capacity of the fuses is max. 80 % of their nominal current according to DIN 72581/Part 3 (for an ambient operating temperature of 23 °C). Selecting 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).

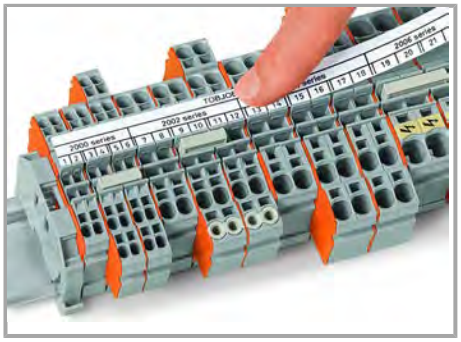
Information from the mini-automotive, blade-type fuse manufacturers

Derating T_{amb} /°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

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

Marking





Snapping WMB Inline markers into marker slots.

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