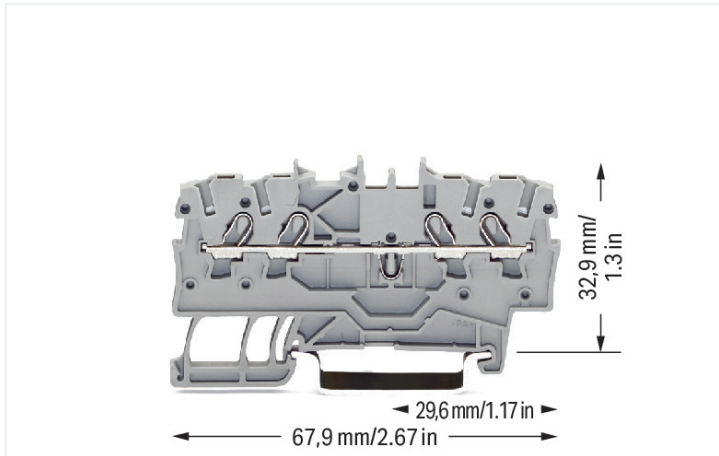


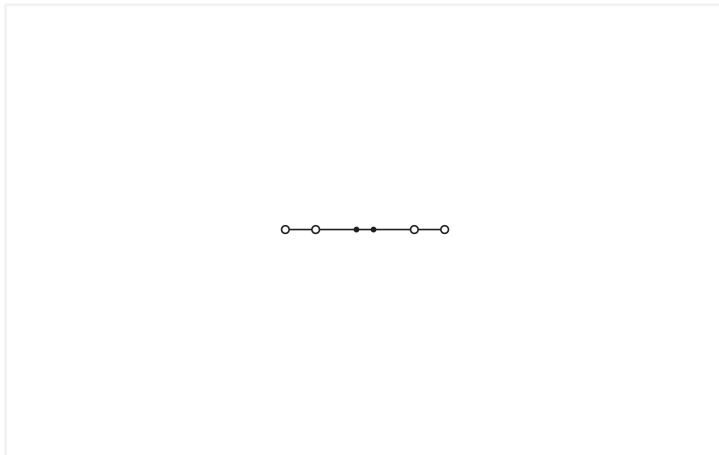
Data Sheet | Item Number: 2000-1401

4-conductor through terminal block; 1 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®; 1,00 mm²; gray

<https://www.wago.com/2000-1401>



Color: ■ gray



Similar to illustration

Through terminal block, 2000 Series, gray

This through terminal block (item number 2000-1401) streamlines wire connections, making them both quick and easy. Conductors should only be connected to this through terminal block if their strip length is between 9 and 11 mm. Whether in industrial or building applications, our rail-mount through terminal blocks are the perfect solution to quickly and securely connect electrical conductors. Depending on the variant, you can use them for either typical through-wiring or potential distribution. This product features conductor terminals and utilizes Push-in CAGE CLAMP®. Push-in CAGE CLAMP® technology provides a universal connection solution for all conductor types. It allows both solid and fine-stranded conductors with ferrules to be inserted directly into the clamping point without the need for tools. The dimensions are (3.5 x 67.9 x 39.5) mm (width x height x depth). This through terminal block is suitable for conductor cross sections ranging from 0.14 mm² to 1.5 mm².

An operating tool is used to operate this through rail-mount terminal block. Our TOPJOB® S rail-mount terminal blocks offer more than just secure electrical connections in different industrial applications and modern building installations. They also offer the perfect actuation option for every application: lever, push-button, or operating slot. This product is designed for specific Ex applications (please refer to the product datasheet).

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	13.5 A	-	-
Current at conductor cross-section (max.) mm ²	17.5 A	-	-

Approvals per	UL 1059		
Use group	B	C	D
Rated voltage	600 V	600 V	-
Rated current	15 A	15 A	-

Approvals per	CSA 22.2 No 158		
Use group	B	C	D
Rated voltage	600 V	600 V	-
Rated current	10 A	10 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 11 ATEX 1041 U / IECEx: PTB 11.0093U (Ex eb IIC Gb)
Rated voltage EN (Ex e II)	550 V
Rated current (Ex e II)	13 A
Rated current (Ex e II) with jumper	12 A

Power Loss

Power loss, per pole (potential)	0.4338 W
Rated current I_N for power loss specification	13.5 A
Resistance value for specified, current-dependent power loss	0.00238 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	1 mm ²
Solid conductor	0.14 ... 1.5 mm ² / 24 ... 16 AWG
Solid conductor; push-in termination	0.5 ... 1.5 mm ² / 20 ... 16 AWG
Fine-stranded conductor	0.14 ... 1.5 mm ² / 24 ... 16 AWG
Fine-stranded conductor; with insulated ferrule	0.14 ... 0.75 mm ² / 24 ... 18 AWG
Fine-stranded conductor; with ferrule; push-in termination	0.5 ... 0.75 mm ² / 20 ... 18 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	9 ... 11 mm / 0.35 ... 0.43 inches
Wiring direction	Front-entry wiring

Physical data

Width	3.5 mm / 0.138 inches
Height	67.9 mm / 2.673 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	gray
Material group	I
Insulation material (main housing)	Polyamide (PA66)
Flammability class per UL94	V0
Fire load	0.097 MJ
Weight	5.2 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.

Environmental Testing

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)	100 pcs
Packaging type	Box
Country of origin	CN
GTIN	4045454966928
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
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Approvals / Certificates

General approvals



Approval	Standard	Certificate Name
CCA DEKRA Certification B.V.	EN 60947	NTR NL 7962
CSA DEKRA Certification B.V.	C22.2	2130762
KEMA/KEUR DEKRA Certification B.V.	EN 60947	71-125928
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 Ship- ping	EN 60947	24-0152298-PDA
DNV GL Det Norske Veritas, Ger- manischer Lloyd	-	TAE00001V2
LR Lloyds Register	EN 60947	LR23325966TA
PRS Polski Rejestr Statków	-	TE/1094/880590/23

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 11 ATEX 1041 U (II 2 G Ex eb IIC Gb bzw. I M 2 Ex eb I Mb)
CCC CNEX	GB/T 3836.3	2020312313000182 (Ex eb IIC Gb, Ex eb I Mb)
IECEX Physikalisch Technische Bundesanstalt	IEC 60079	IECEX PTB 11.0093U (Ex e IIC Gb or Ex e I Mb)

Downloads

Environmental Product Compliance

Compliance Search	
Environmental Product Compliance 2000-1401	↓

Documentation

Bid Text			
2000-1401	19.02.2019	xml 3.93 KB	↓
2000-1401	07.08.2018	docx 14.58 KB	↓

CAD/CAE-Data

CAD data	
2D/3D Models 2000-1401	↓

CAE data	
EPLAN Data Portal 2000-1401	↓
WSCAD Universe 2000-1401	↓
ZUKEN Portal 2000-1401	↓

1 Compatible Products

1.1 Required Accessories

1.1.1 End plate

1.1.1.1 End plate



Item No.: 2000-1491

End and intermediate plate; 0.7 mm thick; gray



Item No.: 2000-1492

End and intermediate plate; 0.7 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.: 210-197

Steel carrier rail; 35 x 15 mm; 1.5 mm thick; 2 m long; slotted; similar to EN 60715; silver-colored



Item No.: 210-114

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.: 210-113

Steel carrier rail; 35 x 7.5 mm; 1 mm thick; 2 m long; unslotted; 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.: 216-243

Ferrule; Sleeve for 1 mm² / AWG 18; insulated; electro-tin plated; electrolytic copper; gastight crimped; acc. to DIN 46228, Part 4/09.90; red

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.: 2000-406/020-000
 Delta jumper; insulated; light gray



Item No.: 2000-410/000-006
 Jumper; 10-way; insulated; blue



Item No.: 2000-410
 Jumper; 10-way; insulated; light gray



Item No.: 2000-410/000-005
 Jumper; 10-way; insulated; red



Item No.: 2000-402/000-006
 Jumper; 2-way; insulated; blue



Item No.: 2000-402
 Jumper; 2-way; insulated; light gray



Item No.: 2000-402/000-005
 Jumper; 2-way; insulated; red



Item No.: 2000-402/000-018
 Jumper; 2-way; insulated; yellow-green



Item No.: 2000-403/000-006
 Jumper; 3-way; insulated; blue



Item No.: 2000-403
 Jumper; 3-way; insulated; light gray



Item No.: 2000-403/000-005
 Jumper; 3-way; insulated; red



Item No.: 2000-404/000-006
 Jumper; 4-way; insulated; blue



Item No.: 2000-404
 Jumper; 4-way; insulated; light gray



Item No.: 2000-404/000-005
 Jumper; 4-way; insulated; red



Item No.: 2000-405/000-006
 Jumper; 5-way; insulated; blue



Item No.: 2000-405
 Jumper; 5-way; insulated; light gray



Item No.: 2000-405/000-005
 Jumper; 5-way; insulated; red



Item No.: 2000-406/000-006
 Jumper; 6-way; insulated; blue



Item No.: 2000-406
 Jumper; 6-way; insulated; light gray



Item No.: 2000-406/000-005
 Jumper; 6-way; insulated; red



Item No.: 2000-407/000-006
 Jumper; 7-way; insulated; blue



Item No.: 2000-407
 Jumper; 7-way; insulated; light gray



Item No.: 2000-407/000-005
 Jumper; 7-way; insulated; red



Item No.: 2000-408/000-006
 Jumper; 8-way; insulated; blue



Item No.: 2000-408
 Jumper; 8-way; insulated; light gray



Item No.: 2000-408/000-005
 Jumper; 8-way; insulated; red



Item No.: 2000-409/000-006
 Jumper; 9-way; insulated; blue



Item No.: 2000-409
 Jumper; 9-way; insulated; light gray



Item No.: 2000-409/000-005
 Jumper; 9-way; insulated; red



Item No.: 2000-440
 Jumper; from 1 to 10; insulated; light gray



Item No.: 2000-433/000-006
 Jumper; from 1 to 3; insulated; blue



Item No.: 2000-433
 Jumper; from 1 to 3; insulated; light gray



Item No.: 2000-433/000-005
 Jumper; from 1 to 3; insulated; red



Item No.: 2000-434
 Jumper; from 1 to 4; insulated; light gray



Item No.: 2000-435
 Jumper; from 1 to 5; insulated; light gray



Item No.: 2000-436
 Jumper; from 1 to 6; insulated; light gray



Item No.: 2000-437
 Jumper; from 1 to 7; insulated; light gray



Item No.: 2000-438
 Jumper; from 1 to 8; insulated; light gray



Item No.: 2000-439
 Jumper; from 1 to 9; insulated; light gray



Item No.: 2000-405/011-000
 Star point jumper; 3-way; insulated; light gray



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



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

1.2.5 Marking

1.2.5.1 Group marker carrier



Item No.: 2009-191

Group marker carrier; gray

1.2.5.2 Marker



Item No.: 793-3501

WMB marking card; as card; plain; snap-on type; white



Item No.: 2009-113/000-006

WMB-Inline; for Smart Printer; 2300 pieces on roll; plain; snap-on type; blue



Item No.: 2009-113/000-007

WMB-Inline; for Smart Printer; 2300 pieces on roll; plain; snap-on type; gray



Item No.: 2009-113/000-023

WMB-Inline; for Smart Printer; 2300 pieces on roll; plain; snap-on type; green



Item No.: 2009-113/000-017

WMB-Inline; for Smart Printer; 2300 pieces on roll; plain; snap-on type; light green



Item No.: 2009-113/000-012

WMB-Inline; for Smart Printer; 2300 pieces on roll; plain; snap-on type; orange



Item No.: 2009-113/000-005

WMB-Inline; for Smart Printer; 2300 pieces on roll; plain; snap-on type; red



Item No.: 2009-113/000-024

WMB-Inline; for Smart Printer; 2300 pieces on roll; plain; snap-on type; violet



Item No.: 2009-113

WMB-Inline; for Smart Printer; 2300 pieces on roll; plain; snap-on type; white



Item No.: 2009-113/000-002

WMB-Inline; for Smart Printer; 2300 pieces on roll; plain; snap-on type; yellow

1.2.5.3 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.: 2000-115

Protective warning marker; for 5 terminal blocks; with high-voltage symbol, black; yellow

1.2.7 Push-in type wire jumper

1.2.7.1 Jumper



Item No.: 2009-404

Push-in type wire jumper; 0.75 mm²; insulated; 110 mm long; gray



Item No.: 2009-406

Push-in type wire jumper; 0.75 mm²; insulated; 250 mm long; gray



Item No.: 2009-402

Push-in type wire jumper; 0.75 mm²; insulated; 60 mm long; gray

1.2.8 Screwless end stop

1.2.8.1 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

1.2.9 Test and measurement

1.2.9.1 Testing accessories



Item No.: 2000-560

Modular TOPJOB®S connector; modular; for jumper contact slot; 10-pole; gray



Item No.: 2000-552

Modular TOPJOB®S connector; modular; for jumper contact slot; 2-pole; gray



Item No.: 2000-553

Modular TOPJOB®S connector; modular; for jumper contact slot; 3-pole; gray



Item No.: 2000-554

Modular TOPJOB®S connector; modular; for jumper contact slot; 4-pole; gray



Item No.: 2000-555

Modular TOPJOB®S connector; modular; for jumper contact slot; 5-pole; gray



Item No.: 2000-556

Modular TOPJOB®S connector; modular; for jumper contact slot; 6-pole; gray



Item No.: 2000-557

Modular TOPJOB®S connector; modular; for jumper contact slot; 7-pole; gray



Item No.: 2000-558

Modular TOPJOB®S connector; modular; for jumper contact slot; 8-pole; gray



Item No.: 2000-559

Modular TOPJOB®S connector; modular; for jumper contact slot; 9-pole; gray



Item No.: 2000-549

Spacer module; modular; e.g., for bridging commoned terminal blocks; gray



Item No.: 2009-174

Test plug adapter; for 4 mm Ø test plugs; for testing TOPJOB®S rail-mounted terminal blocks; gray



Item No.: 210-136

Test plug; 2 mm Ø; with 500 mm cable; red



Item No.: 2009-182

Testing tap; for max. 2.5 mm²; tool-free connection for individual test wires 0.08 - 2.5 mm; gray



Item No.: 2000-511

TOPJOB®S L-type test plug module; modular; for jumper contact slot; 1-pole; gray



Item No.: 2000-510

TOPJOB®S L-type test plug module; modular; for jumper contact slot; gray

1.2.10 Tool

1.2.10.1 Operating tool



Item No.: 210-719

Operating tool; Blade: 2.5 x 0.4 mm; with a partially insulated shaft



Item No.: 210-648

Operating tool; Blade: 2.5 x 0.4 mm; with a partially insulated shaft; angled; short

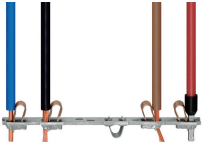


Item No.: 210-647

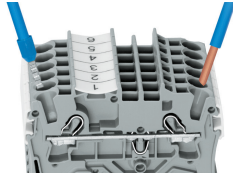
Operating tool; Blade: 2.5 x 0.4 mm; with a partially insulated shaft; multicoloured

Installation Notes

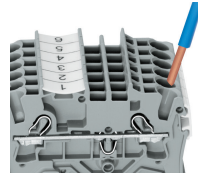
Conductor termination



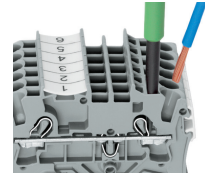
All conductor types at a glance



Push-in termination of solid and ferruled conductors

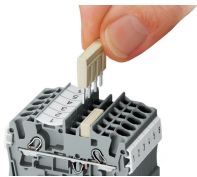


Inserting a conductor via push-in termination:
Solid conductors with cross-sections from either one size above, or up to two sizes below, the rated cross-section can be simply pushed in – no tools needed.

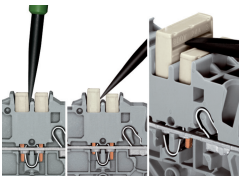


Inserting a conductor via operating tool:
Connecting fine-stranded conductors without ferrules, or small cross-sectional conductors that cannot be pushed in, is performed similarly to the original CAGE CLAMP® – just use an operating tool.
Advantage:
To open the clamp, the operating tool is inserted vertically.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

Commoning

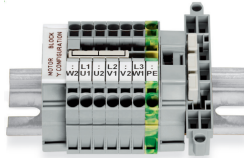


Insert push-in type jumper bar and push down until it hits backstop.

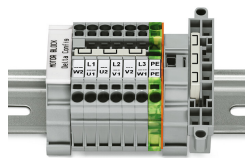


Removing a push-in type jumper bar:
Insert the operating tool between the jumper and partition wall of the dual jumper slots, then lift up the jumper. Place the operating tool in the center of jumpers for up to five contacts (see above), or alternately on both sides for jumpers with more than five contacts.

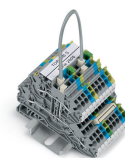
Commoning



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.

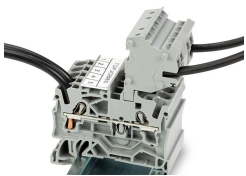


This delta jumper has been specially developed to create a delta configuration and is used on motor terminal boards equipped with rail-mount terminal blocks TOPJOB® S.

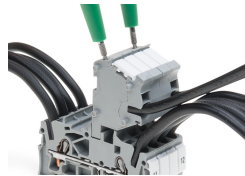


Push down the wire jumper (2009-402) until fully inserted. For rewiring, lift the jumper with an operating tool at the notch provided for this purpose on the jumper.

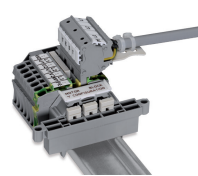
Testing



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



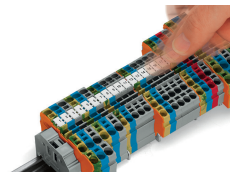
Test plug adapter (Item No. 2009-174, CAT I) for 4 mm Ø plugs – compatible with 2000 to 2016 Series

Testing

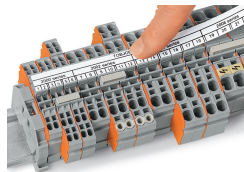


Testing tap (Item No. 2009-182) for tool-free connection of test cables up to 2.5 mm² (12 AWG) – compatible with 2000 to 2016 Series

Marking



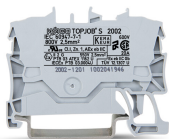
Snapping WMB Inline markers into marker slots.



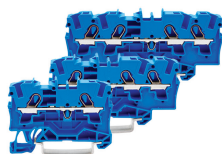
TOPJOB® S 2009-193 Group Marker Carrier (equipped with a marking strip) for all 2001 to 2016 Series TOPJOB® S Rail-Mount Terminal Blocks
Do not use on an end plate!



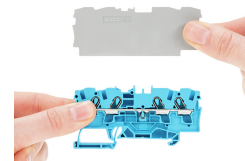
Ex application



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

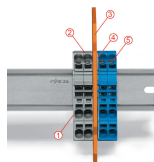


All through and ground conductor terminal blocks are suitable for Ex e II applications.



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.