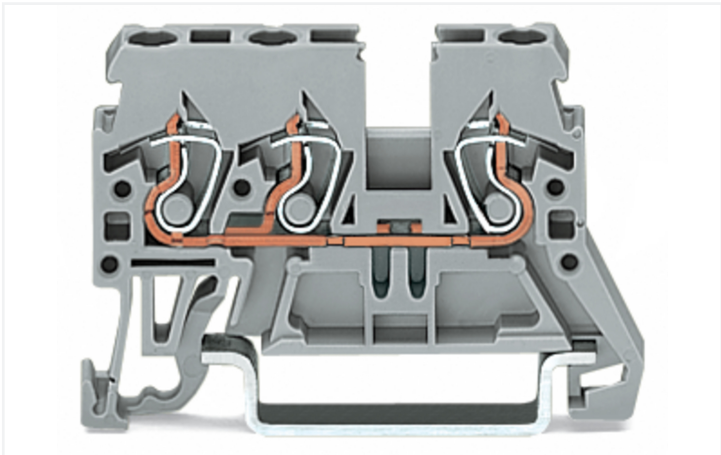


Data Sheet | Item Number: 870-683

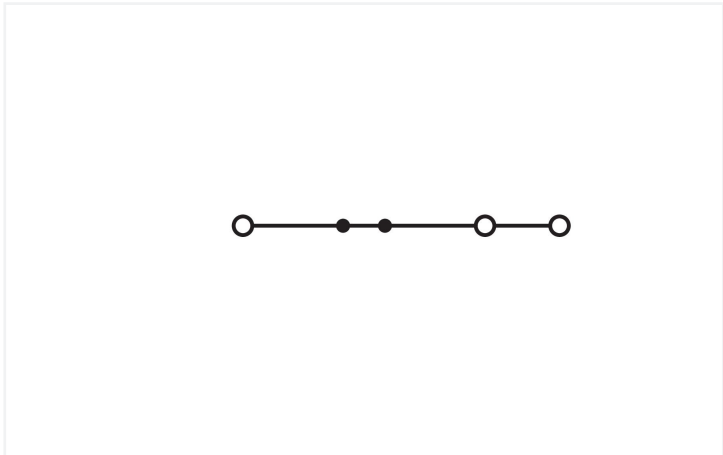
3-conductor through terminal block; 2.5 mm²; side and center marking; for DIN-rail 35 x 15 and 35 x 7.5; CAGE CLAMP®; 2,50 mm²; red

<https://www.wago.com/870-683>



Color: ■ red

Similar to illustration



Similar to illustration

Through terminal block, 870 Series, red

This through terminal block (item number 870-683) is designed for easy and secure connections. Our mini rail-mount terminal blocks are perfect for tight spaces thanks to their compact design. You can also choose from a range of mounting and actuation variants, making it easy to select the ideal mini terminal block for each use. Our mini rail-mount terminal block is rated for 500 V and is designed to handle a rated current of up to 24 A. Conductors should only be connected to this through terminal block if their strip length is between 6 mm and 7 mm. This product incorporates conductor terminals and utilizes CAGE CLAMP®. Our celebrated universal connection known as CAGE CLAMP® leads the way when it comes to connection technology and electrical interconnections. This through terminal block is suitable for conductor cross sections ranging from 0.08 mm² to 2.5 mm². It has one level. The single potential can connect using the three clamping points. The red housing is made of polyamide (PA66) for insulation. This mini rail-mount terminal block is operated with an operating tool. These mini rail-mount terminal blocks are mounted using DIN-35 rails. You can connect copper conductors thanks to front-entry wiring.

| Notes              |                                  |
|--------------------|----------------------------------|
| Safety Information | Max. insulation diameter: 4.4 mm |

| Electrical data                                              |  |                  |     |    |
|--------------------------------------------------------------|--|------------------|-----|----|
| Ratings per                                                  |  | IEC/EN 60947-7-1 |     |    |
| Overvoltage category                                         |  | III              | III | II |
| Pollution degree                                             |  | 3                | 2   | 2  |
| Nominal voltage                                              |  | 500 V            | -   | -  |
| Rated impulse withstand voltage                              |  | 6 kV             | -   | -  |
| Rated current                                                |  | 24 A             | -   | -  |
| Power Loss                                                   |  |                  |     |    |
| Power loss, per pole (potential)                             |  | 0.7661 W         |     |    |
| Rated current I <sub>N</sub> for power loss specification    |  | 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                                 |
| Connection 1                                    |                                   |
| Connection technology                           | CAGE CLAMP®                       |
| Actuation type                                  | Operating tool                    |
| Connectable conductor materials                 | Copper                            |
| Solid conductor                                 | 0.08 ... 2.5 mm² / 28 ... 12 AWG  |
| Fine-stranded conductor                         | 0.08 ... 4 mm² / 28 ... 12 AWG    |
| Fine-stranded conductor; with insulated ferrule | 0.08 ... 1.5 mm² / 28 ... 14 AWG  |
| Strip length                                    | 6 ... 7 mm / 0.24 ... 0.28 inches |
| Wiring direction                                | Front-entry wiring                |



| Physical data                     |  |                        |
|-----------------------------------|--|------------------------|
| Width                             |  | 5 mm / 0.197 inches    |
| Height                            |  | 49 mm / 1.929 inches   |
| Depth from upper-edge of DIN-rail |  | 27.5 mm / 1.083 inches |

| Mechanical data |  |                 |
|-----------------|--|-----------------|
| Design          |  | horizontal type |
| Mounting type   |  | DIN-35 rail     |
| Marking level   |  | Side marking    |

| Material data                      |  |                                                                          |
|------------------------------------|--|--------------------------------------------------------------------------|
| Note (material data)               |  | <a href="#">Information on material specifications can be found here</a> |
| Color                              |  | red                                                                      |
| Material group                     |  | I                                                                        |
| Insulation material (main housing) |  | Polyamide (PA66)                                                         |
| Flammability class per UL94        |  | V0                                                                       |
| Fire load                          |  | 0.108 MJ                                                                 |
| Weight                             |  | 6.2 g                                                                    |

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

| Commercial data       |  |               |
|-----------------------|--|---------------|
| PU (SPU)              |  | 100 pcs       |
| Packaging type        |  | Box           |
| Country of origin     |  | DE            |
| GTIN                  |  | 4045454094577 |
| 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



| Approval                               | Standard | Certificate Name |
|----------------------------------------|----------|------------------|
| CCA<br>DEKRA Certification B.V.        | EN 60947 | NTR NL 7468      |
| CCA<br>DEKRA Certification B.V.        | EN 60947 | 2189801.01       |
| cULus<br>UL International Germany GmbH | UL 1059  | E45172           |

Declarations of conformity and manufacturer's declarations

| Approval                                                | Standard | Certificate Name |
|---------------------------------------------------------|----------|------------------|
| EU-Declaration of Confor-<br>mity<br>WAGO GmbH & Co. KG | -        | -                |
| UK-Declaration of Confor-<br>mity<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       |

Downloads

Environmental Product Compliance

Compliance Search

Environmental Product  
Compliance 870-683



CAD/CAE-Data

CAD data

2D/3D Models 870-683



CAE data

EPLAN Data Portal  
870-683



WSCAD Universe  
870-683





1 Compatible Products

1.1 Required Accessories

1.1.1 End plate

1.1.1.1 End plate



**Item No.: 870-933**  
End and intermediate plate; 1 mm thick; gray



**Item No.: 870-934**  
End and intermediate plate; 1 mm thick; 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.: 870-946**  
Separator plate; 1 mm thick; gray



**Item No.: 870-947**  
Separator plate; 1 mm thick; orange

1.2.3 Ferrule

1.2.3.1 Ferrule



**Item No.: 216-321**  
Ferrule; Sleeve for 0.25 mm² / AWG 24; insulated; electro-tin plated; yellow



**Item No.: 216-131**  
Ferrule; Sleeve for 0.25 mm² / AWG 24; uninsulated; electro-tin plated; silver-colored



**Item No.: 216-322**  
Ferrule; Sleeve for 0.34 mm² / 22 AWG; insulated; electro-tin plated; light turquoise



**Item No.: 216-132**  
Ferrule; Sleeve for 0.34 mm² / AWG 24; uninsulated; electro-tin plated



**Item No.: 216-221**  
Ferrule; Sleeve for 0.5 mm² / 20 AWG; insulated; electro-tin plated; white



**Item No.: 216-121**  
Ferrule; Sleeve for 0.5 mm² / AWG 22; uninsulated; electro-tin plated; silver-colored



**Item No.: 216-222**  
Ferrule; Sleeve for 0.75 mm² / 18 AWG; insulated; electro-tin plated; gray



**Item No.: 216-122**  
Ferrule; Sleeve for 0.75 mm² / AWG 20; uninsulated; electro-tin plated; silver-colored



1.2.3.1 Ferrule



**Item No.: 216-223**  
Ferrule; Sleeve for 1 mm² / AWG 18; insulated; electro-tin plated; red



**Item No.: 216-123**  
Ferrule; Sleeve for 1 mm² / AWG 18; uninsulated; electro-tin plated; silver-colored



**Item No.: 216-224**  
Ferrule; Sleeve for 1.5 mm² / AWG 16; insulated; electro-tin plated; black



**Item No.: 216-124**  
Ferrule; Sleeve for 1.5 mm² / AWG 16; uninsulated; electro-tin plated

1.2.4 Installation

1.2.4.1 Mounting accessories



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



**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

1.2.5 Insulation stop

1.2.5.1 Insulation stop



**Item No.: 280-470**  
Insulation stop; 0.08 - 0.2 mm² "s" (0.14 mm² "f-st"); 5 pieces/strip; white



**Item No.: 280-471**  
Insulation stop; 0.25 - 0.5 mm²; 5 pieces/strip; light gray



**Item No.: 280-472**  
Insulation stop; 0.75 - 1 mm²; 5 pieces/strip; black

1.2.6 Jumper

1.2.6.1 Jumper



**Item No.: 870-405/011-000**



**Item No.: 870-407/011-000**



**Item No.: 870-409/011-000**



**Item No.: 870-406/020-000**  
Delta jumper; insulated; light gray



**Item No.: 870-410**  
Jumper; 10-way; insulated; light gray



**Item No.: 870-402**  
Jumper; 2-way; insulated; light gray



**Item No.: 870-403**  
Jumper; 3-way; insulated; light gray



**Item No.: 870-404**  
Jumper; 4-way; insulated; light gray



**Item No.: 870-405**  
Jumper; 5-way; insulated; light gray



**Item No.: 870-406**  
Jumper; 6-way; insulated; light gray



**Item No.: 870-407**  
Jumper; 7-way; insulated; light gray



**Item No.: 870-408**  
Jumper; 8-way; insulated; light gray



**Item No.: 870-409**  
Jumper; 9-way; insulated; light gray



**Item No.: 870-440**  
Jumper; from 1 to 10; insulated; light gray



**Item No.: 870-433**  
Jumper; from 1 to 3; insulated; light gray



**Item No.: 870-434**  
Jumper; from 1 to 4; insulated; light gray



**Item No.: 870-435**  
Jumper; from 1 to 5; insulated; light gray



**Item No.: 870-436**  
Jumper; from 1 to 6; insulated; light gray



**Item No.: 870-437**  
Jumper; from 1 to 7; insulated; light gray



**Item No.: 870-438**  
Jumper; from 1 to 8; insulated; light gray



**Item No.: 870-439**  
Jumper; from 1 to 9; insulated; light gray



1.2.7 Marking

1.2.7.1 Group marker carrier



Item No.: 870-182  
Adaptor; gray

Item No.: 870-183  
Adaptor; gray

Item No.: 870-184  
Adaptor; 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.: 793-5501/000-007  
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



1.2.7.2 Marker



**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 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

1.2.8 Protective warning marker

1.2.8.1 Cover



**Item No.: 280-405**  
Protective warning marker; for 5 terminal blocks; with high-voltage symbol, black; yellow

1.2.9 Test and measurement

1.2.9.1 Testing accessories



**Item No.: 870-427**  
Spacer module; modular; bridging commoned terminal blocks; gray



**Item No.: 870-426**  
Tap-off module; modular; suitable for 870 Series terminal blocks with jumper slots in the current bar; gray



**Item No.: 870-425**  
Tap-off module; with anti-rotation protection; modular; suitable for 870 Series terminal blocks with jumper slots in the current bar; gray

1.2.10 Tool

1.2.10.1 Operating tool



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



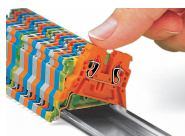
**Item No.: 210-720**  
Operating tool; Blade: 3.5 x 0.5 mm; with a partially insulated shaft; multicoloured



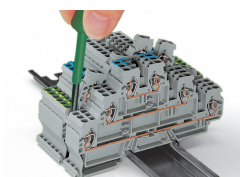
**Item No.: 210-657**  
Operating tool; Blade: 3.5 x 0.5 mm; with a partially insulated shaft; short; multicoloured

## Installation Notes

### Installation



Snapping a rail-mount terminal block onto DIN-35 rail.



Removing a terminal block from the assembly.

### Conductor termination



#### CAGE CLAMP® connection

Inserting a conductor via operating tool (0.08 ... 4 mm<sup>2</sup> "f-st").  
With ferruled conductors, it is necessary to use a terminal block one size smaller than the conductor's nominal cross-section.

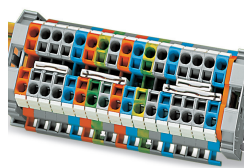


Inserting insulation stops into conductor entry holes of terminal strip.

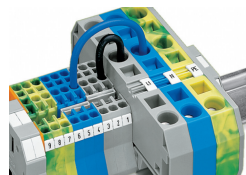
### Commoning



Push jumper bars down firmly until fully inserted. When using multipole bars, push alternately on the right and then left side until installed.  
Push-in type jumper bars 1 – 3 – 5 – 7 or 1 -- 4 -- 7 upon request

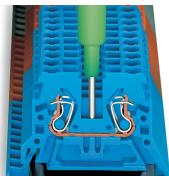


Commoning with push-in type jumper bars:  
Two parallel jumper slots are accommodated in one terminal block.

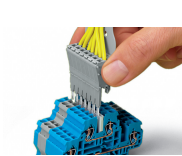


Commoning terminal blocks of different sizes via step-down jumpers.

Testing

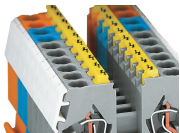


Testing with phase testing device, also possible with single-pole voltage tester.



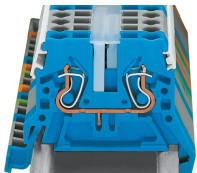
Testing is also possible using a pre-wired tap-off module assembly in the very same way as test plugs.

Cover



Protective warning markers (280-405), with a black high-voltage symbol

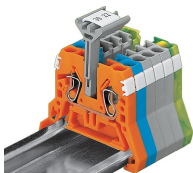
Marking



WMB markers in Mini-WSB marker slots  
Translucent marking strip  
Mini-WSB markers



Translucent marking strip (709-196) – jumpers below may be visible.



In addition to the plastic marker strips, group marker carriers are now available for the WMB and WSB marking systems. They can be mounted in parallel to a push-in type jumper bar via the open jumper contact slot. It is also very useful if the marker slots on the side of the terminal block are hidden. The carriers are available in the following widths: 5 mm (0.197 inch), 10 mm (0.394 inch) and 15 mm (0.591 inch).  
**Notice:**  
Group marker carriers are not suitable for ground conductor terminal blocks and double potential terminal blocks as they have no jumper contact slots.