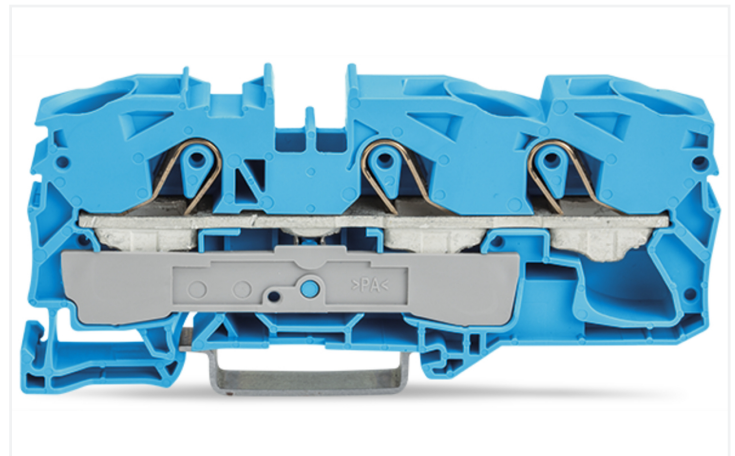
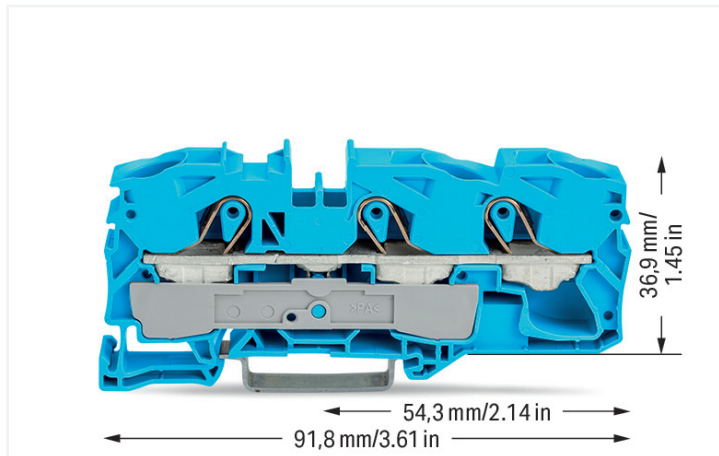


## Data Sheet | Item Number: 2016-1304

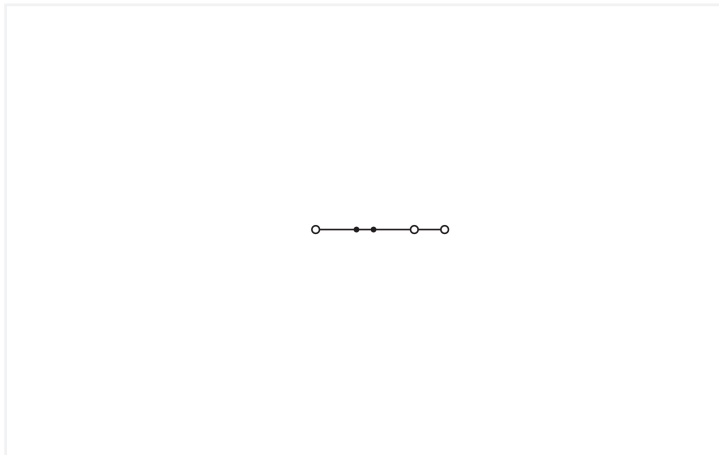
3-conductor through terminal block; 16 mm<sup>2</sup>; for Ex e II and Ex i applications; side and center marking; for DIN-rail 35 x 15 and 35 x 7.5; Push-in CAGE CLAMP®; 16,00 mm<sup>2</sup>; blue



<https://www.wago.com/2016-1304>



Color: ■ blue



Similar to illustration

### Through terminal block, 2016 Series, Push-in CAGE CLAMP®

Our through terminal block (item number 2016-1304) is designed for seamless electrical installations. Conductors should only be connected to this through terminal block if their strip length is between 18 and 20 mm. 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® 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 (12 x 91.8 x 43.5) mm (width x height x depth). Depending on the conductor type, this through terminal block is designed for conductor cross sections ranging from 0.5 mm<sup>2</sup> to 16 mm<sup>2</sup>.

This through rail-mount terminal block is operated with an operating tool. Our TOPJOB® S rail-mount terminal blocks guarantee reliable electrical connections in various industrial applications and modern building installations. They make wiring work easier as you can quickly plug in solid, stranded, and fine-stranded conductors with ferrules. 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   | 76 A             | -   | -  |
| Current at conductor cross-section (max.) mm <sup>2</sup> | 90 A             | -   | -  |

| Ratings per IEC/EN – Notes |  |
|----------------------------|--|
| Rated current (note)       | 15 mm high DIN-35 rails shall be used for a current load higher than 76 A! |

| Approvals per | UL 1059 |       |   |
|---------------|---------|-------|---|
| Use group     | B       | C     | D |
| Rated voltage | 600 V   | 600 V | - |
| Rated current | 85 A    | 85 A  | - |

| Approvals per | CSA 22.2 No 158 |       |   |
|---------------|-----------------|-------|---|
| Use group     | B               | C     | D |
| Rated voltage | 600 V           | 600 V | - |
| Rated current | 80 A            | 80 A  | - |

## Ex information

|                                     |   |
|-------------------------------------|---|
| Reference to hazardous areas        | See application instructions in section "Knowledge and Downloads – Documentation – Additional Information: Technical Section; Technical Explications" |
| Ratings per                         | ATEX: PTB 05 ATEX 1031 U / IECEx: PTB 05.0015U (Ex eb IIC Gb)   |
| Rated voltage EN (Ex e II)          | 550 V   |
| Rated current (Ex e II)             | 67 A  |
| Rated current (Ex e II) with jumper | 65 A  |

## Power Loss

|  |                  |
|--|------------------|
| Power loss, per pole (potential)                             | 2.4259 W         |
| Rated current $I_N$ for power loss specification             | 76 A             |
| Resistance value for specified, current-dependent power loss | 0.00042 $\Omega$ |

## General information

|                  |                    |
|------------------|--------------------|
| Wiring direction | Front-entry wiring |
|------------------|--------------------|

## Connection Data

|                            |   |
|----------------------------|---|
| Clamping units             | 3 |
| 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                                      | 16 mm <sup>2</sup>  |
| Solid conductor  | 0.5 ... 16 mm <sup>2</sup> / 20 ... 6 AWG   |
| Solid conductor; push-in termination                       | 6 ... 16 mm <sup>2</sup> / 14 ... 6 AWG   |
| Fine-stranded conductor                                    | 0.5 ... 25 mm <sup>2</sup> / 20 ... 4 AWG   |
| Fine-stranded conductor; with insulated ferrule            | 0.5 ... 16 mm <sup>2</sup> / 20 ... 6 AWG   |
| Fine-stranded conductor; with ferrule; push-in termination | 6 ... 16 mm <sup>2</sup> / 10 ... 6 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. AWG specifications were converted according to IEC. |
| Strip length   | 18 ... 20 mm / 0.71 ... 0.79 inches   |
| Wiring direction   | Front-entry wiring  |

### Physical data

|                                   |                        |
|-----------------------------------|------------------------|
| Width                             | 12 mm / 0.472 inches   |
| Height                            | 91.8 mm / 3.622 inches |
| Depth from upper-edge of DIN-rail | 36.9 mm / 1.453 inches |
| Depth                             | 43.5 mm / 1.713 inches |

### Mechanical data

|               |                     |
|---------------|---------------------|
| Mounting type | DIN-35 rail         |
| Marking level | Center/side marking |

### Material data

|                                    |  |
|------------------------------------|--|
| Note (material data)               | <a href="#">Information on material specifications can be found here</a> |
| Color                              | blue   |
| Material group                     | I  |
| Insulation material (main housing) | Polyamide (PA66)   |
| Flammability class per UL94        | V0   |
| Fire load                          | 0.371 MJ   |
| Weight                             | 30.2 g   |

### Environmental requirements

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

### Environmental Testing

|   |   |
|---|---|
| Test specification:<br>Railway applications –<br>Rolling stock –<br>Electronic equipment            | DIN EN 50155 (VDE 0115-200):2022-06                 |
| Test procedure:<br>Railway applications –<br>Rolling stock equipment –<br>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)              | 20 pcs        |
| Packaging type        | Box           |
| Country of origin     | DE            |
| GTIN                  | 4017332076739 |
| 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**



| Approval                              | Standard      | Certificate Name |
|---------------------------------------|---------------|------------------|
| CCA<br>DEKRA Certification B.V.       | EN 60947      | NTR NL-7881      |
| CSA<br>DEKRA Certification B.V.       | C22.2 No. 158 | 1579112          |
| KEMA/KEUR<br>DEKRA Certification B.V. | EN 60947      | 71-119271        |
| UL<br>Underwriters Laboratories Inc.  | UL 1059       | E45172           |

**Declarations of conformity and manufacturer's declarations**



| Approval   | Standard | Certificate Name |
|--|----------|------------------|
| ATEX-Attestation of Conformity<br>WAGO GmbH & Co. KG | -        | -                |
| EU-Declaration of Conformity<br>WAGO GmbH & Co. KG   | -        | -                |
| Railway<br>WAGO GmbH & Co. KG                        | -        | Railway Ready    |
| UK-Declaration of Conformity<br>WAGO GmbH & Co. KG   | -        | -                |

Approvals for marine applications



| Approval  | Standard | Certificate Name  |
|---|----------|-------------------|
| ABS<br>American Bureau of Ship-<br>ping               | -        | 24-0152298-PDA    |
| DNV GL<br>Det Norske Veritas, Ger-<br>manischer Lloyd | -        | TAE00001V2        |
| PRS<br>Polski Rejestr Statków                         | -        | TE/1094/880590/23 |

Approvals for hazardous areas



| Approval   | Standard    | Certificate Name   |
|--|-------------|--|
| AEx<br>UL International Germany<br>GmbH c/o Physikalisch<br>Technische Bundesanstalt | UL 60079    | E185892 (AEx eb IIC resp.<br>Ex eb IIC)                            |
| ATEX<br>Physikalisch Technische<br>Bundesanstalt (PTB)                               | EN 60079    | PTB 05 ATEX 1031 U (II 2<br>G Ex eb IIC Gb bzw. IM2 Ex<br>eb I Mb) |
| CCC<br>CQST/CNEx   | GB/T 3836.3 | 2020312313000162 (Ex<br>eb IIC Gb, Ex eb I Mb)                     |
| IECEX<br>Physikalisch Technische<br>Bundesanstalt (PTB)                              | IEC 60079   | IECEX PTB 05.0015 U (Ex<br>eb IIC Gb and Ex eb I Mb)               |
| INMETRO<br>TÜV Rheinland do Brasil<br>Ltda.  | IEC 60079   | TÜV 12.1313 U  |

Downloads

Environmental Product Compliance

| Compliance Search                             |                   |
|---|-------------------|
| Environmental Product<br>Compliance 2016-1304 | <a href="#">↓</a> |

Documentation

| Bid Text  |            |                  |                   |
|-----------|------------|------------------|-------------------|
| 2016-1304 | 17.04.2019 | xml<br>4.19 KB   | <a href="#">↓</a> |
| 2016-1304 | 15.04.2019 | docx<br>15.06 KB | <a href="#">↓</a> |

CAD/CAE-Data

| CAD data                  |                   |
|---------------------------|-------------------|
| 2D/3D Models<br>2016-1304 | <a href="#">↓</a> |

| CAE data                       |                   |
|--------------------------------|-------------------|
| EPLAN Data Portal<br>2016-1304 | <a href="#">↓</a> |
| WSCAD Universe<br>2016-1304    | <a href="#">↓</a> |
| ZUKEN Portal<br>2016-1304      | <a href="#">↓</a> |

## 1 Compatible Products

### 1.1 Required Accessories

#### 1.1.1 End plate

##### 1.1.1.1 End plate



**Item No.: 2016-1391**

End and intermediate plate; 1 mm thick; gray



**Item No.: 2016-1392**

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 Cover

##### 1.2.1.1 Cover



**Item No.: 2016-100**

Finger guard; touchproof cover protects unused conductor entries; yellow

#### 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.: 210-197**

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

#### 1.2.3 Ferrule

##### 1.2.3.1 Ferrule



**Item No.: 216-284**

Ferrule; Sleeve for 1.5 mm<sup>2</sup> / AWG 16; insulated; electro-tin plated; electrolytic copper; gastight crimped; acc. to DIN 46228, Part 4/09.90; black



**Item No.: 216-289**

Ferrule; Sleeve for 10 mm<sup>2</sup> / AWG 8; insulated; electro-tin plated; electrolytic copper; gastight crimped; acc. to DIN 46228, Part 4/09.90; red



**Item No.: 216-210**

Ferrule; Sleeve for 16 mm<sup>2</sup> / AWG 6; insulated; electro-tin plated; electrolytic copper; gastight crimped; acc. to DIN 46228, Part 4/09.90; blue



**Item No.: 216-286**

Ferrule; Sleeve for 2.5 mm<sup>2</sup> / AWG 14; insulated; electro-tin plated; electrolytic copper; gastight crimped; acc. to DIN 46228, Part 4/09.90; blue



**Item No.: 216-287**

Ferrule; Sleeve for 4 mm<sup>2</sup> / AWG 12; insulated; electro-tin plated; electrolytic copper; gastight crimped; acc. to DIN 46228, Part 4/09.90; gray



**Item No.: 216-288**

Ferrule; Sleeve for 6 mm<sup>2</sup> / AWG 10; insulated; electro-tin plated; electrolytic copper; gastight crimped; acc. to DIN 46228, Part 4/09.90; yellow

## 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 Jumper

### 1.2.5.1 Jumper



**Item No.: 2016-402**

Jumper; 2-way; insulated; light gray



**Item No.: 2016-403**

Jumper; 3-way; insulated; light gray



**Item No.: 2016-404**

Jumper; 4-way; insulated; light gray



**Item No.: 2016-405**

Jumper; 5-way; insulated; light gray



**Item No.: 2016-433**

Jumper; from 1 to 3; insulated; light gray



**Item No.: 2016-434**

Jumper; from 1 to 4; insulated; light gray



**Item No.: 2016-435**

Jumper; from 1 to 5; insulated; light gray



**Item No.: 2016-405/011-000**

Star point jumper; 3-way; 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.: 285-430**

Step-down jumper; from 285 (35mm<sup>2</sup>) to 2016/2010 series; insulated; gray

## 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

|   |   |  |  |
|---|---|--|--|
| <p><b>Item No.: 2009-145/000-006</b><br/>Mini-WSB Inline; for Smart Printer; 1700 pieces on roll; stretchable 5 - 5.2 mm; plain; snap-on type; blue</p>                  | <p><b>Item No.: 2009-145/000-007</b><br/>Mini-WSB Inline; for Smart Printer; 1700 pieces on roll; stretchable 5 - 5.2 mm; plain; snap-on type; gray</p>              | <p><b>Item No.: 2009-145/000-023</b><br/>Mini-WSB Inline; for Smart Printer; 1700 pieces on roll; stretchable 5 - 5.2 mm; plain; snap-on type; green</p>         | <p><b>Item No.: 2009-145/000-012</b><br/>Mini-WSB Inline; for Smart Printer; 1700 pieces on roll; stretchable 5 - 5.2 mm; plain; snap-on type; orange</p>           |
| <p><b>Item No.: 2009-145/000-005</b><br/>Mini-WSB Inline; for Smart Printer; 1700 pieces on roll; stretchable 5 - 5.2 mm; plain; snap-on type; red</p>                   | <p><b>Item No.: 2009-145/000-024</b><br/>Mini-WSB Inline; for Smart Printer; 1700 pieces on roll; stretchable 5 - 5.2 mm; plain; snap-on type; violet</p>            | <p><b>Item No.: 2009-145</b><br/>Mini-WSB Inline; for Smart Printer; 1700 pieces on roll; stretchable 5 - 5.2 mm; plain; snap-on type; white</p>                 | <p><b>Item No.: 2009-145/000-002</b><br/>Mini-WSB Inline; for Smart Printer; 1700 pieces on roll; stretchable 5 - 5.2 mm; plain; snap-on type; yellow</p>           |
| <p><b>Item No.: 248-501/000-006</b><br/>Mini-WSB marking card; as card; not stretchable; plain; snap-on type; blue</p>   | <p><b>Item No.: 248-501/000-007</b><br/>Mini-WSB marking card; as card; not stretchable; plain; snap-on type; gray</p>   | <p><b>Item No.: 248-501/000-023</b><br/>Mini-WSB marking card; as card; not stretchable; plain; snap-on type; green</p>    | <p><b>Item No.: 248-501/000-017</b><br/>Mini-WSB marking card; as card; not stretchable; plain; snap-on type; light green</p>                                       |
| <p><b>Item No.: 248-501/000-012</b><br/>Mini-WSB marking card; as card; not stretchable; plain; snap-on type; orange</p>   | <p><b>Item No.: 248-501/000-005</b><br/>Mini-WSB marking card; as card; not stretchable; plain; snap-on type; red</p>    | <p><b>Item No.: 248-501/000-024</b><br/>Mini-WSB marking card; as card; not stretchable; plain; snap-on type; violet</p>   | <p><b>Item No.: 248-501</b><br/>Mini-WSB marking card; as card; not stretchable; plain; snap-on type; white</p>   |
| <p><b>Item No.: 248-501/000-002</b><br/>Mini-WSB marking card; as card; not stretchable; plain; snap-on type; yellow</p>   | <p><b>Item No.: 793-5501/000-006</b><br/>WMB marking card; as card; for terminal block width 5 - 17.5 mm; stretchable 5 - 5.2 mm; plain; snap-on type; blue</p>      | <p><b>Item No.: 793-5501/000-007</b><br/>WMB marking card; as card; for terminal block width 5 - 17.5 mm; stretchable 5 - 5.2 mm; plain; snap-on type; gray</p>  | <p><b>Item No.: 793-5501/000-023</b><br/>WMB marking card; as card; for terminal block width 5 - 17.5 mm; stretchable 5 - 5.2 mm; plain; snap-on type; green</p>    |
| <p><b>Item No.: 793-5501/000-017</b><br/>WMB marking card; as card; for terminal block width 5 - 17.5 mm; stretchable 5 - 5.2 mm; plain; snap-on type; light green</p>  | <p><b>Item No.: 793-5501/000-012</b><br/>WMB marking card; as card; for terminal block width 5 - 17.5 mm; stretchable 5 - 5.2 mm; plain; snap-on type; orange</p>   | <p><b>Item No.: 793-5501/000-005</b><br/>WMB marking card; as card; for terminal block width 5 - 17.5 mm; stretchable 5 - 5.2 mm; plain; snap-on type; red</p>  | <p><b>Item No.: 793-5501/000-024</b><br/>WMB marking card; as card; for terminal block width 5 - 17.5 mm; stretchable 5 - 5.2 mm; plain; snap-on type; violet</p>  |
| <p><b>Item No.: 793-5501</b><br/>WMB marking card; as card; for terminal block width 5 - 17.5 mm; stretchable 5 - 5.2 mm; plain; snap-on type; white</p>               | <p><b>Item No.: 793-5501/000-002</b><br/>WMB marking card; as card; for terminal block width 5 - 17.5 mm; stretchable 5 - 5.2 mm; plain; snap-on type; yellow</p>  | <p><b>Item No.: 793-501/000-006</b><br/>WMB marking card; as card; not stretchable; plain; snap-on type; blue</p>    | <p><b>Item No.: 793-501/000-007</b><br/>WMB marking card; as card; not stretchable; plain; snap-on type; gray</p>   |
| <p><b>Item No.: 793-501/000-023</b><br/>WMB marking card; as card; not stretchable; plain; snap-on type; green</p>   | <p><b>Item No.: 793-501/000-017</b><br/>WMB marking card; as card; not stretchable; plain; snap-on type; light green</p>   | <p><b>Item No.: 793-501/000-012</b><br/>WMB marking card; as card; not stretchable; plain; snap-on type; orange</p>    | <p><b>Item No.: 793-501/000-005</b><br/>WMB marking card; as card; not stretchable; plain; snap-on type; red</p>    |
| <p><b>Item No.: 793-501/000-024</b><br/>WMB marking card; as card; not stretchable; plain; snap-on type; violet</p>    | <p><b>Item No.: 793-501</b><br/>WMB marking card; as card; not stretchable; plain; snap-on type; white</p>   | <p><b>Item No.: 793-501/000-002</b><br/>WMB marking card; as card; not stretchable; plain; snap-on type; yellow</p>    | <p><b>Item No.: 2009-115/000-006</b><br/>WMB-Inline; for Smart Printer; 1500 pieces on roll; stretchable 5 - 5.2 mm; plain; snap-on type; blue</p>                |
| <p><b>Item No.: 2009-115/000-007</b><br/>WMB-Inline; for Smart Printer; 1500 pieces on roll; stretchable 5 - 5.2 mm; plain; snap-on type; gray</p>                     | <p><b>Item No.: 2009-115/000-023</b><br/>WMB-Inline; for Smart Printer; 1500 pieces on roll; stretchable 5 - 5.2 mm; plain; snap-on type; green</p>                | <p><b>Item No.: 2009-115/000-017</b><br/>WMB-Inline; for Smart Printer; 1500 pieces on roll; stretchable 5 - 5.2 mm; plain; snap-on type; light green</p>      | <p><b>Item No.: 2009-115/000-012</b><br/>WMB-Inline; for Smart Printer; 1500 pieces on roll; stretchable 5 - 5.2 mm; plain; snap-on type; orange</p>              |
| <p><b>Item No.: 2009-115/000-024</b><br/>WMB-Inline; for Smart Printer; 1500 pieces on roll; stretchable 5 - 5.2 mm; plain; snap-on type; violet</p>                   | <p><b>Item No.: 2009-115</b><br/>WMB-Inline; for Smart Printer; 1500 pieces on roll; stretchable 5 - 5.2 mm; plain; snap-on type; white</p>                        | <p><b>Item No.: 2009-115/000-002</b><br/>WMB-Inline; for Smart Printer; 1500 pieces on roll; stretchable 5 - 5.2 mm; plain; snap-on type; yellow</p>           |  |

### 1.2.6.3 Marker carrier



**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 Protective warning marker

#### 1.2.7.1 Cover



**Item No.: 2016-115**

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

### 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.: 2016-511**

Modular TOPJOB®S connector; modular; for jumper contact slot; 1-pole; gray



**Item No.: 2016-549**

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 mm<sup>2</sup>; tool-free connection for individual test wires 0.08 - 2.5 mm; gray

### 1.2.10 Tool

#### 1.2.10.1 Operating tool

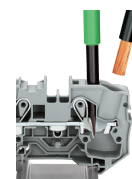
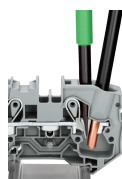
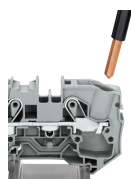


**Item No.: 210-721**

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

#### 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.

#### Removing a solid conductor.

Conductor removal is performed with an operating tool, just like CAGE CLAMP®.

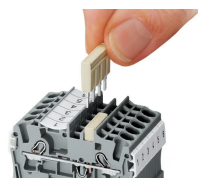
#### Inserting a conductor via operating tool.

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.

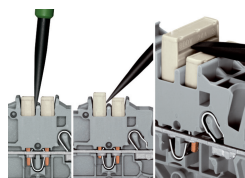
#### The smart feature:

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

### Commoning



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

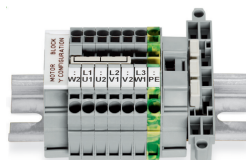


#### Removing a push-in type jumper bar:

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

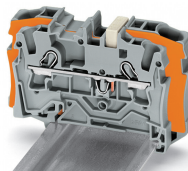
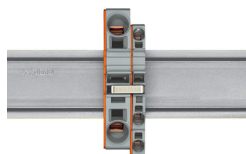
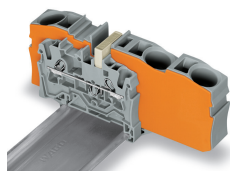
Place the operating tool in the center of jumpers for up to five contacts (see above), or alternately on both sides for jumpers with more than five contacts.

### 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.

Commoning

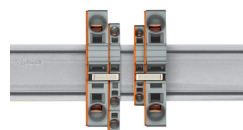
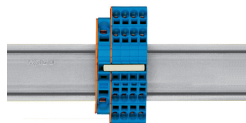
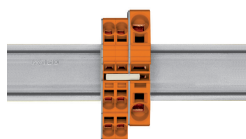


Step-down jumpers common terminal blocks of different sizes, without losing a conductor clamping point. This can be beneficial on long conductor runs where voltage drop can be a problem. A large conductor can be easily connected to smaller conductors at the distribution point. Commoning may be made in 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 mm<sup>2</sup> (10/12 AWG) terminal blocks (2006/2004 Series) with 4/2.5/1.5 mm<sup>2</sup> (AWG 12/14/16) terminal blocks (2004/2002/2001 Series).

**Step-down jumper (Item No. 2016-499)** commons 16/10 mm<sup>2</sup> (16/8 AWG) terminal blocks (2016/2010 Series) with 10/6/4/2.5 mm<sup>2</sup> (8/10/12/14 AWG) terminal blocks (2010/2006/2004/2002 Series).

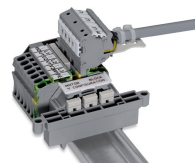
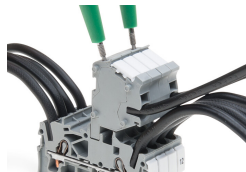
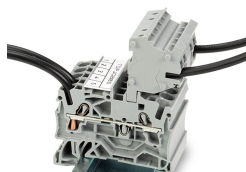


**Stepping down via push-in type jumper bar:** Commoning via open terminal side with end plate allows jumpering over two cross-section sizes for 16 mm<sup>2</sup> (6 AWG) and 10 mm<sup>2</sup> (8 AWG) and one cross-section size for 6/4/2.5 mm<sup>2</sup> (10/12/14 AWG). An example: from 16 mm<sup>2</sup> (6 AWG) to 6 mm<sup>2</sup> (10 AWG) (see illustration above) or from 10 mm<sup>2</sup> (8 AWG) to 4 mm<sup>2</sup> (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 mm<sup>2</sup> (6 AWG) to 6 mm<sup>2</sup> (10 AWG) or from 6 mm<sup>2</sup> (10 AWG) to 2.5 mm<sup>2</sup> (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 mm<sup>2</sup> (12 AWG) – compatible with 2000 to 2016 Series

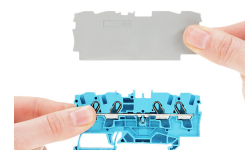
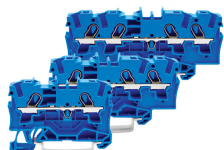
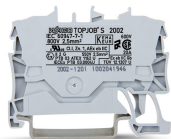
Marking



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

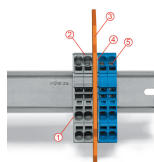


Through terminal blocks with a blue insulated housing are suitable for Ex i applications.

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.

Cover



Finger guard seals an unused conductor entry.