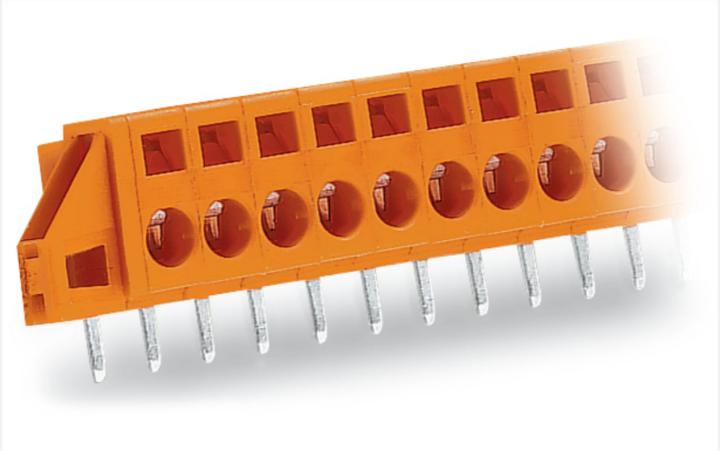
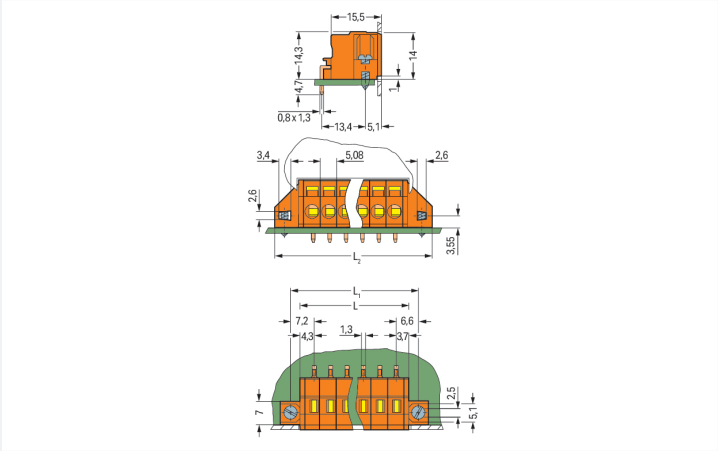
# Data Sheet | Item Number: 231-642/023-000

PCB terminal block; 2.5 mm²; Pin spacing 5.08 mm; 12-pole; CAGE CLAMP®; clamping collar; orange

https://www.wago.com/231-642/023-000






Color: orange

Similar to illustration

Dimensions in mm
L = (pole no. x pin spacing) + 3 mmL1 = L + 5.8 mmL2 = L1 + 6 mmfor plate thickness up to 1.5 mm

Feedthrough terminal block, 231 Series, operating tool

Our feedthrough terminal block (item number 231-642/023-000) ensures effortless electrical installations. Strip lengths must be between 8 and 9 mm when connecting conductors to feedthrough terminal block. This product features one conductor terminal and utilizes CAGE CLAMP®. Our trusted universal connection known as CAGE CLAMP® is the industry standard for connection technology and electrical interconnections. The item's dimensions are (76.16 x 19 x 19.1) mm (width x height x depth). Depending on the type of conductor, feedthrough terminal block is designed for conductor cross sections ranging from 0.08 mm² to 2.5 mm². Tin is used for coating the contact surfaces. THT is used to solder the feedthrough terminal block.

## Notes

| | |
|---|---|
| Variants: | Other pole numbers<br>Other colors<br>Direct marking<br>Versions without mounting flanges<br>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 | 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 | 12 |
| Total number of potentials | 12 |
| Number of connection types | 1 |
| Number of levels | 1 |

### Connection 1

| | |
|---|---|
| Connection technology | CAGE CLAMP® |
| Actuation type | Operating tool |
| Solid conductor | 0.08 … 2.5 mm² / 28 … 14 AWG |
| Fine-stranded conductor | 0.08 … 2.5 mm² / 28 … 14 AWG |
| Fine-stranded conductor; with insulated ferrule | 0.25 … 1.5 mm² |
| Fine-stranded conductor; with uninsulated ferrule | 0.25 … 2.5 mm² |
| Strip length | 8 … 9 mm / 0.31 … 0.35 inches |
| Conductor connection direction to PCB | 0 ° |
| Pole number | 12 |

## Physical data

| | |
|---|---|
| Pin spacing | 5.08 mm / 0.2 inches |
| Width | 75.76 mm / 2.983 inches |
| Height | 19 mm / 0.748 inches |
| Height from the surface | 14.3 mm / 0.563 inches |
| Depth | 19.1 mm / 0.752 inches |
| Solder pin length | 4.7 mm |
| Solder pin dimensions | 0.8 x 1.3 mm |
| Drilled hole diameter | $1.8^{(+0.1)}$ mm |
| PCB thickness (max.) | 1.5 mm |

## Mechanical data

| | |
|---|---|
| Mounting type | Mounting flange |
| Mounting type | Feed-through mounting<br>Panel mounting |
| Suitable for through-panel applications | Yes |

## 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) | Information on material specifications can be found here |
| 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 | Electrolytic copper ($E_{Cu}$) |
| Contact Plating | Tin |
| Fire load | 0.234 MJ |
| Weight | 16.9 g |

## Environmental requirements

| | |
|---|---|
| Limit temperature range | -60 … +105 °C |
| Processing temperature | -35 … +60 °C |

## Commercial data

| | |
|---|---|
| Product Group | 3 (Multi Conn. System) |
| PU (SPU) | 25 pcs |
| Packaging type | Box |
| Country of origin | DE |
| GTIN | 4044918283298 |
| Customs tariff number | 85369010000 |

## Product Classification

| | |
|---|---|
| UNSPSC | 39121409 |
| eCl@ss 10.0 | 27-44-03-09 |
| eCl@ss 9.0 | 27-44-04-02 |
| ETIM 9.0 | EC002637 |
| ETIM 10.0 | EC002637 |
| ECCN | NO US CLASSIFICATION |

## Environmental Product Compliance

| | |
|---|---|
| RoHS Compliance Status | Compliant,No Exemption |

## Approvals / Certificates

### General approvals

| Approval | Standard | Certificate Name |
|---|---|---|
| CSA<br>DEKRA Certification B.V. | C22.2 | 1466354 |
| UR<br>Underwriters Laboratories Inc. | UL 1059 | E45172 |

### Approvals for marine applications

| Approval | Standard | Certificate Name |
|---|---|---|
| BV<br>Bureau Veritas S.A. | IEC 60998 | 11915/E0 BV |

## Downloads

### Environmental Product Compliance

**Compliance Search**

Environmental Product Compliance
231-642/023-000


Continued on next page

## Documentation

### Additional Information

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

## CAD/CAE-Data

### CAE data

EPLAN Data Portal
231-642/023-000

### PCB Design

Symbol and Footprint via
SamacSys
231-642/023-000

Symbol and Footprint via
Ultra Librarian
231-642/023-000

## 1 Compatible Products

### 1.1 Optional Accessories

#### 1.1.1 Ferrule

##### 1.1.1.1 Ferrule



Item No.: 216-301
Ferrule; Sleeve for 0.25 mm² / AWG 24; insulated; electro-tin plated; yellow



Item No.: 216-302
Ferrule; Sleeve for 0.34 mm² / 22 AWG; insulated; electro-tin plated; light turquoise



Item No.: 216-201
Ferrule; Sleeve for 0.5 mm² / 20 AWG; insulated; electro-tin plated; electrolytic copper; acc. to DIN 46228, Part 4/09.90; white



Item No.: 216-101
Ferrule; Sleeve for 0.5 mm² / AWG 22; uninsulated; electro-tin plated; silver-colored



Item No.: 216-202
Ferrule; Sleeve for 0.75 mm² / 18 AWG; insulated; electro-tin plated; gray



Item No.: 216-102
Ferrule; Sleeve for 0.75 mm² / 18 AWG; uninsulated; electro-tin plated; silver-colored



Item No.: 216-203
Ferrule; Sleeve for 1 mm² / AWG 18; insulated; electro-tin plated; red



Item No.: 216-103
Ferrule; Sleeve for 1 mm² / AWG 18; uninsulated; electro-tin plated



Item No.: 216-204
Ferrule; Sleeve for 1.5 mm² / AWG 16; insulated; electro-tin plated; black



Item No.: 216-104
Ferrule; Sleeve for 1.5 mm² / AWG 16; uninsulated; electro-tin plated; silver-colored

#### 1.1.2 Installation

##### 1.1.2.1 Mounting accessories



Item No.: 231-195
Screw with nut; M2x12; for fixing element



Item No.: 209-147
Self-tapping screw



Item No.: 231-194
Self-tapping screw; B 2.2x13, fixing hole 1.8 mm Ø


Continued on next page

## 1.1.3 Marking

### 1.1.3.1 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

## 1.1.4 Tool

### 1.1.4.1 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



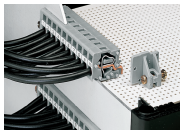
Feedthrough PCB terminal strips – front-entry conductor termination

### Application



Feedthrough PCB terminal strips can be used as front-panel feedthrough for external conductor termination.

### Application



With flanges for PCB or front-panel mounting – either flush with enclosure or protruding