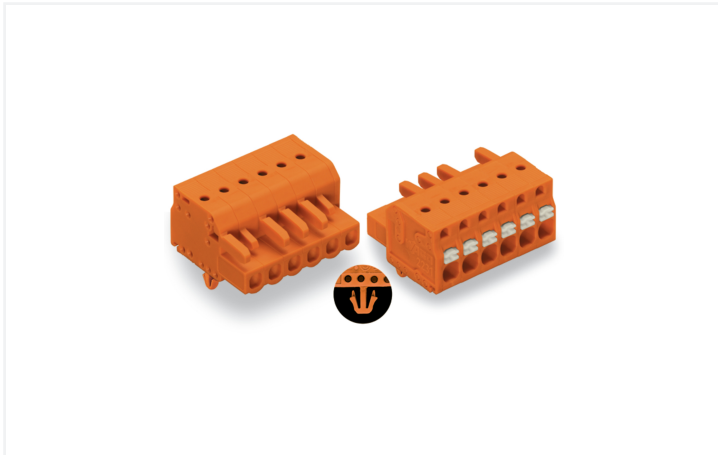


## Data Sheet | Item Number: 2231-310/008-000

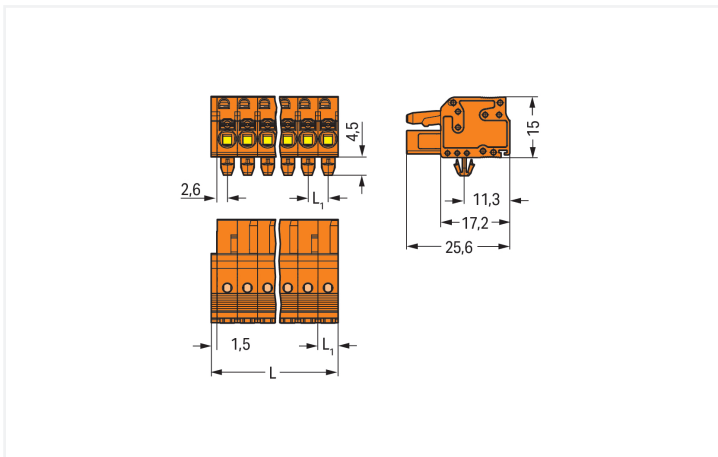
1-conductor female connector; push-button; Push-in CAGE CLAMP®; 2.5 mm<sup>2</sup>; Pin spacing 5.08 mm; 10-pole; Snap-in mounting feet; 2,50 mm<sup>2</sup>; orange

<https://www.wago.com/2231-310/008-000>



Color: ■ orange

Similar to illustration



Dimensions in mm

$L = (\text{pole no.} \times \text{pin spacing}) + 1.5 \text{ mm}$   
L1 = 5.08 mm  
2- to 3-pole female connectors – one latch only

### Female connector, 2231 Series, Push-in CAGE CLAMP®

Convenient electrical installations are guaranteed with this female connector (item number 2231-310/008-000). Conductors should only be connected to this female connector if their strip length is between 10 and 11 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. Both solid and fine-stranded conductors with ferrules can be inserted without the need for tools—all thanks to its pluggable design. The item's dimensions are (52.3 x 19.5 x 25.6) mm (width x height x depth). Depending on the conductor type, this female connector is designed for conductor cross sections ranging from 0.2 mm<sup>2</sup> to 2.5 mm<sup>2</sup>.

The contact surface is coated with tin.

## Notes

## Safety Information

The MCS – MULTI CONNECTION SYSTEM includes connectors without breaking capacity in accordance with DIN EN 61984. When used as intended, these connectors must not be connected/disconnected when live or under load. When used as intended, these connectors must not be connected/disconnected when live or under load. The circuit design should ensure header pins, which can be touched, are not live when unmated.

## Variants:

Gold-plated or partially gold-plated contact surfaces  
Other versions (or variants) can be requested from WAGO Sales or configured at <https://configurator.wago.com/>.

## Electrical data

| Ratings per                     | IEC/EN 60664-1 |       |       |
|---------------------------------|----------------|-------|-------|
| Overvoltage category            | III            | III   | II    |
| Pollution degree                | 3              | 2     | 2     |
| Nominal voltage                 | 320 V          | 320 V | 630 V |
| Rated impulse withstand voltage | 4 kV           | 4 kV  | 4 kV  |
| Rated current                   | 16 A           | 16 A  | 16 A  |

| Approvals per | UL 1059 |       |       |
|---------------|---------|-------|-------|
| Use group     | B       | C     | D     |
| Rated voltage | 300 V   | 150 V | 300 V |
| Rated current | 15 A    | 15 A  | 10 A  |

| Approvals per | UL 1977 |
|---------------|---------|
| Rated voltage | 600 V   |
| Rated current | 15 A    |

| Approvals per | CSA   |       |       |
|---------------|-------|-------|-------|
| Use group     | B     | C     | D     |
| Rated voltage | 300 V | 150 V | 300 V |
| Rated current | 15 A  | 15 A  | 10 A  |

## Connection Data

|                            |    |
|----------------------------|----|
| Clamping units             | 10 |
| Total number of potentials | 10 |
| Number of connection types | 1  |
| Number of levels           | 1  |

## Connection 1

|   |   |
|---|---|
| Connection technology                             | Push-in CAGE CLAMP®                         |
| Actuation type                                    | Push-button                                 |
| Actuation direction 1                             | Operation parallel to conductor entry       |
| Solid conductor                                   | 0.2 ... 2.5 mm <sup>2</sup> / 24 ... 12 AWG |
| Fine-stranded conductor                           | 0.2 ... 2.5 mm <sup>2</sup> / 24 ... 12 AWG |
| Fine-stranded conductor; with insulated ferrule   | 0.25 ... 1.5 mm <sup>2</sup>                |
| Fine-stranded conductor; with uninsulated ferrule | 0.25 ... 2.5 mm <sup>2</sup>                |
| Strip length                                      | 10 ... 11 mm / 0.39 ... 0.43 inches         |
| Pole number                                       | 10  |
| Conductor entry direction to mating direction     | 0°  |

## Physical data

|  |                          |
|--|--------------------------|
| Pin spacing  | 5.08 mm / 0.2 inches     |
| Width  | 52.3 mm / 2.059 inches   |
| Height   | 19.5 mm / 0.768 inches   |
| Height from the surface  | 15 mm / 0.591 inches     |
| Depth  | 25.6 mm / 1.008 inches   |
| Drilled hole diameter for snap-in mounting foot with tolerance | 3.5 <sup>(+0.1)</sup> mm |

### Mechanical data

|                          |   |
|--------------------------|---|
| Variable coding          | Yes                                     |
| Housing sheet thickness  | 0.6 ... 1.2 mm / 0.024 ... 0.047 inches |
| Mounting type            | Snap-in foot                            |
| Mounting type            | Panel mounting                          |
| Anti-rotation protection | Yes                                     |

### Plug-in connection

|                                    |                         |
|------------------------------------|-------------------------|
| Contact type (pluggable connector) | Female connector/socket |
| Connector (connection type)        | for conductor           |
| Mismating protection               | No                      |

### Material data

|                                    |  |
|------------------------------------|--|
| Note (material data)               | <a href="#">Information on material specifications can be found here</a> |
| Color                              | orange   |
| Material group                     | I  |
| Insulation material (main housing) | Polyamide (PA66)   |
| Flammability class per UL94        | V0   |
| Clamping spring material           | Chrome-nickel spring steel (CrNi)  |
| Contact material                   | Copper alloy   |
| Contact Plating                    | Tin  |
| Fire load                          | 0.329 MJ   |
| Weight                             | 16.1 g   |

### Environmental requirements

|                         |                 |
|-------------------------|-----------------|
| Limit temperature range | -60 ... +100 °C |
| Processing temperature  | -35 ... +60 °C  |

### Commercial data

|                       |                        |
|-----------------------|------------------------|
| Product Group         | 3 (Multi Conn. System) |
| PU (SPU)              | 50 pcs                 |
| Packaging type        | Box                    |
| Country of origin     | PL                     |
| GTIN                  | 4045454724368          |
| Customs tariff number | 85366990990            |

### Product Classification

|             |                      |
|-------------|----------------------|
| UNSPSC      | 39121409             |
| eCl@ss 10.0 | 27-44-03-09          |
| eCl@ss 9.0  | 27-44-03-09          |
| ETIM 9.0    | EC002638             |
| ETIM 10.0   | EC002638             |
| ECCN        | NO US CLASSIFICATION |

**Environmental Product Compliance**

RoHS Compliance Status Compliant, No Exemption

**Approvals / Certificates**

**General approvals**



| Approval                              | Standard      | Certificate Name |
|---------------------------------------|---------------|------------------|
| CB<br>DEKRA Certification B.V.        | IEC 61984     | NL-113351        |
| CSA<br>CSA Group                      | C22.2 No. 158 | 2314554          |
| KEMA/KEUR<br>DEKRA Certification B.V. | EN 61984      | 71-130478 REV.1  |
| UL<br>UL International Germany GmbH   | UL 1977       | E45171           |
| UR<br>Underwriters Laboratories Inc.  | UL 1059       | E45172           |

**Downloads**

**Environmental Product Compliance**

**Compliance Search**

|  |   |
|--|---|
| Environmental Product Compliance<br>2231-310/008-000 | ↓ |
|--|---|

**Documentation**

**Additional Information**

|                   |            |                   |   |
|-------------------|------------|-------------------|---|
| Technical Section | 03.04.2019 | pdf<br>2027.26 KB | ↓ |
|-------------------|------------|-------------------|---|

**CAD/CAE-Data**

**CAD data**

|                                  |   |
|----------------------------------|---|
| 2D/3D Models<br>2231-310/008-000 | ↓ |
|----------------------------------|---|

**CAE data**

|                                  |   |
|----------------------------------|---|
| ZUKEN Portal<br>2231-310/008-000 | ↓ |
|----------------------------------|---|

**1 Compatible Products**

**1.1 System counterpart**

**1.1.1 Male connector/plug**



**Item No.: 231-640**  
 1-conductor male connector; CAGE CLAMP®; 2.5 mm<sup>2</sup>; Pin spacing 5.08 mm; 10-pole; orange

**1.2 Optional Accessories**

**1.2.1 Ferrule**

**1.2.1.1 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; un-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; un-insulated; 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; un-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; un-insulated; electro-tin plated; electrolytic copper; gastight crimped; acc. to DIN 46228, Part 1/08.92



**Item No.: 216-244**  
 Ferrule; Sleeve for 1.5 mm<sup>2</sup> / AWG 16; insulated; electro-tin plated; electrolytic copper; gastight crimped; acc. to DIN 46228, Part 4/09.90; black



**Item No.: 216-264**  
 Ferrule; Sleeve for 1.5 mm<sup>2</sup> / AWG 16; un-insulated; electro-tin plated; electrolytic copper; gastight crimped; acc. to DIN 46228, Part 4/09.90; black



**Item No.: 216-284**  
 Ferrule; Sleeve for 1.5 mm<sup>2</sup> / AWG 16; un-insulated; electro-tin plated; electrolytic copper; gastight crimped; acc. to DIN 46228, Part 4/09.90; black



**Item No.: 216-144**  
 Ferrule; Sleeve for 1.5 mm<sup>2</sup> / AWG 16; un-insulated; electro-tin plated; electrolytic copper; gastight crimped; acc. to DIN 46228, Part 1/08.92; silver-colored



**Item No.: 216-106**  
 Ferrule; Sleeve for 2.5 mm<sup>2</sup> / AWG 14; un-insulated; electro-tin plated; silver-colored

**1.2.2 Installation**

**1.2.2.1 Mounting accessories**



**Item No.: 209-137**  
 Mounting adapter; can be used as end stop; 6.5 mm wide; gray

### 1.2.3 Insulation stop

#### 1.2.3.1 Insulation stop



**Item No.: 231-671**

Insulation stop; 0.25 - 0.5 mm<sup>2</sup>; light gray



**Item No.: 231-672**

Insulation stop; 0.75 - 1 mm<sup>2</sup>; dark gray

### 1.2.4 Marking

#### 1.2.4.1 Marking strip



**Item No.: 210-332/508-202**

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.: 210-332/508-205**

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.: 210-332/508-204**

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.: 210-332/508-206**

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

### 1.2.5 Mounting adapter

#### 1.2.5.1 Mounting accessories



**Item No.: 209-148**

Multi mounting adapter; for female and male connectors; 25 mm wide; 3 parts; gray

### 1.2.6 Strain relief

#### 1.2.6.1 Strain relief plate



**Item No.: 734-226**

Strain relief plate; for female and male connectors; 35 mm wide; 1 part; Pin spacing 3.81 mm; orange

### 1.2.7 Test and measurement

#### 1.2.7.1 Testing accessories



**Item No.: 210-136**

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



**Item No.: 231-661**

Test plugs for female connectors; for 5 mm and 5.08 mm pin spacing; 2,50 mm<sup>2</sup>; light gray

## 1.2.8 Tool

### 1.2.8.1 Operating tool



**Item No.: 210-720**

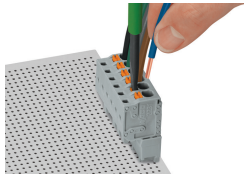
Operating tool; Blade: 3.5 x 0.5 mm; with a partially insulated shaft; multicoloured

**Item No.: 210-657**

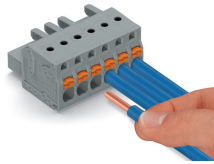
Operating tool; Blade: 3.5 x 0.5 mm; with a partially insulated shaft; short; multicoloured

## Installation Notes

### Conductor termination

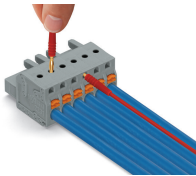


Inserting fine-stranded conductors into Push-in CAGE CLAMP® unit via push-buttons.



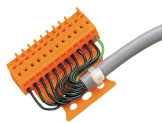
Push-in termination of solid conductors or fine-stranded conductors with ferrule

## Testing



Testing parallel to conductor entry via integrated test ports – female connector with push-buttons and Push-in CAGE CLAMP® connection – touch contact perpendicular to conductor entry.

## Installation

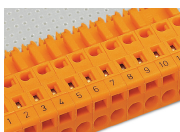


Male connector with strain relief plate



Strain relief housing shown with a male connector equipped with CAGE CLAMP®

## Marking



Labeling via direct marking or self-adhesive strips.