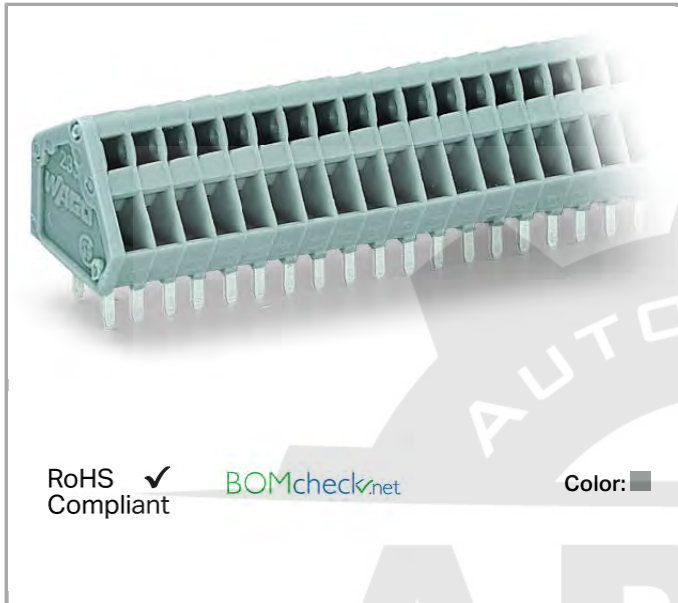


## Data sheet | Item number: 233-110

PCB terminal block; 0.5 mm<sup>2</sup>; Pin spacing 2.5 mm; 10-pole; CAGE CLAMP®



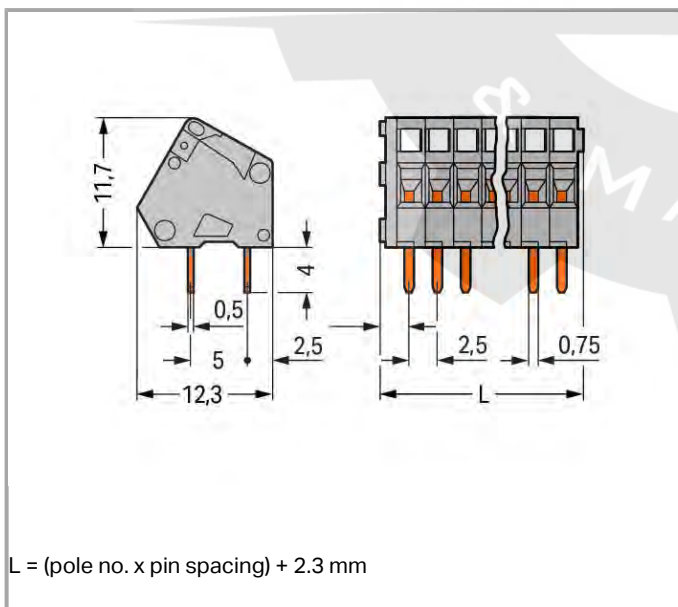
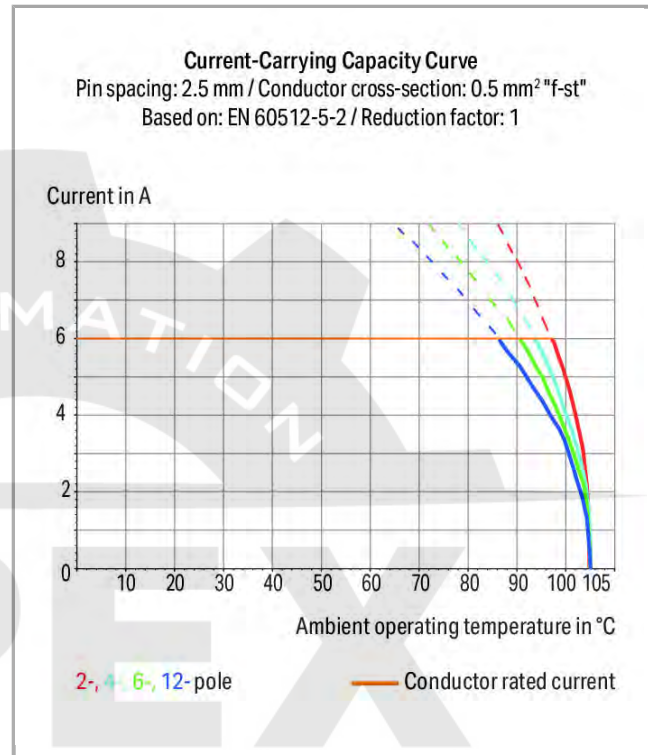
233-110



RoHS  
Compliant

[BOMcheck.net](https://www.bomcheck.net)

Color: ■



### Item description

- Compact terminal strips with CAGE CLAMP® connection and screwdriver actuation parallel or perpendicular to conductor entry

- Double solder pins for high mechanical stability
- 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                                              | Operating tool                                                                                                                                                                |
| 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                                                | 10                                                                                                                                                                            |
| Total number of connection points                           | 10                                                                                                                                                                            |
| Total number of potentials                                  | 10                                                                                                                                                                            |
| Number of connection types                                  | 1                                                                                                                                                                             |
| Number of levels                                            | 1                                                                                                                                                                             |

## Geometrical Data

|                                   |                                |
|-----------------------------------|--------------------------------|
| Pin spacing                       | 2.5 mm / 0.098 inch            |
| Width                             | 27.3 mm / 1.075 inch           |
| Height                            | 15.7 mm / 0.618 inch           |
| Height from the surface           | 11.7 mm / 0.461 inch           |
| Depth                             | 12.1 mm / 0.476 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                       | gray                                   |
| 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                   | 0.044 MJ                               |
| Weight                      | 3.456 g                                |

## Environmental Requirements

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

## Commercial data

|                    |                     |
|--------------------|---------------------|
| Product Group      | 4 (Printed Circuit) |
| Country of origin  | CH                  |
| GTIN               | 4045454049249       |
| Customs Tariff No. | 85369010000         |

## Approvals / Certificates

### Country specific Approvals

Certificate

| Logo                                                                             | Approval                        | Additional Approval Text | name           |
|----------------------------------------------------------------------------------|---------------------------------|--------------------------|----------------|
|  | CCA<br>DEKRA Certification B.V. | EN 60998                 | 2153951.01     |
|  | CCA<br>DEKRA Certification B.V. | EN 60998                 | NTR NL<br>6946 |
|  | 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

#### Marking accessories

|                                                                                                                                                          |                                                                                                                   |           |
|----------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------|-----------|
| <b>Item no.: 210-331/250-202</b>                                                                                                                         |                                                                                                                   | 210-331   |
| 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  |                                                                                                                   | / 250-202 |
| <b>Item no.: 210-331/250-204</b>                                                                                                                         |                                                                                                                   | 210-331   |
| 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 |                                                                                                                   | / 250-204 |
| <b>Item no.: 210-331/250-206</b>                                                                                                                         |                                                                                                                   | 210-331   |
| 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 |                                                                                                                   | / 250-206 |
| <b>Item no.: 210-331/250-207</b>                                                                                                                         |                                                                                                                   | 210-331   |
| 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  |                                                                                                                   | / 250-207 |
| <b>Item no.: 210-331/254-202</b>                                                                                                                         |                                                                                                                   | 210-331   |
| 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  |                                                                                                                   | / 254-202 |
| <b>Item no.: 210-331/254-204</b>                                                                                                                         |                                                                                                                   | 210-331   |
| 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 |                                                                                                                   | / 254-204 |
| <b>Item no.: 210-331/254-206</b>                                                                                                                         |                                                                                                                   | 210-331   |
| 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 |                                                                                                                   | / 254-206 |
| <b>Item no.: 210-331/254-207</b>                                                                                                                         |                                                                                                                   | 210-331   |
| 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  |                                                                                                                   | / 254-207 |
| <b>ferrule</b>                                                                                                                                           |                                                                                                                   |           |
|                                                                         | <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   |
| <b>tools</b>                                                                                                                                             |                                                                                                                   |           |
|                                                                         | <b>Item no.: 210-647</b><br>Operating tool with partially insulated shaft; Blade (2.5 x 0.4) mm; short            | 210-647   |
|                                                                         | <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   |
|                                                                         | <b>Item no.: 233-331</b><br>Operating tool; for female and male connectors with CAGE CLAMP® connection; insulated | 233-331   |



**Item no.: 233-332**  
Operating tool; for 233 and 733 Series; of insulating material

233-332



**Item no.: 233-335**  
Operating tool; for 233 and 733 Series

233-335

## Downloads

## CAD/CAE - Smart Data

## CAD data

| 3D Download 233-110                                                                                           |                      | 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 |
| 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 |
| 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 |

Subject to changes.