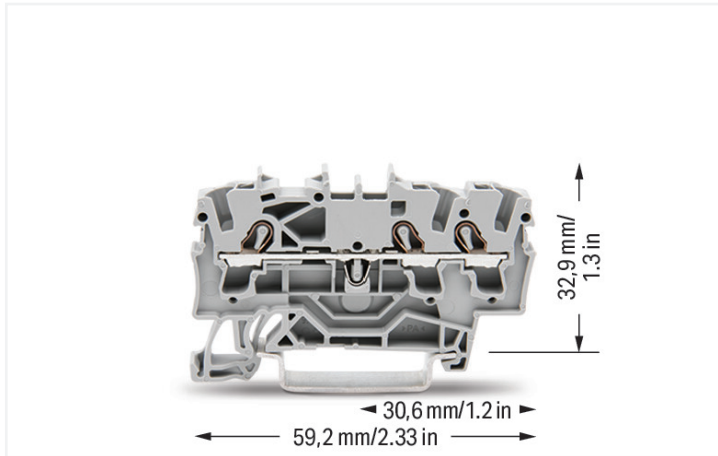


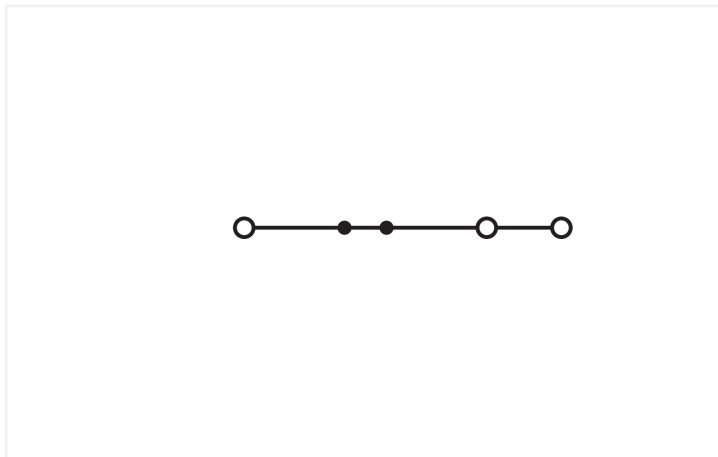
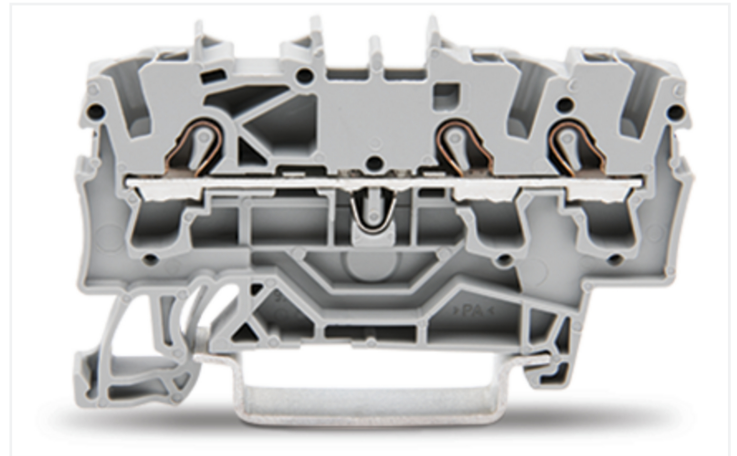
## Data Sheet | Item Number: 2002-1301

3-conductor through terminal block; 2.5 mm<sup>2</sup>; 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 mm<sup>2</sup>; gray

<https://www.wago.com/2002-1301>



Color: ■ gray



Similar to illustration

Through terminal block, 2002 Series, gray

Our through terminal block (item number 2002-1301) makes connecting wires quick and easy. Whether for use in industry or building installations, our rail-mount through terminal blocks make it easy to quickly and securely connect electrical conductors. They're perfect for either classic through-wiring or distributing potential, depending on the variant. Our through rail-mount terminal block is rated for 800 V and is designed for use with a rated current of up to 24 A. Conductors can only be connected to this through terminal block if their strip length is between 10 mm and 12 mm. This product features conductor terminals and utilizes Push-in CAGE CLAMP®. Our Push-in CAGE CLAMP® is a universal, maintenance-free connection solution for all conductor types, offering a key advantage: both solid and fine-stranded conductors with ferrules can be directly inserted without the need for tools or any preparation, such as crimping the ferrule. Dimensions: 5.2 x 59.2 x 39.5 mm (width x height x depth). Depending on the type of conductor, this through terminal block is suitable for conductor cross sections ranging from 0.25 mm<sup>2</sup> to 4 mm<sup>2</sup>. It comes with one level and three clamping points that you can use to connect a single potential. The gray housing is made of polyamide (PA66) for insulation. This through rail-mount terminal block is operated with an operating tool. Our TOPJOB® S rail-mount terminal blocks are perfect for many different industrial applications and modern building installations thanks to the secure electrical connections they provide. You can work anywhere in the world and on any application with just a single rail-mount terminal block system. These through rail-mount terminal blocks are mounted using DIN-35 rails. The front-entry wiring makes it possible to connect copper conductors. The two jumper slots enable potential distribution to other clamping points. 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                                 | 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  | - |

| Approvals per | CSA 22.2 No 158 |       |   |
|---------------|-----------------|-------|---|
| 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 <sub>N</sub> for specified power loss        | 24 A      |
| Resistance value for specified, current-dependent power loss | 0.00133 Ω |

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                                      | 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                            | 59.2 mm / 2.33 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)               | <a href="#">Information on material specifications can be found here</a> |
| Color                              | gray                                                                     |
| Material group                     | I                                                                        |
| Insulation material (main housing) | Polyamide (PA66)                                                         |
| Flammability class per UL94        | V0                                                                       |
| Fire load                          | 0.147 MJ                                                                 |
| Weight                             | 6.1 g                                                                    |

| Environmental requirements                                                                         |                                                     |
|----------------------------------------------------------------------------------------------------|-----------------------------------------------------|
| Processing temperature                                                                             | -35 ... +85 °C                                      |
| Continuous operating temperature                                                                   | -60 ... +105 °C                                     |
| Environmental Testing (Environmental Conditions)                                                   |                                                     |
| 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>Shock and vibration tests | DIN EN 61373 (VDE 0115-0106):2011-04                |
| Spectrum/Installation location                                                                     | Service life test, Category 1, Class A/B            |
| Function test with noise-like vibration                                                            | Test passed according to Section 8 of the standard  |
| Frequency                                                                                          | f <sub>1</sub> = 5 Hz to f <sub>2</sub> = 150 Hz    |
| Acceleration                                                                                       | 0.101g (highest test level used for all axes)       |
| Test duration per axis                                                                             | 10 min.                                             |
| Test directions                                                                                    | X, Y and Z axes                                     |
| Monitoring for contact faults/interruptions                                                        | Passed                                              |
| Voltage drop measurement before and after each axis                                                | Passed                                              |
| Simulated service life test through increased levels of noise-like vibration                       | Test passed according to Section 9 of the standard  |
| Frequency                                                                                          | f <sub>1</sub> = 5 Hz to f <sub>2</sub> = 150 Hz    |
| Acceleration                                                                                       | 0.572g (highest test level used for all axes)       |
| Test duration per axis                                                                             | 5 h                                                 |
| Test directions                                                                                    | X, Y and Z axes                                     |
| Extended test scope: Monitoring for contact faults/interruptions                                   | Passed                                              |
| Extended test scope: Voltage drop measurement before and after each axis                           | Passed                                              |
| Shock test                                                                                         | Test passed according to Section 10 of the standard |
| Shock form                                                                                         | Half sine                                           |
| Acceleration                                                                                       | 5g (highest test level used for all axes)           |
| Shock duration                                                                                     | 30 ms                                               |



| Environmental Testing (Environmental Conditions)                         |                   |
|--------------------------------------------------------------------------|-------------------|
| Number of shocks per axis                                                | 3 pos. und 3 neg. |
| Test directions                                                          | X, Y and Z axes   |
| Extended test scope: Monitoring for contact faults/interruptions         | Passed            |
| Extended test scope: 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     | DE            |
| GTIN                  | 4017332999229 |
| 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 8.0               | EC000897             |
| ECCN                   | NO US CLASSIFICATION |

| Environmental Product Compliance |                        |
|----------------------------------|------------------------|
| RoHS Compliance Status           | Compliant,No Exemption |

| Approvals / Certificates                             |               |                                                            |
|------------------------------------------------------|---------------|------------------------------------------------------------|
| General approvals                                    |               | Declarations of conformity and manufacturer's declarations |
|                                                      |               |                                                            |
| Approval                                             | Standard      | Certificate Name                                           |
| CCA<br>DEKRA Certification B.V.                      | EN 60947      | NTR NL-8054                                                |
| CSA<br>CSA Group                                     | C22.2 No. 158 | 154112                                                     |
| KEMA/KEUR<br>DEKRA Certification B.V.                | EN 60947      | 71-124163                                                  |
| UL<br>Underwriters Laboratories Inc.                 | UL 1059       | E45172                                                     |
| 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               | EN 60947 | 20-HG1941090-PDA |
| BV<br>Bureau Veritas S.A.                             | EN 60947 | 38586/B0 BV      |
| DNV GL<br>Det Norske Veritas, Ger-<br>manischer Lloyd | -        | TAE00001V2       |

Approvals for hazardous areas



| Approval                                          | Standard    | Certificate Name                                            |
|---------------------------------------------------|-------------|-------------------------------------------------------------|
| AEx<br>Underwriters Laboratories<br>Inc.          | UL 60079    | E185892 (AEx eb IIC resp.<br>Ex eb IIC)                     |
| ATEX<br>Physikalisch Technische<br>Bundesanstalt  | EN 60079    | PTB 03 ATEX 1162 U (II2G<br>Ex eb IIC Gb, IM2 Ex eb<br>IMb) |
| CCC<br>CQST/CNEx                                  | GB/T 3836.3 | 2020312313000238 (Ex<br>eb IIC Gb, Ex eb I Mb)              |
| IECEX<br>Physikalisch Technische<br>Bundesanstalt | IEC 60079   | IECEX PTB 03.0004U (Ex<br>eb IIC Gb or Ex eb I Mb)          |
| INMETRO<br>TÜV Rheinland do Brasil<br>Ltda.       | IEC 60079   | TÜV 12.1307 U                                               |

Downloads

Environmental Product Compliance

| Compliance Search                             |
|-----------------------------------------------|
| Environmental Product<br>Compliance 2002-1301 |



Documentation

| Bid Text  |            |                  |                                                                                                     |
|-----------|------------|------------------|-----------------------------------------------------------------------------------------------------|
| 2002-1301 | 29.04.2019 | xml<br>4.15 KB   | <a href="#"></a> |
| 2002-1301 | 23.04.2019 | docx<br>14.97 KB | <a href="#"></a> |



CAD/CAE-Data

| CAD data                  |
|---------------------------|
| 2D/3D Models<br>2002-1301 |



| CAE data                       |
|--------------------------------|
| EPLAN Data Portal<br>2002-1301 |
| WSCAD Universe<br>2002-1301    |
| ZUKEN Portal<br>2002-1301      |





1 Compatible Products

1.1 Required Accessories

1.1.1 End plate

1.1.1.1 End plate



**Item No.: 2002-1391**  
End and intermediate plate; 0.8 mm thick; gray



**Item No.: 2002-1392**  
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

1.2 Optional Accessories

1.2.1 DIN-rail

1.2.1.1 Mounting accessories



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



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



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



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



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



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



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



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



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



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



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



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

1.2.2 End plate

1.2.2.1 End plate



**Item No.: 2002-1393**  
Separator plate; 2 mm thick; oversized; gray



**Item No.: 2002-1394**  
Separator plate; 2 mm thick; oversized; orange

1.2.3 Ferrule

1.2.3.1 Ferrule



**Item No.: 216-241**  
Ferrule; Sleeve for 0.5 mm<sup>2</sup> / 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 mm<sup>2</sup> / 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 mm<sup>2</sup> / 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 mm<sup>2</sup> / AWG 18; insulated; electro-tin plated; electrolytic copper; gastight crimped; acc. to DIN 46228, Part 4/09.90; red



1.2.3.1 Ferrule



**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

1.2.4 Installation

1.2.4.1 Cover



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

1.2.4.2 Cover carrier



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

1.2.5 Insulation stop

1.2.5.1 Insulation stop



**Item No.: 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

1.2.6 Jumper

1.2.6.1 Jumper



**Item No.: 2002-400**  
Continuous jumper; 2-way; insulated; light gray



**Item No.: 2002-413**  
Continuous jumper; 3-way; insulated; light gray



**Item No.: 2002-415**  
Continuous jumper; 5-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



1.2.6.1 Jumper

|                                                                                                                                                                                         |                                                                                                                                                                             |                                                                                                                                                                                                                                               |                                                                                                                                                                                                                                                           |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <br><b>Item No.: 2002-424/000-005</b><br>Continuous jumper; from 1 to 4; insulated; red                | <br><b>Item No.: 2002-406/020-000</b><br>Delta jumper; insulated; light gray               | <br><b>Item No.: 2002-410/000-006</b><br>Jumper; 10-way; insulated; blue                                                                                    | <br><b>Item No.: 2002-410</b><br>Jumper; 10-way; insulated; light gray                                                                                                 |
| <br><b>Item No.: 2002-410/000-005</b><br>Jumper; 10-way; insulated; red                                | <br><b>Item No.: 2002-402/000-006</b><br>Jumper; 2-way; insulated; blue                    | <br><b>Item No.: 2002-402</b><br>Jumper; 2-way; insulated; light gray                                                                                        | <br><b>Item No.: 2002-402/000-005</b><br>Jumper; 2-way; insulated; red                                                                                                 |
| <br><b>Item No.: 2002-403/000-006</b><br>Jumper; 3-way; insulated; blue                                | <br><b>Item No.: 2002-403</b><br>Jumper; 3-way; insulated; light gray                      | <br><b>Item No.: 2002-403/000-005</b><br>Jumper; 3-way; insulated; red                                                                                       | <br><b>Item No.: 2002-404/000-006</b><br>Jumper; 4-way; insulated; blue                                                                                                |
| <br><b>Item No.: 2002-404</b><br>Jumper; 4-way; insulated; light gray                                  | <br><b>Item No.: 2002-404/000-005</b><br>Jumper; 4-way; insulated; red                     | <br><b>Item No.: 2002-405/000-006</b><br>Jumper; 5-way; insulated; blue                                                                                      | <br><b>Item No.: 2002-405</b><br>Jumper; 5-way; insulated; light gray                                                                                                  |
| <br><b>Item No.: 2002-405/000-005</b><br>Jumper; 5-way; insulated; red                                 | <br><b>Item No.: 2002-406/000-006</b><br>Jumper; 6-way; insulated; blue                    | <br><b>Item No.: 2002-406</b><br>Jumper; 6-way; insulated; light gray                                                                                        | <br><b>Item No.: 2002-406/000-005</b><br>Jumper; 6-way; insulated; red                                                                                                 |
| <br><b>Item No.: 2002-407/000-006</b><br>Jumper; 7-way; insulated; blue                                | <br><b>Item No.: 2002-407</b><br>Jumper; 7-way; insulated; light gray                      | <br><b>Item No.: 2002-407/000-005</b><br>Jumper; 7-way; insulated; red                                                                                      | <br><b>Item No.: 2002-408/000-006</b><br>Jumper; 8-way; insulated; blue                                                                                                |
| <br><b>Item No.: 2002-408</b><br>Jumper; 8-way; insulated; light gray                                  | <br><b>Item No.: 2002-408/000-005</b><br>Jumper; 8-way; insulated; red                     | <br><b>Item No.: 2002-409/000-006</b><br>Jumper; 9-way; insulated; blue                                                                                     | <br><b>Item No.: 2002-409</b><br>Jumper; 9-way; insulated; light gray                                                                                                  |
| <br><b>Item No.: 2002-409/000-005</b><br>Jumper; 9-way; insulated; red                               | <br><b>Item No.: 2002-440</b><br>Jumper; from 1 to 10; insulated; light gray             | <br><b>Item No.: 2002-433</b><br>Jumper; from 1 to 3; insulated; light gray                                                                                | <br><b>Item No.: 2002-434</b><br>Jumper; from 1 to 4; insulated; light gray                                                                                          |
| <br><b>Item No.: 2002-435</b><br>Jumper; from 1 to 5; insulated; light gray                          | <br><b>Item No.: 2002-436</b><br>Jumper; from 1 to 6; insulated; light gray              | <br><b>Item No.: 2002-437</b><br>Jumper; from 1 to 7; insulated; light gray                                                                                | <br><b>Item No.: 2002-438</b><br>Jumper; from 1 to 8; insulated; light gray                                                                                          |
| <br><b>Item No.: 2002-439</b><br>Jumper; from 1 to 9; insulated; light gray                          | <br><b>Item No.: 2002-480</b><br>Staggered jumper; 10-way; insulated; light gray         | <br><b>Item No.: 2002-481</b><br>Staggered jumper; 11-way; insulated; light gray                                                                          | <br><b>Item No.: 2002-482</b><br>Staggered jumper; 12-way; insulated; light gray                                                                                     |
| <br><b>Item No.: 2002-473/011-000</b><br>Staggered jumper; 2-way; from 1 to 3; insulated; light gray | <br><b>Item No.: 2002-472</b><br>Staggered jumper; 2-way; insulated; light gray          | <br><b>Item No.: 2002-473</b><br>Staggered jumper; 3-way; insulated; light gray                                                                            | <br><b>Item No.: 2002-475/011-000</b><br>Staggered jumper; 3-way; insulated; light gray                                                                              |
| <br><b>Item No.: 2002-474</b><br>Staggered jumper; 4-way; insulated; light gray                      | <br><b>Item No.: 2002-475</b><br>Staggered jumper; 5-way; insulated; light gray          | <br><b>Item No.: 2002-476</b><br>Staggered jumper; 6-way; insulated; light gray                                                                           | <br><b>Item No.: 2002-477</b><br>Staggered jumper; 7-way; insulated; light gray                                                                                      |
| <br><b>Item No.: 2002-478</b><br>Staggered jumper; 8-way; insulated; light gray                      | <br><b>Item No.: 2002-479</b><br>Staggered jumper; 9-way; insulated; light gray          | <br><b>Item No.: 2002-477/011-000</b><br>Staggered jumper; insulated; light gray                                                                          | <br><b>Item No.: 2002-479/011-000</b><br>Staggered jumper; insulated; light gray                                                                                     |
| <br><b>Item No.: 2002-481/011-000</b><br>Staggered jumper; insulated; light gray                     | <br><b>Item No.: 2002-405/011-000</b><br>Star point jumper; 3-way; insulated; light gray | <br><b>Item No.: 2006-499</b><br>Step-down jumper; from 2006/2004 to 2004/2002/2001 series; from 2206/2204 to 2204/2202/2201 series; insulated; light gray | <br><b>Item No.: 2016-499</b><br>Step-down jumper; from 2016/2010 to 2010/2006/2004/2002 series; from 2216/2210 to 2210/2206/2204/2202 series; insulated; light gray |



1.2.6.1 Jumper



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



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

1.2.7 Marking

1.2.7.1 Group marker carrier



Item No.: 2009-191  
Group marker carrier; gray



Item No.: 2009-192  
Group marker carrier; gray



Item No.: 2009-193  
Group marker carrier; gray

1.2.7.2 Marker



Item No.: 2009-145/000-006  
Mini-WSB Inline; for Smart Printer; 1700 pieces on roll; stretchable 5 - 5.2 mm; plain; snap-on type; blue



Item No.: 2009-145/000-007  
Mini-WSB Inline; for Smart Printer; 1700 pieces on roll; stretchable 5 - 5.2 mm; plain; snap-on type; gray



Item No.: 2009-145/000-023  
Mini-WSB Inline; for Smart Printer; 1700 pieces on roll; stretchable 5 - 5.2 mm; plain; snap-on type; green



Item No.: 2009-145/000-012  
Mini-WSB Inline; for Smart Printer; 1700 pieces on roll; stretchable 5 - 5.2 mm; plain; snap-on type; orange



Item No.: 2009-145/000-005  
Mini-WSB Inline; for Smart Printer; 1700 pieces on roll; stretchable 5 - 5.2 mm; plain; snap-on type; red



Item No.: 2009-145/000-024  
Mini-WSB Inline; for Smart Printer; 1700 pieces on roll; stretchable 5 - 5.2 mm; plain; snap-on type; violet



Item No.: 2009-145  
Mini-WSB Inline; for Smart Printer; 1700 pieces on roll; stretchable 5 - 5.2 mm; plain; snap-on type; white



Item No.: 2009-145/000-002  
Mini-WSB Inline; for Smart Printer; 1700 pieces on roll; stretchable 5 - 5.2 mm; plain; snap-on type; yellow



Item No.: 248-501/000-006  
Mini-WSB marking card; as card; not stretchable; plain; snap-on type; blue



Item No.: 248-501/000-007  
Mini-WSB marking card; as card; not stretchable; plain; snap-on type; gray



Item No.: 248-501/000-023  
Mini-WSB marking card; as card; not stretchable; plain; snap-on type; green



Item No.: 248-501/000-017  
Mini-WSB marking card; as card; not stretchable; plain; snap-on type; light green



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



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



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



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



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



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



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



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



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



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



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



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



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



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



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



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



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



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



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



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



1.2.7.2 Marker



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



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



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



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

1.2.7.3 Marker carrier



**Item No.: 2002-161**  
Adaptor; gray



**Item No.: 2009-198**  
Adaptor; gray

1.2.7.4 Marking strip



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

1.2.8 Plug

1.2.8.1 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

1.2.8.2 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

1.2.8.3 Empty component plug housing



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



1.2.9 Protective warning marker

1.2.9.1 Cover



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

1.2.10 Push-in type wire jumper

1.2.10.1 Jumper



**Item No.: 2009-414**  
Push-in type wire jumper; 1.5 mm<sup>2</sup>; insulated; 110 mm long; black



**Item No.: 2009-414/000-005**  
Push-in type wire jumper; 1.5 mm<sup>2</sup>; insulated; 110 mm long; black



**Item No.: 2009-416**  
Push-in type wire jumper; 1.5 mm<sup>2</sup>; 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

1.2.11 Screwless end stop

1.2.11.1 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

1.2.12 Test and measurement

1.2.12.1 Testing accessories



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



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



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



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



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



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



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



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



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



**Item No.: 2002-559**  
Modular TOPJOB®S connector; modular; for jumper contact slot; 9-pole; 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 mm<sup>2</sup>; 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; gray



1.2.13 Tool

1.2.13.1 Operating tool



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



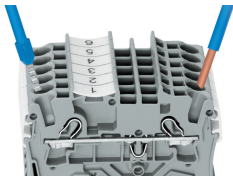
**Item No.: 210-720**  
Operating tool; Blade: 3.5 x 0.5 mm; with a partially insulated shaft; multicoloured

Installation Notes

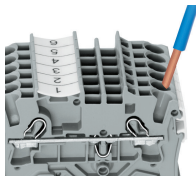
Conductor termination



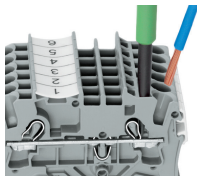
**All conductor types at a glance**



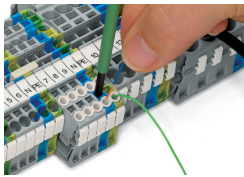
Push-in termination of solid and ferruled conductors



**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.

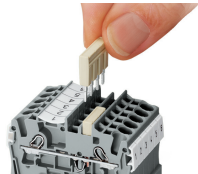


**Inserting a conductor via operating tool:**  
Connecting fine-stranded conductors without ferrules, or small cross-sectional conductors that cannot be pushed in, is performed similarly to the original CAGE CLAMP® – just use an operating tool.  
**Advantage:**  
To open the clamp, the operating tool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

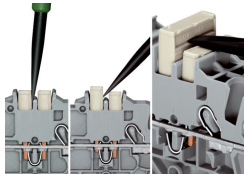


Conductor termination – insulation stop

Commoning

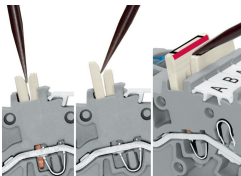
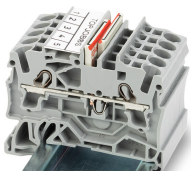


Insert push-in type jumper bar and push down until it hits backstop.



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

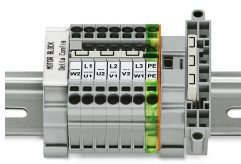
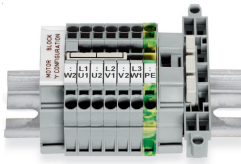
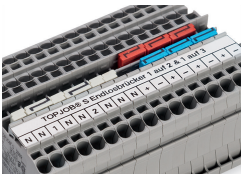
Commoning



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

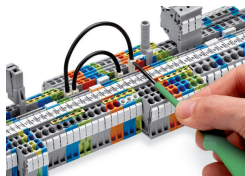


Continuous jumpers (2002 Series) readily connect an endless number of terminal blocks to each other via single jumper slot. Use the second jumper slot for additional commoning or testing.

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.

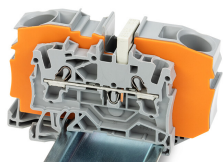
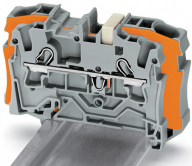
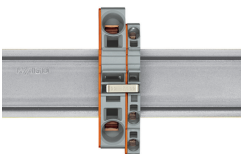
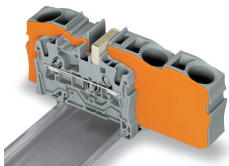
This star point jumper has been specially developed to create a "star point" and is used on motor terminal boards equipped with Rail-Mount Terminal Blocks TOP-JOB® S.

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



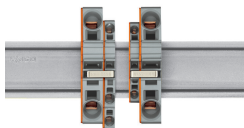
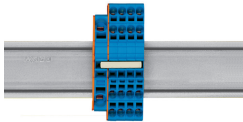
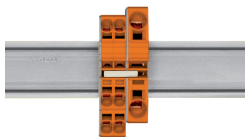
Step-down jumpers common terminal blocks of different sizes, without losing a conductor clamping point. This can be beneficial on long conductor runs where voltage drop can be a problem. A large conductor can be easily connected to smaller conductors at the distribution point.  
Commoning may be made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

Commoning

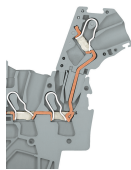
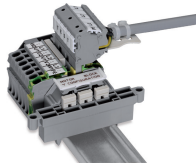
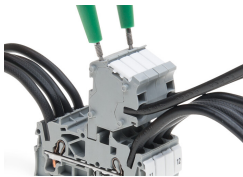
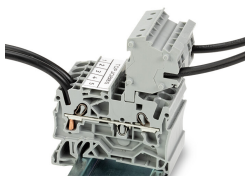


**Stepping down via push-in type jumper bar:**  
Commoning via open terminal side with end plate allows jumpering over two cross-section sizes for 16 mm<sup>2</sup> (6 AWG) and 10 mm<sup>2</sup> (8 AWG) and one cross-section size for 6/4/2.5 mm<sup>2</sup> (10/12/14 AWG). An example: from 16 mm<sup>2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

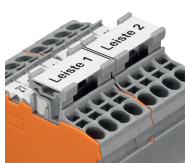
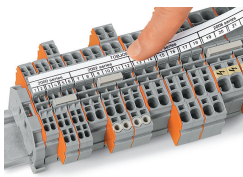
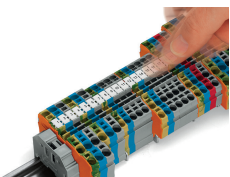
L-type test plug module – cross-sectional view of contacts



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 mm<sup>2</sup> (12 AWG) – compatible with 2000 to 2016 Series

Marking

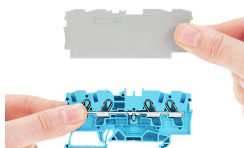
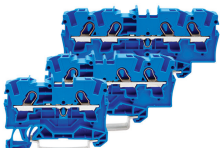
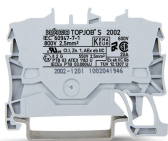


Snapping WMB Inline markers into marker slots.

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!

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

Ex application

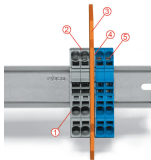


Through terminal blocks with a blue insulated housing are suitable for Ex i applications.

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 application



**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.