

## Data sheet | Item number: 233-548

PCB terminal block; push-button; 0.5 mm<sup>2</sup>; Pin spacing 2.54 mm; 48-pole;  
CAGE CLAMP®



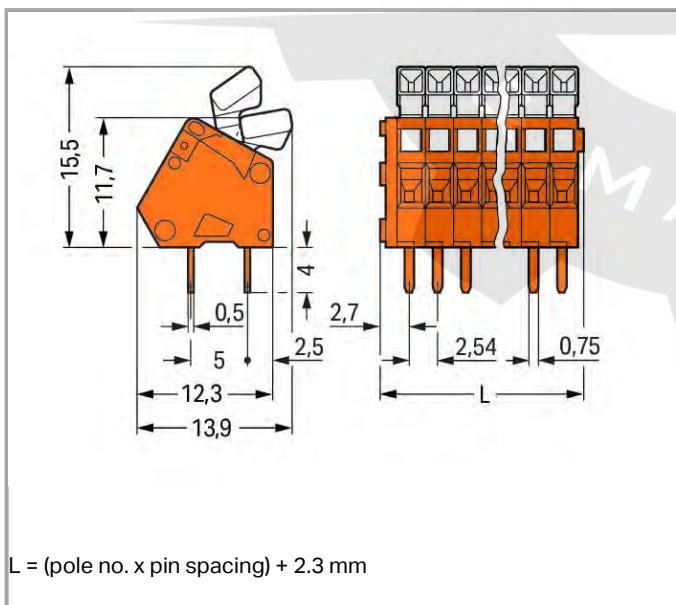
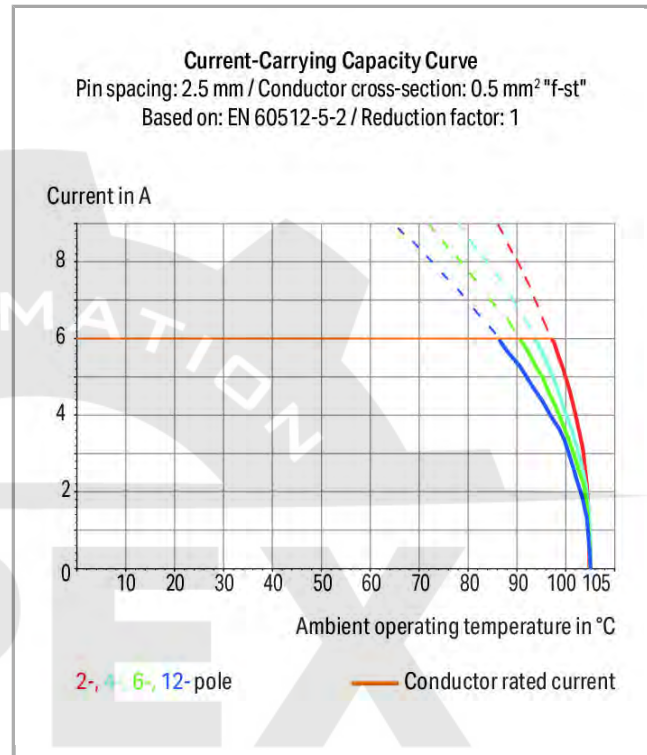
233-548



RoHS  
Compliant

BOMcheck.net

Color: ■



### Item description

- Compact PCB terminal strips with CAGE CLAMP® connection and screwdriver actuation parallel or perpendicular to conductor entry
- Double solder pins for high mechanical
- Custom color combinations

## Data

### Electrical data

#### Ratings per IEC/EN 60664-1

|                                 |        |
|---------------------------------|--------|
| Rated voltage (III / 3)         | 63 V   |
| Rated impulse voltage (III / 3) | 2.5 kV |
| Rated voltage (III / 2)         | 160 V  |
| Rated impulse voltage (III / 2) | 2.5 kV |
| Rated voltage (II / 2)          | 320 V  |
| Rated impulse voltage (II / 2)  | 2.5 kV |
| Rated current                   | 6 A    |

#### Approvals per UL 1059

|                                |       |
|--------------------------------|-------|
| Rated voltage UL (Use Group B) | 150 V |
| Rated current UL (Use Group B) | 4 A   |

#### Approvals per CSA

|                                 |       |
|---------------------------------|-------|
| Rated voltage CSA (Use Group B) | 150 V |
| Rated current CSA (Use Group B) | 4 A   |

### Connection data

|                                                             |                                                                                                                                                                               |
|-------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Connection technology                                       | CAGE CLAMP®                                                                                                                                                                   |
| Actuation type                                              | Push-button                                                                                                                                                                   |
| Solid conductor                                             | 0.08 ... 0.5 mm <sup>2</sup> / 28 ... 20 AWG                                                                                                                                  |
| Fine-stranded conductor                                     | 0.08 ... 0.5 mm <sup>2</sup> / 28 ... 20 AWG                                                                                                                                  |
| Fine-stranded conductor with ferrule with plastic collar    | 0.25 mm <sup>2</sup>                                                                                                                                                          |
| Fine-stranded conductor with ferrule without plastic collar | 0.25 mm <sup>2</sup>                                                                                                                                                          |
| Strip length                                                | 5 ... 6 mm / 0.2 ... 0.24 inch                                                                                                                                                |
| Conductor entry angle to the PCB                            | 30°                                                                                                                                                                           |
| Note (conductor cross-section)                              | Terminating 0.75 mm <sup>2</sup> /18 AWG conductors is possible; however insulation diameter allows only every other clamping unit to be terminated with this conductor size. |
| No. of poles                                                | 48                                                                                                                                                                            |
| Total number of connection points                           | 48                                                                                                                                                                            |
| Total number of potentials                                  | 48                                                                                                                                                                            |

|                            |   |
|----------------------------|---|
| Number of connection types | 1 |
| Number of levels           | 1 |

### Geometrical Data

|                                   |                              |
|-----------------------------------|------------------------------|
| Pin spacing                       | 2.54 mm / 0.1 inch           |
| Width                             | 124.22 mm / 4.891 inch       |
| Height                            | 19.5 mm / 0.768 inch         |
| Height from the surface           | 15.5 mm / 0.61 inch          |
| Depth                             | 13.9 mm / 0.547 inch         |
| Solder pin length                 | 4 mm                         |
| Solder pin dimensions             | 0.5 x 0.75 mm                |
| Drilled hole diameter (tolerance) | 1.1 <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 | 2                                       |

### Material Data

|                             |                                        |
|-----------------------------|----------------------------------------|
| Color                       | orange                                 |
| Material group              | I                                      |
| Insulating material         | Polyamide 66 (PA 66)                   |
| Flammability class per UL94 | V0                                     |
| Clamping spring material    | Chrome nickel spring steel (CrNi)      |
| Contact material            | Electrolytic copper (E <sub>Cu</sub> ) |
| Contact plating             | tin-plated                             |
| Fire load                   | 0.34 MJ                                |
| Weight                      | 19.178 g                               |

### Environmental Requirements

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

### Commercial data

|                    |                     |
|--------------------|---------------------|
| Product Group      | 4 (Printed Circuit) |
| Country of origin  | CH                  |
| GTIN               | 4045454051549       |
| Customs Tariff No. | 85369010000         |

## Approvals / Certificates

### Country specific Approvals

| Logo                                                                               | Approval                        | Additional Approval Text | Certificate name |
|------------------------------------------------------------------------------------|---------------------------------|--------------------------|------------------|
|    | CCA<br>DEKRA Certification B.V. | EN 60998                 | NTR NL<br>6946   |
|    | CCA<br>DEKRA Certification B.V. | EN 60998                 | 2153951.01       |
|    | CCA<br>DEKRA Certification B.V. | EN 60947-7-4             | 2169331.02       |
|    | CSA<br>DEKRA Certification B.V. | C22.2                    | 1465035          |
|  | CSA<br>DEKRA Certification B.V. | C22.2                    | 1465035          |

### Ship Approvals

| Logo                                                                               | Approval                                         | Additional Approval Text | Certificate name         |
|------------------------------------------------------------------------------------|--------------------------------------------------|--------------------------|--------------------------|
|  | ABS<br>American Bureau of Shipping               | -                        | 14-<br>HG1241537-<br>PDA |
|  | DNV GL<br>Det Norske Veritas, Germanischer Lloyd | -                        | TAE000016Z               |

### UL-Approvals

| Logo                                                                               | Approval                            | Additional Approval Text | Certificate name |
|------------------------------------------------------------------------------------|-------------------------------------|--------------------------|------------------|
|  | UL<br>UL International Germany GmbH | UL 1059                  | E45172           |

## Compatible products

## ferrule

|                                                                                 |                                                                                                                |         |
|---------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------|---------|
|  | <b>Item no.: 216-131</b><br>Ferrule; Sleeve for 0.25 mm <sup>2</sup> / AWG 24; uninsulated; electro-tin plated | 216-131 |
|  | <b>Item no.: 216-151</b><br>Ferrule; Sleeve for 0.25 mm <sup>2</sup> / AWG 24; uninsulated; electro-tin plated | 216-151 |
|                                                                                 | <b>Item no.: 216-301</b><br>Ferrule; Sleeve for 0.25 mm <sup>2</sup> / AWG 24; insulated; electro-tin plated   | 216-301 |
|                                                                                 | <b>Item no.: 216-321</b><br>Ferrule; Sleeve for 0.25 mm <sup>2</sup> / AWG 24; insulated; electro-tin plated   | 216-321 |

## Marking accessories

|  |                                                                                                                                                                                              |         |
|--|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------|
|  | <b>Item no.: 210-331/250-202</b><br>Marking strips; as a DIN A4 sheet; MARKED; 1-16 (400x); Height of marker strip: 2.3 mm/0.091 in; Strip length 182 mm; Horizontal marking; Self-adhesive  | 210-331 |
|  | <b>Item no.: 210-331/250-204</b><br>Marking strips; as a DIN A4 sheet; MARKED; 17-32 (400x); Height of marker strip: 2.3 mm/0.091 in; Strip length 182 mm; Horizontal marking; Self-adhesive | 210-331 |
|  | <b>Item no.: 210-331/250-206</b><br>Marking strips; as a DIN A4 sheet; MARKED; 33-48 (400x); Height of marker strip: 2.3 mm/0.091 in; Strip length 182 mm; Horizontal marking; Self-adhesive | 210-331 |
|  | <b>Item no.: 210-331/250-207</b><br>Marking strips; as a DIN A4 sheet; MARKED; 1-48 (100x); Height of marker strip: 2.3 mm/0.091 in; Strip length 182 mm; Horizontal marking; Self-adhesive  | 210-331 |
|  | <b>Item no.: 210-331/254-202</b><br>Marking strips; as a DIN A4 sheet; MARKED; 1-16 (400x); Height of marker strip: 2.3 mm/0.091 in; Strip length 182 mm; Horizontal marking; Self-adhesive  | 210-331 |
|  | <b>Item no.: 210-331/254-204</b><br>Marking strips; as a DIN A4 sheet; MARKED; 17-32 (400x); Height of marker strip: 2.3 mm/0.091 in; Strip length 182 mm; Horizontal marking; Self-adhesive | 210-331 |
|  | <b>Item no.: 210-331/254-206</b><br>Marking strips; as a DIN A4 sheet; MARKED; 33-48 (400x); Height of marker strip: 2.3 mm/0.091 in; Strip length 182 mm; Horizontal marking; Self-adhesive | 210-331 |
|  | <b>Item no.: 210-331/254-207</b><br>Marking strips; as a DIN A4 sheet; MARKED; 1-48 (100x); Height of marker strip: 2.3 mm/0.091 in; Strip length 182 mm; Horizontal marking; Self-adhesive  | 210-331 |

## tools

|                                                                                    |                                                                                                                |         |
|------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------|---------|
|  | <b>Item no.: 210-648</b><br>Operating tool with partially insulated shaft; Blade (2.5 x 0.4) mm; short; angled | 210-648 |
|  | <b>Item no.: 210-719</b><br>Operating tool with partially insulated shaft; Type 1, blade (2.5 x 0.4) mm        | 210-719 |



## Downloads

## CAD/CAE - Smart Data

## CAD data

| 3D Download 233-548                                                                                           |                      | URL            | Download |
|---------------------------------------------------------------------------------------------------------------|----------------------|----------------|----------|
| <b>PCB libraries</b>                                                                                          |                      |                |          |
| EAGLE Library for WAGO PCB Terminal Blocks<br>Compatible with EAGLE PCB Design Software Version 6.x or higher | 2.1<br>Oct 6, 2014   | zip<br>23.9 MB | Download |
| DesignSpark Library for WAGO PCB Terminal Blocks<br>Compatible with DesignSpark PCB Version 4.x or higher     | 2.1<br>Oct 6, 2014   | zip<br>22.5 MB | Download |
| TARGET Library for WAGO PCB Terminal Blocks<br>Compatible with TARGET PCB Design Software Version 17.x        | 1.1.0<br>Oct 6, 2014 | zip<br>27.1 MB | Download |

Subject to changes.