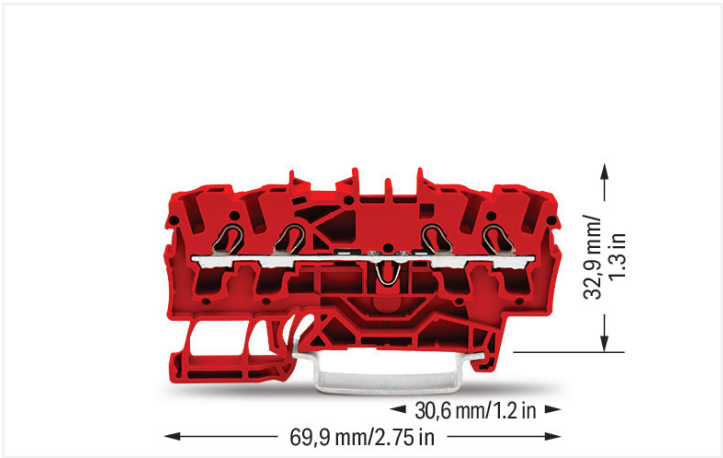
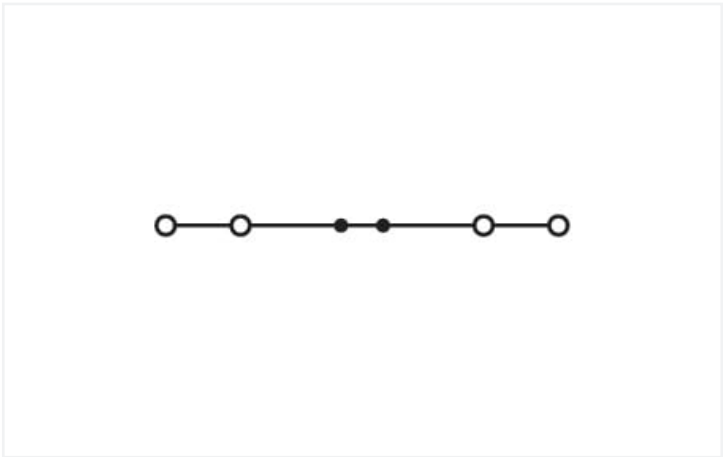
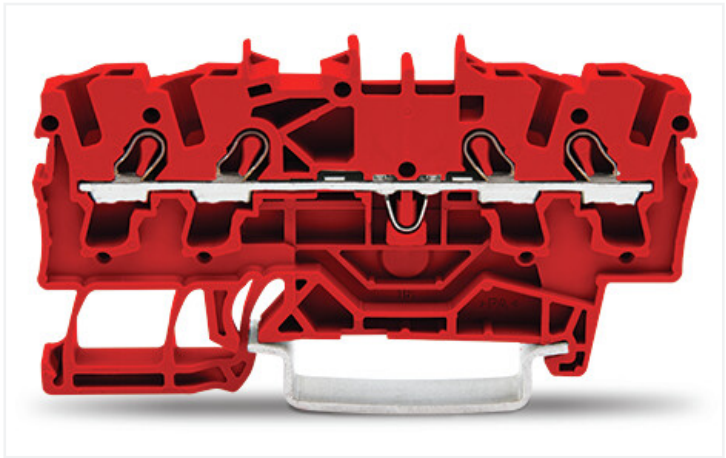


Data Sheet | Item Number: 2002-1403
4-conductor through terminal block; 2.5 mm²; suitable for Ex e II applications; side and center marking; for DIN-rail 35 x 15 and 35 x 7.5; Push-in CAGE CLAMP®; 2,50 mm²; red
<https://www.wago.com/2002-1403>



Color: ■ red



Similar to illustration

Electrical data				
Ratings per		IEC/EN 60947-7-1		
Overvoltage category		III	III	II
Pollution degree		3	2	2
Nominal voltage		800 V	-	-
Rated surge voltage		8 kV	-	-
Rated current		24 A	-	-
Current at conductor cross-section (max.) mm²		32 A	-	-
Approvals per		UL 1059		
Use group		B	C	D
Rated voltage		600 V	600 V	-
Rated current		20 A	20 A	-
Ex information				
Reference hazardous areas		See application instructions in section "Knowledge and Downloads – Documentation – Additional Information: Technical Section; Technical Explanations"		
Ratings per		ATEX: PTB 03 ATEX 1162 U / IECEx: PTB 03.0004U (Ex eb IIC Gb)		
Rated voltage EN (Ex e II)		550 V		
Rated current (Ex e II)		22 A		
Rated current (Ex e II) with jumper		20 A		



Power Loss	
Power loss, per pole (potential)	0.7661 W
Rated current I _N for specified power loss	24 A
Resistance value for specified, current-dependent power loss	0.00133 Ω

Connection data			
Connection points	4	Connection 1	
Total number of potentials	1	Connection technology	Push-in CAGE CLAMP®
Number of levels	1	Actuation type	Operating tool
Number of jumper slots	2	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	69.9 mm / 2.752 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	red
Material group	I
Insulation material	Polyamide (PA66)
Flammability class per UL94	V0
Fire load	0.122 MJ
Weight	7.5 g



Environmental requirements	
Processing temperature	-35 ... +85 °C
Continuous operating temperature	-60 ... +105 °C

Commercial data	
Product Group	22 (TOPJOB S)
eCl@ss 10.0	27-14-11-20
eCl@ss 9.0	27-14-11-20
ETIM 8.0	EC000897
ETIM 7.0	EC000897
PU (SPU)	100 pcs
Packaging type	Box
Country of origin	DE
GTIN	4044918081559
Customs tariff number	85369010000

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 7941
CSA DEKRA Certification B.V.	C22.2 No. 158	1536069
KEMA/KEUR DEKRA Certification B.V.	EN 60947	71-124163
UL Underwriters Laboratories Inc.	UL 1059	E45172

Declarations of conformity and manufacturer's declarations		
Approval	Standard	Certificate Name
ATEX-Attestation of Conformity WAGO GmbH & Co. KG	-	-
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	20-HG1941090-PDA
BV Bureau Veritas S.A.	EN 60947	38586/B0 BV
DNV GL Det Norske Veritas, Germanischer Lloyd	-	TAE00001V2

Approvals for hazardous areas		
Approval	Standard	Certificate Name
AEx Underwriters Laboratories Inc.	UL 60079	E185892 (AEx eb IIC resp. Ex eb IIC)
ATEX Physikalisch Technische Bundesanstalt	EN 60079	PTB 03 ATEX 1162 U (II2G Ex eb IIC Gb, IM2 Ex eb IMb)
CCC CNEX	GB/T 3836.3	2020312313000238 (Ex eb IIC Gb, Ex eb I Mb)
EAC Brjansker Zertifizierungsstelle	TP TC 012/2011	RU C-DE.AM02. B.00127/19 (Ex e IIC Gb U)
IECEx Physikalisch Technische Bundesanstalt	IEC 60079	IECEx PTB 03.0004U (Ex eb IIC Gb or Ex eb I Mb)



Approvals for hazardous areas		
INMETRO TÜV Rheinland do Brasil Ltda.	IEC 60079	TÜV 12.1307 U

Downloads

Environmental Product Compliance

Compliance Search	
Environmental Product Compliance 2002-1403	

Documentation

Bid Text			
2002-1403	29.04.2019	xml 4.14 KB	
2002-1403	23.04.2019	docx 14.76 KB	

CAD/CAE-Data

CAD data	
2D/3D Models 2002-1403	

CAE data	
EPLAN Data Portal 2002-1403	
WSCAD Universe 2002-1403	
ZUKEN Portal 2002-1403	

1 Compatible Products

1.1 Required Accessories

1.1.1 End plate

1.1.1.1 End plate

Item No.: 2002-1491 End and intermediate plate; 0.8 mm thick; gray	Item No.: 2002-1492 End and intermediate plate; 0.8 mm thick; orange	Item No.: 209-191 Separator for Ex e/Ex i applications; 3 mm thick; 120 mm wide; orange	Item No.: 2002-1493 Seperator plate; 2 mm thick; oversized; gray
Item No.: 2002-1494 Seperator plate; 2 mm thick; oversized; orange			



1.2 Optional Accessories

1.2.1 DIN-rail

1.2.1.1 Mounting accessories



Item No.: 210-196
Aluminum carrier rail; 35 x 8.2 mm; 1.6 mm thick; 2 m long; unslotted; similar to EN 60715; silver-colored



Item No.: 210-198
Copper carrier rail; 35 x 15 mm; 2.3 mm thick; 2 m long; unslotted; according to EN 60715; copper-colored



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



Item No.: 210-197
Steel carrier rail; 35 x 15 mm; 1.5 mm thick; 2 m long; slotted; similar to EN 60715; silver-colored



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



Item No.: 210-114
Steel carrier rail; 35 x 15 mm; 1.5 mm thick; 2 m long; unslotted; similar to EN 60715; silver-colored



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



Item No.: 210-115
Steel carrier rail; 35 x 7.5 mm; 1 mm thick; 2 m long; slotted; according to EN 60715; "Hole width 18 mm; silver-colored



Item No.: 210-112
Steel carrier rail; 35 x 7.5 mm; 1 mm thick; 2 m long; slotted; according to EN 60715; "Hole width 25 mm; silver-colored



Item No.: 210-504
Steel carrier rail; 35 x 7.5 mm; 1 mm thick; 2 m long; slotted; galvanized; according to EN 60715; silver-colored



Item No.: 210-113
Steel carrier rail; 35 x 7.5 mm; 1 mm thick; 2 m long; unslotted; according to EN 60715; silver-colored



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

1.2.2 Ferrule

1.2.2.1 Ferrule



Item No.: 216-241
Ferrule; Sleeve for 0.5 mm² / 20 AWG; insulated; electro-tin plated; electrolytic copper; gastight crimped; acc. to DIN 46228, Part 4/09.90; white



Item No.: 216-242
Ferrule; Sleeve for 0.75 mm² / 18 AWG; insulated; electro-tin plated; electrolytic copper; gastight crimped; acc. to DIN 46228, Part 4/09.90; gray



Item No.: 216-262
Ferrule; Sleeve for 0.75 mm² / 18 AWG; insulated; electro-tin plated; electrolytic copper; gastight crimped; acc. to DIN 46228, Part 4/09.90; gray



Item No.: 216-243
Ferrule; Sleeve for 1 mm² / AWG 18; insulated; electro-tin plated; electrolytic copper; gastight crimped; acc. to DIN 46228, Part 4/09.90; red



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



Item No.: 216-244
Ferrule; Sleeve for 1.5 mm² / AWG 16; insulated; electro-tin plated; electrolytic copper; gastight crimped; acc. to DIN 46228, Part 4/09.90; black



Item No.: 216-264
Ferrule; Sleeve for 1.5 mm² / AWG 16; insulated; electro-tin plated; electrolytic copper; gastight crimped; acc. to DIN 46228, Part 4/09.90; black



Item No.: 216-246
Ferrule; Sleeve for 2.5 mm² / AWG 14; insulated; electro-tin plated; electrolytic copper; gastight crimped; acc. to DIN 46228, Part 4/09.90; blue



Item No.: 216-266
Ferrule; Sleeve for 2.5 mm² / AWG 14; insulated; electro-tin plated; electrolytic copper; gastight crimped; acc. to DIN 46228, Part 4/09.90; blue

1.2.3 Installation

1.2.3.1 Cover



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



1.2.3.2 Cover carrier



Item No.: 709-169
Cover carrier; Type 3; incl. fixing/retaining screws and knurled nut; suitable for 279 to 282 and 880 Series rail-mounted terminal blocks; suitable for 264 Series miniature rail-mounted terminal blocks; suitable for 270 Series sensor and actuator terminal blocks; gray

1.2.4 Insulation stop

1.2.4.1 Insulation stop



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



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

1.2.5 Jumper

1.2.5.1 Jumper



Item No.: 2002-400
Continuous jumper; 2-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

1.2.5.1 Jumper

**Item No.: 2002-433**

Jumper; from 1 to 3; insulated; light gray

**Item No.: 2002-437**

Jumper; from 1 to 7; insulated; light gray

**Item No.: 2002-481**

Staggered jumper; 11-way; insulated; light gray

**Item No.: 2002-473**

Staggered jumper; 3-way; insulated; light gray

**Item No.: 2002-476**

Staggered jumper; 6-way; insulated; light gray

**Item No.: 2002-477/011-000**

Staggered jumper; 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.: 2002-434**

Jumper; from 1 to 4; insulated; light gray

**Item No.: 2002-438**

Jumper; from 1 to 8; insulated; light gray

**Item No.: 2002-482**

Staggered jumper; 12-way; insulated; light gray

**Item No.: 2002-475/011-000**

Staggered jumper; 3-way; insulated; light gray

**Item No.: 2002-477**

Staggered jumper; 7-way; insulated; light gray

**Item No.: 2002-479/011-000**

Staggered jumper; 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.: 2002-435**

Jumper; from 1 to 5; insulated; light gray

**Item No.: 2002-439**

Jumper; from 1 to 9; insulated; light gray

**Item No.: 2002-473/011-000**

Staggered jumper; 2-way; from 1 to 3; insulated; light gray

**Item No.: 2002-474**

Staggered jumper; 4-way; insulated; light gray

**Item No.: 2002-478**

Staggered jumper; 8-way; insulated; light gray

**Item No.: 2002-481/011-000**

Staggered jumper; insulated; light gray

**Item No.: 210-103**

Wire commoning chain; insulated; black

**Item No.: 2002-436**

Jumper; from 1 to 6; insulated; light gray

**Item No.: 2002-480**

Staggered jumper; 10-way; insulated; light gray

**Item No.: 2002-472**

Staggered jumper; 2-way; insulated; light gray

**Item No.: 2002-475**

Staggered jumper; 5-way; insulated; light gray

**Item No.: 2002-479**

Staggered jumper; 9-way; insulated; light gray

**Item No.: 2002-405/011-000**

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

**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.: 2009-145/000-005**

Mini-WSB Inline; for Smart Printer; 1700 pieces on roll; stretchable 5 - 5.2 mm; plain; snap-on type; red

**Item No.: 248-501/000-006**

Mini-WSB marking card; as card; not stretchable; 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.: 2009-145/000-024**

Mini-WSB Inline; for Smart Printer; 1700 pieces on roll; stretchable 5 - 5.2 mm; plain; snap-on type; violet

**Item No.: 248-501/000-007**

Mini-WSB marking card; as card; not stretchable; 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**

Mini-WSB Inline; for Smart Printer; 1700 pieces on roll; stretchable 5 - 5.2 mm; plain; snap-on type; white

**Item No.: 248-501/000-023**

Mini-WSB marking card; as card; not stretchable; 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.: 2009-145/000-002**

Mini-WSB Inline; for Smart Printer; 1700 pieces on roll; stretchable 5 - 5.2 mm; plain; snap-on type; yellow

**Item No.: 248-501/000-017**

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



1.2.6.2 Marker



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



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



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



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



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



Item No.: 793-5501/000-006
WMB marking card; as card; for terminal block width 5 - 17.5 mm; stretchable 5 - 5.2 mm; plain; snap-on type; blue



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



Item No.: 793-5501/000-007
WMB marking card; as card; for terminal block width 5 - 17.5 mm; stretchable 5 - 5.2 mm; plain; snap-on type; gray



Item No.: 793-5501/000-023
WMB marking card; as card; for terminal block width 5 - 17.5 mm; stretchable 5 - 5.2 mm; plain; snap-on type; green



Item No.: 793-5501/000-017
WMB marking card; as card; for terminal block width 5 - 17.5 mm; stretchable 5 - 5.2 mm; plain; snap-on type; light green



Item No.: 793-5501/000-012
WMB marking card; as card; for terminal block width 5 - 17.5 mm; stretchable 5 - 5.2 mm; plain; snap-on type; orange



Item No.: 793-5501/000-005
WMB marking card; as card; for terminal block width 5 - 17.5 mm; stretchable 5 - 5.2 mm; plain; snap-on type; red



Item No.: 793-5501/000-024
WMB marking card; as card; for terminal block width 5 - 17.5 mm; stretchable 5 - 5.2 mm; plain; snap-on type; violet



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



Item No.: 793-5501/000-002
WMB marking card; as card; for terminal block width 5 - 17.5 mm; stretchable 5 - 5.2 mm; plain; snap-on type; yellow



Item No.: 2009-115/000-006
WMB-Inline; for Smart Printer; 1500 pieces on roll; stretchable 5 - 5.2 mm; plain; snap-on type; blue



Item No.: 2009-115/000-007
WMB-Inline; for Smart Printer; 1500 pieces on roll; stretchable 5 - 5.2 mm; plain; snap-on type; gray



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



Item No.: 2009-115/000-017
WMB-Inline; for Smart Printer; 1500 pieces on roll; stretchable 5 - 5.2 mm; plain; snap-on type; light green



Item No.: 2009-115/000-012
WMB-Inline; for Smart Printer; 1500 pieces on roll; stretchable 5 - 5.2 mm; plain; snap-on type; orange



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



Item No.: 2009-115/000-024
WMB-Inline; for Smart Printer; 1500 pieces on roll; stretchable 5 - 5.2 mm; plain; snap-on type; violet



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



Item No.: 2009-115/000-002
WMB-Inline; for Smart Printer; 1500 pieces on roll; stretchable 5 - 5.2 mm; plain; snap-on type; yellow

1.2.6.3 Marker carrier



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 Plug

1.2.7.1 Component module with diode



Item No.: 2002-880/1000-411
Component plug; 2-pole; with diode 1N4007; 10.4 mm wide; Operating temperature 85°C max.; gray

1.2.7.2 Component module with LED



Item No.: 2002-880/1000-541
Component plug; 2-pole; LED (red); 10.4 mm wide; Operating temperature 85°C max.; gray



Item No.: 2002-880/1000-836
Component plug; 2-pole; LED (red); 10.4 mm wide; Operating temperature 85°C max.; gray



Item No.: 2002-880/1000-542
Component plug; 2-pole; LED (red); 10.4 mm wide; Operating temperature 85°C max.; multicoloured

1.2.7.3 Empty component plug housing



Item No.: 2002-880
Empty component plug housing; 10.4 mm wide; 2-pole; Type 4; gray

1.2.8 Protective warning marker

1.2.8.1 Cover



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

1.2.9 Push-in type wire jumper

1.2.9.1 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

1.2.10 Screwless end stop

1.2.10.1 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

1.2.11 Test and measurement

1.2.11.1 Testing accessories



Item No.: 2002-560
Modular TOPJOB®S connector; modular; for jumper contact slot; 10-pole; 2,50 mm²; gray



Item No.: 2002-511
Modular TOPJOB®S connector; modular; for jumper contact slot; 1-pole; 2,50 mm²; gray



Item No.: 2002-552
Modular TOPJOB®S connector; modular; for jumper contact slot; 2-pole; 2,50 mm²; gray



Item No.: 2002-553
Modular TOPJOB®S connector; modular; for jumper contact slot; 3-pole; 2,50 mm²; gray



Item No.: 2002-554
Modular TOPJOB®S connector; modular; for jumper contact slot; 4-pole; 2,50 mm²; gray



Item No.: 2002-555
Modular TOPJOB®S connector; modular; for jumper contact slot; 5-pole; 2,50 mm²; gray



Item No.: 2002-556
Modular TOPJOB®S connector; modular; for jumper contact slot; 6-pole; 2,50 mm²; gray



Item No.: 2002-557
Modular TOPJOB®S connector; modular; for jumper contact slot; 7-pole; 2,50 mm²; gray



Item No.: 2002-558
Modular TOPJOB®S connector; modular; for jumper contact slot; 8-pole; 2,50 mm²; gray



Item No.: 2002-559
Modular TOPJOB®S connector; modular; for jumper contact slot; 9-pole; 2,50 mm²; 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.: 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; 2,50 mm²; gray

1.2.12 Tool

1.2.12.1 Operating tool



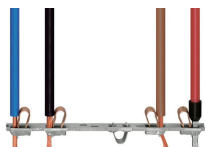
Item No.: 210-658
Operating tool; Blade: 3.5 x 0.5 mm; with a partially insulated shaft; angled; short; multicoloured



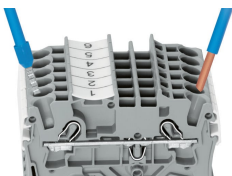
Item No.: 210-720
Operating tool; Blade: 3.5 x 0.5 mm; with a partially insulated shaft; multicoloured

Installation Notes

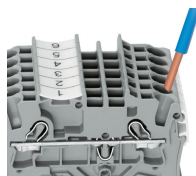
Conductor termination



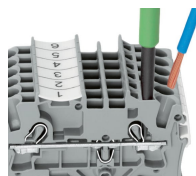
All conductor types at a glance



Push-in termination of solid and ferruled conductors

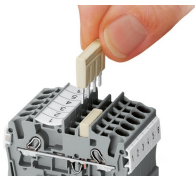


Inserting a conductor via push-in termination:
Solid conductors with cross-sections from either one size above, or up to two sizes below, the rated cross-section can be simply pushed in – no tools needed.

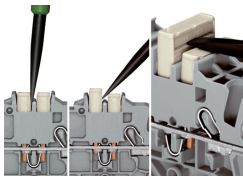


Inserting a conductor via operating tool:
Connecting fine-stranded conductors without ferrules, or small cross-sectional conductors that cannot be pushed in, is performed similarly to the original CAGE CLAMP® – just use an operating tool.
Advantage:
To open the clamp, the operating tool is inserted vertically.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

Commoning

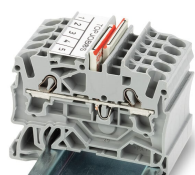


Insert push-in type jumper bar and push down until it hits backstop.

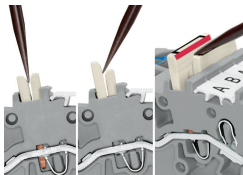


Removing a push-in type jumper bar:
Insert the operating tool between the jumper and partition wall of the dual jumper slots, then lift up the jumper.
Place the operating tool in the center of jumpers for up to five contacts (see above), or alternately on both sides for jumpers with more than five contacts.

Commoning



Orient the staggered jumpers' red stripes on the inside.
Insert the staggered jumper and push down until it hits the backstop.

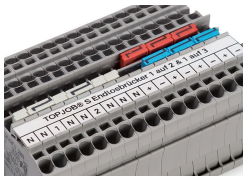


Removing a staggered jumper:
Insert the operating tool between the staggered jumpers, then lift up the jumper.

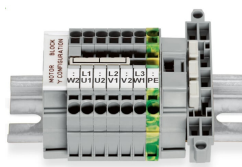
Commoning



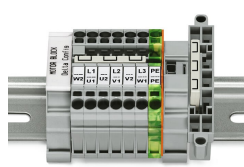
Continuous jumpers (2002 Series) readily connect an endless number of terminal blocks to each other via single jumper slot. Use the second jumper slot for additional commoning or testing.



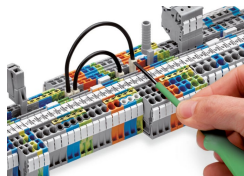
The 1-to-3 adjacent jumper for continuous commoning enables every other terminal block to be commoned. For example, positive and negative potentials can be accommodated alongside each other.



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.

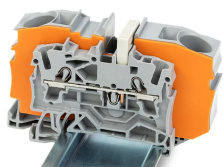
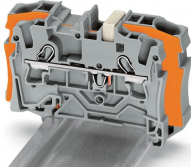
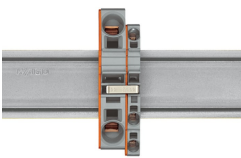
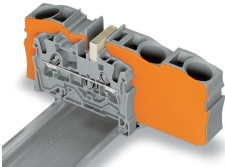


This delta jumper has been specially developed to create a delta configuration and is used on motor terminal boards equipped with rail-mount terminal blocks TOPJOB® S.



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

Commoning

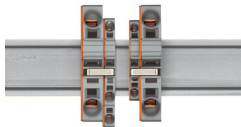
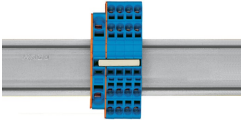
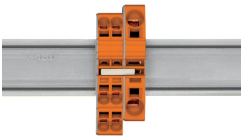


Step-down jumpers common terminal blocks of different sizes, without losing a conductor clamping point. This can be beneficial on long conductor runs where voltage drop can be a problem. A large conductor can be easily connected to smaller conductors at the distribution point. Commoning may be made in 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).

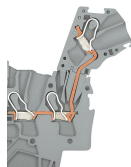
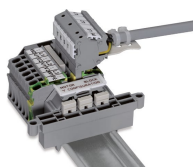
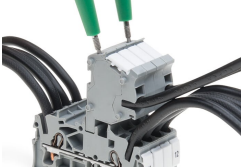


Stepping down via push-in type jumper bar: Commoning via open terminal side with end plate allows jumpering over two cross-section sizes for 16 mm² (6 AWG) and 10 mm² (8 AWG) and one cross-section size for 6/4/2.5 mm² (10/12/14 AWG). An example: from 16 mm² (6 AWG) to 6 mm² (10 AWG) (see illustration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

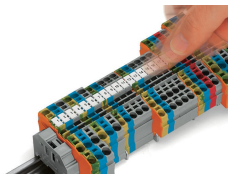
L-type test plug module – cross-sectional view of contacts



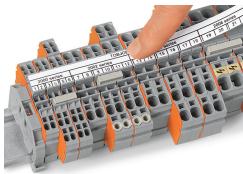
Test plug adapter (2009-174, CAT I) for 4 mm Ø plugs – compatible with 2000 to 2016 Series

Testing tap (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.

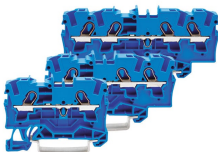
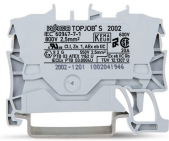


TOPJOB® S 2009-193 Group Marker Carrier (equipped with a marking strip) for all 2001 to 2016 Series TOPJOB® S Rail-Mount Terminal Blocks
Do not use on an end plate!

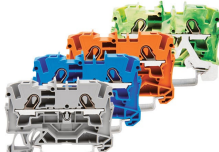


Using marker carriers for marking strips (2002-161) in jumper slots.

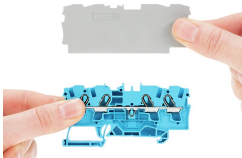
Ex application



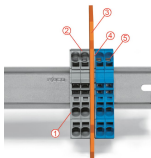
Through terminal blocks with a blue insulated housing are suitable for Ex i applications.



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.



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.