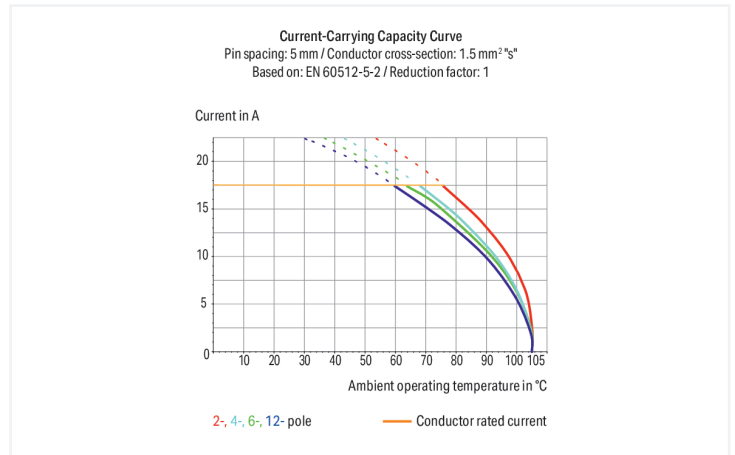


## Data Sheet | Item Number: 250-509

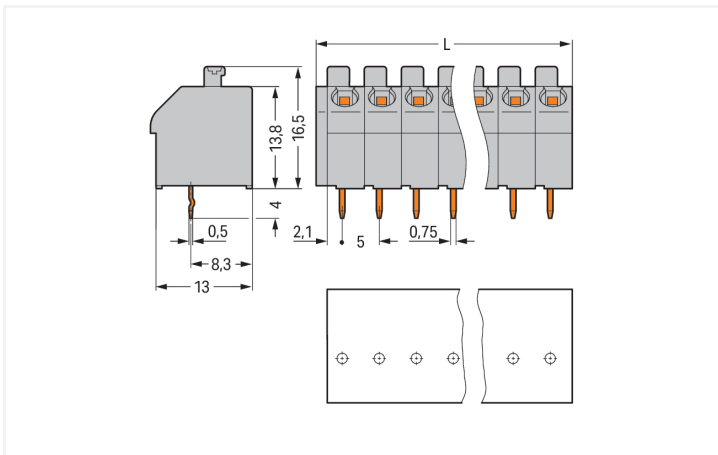
PCB terminal block; push-button; 1.5 mm<sup>2</sup>; Pin spacing 5 mm; 9-pole; Push-in CAGE CLAMP®; gray

<https://www.wago.com/250-509>



Color: ■ gray

Similar to illustration



Dimensions in mm

L = (pole no. x pin spacing) + 1.5 mm

PCB terminal block, 250 Series, with 5 mm pin spacing

Quick and easy connections are guaranteed with this PCB terminal block (item number 250-509). You can count on tried and tested safety with these PCB terminal blocks, perfect for a wide range of applications when designing your devices. Conductors should only be connected to this PCB terminal block if their strip length is between 9 and 10 mm. This product features one conductor terminal and utilizes Push-in CAGE CLAMP®. Push-in CAGE CLAMP® connection technology is ideal for connecting all conductor types. It allows direct insertion of both solid and fine-stranded conductors with ferrules without needing to use any tools—all thanks to its pluggable design. The dimensions are (46.5 x 20.5 x 13) mm (width x height x depth). Depending on the conductor type, this PCB terminal block is designed for conductor cross sections ranging from 0.5 mm<sup>2</sup> to 1.5 mm<sup>2</sup>.

Tin is used for coating the contact surfaces. A push-button is used to operate this PCB terminal block. THT is used to solder the PCB terminal block. The conductor is designed to be inserted into the board at an angle of 45°.

## Notes

|           |  |
|-----------|--|
| Variants: | Other pole numbers<br>Other colors<br>Mixed-color PCB connector strips<br>Direct marking<br>Other versions (or variants) can be requested from WAGO Sales or configured at <a href="https://configurator.wago.com/">https://configurator.wago.com/</a> . |
|-----------|--|

## Electrical data

| Ratings per                     | IEC/EN 60664-1 |        |        | Approvals per | UL 1059 |   |       |
|---------------------------------|----------------|--------|--------|---------------|---------|---|-------|
| Overvoltage category            | III            | III    | II     | Use group     | B       | C | D     |
| Pollution degree                | 3              | 2      | 2      | Rated voltage | 300 V   | - | 300 V |
| Nominal voltage                 | 320 V          | 320 V  | 630 V  | Rated current | 10 A    | - | 10 A  |
| Rated impulse withstand voltage | 4 kV           | 4 kV   | 4 kV   |               |         |   |       |
| Rated current                   | 17.5 A         | 17.5 A | 17.5 A |               |         |   |       |

| Approvals per | CSA   |   |       |
|---------------|-------|---|-------|
| Use group     | B     | C | D     |
| Rated voltage | 300 V | - | 300 V |
| Rated current | 10 A  | - | 10 A  |

## Connection Data

|                            |   |   |   |
|----------------------------|---|---|---|
| Clamping units             | 9 | <b>Connection 1</b>                               |   |
| Total number of potentials | 9 | Connection technology                             | Push-in CAGE CLAMP®   |
| Number of connection types | 1 | Actuation type                                    | Push-button   |
| Number of levels           | 1 | Solid conductor                                   | 0.5 ... 1.5 mm <sup>2</sup> / 20 ... 14 AWG   |
|                            |   | Fine-stranded conductor                           | 0.75 ... 1.5 mm <sup>2</sup> / 18 ... 16 AWG  |
|                            |   | Fine-stranded conductor; with insulated ferrule   | 0.5 ... 1 mm <sup>2</sup>   |
|                            |   | Fine-stranded conductor; with uninsulated ferrule | 0.5 ... 1 mm <sup>2</sup>   |
|                            |   | Note (conductor cross-section)                    | Fine-stranded conductor 0.75 ... 1.5 mm <sup>2</sup> (I max. 4 A)<br>Fine-stranded conductor 0.5 mm <sup>2</sup> (I max. 2 A) |
|                            |   | Strip length                                      | 9 ... 10 mm / 0.35 ... 0.39 inches  |
|                            |   | Conductor connection direction to PCB             | 45°   |
|                            |   | Pole number                                       | 9   |

## Physical data

|                         |                          |
|-------------------------|--------------------------|
| Pin spacing             | 5 mm / 0.197 inches      |
| Width                   | 46.5 mm / 1.831 inches   |
| Height                  | 20.5 mm / 0.807 inches   |
| Height from the surface | 16.5 mm / 0.65 inches    |
| Depth                   | 13 mm / 0.512 inches     |
| Solder pin length       | 4 mm                     |
| Solder pin dimensions   | 0.5 x 0.75 mm            |
| !                       | 1.2 <sup>(±0.1)</sup> mm |

### PCB contact

|                                     |  |
|-------------------------------------|--|
| PCB contact                         | THT                                      |
| Solder pin arrangement              | over the entire terminal strip (in-line) |
| Number of solder pins per potential | 1  |

### 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   |
| Clamping spring material           | Chrome-nickel spring steel (CrNi)  |
| Contact material                   | Electrolytic copper (E <sub>Cu</sub> )                                   |
| Contact Plating                    | Tin  |
| Fire load                          | 0.188 MJ   |
| Weight                             | 8.7 g  |

### Environmental requirements

|                         |                 |
|-------------------------|-----------------|
| Limit temperature range | -60 ... +105 °C |
|-------------------------|-----------------|

### Commercial data

|                       |                                |
|-----------------------|--------------------------------|
| Product Group         | 4 (Printed Circuit Connectors) |
| PU (SPU)              | 100 (25) pcs                   |
| Packaging type        | Box                            |
| Country of origin     | PL                             |
| GTIN                  | 4044918303682                  |
| Customs tariff number | 85369010000                    |

### Product Classification

|             |                      |
|-------------|----------------------|
| UNSPSC      | 39121409             |
| eCl@ss 10.0 | 27-44-04-01          |
| eCl@ss 9.0  | 27-44-04-01          |
| ETIM 9.0    | EC002643             |
| ETIM 10.0   | EC002643             |
| 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 7833/2    |

#### General approvals

|                                       |              |               |
|---------------------------------------|--------------|---------------|
| CCA<br>DEKRA Certification B.V.       | EN 60998     | NTR NL-7705/1 |
| CSA<br>DEKRA Certification B.V.       | C22.2        | 1132097       |
| DEKRA<br>DEKRA Certification B.V.     | EN 60947-7-4 | 71-141963     |
| KEMA/KEUR<br>DEKRA Certification B.V. | EN 60947     | 71-124227     |
| KEMA/KEUR<br>DEKRA Certification B.V. | EN 60998     | 71-124629     |

**General approvals**

|                               |         |        |
|-------------------------------|---------|--------|
| UL                            | UL 1059 | E45172 |
| UL International Germany GmbH |         |        |

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

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

**Approvals for marine applications**



| Approval                           | Standard | Certificate Name |
|------------------------------------|----------|------------------|
| ABS<br>American Bureau of Shipping | -        | 24-0095975-PDA   |
| DNV<br>DNV GL SE                   | -        | TAE000016Z       |

**Downloads**

**Environmental Product Compliance**

| Compliance Search                        |                   |
|--|-------------------|
| Environmental Product Compliance 250-509 | <a href="#">↓</a> |

**Documentation**

| Additional Information |            |                   |                   |
|------------------------|------------|-------------------|-------------------|
| Technical Section      | 03.04.2019 | pdf<br>2027.26 KB | <a href="#">↓</a> |

**CAD/CAE-Data**

| CAD data                               |
|--|
| 2D/3D Models 250-509 <a href="#">↓</a> |

| CAE data                                    |
|---|
| EPLAN Data Portal 250-509 <a href="#">↓</a> |
| ZUKEN Portal 250-509 <a href="#">↓</a>      |

**PCB Design**

|  |
|--|
| Symbol and Footprint via SamacSys 250-509 <a href="#">↓</a>        |
| Symbol and Footprint via Ultra Librarian 250-509 <a href="#">↓</a> |

**1 Compatible Products**

**1.1 Optional Accessories**

**1.1.1 Ferrule**

**1.1.1.1 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.: 216-141**

Ferrule; Sleeve for 0.5 mm<sup>2</sup> / 20 AWG; un-insulated; electro-tin plated; electrolytic copper; gastight crimped; acc. to DIN 46228, Part 1/08.92

**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.: 216-142**

Ferrule; Sleeve for 0.75 mm<sup>2</sup> / 18 AWG; uninsulated; electro-tin plated; electrolytic copper; gastight crimped; acc. to DIN 46228, Part 1/08.92

**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

**Item No.: 216-263**

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

**Item No.: 216-143**

Ferrule; Sleeve for 1 mm<sup>2</sup> / AWG 18; uninsulated; electro-tin plated; electrolytic copper; gastight crimped; acc. to DIN 46228, Part 1/08.92

**1.1.2 Marking**

**1.1.2.1 Marking strip**



**Item No.: 210-332/500-202**

Marking strips; as a DIN A4 sheet; MARKED; 1-16 (160x); Height of marker strip: 3 mm; Strip length 182 mm; Horizontal marking; Self-adhesive; white

**Item No.: 210-332/500-205**

Marking strips; as a DIN A4 sheet; MARKED; 1-32 (80x); Height of marker strip: 3 mm; Strip length 182 mm; Horizontal marking; Self-adhesive; white

**Item No.: 210-332/500-204**

Marking strips; as a DIN A4 sheet; MARKED; 17-32 (160x); Height of marker strip: 3 mm; Strip length 182 mm; Horizontal marking; Self-adhesive; white

**Item No.: 210-332/500-206**

Marking strips; as a DIN A4 sheet; MARKED; 33-48 (160x); Height of marker strip: 3 mm; Strip length 182 mm; Horizontal marking; Self-adhesive; white

**1.1.3 Test and measurement**

**1.1.3.1 Testing accessories**



**Item No.: 210-136**

Test plug; 2 mm Ø; with 500 mm cable; red

**1.1.4 Tool**

**1.1.4.1 Operating tool**



**Item No.: 210-719**

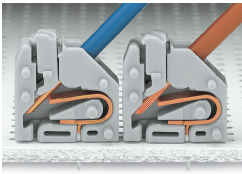
Operating tool; Blade: 2.5 x 0.4 mm; with a partially insulated shaft

**Item No.: 210-647**

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

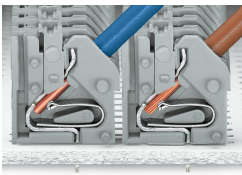
## Installation Notes

### Conductor termination



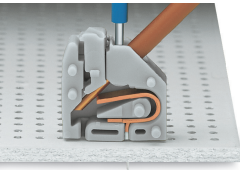
Inserting solid conductors via push-in termination.  
Inserting fine-stranded conductors via push-buttons, 250 Series – 3.5 mm pin spacing.

### Conductor termination

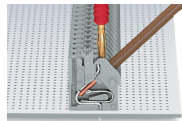


Space-saving wiring, 250 Series – 5 mm pin spacing.

## Testing

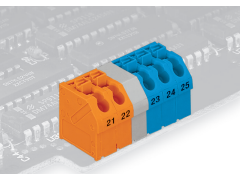


Testing with 11 mm Ø test pin, on the conductor, 250 Series – 2.5 ... 3.5 mm pin spacing.

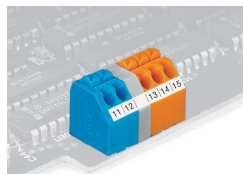


Testing with 2 mm Ø test plug, touch contact, 250 Series – 5 mm pin spacing.

## Marking



Labeling via self-adhesive strips or direct marking. Mixed-color terminal strips (with or without spacer) are available upon request.



Labeling via self-adhesive strips or direct marking. Mixed-color terminal strips (with or without spacer) are available upon request.