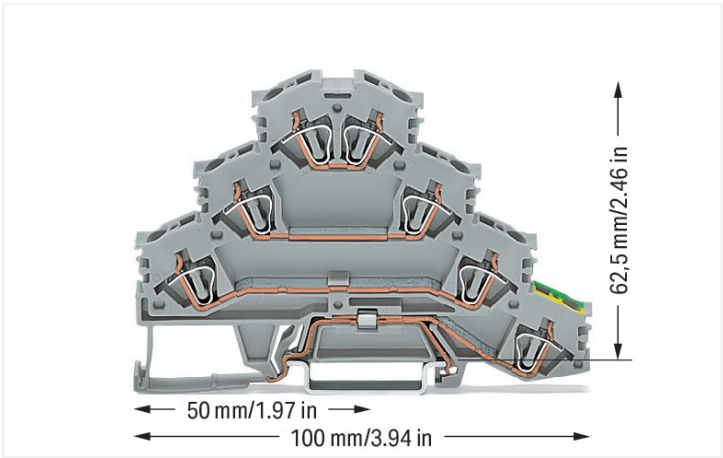


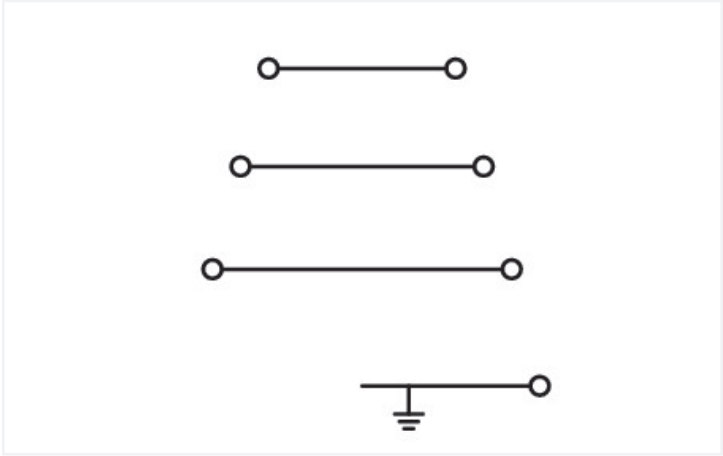
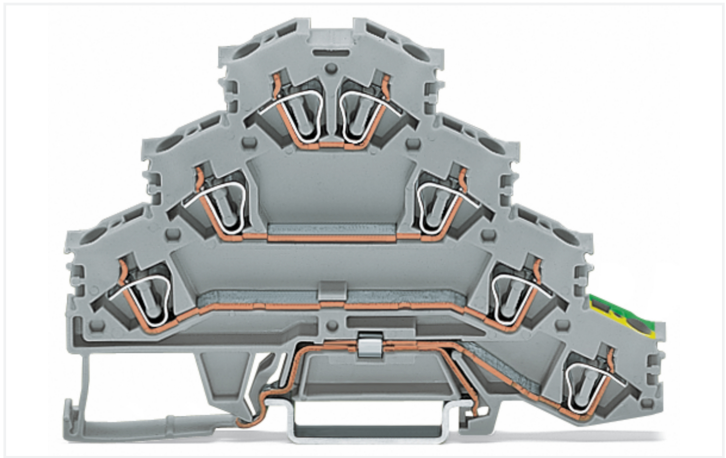
Data Sheet | Item Number: 281-530

Quadruple-deck rail-mounted terminal block; Rail-mounted terminal block for electric motor wiring; 2.5 mm²; L1 - L2 - L3 - PE; for DIN-rail 35 x 15 and 35 x 7.5; CAGE CLAMP®; 2,50 mm²; gray

<https://www.wago.com/281-530>



Color: ■ gray



Quadruple-deck terminal block, 281 Series, operating tool

Enjoy error-free electrical installations with this quadruple-deck terminal block (item number 281-530). The quadruple-deck terminal block also functions as a through terminal block as well as a ground terminal block. Conductors can only be connected to this quadruple-deck terminal block if their strip length is between 8 mm and 9 mm. Featuring conductor terminals along with CAGE CLAMP®, this connector is highly versatile. Our celebrated universal connection known as CAGE CLAMP® is the industry standard when it comes to connection technology and electrical interconnections. This quadruple-deck terminal block is suitable for conductor cross sections ranging from 0.08 mm² to 4 mm². It features four levels and seven clamping points that you can use to connect four potentials. The gray housing is made of polyamide (PA66) for insulation. These through rail-mount terminal blocks are mounted using DIN-35 rails..

| Electrical data      |       |                  |    |  |           |
|----------------------|-------|------------------|----|--|-----------|
| Ratings per          |       | IEC/EN 60947-7-1 |    | Power Loss   |           |
| Overvoltage category | III   | III              | II | Power loss, per pole (potential)                             | 1.596 W   |
| Pollution degree     | 3     | 2                | 2  | Rated current I <sub>N</sub> for specified power loss        | 20 A      |
| Nominal voltage      | 400 V | -                | -  | Resistance value for specified, current-dependent power loss | 0.00133 Ω |
| Rated surge voltage  | 6 kV  | -                | -  |  |           |



| Connection data                        |  |  |
|--|--|--|
| Clamping units                         | 7  |  |
| Total number of potentials             | 4  |  |
| Number of levels                       | 4  |  |
| Connection 1                           |  |  |
| Connection technology                  | CAGE CLAMP®  |  |
| Actuation type                         | Operating tool   |  |
| Connectable conductor materials        | Copper<br>Aluminum   |  |
| Connectable conductor materials (note) | <p><b>Terminating Aluminum Conductors</b><br/>WAGO Spring-Clamp Terminal Blocks are suitable for solid aluminum conductors up to 4 mm²/12 AWG if WAGO "Alu-Plus" Contact Paste <a href="#">249-130</a> is used for termination.</p> <p>"Alu-Plus" Contact Paste Advantages:</p> <ul style="list-style-type: none"><li>• Automatically destroys the oxide film during clamping.</li><li>• Prevents fresh oxidation at the clamping point.</li><li>• Prevents electrolytic corrosion between aluminum and copper conductors (in the same terminal block).</li><li>• Provides long-term protection against corrosion.</li></ul> <p>Using terminal blocks with CAGE CLAMP® Spring Pressure Connection Technology, <b>aluminum conductors must first be cleaned with a blade</b> and then immediately inserted into the clamping units filled with "Alu-Plus" contact paste.</p> <p>It is also possible to apply WAGO "Alu-Plus" <b>additionally</b> on the whole surface of the aluminum conductor before termination.</p> <p>Please note that the nominal currents must be adapted to the reduced conductivity of the aluminum conductors::<br/>2.5 mm² = 16 A<br/>4 mm² = 22 A</p> |  |
| Nominal cross-section                  | 2.5 mm²  |  |
| Solid conductor                        | 0.08 ... 4 mm² / 28 ... 12 AWG   |  |
| Fine-stranded conductor                | 0.08 ... 4 mm² / 28 ... 12 AWG   |  |
| Strip length                           | 8 ... 9 mm / 0.31 ... 0.35 inches  |  |
| Wiring direction                       | Front-entry wiring   |  |

| Physical data                     |                        |
|-----------------------------------|------------------------|
| Width                             | 6 mm / 0.236 inches    |
| Height                            | 100 mm / 3.937 inches  |
| Depth from upper-edge of DIN-rail | 62.5 mm / 2.461 inches |

| Mechanical data   |                     |
|-------------------|---------------------|
| Potential marking | L1 - L2 - L3 - PE   |
| Design            | angled              |
| 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                          | 0.356 MJ         |  |
| Weight                             | 23.2 g           |  |

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

| Commercial data       |                                  |  |
|-----------------------|----------------------------------|--|
| Product Group         | 1 (Rail Mounted Terminal Blocks) |  |
| PU (SPU)              | 50 pcs                           |  |
| Packaging type        | Box                              |  |
| Country of origin     | DE                               |  |
| GTIN                  | 4045454017071                    |  |
| 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.                      | IEC 60947 | NTR NL-7454/A1   |          |          |                  |  |   |   |
| CSA<br>CSA Group                                     | C22.2     | 1505034  |          |          |                  |  |   |   |
| KEMA/KEUR<br>DEKRA Certification B.V.                | EN 60947  | 71-107288  |          |          |                  |  |   |   |
| UL<br>Underwriters Laboratories Inc.                 | -         | 20170731-E45172  |          |          |                  |  |   |   |
|  |           | <table><tr><th>Approval</th><th>Standard</th><th>Certificate Name</th></tr><tr><td>EU-Declaration of Confor- mity<br/>WAGO GmbH &amp; Co. KG</td><td>-</td><td>-</td></tr></table> | Approval | Standard | Certificate Name | EU-Declaration of Confor- mity<br>WAGO GmbH & Co. KG | - | - |
| Approval   | Standard  | Certificate Name   |          |          |                  |  |   |   |
| EU-Declaration of Confor- mity<br>WAGO GmbH & Co. KG | -         | -  |          |          |                  |  |   |   |



Approvals for marine applications



| Approval  | Standard | Certificate Name |
|---|----------|------------------|
| ABS<br>American Bureau of Ship-<br>ping               | -        | 20-HG1941090-PDA |
| BV<br>Bureau Veritas S.A.                             | EN 60947 | 07436/F0 BV      |
| DNV GL<br>Det Norske Veritas, Ger-<br>manischer Lloyd | -        | TAE00001V2       |

Downloads

Environmental Product Compliance

| Compliance Search                           |
|---|
| Environmental Product<br>Compliance 281-530 |



























Documentation

| Bid Text |            |                 |   |
|----------|------------|-----------------|---|
| 281-530  | 19.02.2019 | xml<br>3.25 KB  | ↓ |
| 281-530  | 02.03.2017 | doc<br>24.50 KB | ↓ |

CAD/CAE-Data

| CAD data             |
|----------------------|
| 2D/3D Models 281-530 |

| CAE data                     |
|------------------------------|
| EPLAN Data Portal<br>281-530 |
| WSCAD Universe<br>281-530    |
| ZUKEN Portal 281-530         |

| 1 Compatible Products  |  |  |  |
|--|--|--|--|
| 1.1 Required Accessories   |  |  |  |
| 1.1.1 End plate  |  |  |  |
| 1.1.1.1 End plate  |  |  |  |
|   |   |  |  |
| <b>Item No.: 281-365</b><br>End and intermediate plate; 1 mm thick; gray   | <b>Item No.: 281-366</b><br>End and intermediate plate; 1 mm thick; orange   |  |  |
|  |  |  |  |
| 1.2 Optional Accessories   |  |  |  |
| 1.2.1 DIN-rail   |  |  |  |
| 1.2.1.1 Mounting accessories   |  |  |  |
|   |   |    |   |
| <b>Item No.: 210-196</b><br>Aluminum carrier rail; 35 x 8.2 mm; 1.6 mm thick; 2 m long; unslotted; similar to EN 60715; silver-colored   | <b>Item No.: 210-198</b><br>Copper carrier rail; 35 x 15 mm; 2.3 mm thick; 2 m long; unslotted; according to EN 60715; copper-colored  | <b>Item No.: 210-508</b><br>Steel carrier rail; 35 x 15 mm; 1.5 mm thick; 2 m long; slotted; galvanized; similar to EN 60715; silver-colored                               | <b>Item No.: 210-197</b><br>Steel carrier rail; 35 x 15 mm; 1.5 mm thick; 2 m long; slotted; similar to EN 60715; silver-colored   |
|   |   |    |   |
| <b>Item No.: 210-506</b><br>Steel carrier rail; 35 x 15 mm; 1.5 mm thick; 2 m long; unslotted; galvanized; similar to EN 60715; silver-colored                                 | <b>Item No.: 210-114</b><br>Steel carrier rail; 35 x 15 mm; 1.5 mm thick; 2 m long; unslotted; similar to EN 60715; silver-colored   | <b>Item No.: 210-118</b><br>Steel carrier rail; 35 x 15 mm; 2.3 mm thick; 2 m long; unslotted; according to EN 60715; silver-colored                                       | <b>Item No.: 210-115</b><br>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                           |
|   |   |    |   |
| <b>Item No.: 210-112</b><br>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                           | <b>Item No.: 210-504</b><br>Steel carrier rail; 35 x 7.5 mm; 1 mm thick; 2 m long; slotted; galvanized; according to EN 60715; silver-colored                                  | <b>Item No.: 210-113</b><br>Steel carrier rail; 35 x 7.5 mm; 1 mm thick; 2 m long; unslotted; according to EN 60715; silver-colored  | <b>Item No.: 210-505</b><br>Steel carrier rail; 35 x 7.5 mm; 1 mm thick; 2 m long; unslotted; galvanized; according to EN 60715; silver-colored                                |
|  |  |  |  |
| 1.2.2 Ferrule  |  |  |  |
| 1.2.2.1 Ferrule  |  |  |  |
|   |   |   |   |
| <b>Item No.: 216-301</b><br>Ferrule; Sleeve for 0.25 mm² / AWG 24; insulated; electro-tin plated; yellow   | <b>Item No.: 216-302</b><br>Ferrule; Sleeve for 0.34 mm² / 22 AWG; insulated; electro-tin plated; light turquoise  | <b>Item No.: 216-201</b><br>Ferrule; Sleeve for 0.5 mm² / 20 AWG; insulated; electro-tin plated; electrolytic copper; acc. to DIN 46228, Part 4/09.90; white               | <b>Item No.: 216-241</b><br>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 |
|   |   |   |   |
| <b>Item No.: 216-242</b><br>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 | <b>Item No.: 216-202</b><br>Ferrule; Sleeve for 0.75 mm² / 18 AWG; insulated; electro-tin plated; gray   | <b>Item No.: 216-243</b><br>Ferrule; Sleeve for 1 mm² / AWG 18; insulated; electro-tin plated; electrolytic copper; gastight crimped; acc. to DIN 46228, Part 4/09.90; red | <b>Item No.: 216-203</b><br>Ferrule; Sleeve for 1 mm² / AWG 18; insulated; electro-tin plated; red   |
|   |   |   |   |
| <b>Item No.: 216-204</b><br>Ferrule; Sleeve for 1.5 mm² / AWG 16; insulated; electro-tin plated; black   | <b>Item No.: 216-244</b><br>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 | <b>Item No.: 216-205</b><br>Ferrule; Sleeve for 2.08 mm² / AWG 14; insulated; electro-tin plated; yellow   | <b>Item No.: 216-206</b><br>Ferrule; Sleeve for 2.5 mm² / AWG 14; insulated; electro-tin plated; blue  |



1.2.2.1 Ferrule



**Item No.: 216-246**  
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.: 216-106**  
Ferrule; Sleeve for 2.5 mm<sup>2</sup> / AWG 14; un-insulated; electro-tin plated; silver-colored

1.2.3 Installation

1.2.3.1 Mounting accessories



**Item No.: 209-106**  
Mounting carrier; for isolated mounting on DIN 35 rails; gray

**Item No.: 249-116**  
Screwless end stop; 6 mm wide; for DIN-rail 35 x 15 and 35 x 7.5; gray

1.2.4 Insulation stop

1.2.4.1 Insulation stop



**Item No.: 281-470**  
Insulation stop; 0.08 - 0.2 mm<sup>2</sup> "s" (0.14 mm<sup>2</sup> "f-st"); 5 pieces/strip; white

**Item No.: 281-471**  
Insulation stop; 0.25 - 0.5 mm<sup>2</sup>; 5 pieces/strip; light gray

**Item No.: 281-472**  
Insulation stop; 0.75 - 1.5 mm<sup>2</sup>; 5 pieces/strip; dark gray

1.2.5 Jumper

1.2.5.1 Jumper



**Item No.: 281-490**  
Jumper; 10-way; insulated; gray

**Item No.: 281-482**  
Jumper; 2-way; insulated; gray

**Item No.: 281-492**  
Jumper; 2-way; insulated; gray

**Item No.: 281-483**  
Jumper; 3-way; insulated; gray



**Item No.: 281-485**  
Jumper; 5-way; insulated; gray

**Item No.: 709-110**  
Wire commoning chain; 2.5 mm<sup>2</sup>; insulated; black

**Item No.: 709-111**  
Wire commoning chain; 2.5 mm<sup>2</sup>; insulated; black

**Item No.: 709-112**  
Wire commoning chain; 2.5 mm<sup>2</sup>; insulated; black



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

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

1.2.6 Marking

1.2.6.1 Group marker carrier



**Item No.: 249-105**  
Group marker carrier; gray



1.2.6.2 Marker



**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.: 793-5501/000-007**  
WMB marking card; as card; for terminal block width 5 - 17.5 mm; stretchable 5 - 5.2 mm; plain; snap-on type; gray



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



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



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



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



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



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



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



**Item No.: 793-501/000-006**  
WMB marking card; as card; not stretchable; plain; snap-on type; blue



**Item No.: 793-501/000-007**  
WMB marking card; as card; not stretchable; plain; snap-on type; gray



**Item No.: 793-501/000-023**  
WMB marking card; as card; not stretchable; plain; snap-on type; green



**Item No.: 793-501/000-017**  
WMB marking card; as card; not stretchable; plain; snap-on type; light green



**Item No.: 793-501/000-012**  
WMB marking card; as card; not stretchable; plain; snap-on type; orange



**Item No.: 793-501/000-005**  
WMB marking card; as card; not stretchable; plain; snap-on type; red



**Item No.: 793-501/000-024**  
WMB marking card; as card; not stretchable; plain; snap-on type; violet



**Item No.: 793-501**  
WMB marking card; as card; not stretchable; plain; snap-on type; white



**Item No.: 793-501/000-002**  
WMB marking card; as card; not stretchable; plain; snap-on type; yellow



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



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



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



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



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



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



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



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

1.2.6.3 Marking strip



**Item No.: 709-196**  
Marking strips; for laser printer; translucent



**Item No.: 709-177**  
Marking strips; on reel; 7.5 mm wide; not stretchable; plain; snap-on type; translucent



**Item No.: 709-178**  
Marking strips; on reel; 7.5 mm wide; not stretchable; plain; snap-on type; white

1.2.7 Push-in type wire jumper

1.2.7.1 Jumper



**Item No.: 249-126**  
Push-in type wire jumper; 0.75 mm<sup>2</sup>; insulated; 110 mm long; black



**Item No.: 249-123**  
Push-in type wire jumper; 0.75 mm<sup>2</sup>; insulated; 180 mm long; black



**Item No.: 249-127**  
Push-in type wire jumper; 0.75 mm<sup>2</sup>; insulated; 250 mm long; black



**Item No.: 249-125**  
Push-in type wire jumper; insulated; 60 mm long; black

1.2.8 Test and measurement

1.2.8.1 Testing accessories



Item No.: 210-136  
Test plug; 2 mm Ø; with 500 mm cable; red

1.2.9 Tool

1.2.9.1 Operating tool



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

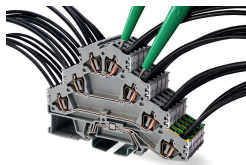


Item No.: 210-720  
Operating tool; Blade: 3.5 x 0.5 mm; with a partially insulated shaft; multicoloured



Item No.: 210-657  
Operating tool; Blade: 3.5 x 0.5 mm; with a partially insulated shaft; short; multicoloured

Installation Notes



In addition to rail-mount terminal blocks for electric motor wiring, special versions are also available:

- Version **without** ground contact and only two potentials: These terminal blocks were specifically designed to support additional functions, such as engine brakes or temperature sensors. Sharing a common profile, this terminal block version can be put next to the appropriate electric motor wiring terminal block without using intermediate plates. That makes the rail assembly easier to understand and wire. This also prevents wiring errors as no conductor entry is unused.
- Version **without** ground contact and with three potentials: Clearly designated clamping units are the primary advantage to this terminal block design. When using devices with protective insulation, for example, there are no open ground clamping units that could create confusion.

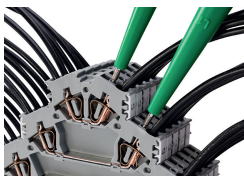
Commoning



Commoning using comb-style jumper bars.  
Push comb-style jumper bars down until fully inserted.  
Group marking via marking strips (Item No. 709-177)

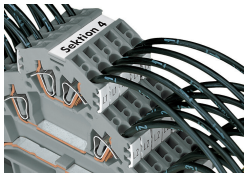


## Testing



Testing with voltage tester.

## Marking



Marking clamping points via WMB Multi Marking System.  
Group marking via marking strips (Item No. 709-177)