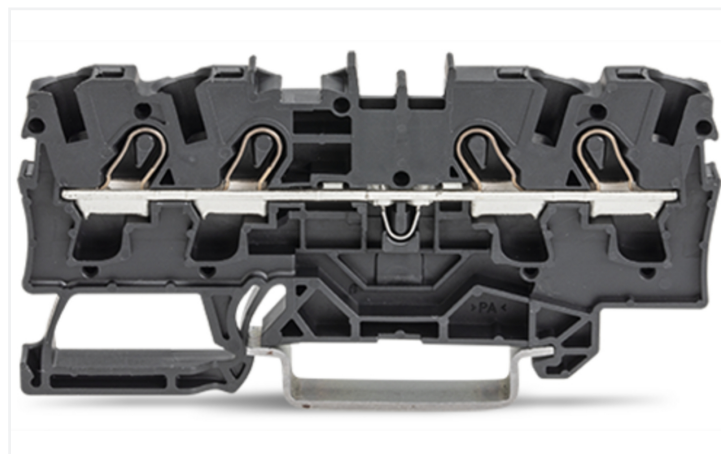
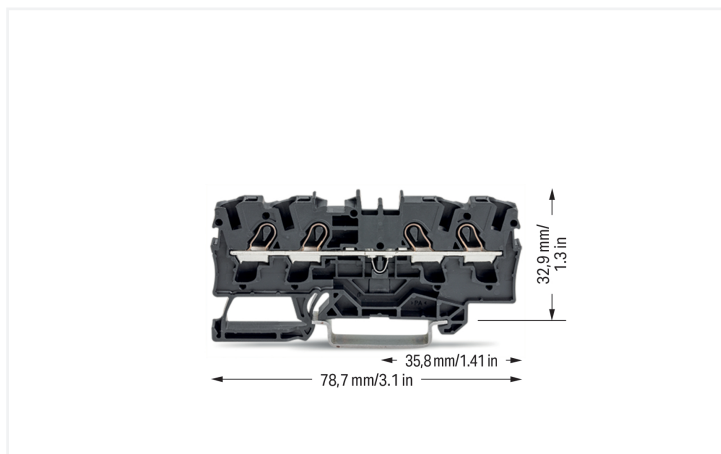


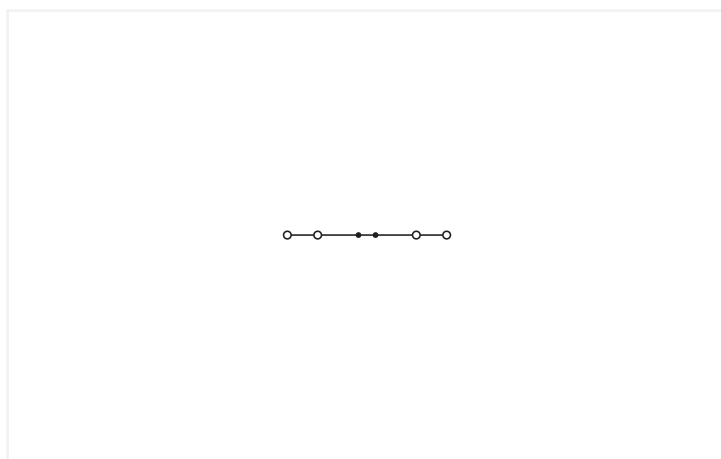
Data Sheet | Item Number: 2004-1405

4-conductor through terminal block; 4 mm²; suitable for Ex e II applications; side and center marking; for DIN-rail 35 x 15 and 35 x 7.5; Push-in CAGE CLAMP®; 4,00 mm²; black

<https://www.wago.com/2004-1405>



Color: ■ black



Similar to illustration

Through terminal block, 2004 Series, operating tool

Our through terminal block (item number 2004-1405) makes connections quick and easy. Ensure that the strip lengths are between 11 and 13 mm when connecting conductors to this through terminal block. Whether for industrial or building applications, you can use our through terminal blocks to connect electrical conductors quickly and safely. We offer variants for both classic through-wiring and potential distribution. This product features conductor terminals and utilizes Push-in CAGE CLAMP®. Push-in CAGE CLAMP® connection technology is ideal for connecting all conductor types. Both solid and fine-stranded conductors with ferrules can be plugged in without needing to use any tools—all thanks to its pluggable design. The item's dimensions are (6.2 x 78.7 x 39.5) mm (width x height x depth). Depending on the type of conductor, this through terminal block is suitable for conductor cross sections ranging from 0.5 mm² to 6 mm².

The universal connection for all conductor types – Push-in CAGE CLAMP®

An operating tool is used to operate this through rail-mount terminal block. Our TOPJOB® S rail-mount terminal blocks are perfect for a wide range of industrial applications and modern building installations thanks to the secure electrical connections they provide. You can work anywhere in the world and on any application with just a single rail-mount terminal block system. This product is designed for specific Ex applications (please refer to the product datasheet).

- Compact sizes
- Suitable for specific Ex applications
- Actuation via operating tool
- Permanently secure connections



Electrical data

Ratings per	IEC/EN 60947-7-1		
Overvoltage category	III	III	II
Pollution degree	3	2	2
Nominal voltage	800 V	-	-
Rated impulse withstand voltage	8 kV	-	-
Rated current	32 A	-	-
Current at conductor cross-section (max.) mm ²	41 A	-	-

Approvals per	UL 1059		
Use group	B	C	D
Rated voltage	600 V	600 V	-
Rated current	30 A	30 A	-

Approvals per	CSA 22.2 No 158		
Use group	B	C	D
Rated voltage	600 V	600 V	-
Rated current	30 A	30 A	-

Ex information	
Reference to hazardous areas	See application instructions in section "Knowledge and Downloads – Documentation – Additional Information: Technical Section; Technical Explanations"
Ratings per	ATEX: PTB 05 ATEX 1095 U / IECEx: PTB 05.0033U (Ex eb IIC Gb)
Rated voltage EN (Ex e II)	550 V
Rated current (Ex e II)	30 A

Power Loss	
Power loss, per pole (potential)	1.024 W
Rated current I _N for power loss specification	32 A
Resistance value for specified, current-dependent power loss	0.001 Ω

General information	
Wiring direction	Front-entry wiring

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	4 mm ²
Solid conductor	0.5 ... 6 mm ² / 20 ... 10 AWG
Solid conductor; push-in termination	1.5 ... 6 mm ² / 14 ... 10 AWG
Stranded conductor	0.5 ... 6 mm ² / 20 ... 10 AWG
Fine-stranded conductor	0.5 ... 6 mm ² / 20 ... 10 AWG
Fine-stranded conductor; with insulated ferrule	0.5 ... 4 mm ² / 20 ... 12 AWG
Fine-stranded conductor; with ferrule; push-in termination	1.5 ... 4 mm ² / 18 ... 12 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	11 ... 13 mm / 0.43 ... 0.51 inches
Wiring direction	Front-entry wiring



Physical data	
Width	6.2 mm / 0.244 inches
Height	78.7 mm / 3.098 inches
Depth from upper-edge of DIN-rail	32.9 mm / 1.295 inches
Depth	39.5 mm / 1.555 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	black
Material group	I
Insulation material (main housing)	Polyamide (PA66)
Flammability class per UL94	V0
Fire load	0.178 MJ
Weight	10.6 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	
Product Group	22 (TOPJOB S)
PU (SPU)	50 pcs
Packaging type	Box
Country of origin	DE
GTIN	4045454537500
Customs tariff number	85369010000

Product Classification	
UNSPSC	39121410
eCl@ss 10.0	27-14-11-20
eCl@ss 9.0	27-14-11-20
ETIM 9.0	EC000897
ETIM 10.0	EC000897
ECCN	NO US CLASSIFICATION

Environmental Product Compliance	
RoHS Compliance Status	Compliant, No Exemption

Approvals / Certificates		
General approvals		Declarations of conformity and manufacturer's declarations
   		
Approval	Standard	Certificate Name
CCA DEKRA Certification B.V.	EN 60947	71-125978
CCA DEKRA Certification B.V.	EN 60947	NTR NL-7964
DEKRA DEKRA Certification B.V.	EN 60947	71-155655
UL Underwriters Laboratories Inc.	UL 1059	E45172
Approval	Standard	Certificate Name
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 Ship- ping	-	24-0152298-PDA
DNV GL Det Norske Veritas, Ger- manischer Lloyd	-	TAE00001V2
PRS Polski Rejestr Statków	-	TE/1094/880590/23

Approvals for hazardous areas



Approval	Standard	Certificate Name
ATEX Physikalisch Technische Bundesanstalt (PTB)	EN 60079	PTB 05 ATEX 1095 U (II 2 G Ex eb IIC Gb bzw. I M 2 Ex eb I Mb)
CCCEx CQST/CNEx	GB/T 3836.3	2020312313000160 (Ex eb IIC Gb, Ex eb I Mb)
IECEx Physikalisch Technische Bundesanstalt (PTB)	IEC 60079	IECEx PTB 05.0033 U (Ex eb IIC Gb resp. Ex eb I Mb)
INMETRO TÜV Rheinland do Brasil Lt- da.	IEC 60079	TÜV 12.1309 U

Downloads

Environmental Product Compliance

Compliance Search
Environmental Product Compliance 2004-1405

Documentation

Bid Text			
2004-1405	19.02.2019	xml 3.86 KB	↓
2004-1405	07.08.2018	docx 14.76 KB	↓

CAD/CAE-Data

CAD data
2D/3D Models 2004-1405

CAE data
EPLAN Data Portal 2004-1405
WSCAD Universe 2004-1405
ZUKEN Portal 2004-1405

1 Compatible Products

1.1 Required Accessories

1.1.1 End plate

1.1.1.1 End plate



Item No.: 2004-1491

End and intermediate plate; 1 mm thick; gray



Item No.: 2004-1492

End and intermediate plate; 1 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 End plate

1.2.2.1 End plate



Item No.: 2004-1493

Separator plate; 2 mm thick; oversized; gray



Item No.: 2004-1494

Separator plate; 2 mm thick; oversized; orange

1.2.3 Ferrule

1.2.3.1 Ferrule



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

1.2.3.1 Ferrule



Item No.: 216-267

Ferrule; Sleeve for 4 mm² / AWG 12; insulated; electro-tin plated; electrolytic copper; gastight crimped; acc. to DIN 46228, Part 4/09.90; gray

1.2.4 Installation

1.2.4.1 Cover



Item No.: 709-156

Cover; Type 3; suitable for cover carrier, type 3; 1 m long; transparent

1.2.4.2 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

1.2.5 Insulation stop

1.2.5.1 Insulation stop



Item No.: 2004-171

Insulation stop; 0.25 - 0.5 mm²; 5 pieces/strip; light gray



Item No.: 2004-172

Insulation stop; 0.75 - 1 mm²; 5 pieces/strip; dark gray

1.2.6 Jumper

1.2.6.1 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

1.2.6.1 Jumper

**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**

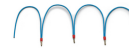
Star point jumper; 3-way; insulated; light gray

**Item No.: 2006-499**

Step-down jumper; from 2006/2004 to 2004/2002/2001 series; from 2206/2204 to 2204/2202/2201 series; insulated; light gray

**Item No.: 2016-499**

Step-down jumper; from 2016/2010 to 2010/2006/2004/2002 series; from 2216/2210 to 2210/2206/2204/2202 series; insulated; light gray

**Item No.: 210-103**Wire commoning chain; 0.5 mm²; insulated; black**Item No.: 210-123**

Wire commoning chain; insulated; blue

1.2.7 Marking

1.2.7.1 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

1.2.7.2 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

**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



1.2.7.2 Marker



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



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

1.2.7.3 Marker carrier



Item No.: 2009-198
Adaptor; gray

1.2.7.4 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.: 2004-115
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.: 2004-511
Modular TOPJOB®S connector; modular; for jumper contact slot; 1-pole; gray



Item No.: 2004-552
Modular TOPJOB®S connector; modular; for jumper contact slot; 2-pole; gray



Item No.: 2004-553
Modular TOPJOB®S connector; modular; for jumper contact slot; 3-pole; gray



Item No.: 2004-554
Modular TOPJOB®S connector; modular; for jumper contact slot; 4-pole; gray



Item No.: 2004-555
Modular TOPJOB®S connector; modular; for jumper contact slot; 5-pole; gray



Item No.: 2004-549
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.: 2009-182
Testing tap; for max. 2.5 mm²; tool-free connection for individual test wires 0.08 - 2.5 mm; 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; multi-coloured



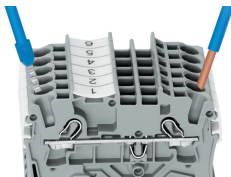
Item No.: 210-720
Operating tool; Blade: 3.5 x 0.5 mm; with a partially insulated shaft; multicoloured

Installation Notes

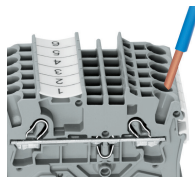
Conductor termination



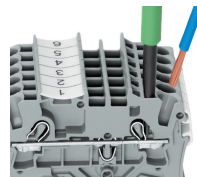
All conductor types at a glance



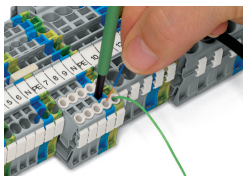
Push-in termination of solid and ferruled conductors



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.

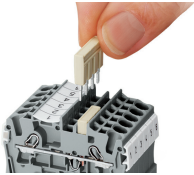


Inserting a conductor via operating tool:
Connecting fine-stranded conductors without ferrules, or small cross-sectional conductors that cannot be pushed in, is performed similarly to the original CAGE CLAMP® – just use an operating tool.
Advantage:
To open the clamp, the operating tool is inserted vertically.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

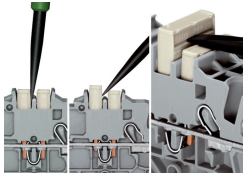


Conductor termination – insulation stop

Commoning

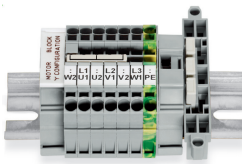


Insert push-in type jumper bar and push down until it hits backstop.

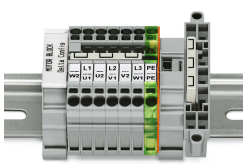


Removing a push-in type jumper bar:
Insert the operating tool between the jumper and partition wall of the dual jumper slots, then lift up the jumper.
Place the operating tool in the center of jumpers for up to five contacts (see above), or alternately on both sides for jumpers with more than five contacts.

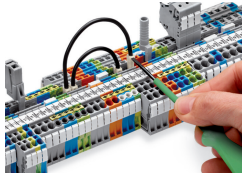
Commoning



This star point jumper has been specially developed to create a "star point" and is used on motor terminal boards equipped with Rail-Mount Terminal Blocks TOPJOB® S.

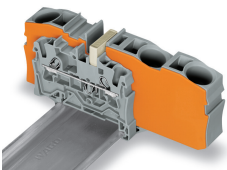


This delta jumper has been specially developed to create a delta configuration and is used on motor terminal boards equipped with rail-mount terminal blocks TOPJOB® S.

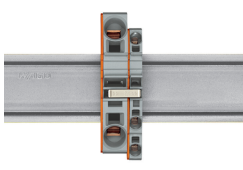


Push down the wire jumper until fully inserted. Lift the jumper with an operating tool for rewiring.

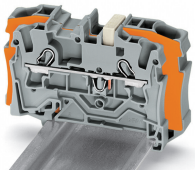
Commoning



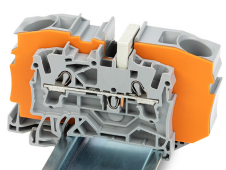
Step-down jumpers common terminal blocks of different sizes, without losing a conductor clamping point. This can be beneficial on long conductor runs where voltage drop can be a problem. A large conductor can be easily connected to smaller conductors at the distribution point. Commoning may be made in either direction using the special thin end plate to cover the open side. Additional through terminal blocks having a smaller cross-section may be commoned using push-in type jumper bars.



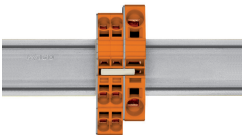
Using step-down jumpers, an end plate must be inserted between the terminal blocks to be commoned.



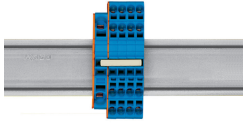
Step-down jumper (Item No. 2006-499) commons 6/4 mm² (10/12 AWG) terminal blocks (2006/2004 Series) with 4/2.5/1.5 mm² (AWG 12/14/16) terminal blocks (2004/2002/2001 Series).



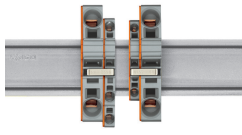
Step-down jumper (Item No. 2016-499) commons 16/10 mm² (16/8 AWG) terminal blocks (2016/2010 Series) with 10/6/4/2.5 mm² (8/10/12/14 AWG) terminal blocks (2010/2006/2004/2002 Series).



Stepping down via push-in type jumper bar:
Commoning via open terminal side with end plate allows jumpering over two cross-section sizes for 16 mm² (6 AWG) and 10 mm² (8 AWG) and one cross-section size for 6/4/2.5 mm² (10/12/14 AWG). An example: from 16 mm² (6 AWG) to 6 mm² (10 AWG) (see illustration above) or from 10 mm² (8 AWG) to 4 mm² (12 AWG).



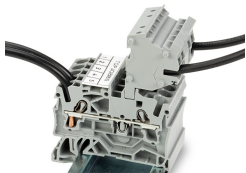
Stepping down via push-in type jumper bar:
Commoning via closed terminal side with end plate allows jumpering over two cross-section sizes, e.g., from 16 mm² (6 AWG) to 6 mm² (10 AWG) or from 6 mm² (10 AWG) to 2.5 mm² (14 AWG) (see illustration above).



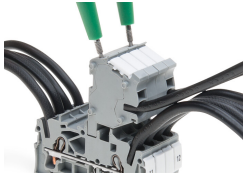
Note:
The total current of the outgoing circuits must not exceed the nominal current of the step-down jumper/push-in type jumper bar.



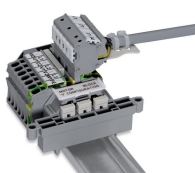
Testing



The modular TOPJOB® S connectors also connect conductors of the same size as the terminal blocks being used.



TOPJOB® S Connectors with a 2 mm Ø test socket for testing voltage via 2-pole voltage tester



Rail-mount terminal block assembly for electric motor wiring

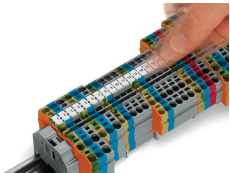


Test plug adapter (Item No. 2009-174, CAT I) for 4 mm Ø plugs – compatible with 2000 to 2016 Series

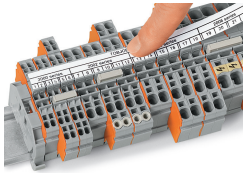


Testing tap (Item No. 2009-182) for tool-free connection of test cables up to 2.5 mm² (12 AWG) – compatible with 2000 to 2016 Series

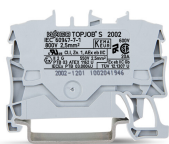
Marking



Snapping WMB Inline markers into marker slots.



Ex application



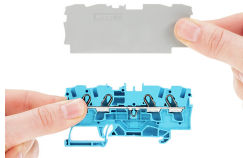
Through terminal blocks with a blue insulated housing are suitable for Ex i applications.



All through and ground conductor terminal blocks are suitable for Ex e II applications.



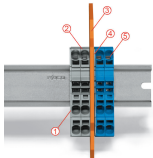
Separator plate for Ex e/Ex i applications
An end plate must be applied to the terminal block located directly behind an Ex e/Ex i separator plate.



Separator plate for Ex e/Ex i applications
An end plate must be applied to the terminal block located directly behind an Ex e/Ex i separator plate.



Ex e II/Ex i terminal strip
Note:
The movable feet of terminal blocks and separator plates must face the same direction.



A separator plate is located between the Ex e II and Ex i terminal strip.
End plate
Ex e II terminal blocks
Separator plate for Ex e/Ex i applications
End plate
Ex i terminal blocks
According to EN 50020, a minimum distance of 50 mm must be kept between live parts of Ex e and Ex i circuits. The use of Ex e/Ex i separators is a space-saving solution when Ex e and Ex i terminal blocks are mounted on a common DIN-rail.

