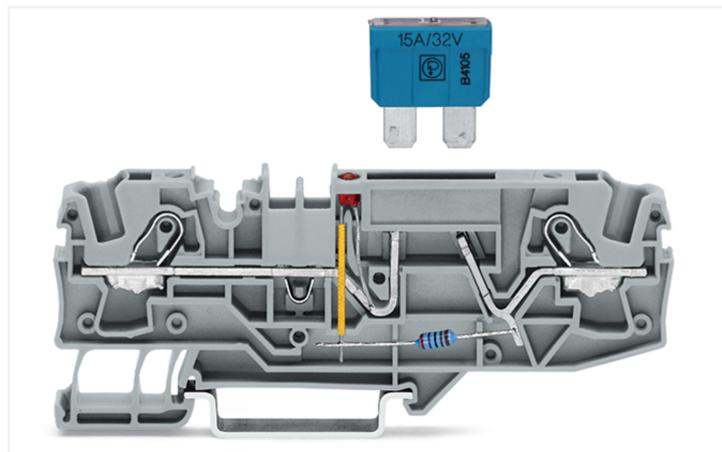
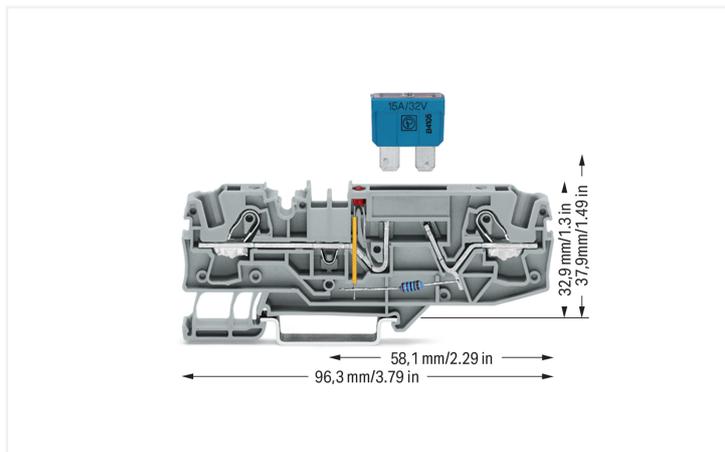


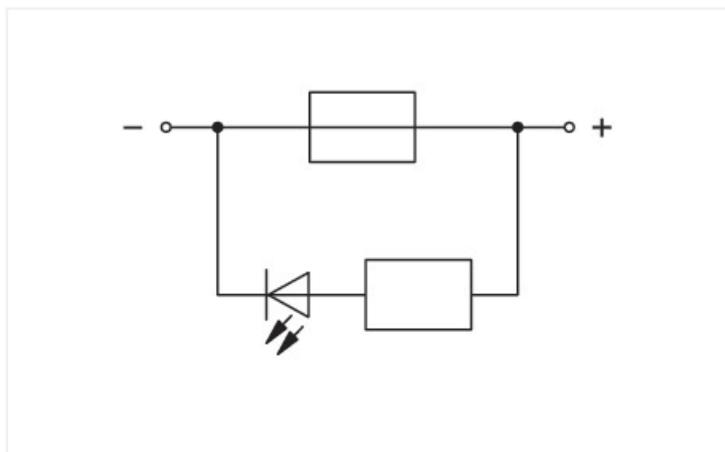
Data Sheet | Item Number: 2006-1681/1000-414

2-conductor fuse terminal block; for 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; 6 mm²; Push-in CAGE CLAMP®; gray

<https://www.wago.com/2006-1681/1000-414>



Color: ■ gray



Fuse terminal block, 2006 Series, Push-in CAGE CLAMP®

This fuse terminal block (item number 2006-1681/1000-414) is designed for quick and simple connections. Conductors should only be connected to this fuse terminal block if their strip length is between 13 and 15 mm. Featuring conductor terminals along with Push-in CAGE CLAMP®, this product is highly versatile. Our Push-in CAGE CLAMP® is a universal, maintenance-free connection solution for all conductor types, offering a key advantage: 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. Depending on the type of conductor, this fuse terminal block is suitable for conductor cross sections ranging from 0.5 mm² to 10 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	500 V	-	-
Rated impulse withstand voltage	8 kV	-	-
Rated current	25 A	-	-
Current at conductor cross-section (max.) mm ²	30 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!
----------------	---

Approvals per

	UL 1059		
Use group	B	C	D
Rated voltage	48 V	48 V	-
Rated current	30 A	30 A	-

Approvals per

	CSA 22.2 No 158		
Use group	B	C	D
Rated voltage	48 V	48 V	-
Rated current	30 A	30 A	-

General information

Fuse receptacle	pluggable
Fuse type	Standard flat plug-in fuse; 19.1 x 5.1 x 18.5 mm
Number/type of diode/LED	Red LED
Wiring direction	Front-entry wiring

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	6 mm ²
Solid conductor	0.5 ... 10 mm ² / 20 ... 8 AWG
Solid conductor; push-in termination	2.5 ... 10 mm ² / 14 ... 8 AWG
Fine-stranded conductor	0.5 ... 10 mm ² / 20 ... 8 AWG
Fine-stranded conductor; with insulated ferrule	0.5 ... 6 mm ² / 20 ... 10 AWG
Fine-stranded conductor; with ferrule; push-in termination	2.5 ... 6 mm ² / 16 ... 10 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	13 ... 15 mm / 0.51 ... 0.59 inches
Wiring direction	Front-entry wiring

Physical data

Width	7.5 mm / 0.295 inches
Height	96.3 mm / 3.791 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	0.323 MJ
Weight	17.5 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	$f_1 = 5 \text{ Hz}$ to $f_2 = 150 \text{ Hz}$
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	$f_1 = 5 \text{ Hz}$ to $f_2 = 150 \text{ Hz}$
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)	25 pcs
Packaging type	Box
Country of origin	CN
GTIN	4050821437802
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 10.0	EC000899
ECCN	NO US CLASSIFICATION

Environmental Product Compliance

RoHS Compliance Status	Compliant, No Exemption
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Approvals / Certificates

General approvals



Approval	Standard	Certificate Name
CCA DEKRA Certification B.V.	IEC 60947	71-122840 REV.1
CCA DEKRA Certification B.V.	EN 60947	NTR NL-8060
CSA CSA Group	C22.2 No. 158	1543858
UR 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
LR Lloyds Register	EN 60947	LR23325966TA
PRS Polski Rejestr Statków	-	TE/1094/880590/23

Downloads

Environmental Product Compliance

Compliance Search	
Environmental Product Compliance 2006-1681/1000-414	↓

Documentation

Bid Text			
2006-1681/1000-414	18.04.2019	xml 4.58 KB	↓
2006-1681/1000-414	17.04.2019	docx 15.94 KB	↓

CAD/CAE-Data

CAD data	
2D/3D Models 2006-1681/1000-414	↓

CAE data	
EPLAN Data Portal 2006-1681/1000-414	↓
WSCAD Universe 2006-1681/1000-414	↓
ZUKEN Portal 2006-1681/1000-414	↓

1 Compatible Products

1.1 Required Accessories

1.1.1 End plate

1.1.1.1 End plate



Item No.: 2006-1691
End and intermediate plate; 1 mm thick; gray

Item No.: 2006-1692
End and intermediate plate; 1 mm thick; orange

1.2 Optional Accessories

1.2.1 Cover

1.2.1.1 Cover



Item No.: 2006-191
Lockout cap; for wire insertion and actuating opening; gray

1.2.2 DIN-rail

1.2.2.1 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

1.2.3 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 Jumper

1.2.4.1 Jumper



Item No.: 2006-402

Jumper; 2-way; insulated; light gray



Item No.: 2006-403

Jumper; 3-way; insulated; light gray



Item No.: 2006-404

Jumper; 4-way; insulated; light gray



Item No.: 2006-405

Jumper; 5-way; insulated; light gray



Item No.: 2006-433

Jumper; from 1 to 3; insulated; light gray



Item No.: 2006-434

Jumper; from 1 to 4; insulated; light gray



Item No.: 2006-435

Jumper; from 1 to 5; insulated; light gray



Item No.: 2006-405/011-000

Star point jumper; 3-way; insulated; light gray

1.2.5 Marking

1.2.5.1 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

1.2.5.2 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.: [793-5501/000-007](#)

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.: [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.: [793-501/000-023](#)

WMB marking card; as card; not stretchable; plain; snap-on type; green

Item No.: [793-501/000-017](#)

WMB marking card; as card; not stretchable; plain; snap-on type; light green

Item No.: [793-501/000-012](#)

WMB marking card; as card; not stretchable; plain; snap-on type; orange

Item No.: [793-501/000-005](#)

WMB marking card; as card; not stretchable; plain; snap-on type; red



Item No.: [793-501/000-024](#)

WMB 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.: [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

1.2.5.2 Marker



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

1.2.5.3 Marker carrier



Item No.: 2002-121
 Adaptor; gray

Item No.: 2009-198
 Adaptor; gray

1.2.5.4 Marking strip



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

1.2.6 Protective warning marker

1.2.6.1 Cover



Item No.: 2006-115
 Protective warning marker; for 5 terminal blocks; with high-voltage symbol, black; yellow

1.2.7 Screwless end stop

1.2.7.1 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

1.2.8 Test and measurement

1.2.8.1 Testing accessories



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

1.2.9 Tool

1.2.9.1 Operating tool



Item No.: 210-721

Operating tool; Blade: 5.5 x 0.8 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.

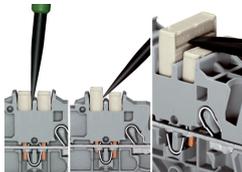
Advantage:

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

Commoning



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

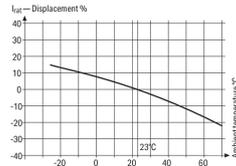
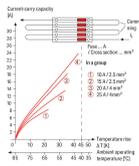
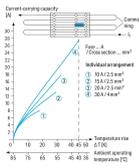


Removing a push-in type jumper bar:

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.





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

Operating Temp. °C	%	F_t
-35	14	0.877
-30	13	0.866
-25	12	0.855
-20	11	0.844
-15	10	0.833
-10	9	0.822
-5	8	0.811
0	7	0.800
5	6	0.789
10	5	0.778
15	4	0.767
20	3	0.756
25	2	0.745
30	1	0.734
35	0	0.723
40	-1	0.712
45	-2	0.701
50	-3	0.690
55	-4	0.679
60	-5	0.668
65	-6	0.657
70	-7	0.646
75	-8	0.635
80	-9	0.624
85	-10	0.613
90	-11	0.602
95	-12	0.591
100	-13	0.580
105	-14	0.569
110	-15	0.558
115	-16	0.547
120	-17	0.536
125	-18	0.525
130	-19	0.514
135	-20	0.503
140	-21	0.492
145	-22	0.481

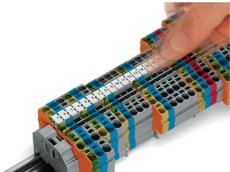
Application Notes on Terminal Blocks for Glass Cartridge Fuses
 Diagram: "Individual Arrangement"

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.