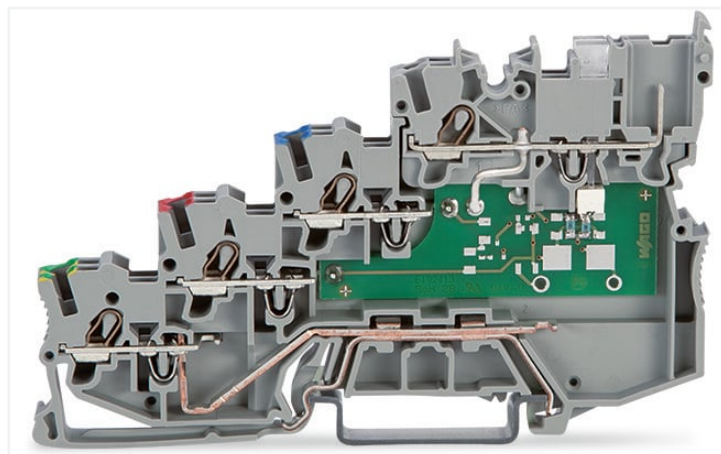
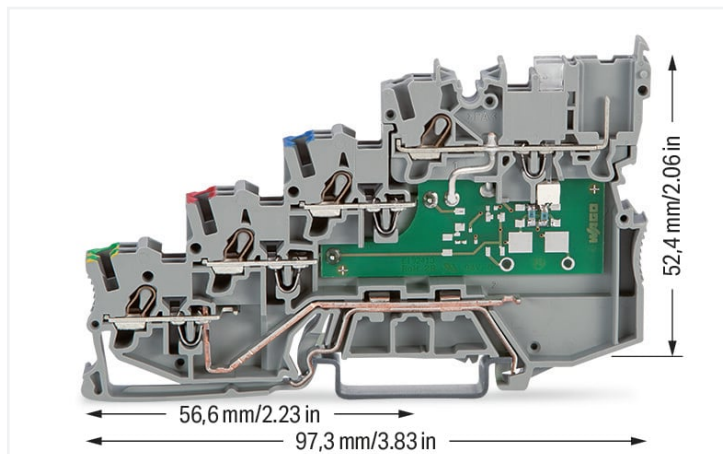


# Data Sheet | Item Number: 2020-5417/1102-950

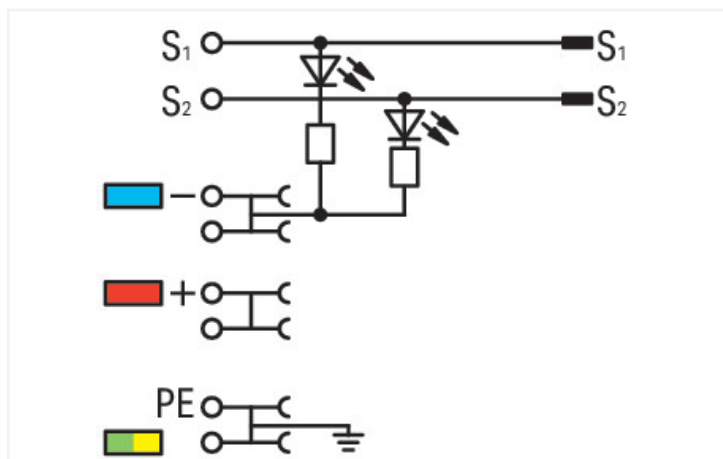
4-conductor sensor terminal block; LED (yellow); for PNP-(high-side) switching sensors; with ground contact; with pluggable signal level; 1 mm<sup>2</sup>; Push-in CAGE CLAMP®; 1,00 mm<sup>2</sup>; gray



<https://www.wago.com/2020-5417/1102-950>



Color: ■ gray



2020-5417/1102-950

3.5 mm spacing per signal (2 x 3.5 mm = 7 mm)

The double spacing per pole of this terminal block series maximizes connectivity. For example, ten sensors may be connected using only five sensor terminal blocks plus a power supply terminal block.

## Notes

Note

According to EN 61984, pluggable connectors without a current interrupting capacity must not be mated or unmated when live or under load. An appropriate end plate must be applied to the carrier terminal blocks after each female plug.

## Electrical data

| Ratings per          | IEC/EN 60947-7-1 |     |    |
|----------------------|------------------|-----|----|
| Overtoltage category | III              | III | II |
| Pollution degree     | 3                | 2   | 2  |
| Nominal voltage      | -                | -   | -  |
| Rated surge voltage  | -                | -   | -  |
| Rated current        | -                | -   | -  |

| Approvals per | UL 1059 |   |       |
|---------------|---------|---|-------|
| Use group     | B       | C | D     |
| Rated voltage | 300 V   | - | 300 V |
| Rated current | 15 A    | - | 15 A  |

| Approvals per | CSA 22.2 No 158 |      |   |
|---------------|-----------------|------|---|
| Use group     | B               | C    | D |
| Rated voltage | -               | 24 V | - |
| Rated current | -               | 10 A | - |

| Power Loss   |                  |
|--|------------------|
| Power loss, per pole (potential)                             | 0.4338 W         |
| Rated current $I_N$ for specified power loss                 | 13.5 A           |
| Resistance value for specified, current-dependent power loss | 0.00238 $\Omega$ |

| General information |      |
|---------------------|------|
| Voltage type 1      | DC   |
| Nominal voltage     | 24 V |

### Connection data

|                            |   |
|----------------------------|---|
| Connection points          | 8 |
| Female plug slots          | 2 |
| Total number of potentials | 5 |
| Number of levels           | 4 |
| Number of jumper slots     | 4 |

| Connection 1   |   |
|--|---|
| Connection technology                                      | Push-in CAGE CLAMP®   |
| Actuation type   | Operating tool  |
| Connectable conductor materials                            | Copper  |
| Nominal cross-section                                      | 1 mm <sup>2</sup>   |
| Solid conductor  | 0.14 ... 1.5 mm <sup>2</sup> / 24 ... 16 AWG  |
| Solid conductor; push-in termination                       | 0.5 ... 1.5 mm <sup>2</sup> / 20 ... 16 AWG   |
| Fine-stranded conductor                                    | 0.14 ... 1.5 mm <sup>2</sup> / 24 ... 16 AWG  |
| Fine-stranded conductor; with insulated ferrule            | 0.14 ... 0.75 mm <sup>2</sup> / 24 ... 18 AWG   |
| Fine-stranded conductor; with ferrule; push-in termination | 0.5 ... 0.75 mm <sup>2</sup> / 20 ... 18 AWG  |
| Note (conductor cross-section)                             | Depending on the conductor characteristic, a conductor with a smaller cross-section can also be inserted via push-in termination. |
| Strip length   | 9 ... 11 mm / 0.35 ... 0.43 inches  |
| Wiring direction   | Front-entry wiring  |

### Physical data

|                                   |                        |
|-----------------------------------|------------------------|
| Width                             | 7 mm / 0.276 inches    |
| Height                            | 97.3 mm / 3.831 inches |
| Depth from upper-edge of DIN-rail | 52.4 mm / 2.063 inches |

### Mechanical data

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

### Material data

|                             |  |
|-----------------------------|--|
| Note (material data)        | <a href="https://www.wago.com/us/material-specifications">Information on material specifications can be found here</a> |
| Color                       | gray   |
| Material group              | I  |
| Insulation material         | Polyamide (PA66)   |
| Flammability class per UL94 | V0   |
| Fire load                   | 0.391 MJ   |
| Weight                      | 22.3 g   |

### Environmental requirements

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

### Commercial data

|                       |               |
|-----------------------|---------------|
| eCl@ss 10.0           | 27-14-11-28   |
| eCl@ss 9.0            | 27-14-11-28   |
| ETIM 8.0              | EC000900      |
| ETIM 7.0              | EC000900      |
| PU (SPU)              | 50 pcs        |
| Packaging type        | Box           |
| Country of origin     | DE            |
| GTIN                  | 4055143528634 |
| Customs tariff number | 85369010000   |

### 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 7617      |
| CSA<br>DEKRA Certification B.V.        | C22.2    | 2516073          |
| KEMA/KEUR<br>DEKRA Certification B.V.  | EN 60947 | 71-100670        |
| UL<br>UL International Germany<br>GmbH | UL 1059  | E 45172          |

#### 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 | -        | -                |

### Downloads

#### Environmental Product Compliance

##### Compliance Search

Environmental Product  
Compliance  
2020-5417/1102-950



## Documentation

### Additional Information

|                   |                   |  |
|-------------------|-------------------|--|
| Technical Section | pdf<br>2240.62 KB |  |
|-------------------|-------------------|--|

### Bid Text

|                    |            |                  |  |
|--------------------|------------|------------------|--|
| 2020-5417/1102-950 | 19.02.2019 | xml<br>4.17 KB   |  |
| 2020-5417/1102-950 | 07.08.2018 | docx<br>15.17 KB |  |

## CAD/CAE-Data

### CAD data

|                                    |  |
|------------------------------------|--|
| 2D/3D Models<br>2020-5417/1102-950 |  |
|------------------------------------|--|

### CAE data

|                                    |  |
|------------------------------------|--|
| ZUKEN Portal<br>2020-5417/1102-950 |  |
|------------------------------------|--|

## 1 Compatible Products

### 1.1 System counterpart

#### 1.1.1 Female connector/socket



**Item No.: 2020-102**

1-conductor female connector; Push-in CAGE CLAMP®; 1.5 mm<sup>2</sup>; Pin spacing 3.5 mm; 2-pole; 1,50 mm<sup>2</sup>; gray

**Item No.: 2020-202**

2-conductor female connector; Push-in CAGE CLAMP®; 1.5 mm<sup>2</sup>; Pin spacing 3.5 mm; 2-pole; 1,50 mm<sup>2</sup>; gray

### 1.2 Required Accessories

#### 1.2.1 End plate

##### 1.2.1.1 End plate



**Item No.: 2020-5491**

End and intermediate plate; 1 mm thick; for 4-conductor terminal blocks; gray

### 1.3 Optional Accessories

#### 1.3.1 Coding

##### 1.3.1.1 Coding



**Item No.: 2020-100**

Carrier with 6 coding pins; for coding of female plugs; for carrier terminal blocks; orange

### 1.3.2 DIN-rail

#### 1.3.2.1 Mounting accessories



**Item No.: 210-196**

Aluminum carrier rail; 35 x 8.2 mm; 1.6 mm thick; 2 m long; unslotted; similar to EN 60715; silver-colored



**Item No.: 210-198**

Copper carrier rail; 35 x 15 mm; 2.3 mm thick; 2 m long; unslotted; according to EN 60715; copper-colored



**Item No.: 210-197**

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



**Item No.: 210-114**

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



**Item No.: 210-118**

Steel carrier rail; 35 x 15 mm; 2.3 mm thick; 2 m long; unslotted; according to EN 60715; silver-colored



**Item No.: 210-115**

Steel carrier rail; 35 x 7.5 mm; 1 mm thick; 2 m long; slotted; according to EN 60715; "Hole width 18 mm; silver-colored



**Item No.: 210-112**

Steel carrier rail; 35 x 7.5 mm; 1 mm thick; 2 m long; slotted; according to EN 60715; "Hole width 25 mm; silver-colored



**Item No.: 210-113**

Steel carrier rail; 35 x 7.5 mm; 1 mm thick; 2 m long; unslotted; according to EN 60715; silver-colored

### 1.3.3 Ferrule

#### 1.3.3.1 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.: 216-243**

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

### 1.3.4 Installation

#### 1.3.4.1 Cover



**Item No.: 709-156**

Cover; Type 3; suitable for cover carrier, type 3; 1 m long; transparent

#### 1.3.4.2 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

1.3.5 Jumper

1.3.5.1 Jumper



[Item No.: 2000-406/020-000](#)  
Delta jumper; insulated; light gray



[Item No.: 2000-410/000-006](#)  
Jumper; 10-way; insulated; blue



[Item No.: 2000-410](#)  
Jumper; 10-way; insulated; light gray



[Item No.: 2000-410/000-005](#)  
Jumper; 10-way; insulated; red



[Item No.: 2000-402/000-006](#)  
Jumper; 2-way; insulated; blue



[Item No.: 2000-402](#)  
Jumper; 2-way; insulated; light gray



[Item No.: 2000-402/000-005](#)  
Jumper; 2-way; insulated; red



[Item No.: 2000-402/000-018](#)  
Jumper; 2-way; insulated; yellow-green



[Item No.: 2000-403/000-006](#)  
Jumper; 3-way; insulated; blue



[Item No.: 2000-403](#)  
Jumper; 3-way; insulated; light gray



[Item No.: 2000-403/000-005](#)  
Jumper; 3-way; insulated; red



[Item No.: 2000-404/000-006](#)  
Jumper; 4-way; insulated; blue



[Item No.: 2000-404](#)  
Jumper; 4-way; insulated; light gray



[Item No.: 2000-404/000-005](#)  
Jumper; 4-way; insulated; red



[Item No.: 2000-405/000-006](#)  
Jumper; 5-way; insulated; blue



[Item No.: 2000-405](#)  
Jumper; 5-way; insulated; light gray



[Item No.: 2000-405/000-005](#)  
Jumper; 5-way; insulated; red



[Item No.: 2000-406/000-006](#)  
Jumper; 6-way; insulated; blue



[Item No.: 2000-406](#)  
Jumper; 6-way; insulated; light gray



[Item No.: 2000-406/000-005](#)  
Jumper; 6-way; insulated; red



[Item No.: 2000-407/000-006](#)  
Jumper; 7-way; insulated; blue



[Item No.: 2000-407](#)  
Jumper; 7-way; insulated; light gray



[Item No.: 2000-407/000-005](#)  
Jumper; 7-way; insulated; red



[Item No.: 2000-408/000-006](#)  
Jumper; 8-way; insulated; blue



[Item No.: 2000-408](#)  
Jumper; 8-way; insulated; light gray



[Item No.: 2000-408/000-005](#)  
Jumper; 8-way; insulated; red



[Item No.: 2000-409/000-006](#)  
Jumper; 9-way; insulated; blue



[Item No.: 2000-409](#)  
Jumper; 9-way; insulated; light gray



[Item No.: 2000-409/000-005](#)  
Jumper; 9-way; insulated; red



[Item No.: 2000-440](#)  
Jumper; from 1 to 10; insulated; light gray



[Item No.: 2000-433/000-006](#)  
Jumper; from 1 to 3; insulated; blue



[Item No.: 2000-433](#)  
Jumper; from 1 to 3; insulated; light gray



[Item No.: 2000-433/000-005](#)  
Jumper; from 1 to 3; insulated; red



[Item No.: 2000-434](#)  
Jumper; from 1 to 4; insulated; light gray



[Item No.: 2000-435](#)  
Jumper; from 1 to 5; insulated; light gray



[Item No.: 2000-436](#)  
Jumper; from 1 to 6; insulated; light gray



[Item No.: 2000-437](#)  
Jumper; from 1 to 7; insulated; light gray



[Item No.: 2000-438](#)  
Jumper; from 1 to 8; insulated; light gray



[Item No.: 2000-439](#)  
Jumper; from 1 to 9; insulated; light gray



[Item No.: 2000-405/011-000](#)  
Star point jumper; 3-way; insulated; light gray



[Item No.: 210-103](#)  
Wire commencing chain; insulated; black



[Item No.: 210-123](#)  
Wire commencing chain; insulated; blue

1.3.6 Marking

1.3.6.1 Group marker carrier



[Item No.: 2009-191](#)  
Group marker carrier; gray

1.3.6.2 Marker



**Item No.: 793-3501**  
WMB marking card; as card; plain; snap-on type; white



**Item No.: 2009-113/000-006**  
WMB-Inline; for Smart Printer; 2300 pieces on roll; plain; snap-on type; blue



**Item No.: 2009-113/000-007**  
WMB-Inline; for Smart Printer; 2300 pieces on roll; plain; snap-on type; gray



**Item No.: 2009-113/000-023**  
WMB-Inline; for Smart Printer; 2300 pieces on roll; plain; snap-on type; green



**Item No.: 2009-113/000-017**  
WMB-Inline; for Smart Printer; 2300 pieces on roll; plain; snap-on type; light green



**Item No.: 2009-113/000-012**  
WMB-Inline; for Smart Printer; 2300 pieces on roll; plain; snap-on type; orange



**Item No.: 2009-113/000-005**  
WMB-Inline; for Smart Printer; 2300 pieces on roll; plain; snap-on type; red



**Item No.: 2009-113/000-024**  
WMB-Inline; for Smart Printer; 2300 pieces on roll; plain; snap-on type; violet



**Item No.: 2009-113**  
WMB-Inline; for Smart Printer; 2300 pieces on roll; plain; snap-on type; white



**Item No.: 2009-113/000-002**  
WMB-Inline; for Smart Printer; 2300 pieces on roll; plain; snap-on type; yellow

1.3.6.3 Marker carrier



**Item No.: 2000-121**  
Adaptor; gray

1.3.6.4 Marking strip



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

1.3.7 Protective warning marker

1.3.7.1 Cover



**Item No.: 2000-115**  
Protective warning marker; for 5 terminal blocks; with high-voltage symbol, black; yellow

1.3.8 Push-in type wire jumper

1.3.8.1 Jumper



**Item No.: 2009-404**  
Push-in type wire jumper; 0.75 mm<sup>2</sup>; insulated; 110 mm long; gray



**Item No.: 2009-406**  
Push-in type wire jumper; 0.75 mm<sup>2</sup>; insulated; 250 mm long; gray



**Item No.: 2009-402**  
Push-in type wire jumper; 0.75 mm<sup>2</sup>; insulated; 60 mm long; gray

### 1.3.9 Screwless end stop

#### 1.3.9.1 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

### 1.3.10 Test and measurement

#### 1.3.10.1 Testing accessories



**Item No.: 2009-174**

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



**Item No.: 2009-182**

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

### 1.3.11 Tool

#### 1.3.11.1 Operating tool



**Item No.: 210-719**

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



**Item No.: 210-648**

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

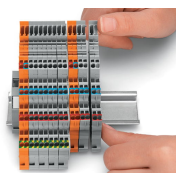


**Item No.: 210-647**

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

## Installation Notes

### Installation

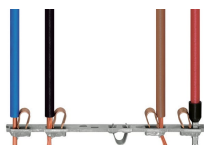


Snap individual terminal blocks onto the DIN-rail and slide together.



Separate terminal block assembly and slide individual terminal blocks laterally using an operating tool.

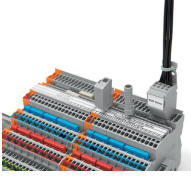
## Conductor termination



### All conductor types at a glance

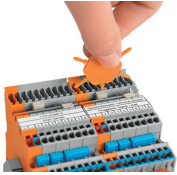


## Testing

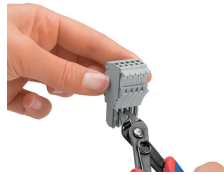


Testing via testing tap (2009-182) or test plug adapter (2009-174) (up to max. 42 V).

## Coding

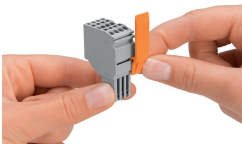


Insert coding pin into the corresponding slot and twist it off.



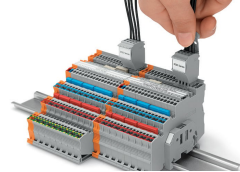
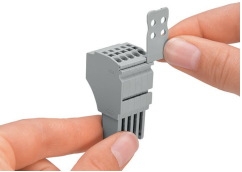
Remove the coding finger using a cutting tool.

## Locking system



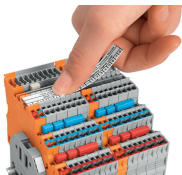
Slide the locking lever into position.

## Strain relief



Removing a female plug via conductor bundle provided with strain relief plate.

## Marking



Labeling terminal blocks via marking strips (2009-110) or 3.5 mm wide WMB markers (793-35xx) – from the top or the side.