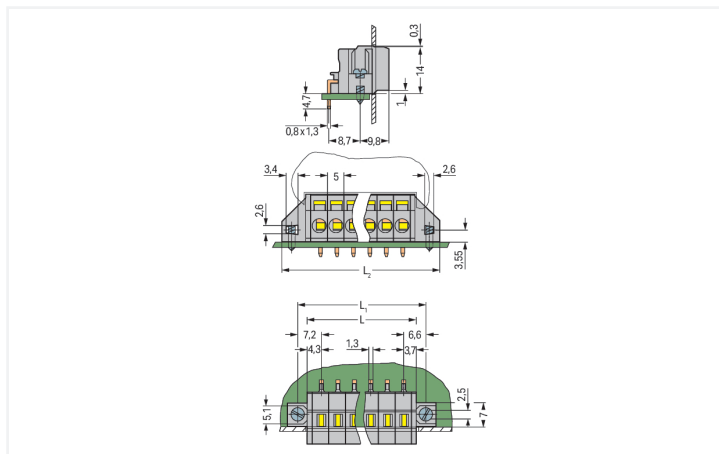
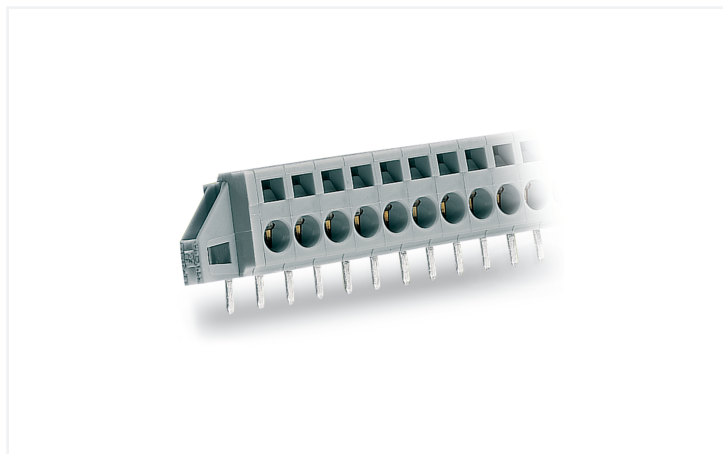


Data Sheet | Item Number: 231-610/017-000

PCB terminal block; 2.5 mm²; Pin spacing 5 mm; 10-pole; CAGE CLAMP®; clamping collar; gray

<https://www.wago.com/231-610/017-000>



Color: ■ gray

Dimensions in mm

$L = (\text{pole no.} \times \text{pin spacing}) + 3 \text{ mm}$
 $L1 = L + 5.8 \text{ mm}$
 $L2 = L1 + 6 \text{ mm}$

Feedthrough terminal block, 231 Series, operating tool

Feedthrough terminal block (item number 231-610/017-000) simplifies electrical installations. Ensure that the strip lengths are between 8 and 9 mm when connecting conductors to feedthrough terminal block. Featuring one conductor terminal along with CAGE CLAMP®, this product is highly versatile. Our CAGE CLAMP® connection provides a proven and maintenance-free way to connect all types of conductors. You do not need to prepare the conductor in any way, such as crimping ferrules. The dimensions are (65.2 x 19 x 19.1) mm (width x height x depth). Feedthrough terminal block is suitable for conductor cross sections ranging from 0.08 mm² to 2.5 mm². The contact surface is coated with tin. The feedthrough terminal block is designed for THT soldering.

Notes

Variants:

- Other pole numbers
- Other colors
- Direct marking
- Versions without mounting flanges
- 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 | 10 |
| Total number of potentials | 10 |
| 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 mm ² / 28 ... 14 AWG |
| Fine-stranded conductor | 0.08 ... 2.5 mm ² / 28 ... 14 AWG |
| Fine-stranded conductor; with insulated ferrule | 0.25 ... 1.5 mm ² |
| Fine-stranded conductor; with uninsulated ferrule | 0.25 ... 2.5 mm ² |
| Strip length | 8 ... 9 mm / 0.31 ... 0.35 inches |
| Conductor connection direction to PCB | 0° |
| Pole number | 10 |

Physical data

| | |
|-------------------------|--------------------------|
| Pin spacing | 5 mm / 0.197 inches |
| Width | 64.8 mm / 2.551 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 |
| ! | 1.8 ^(+0.1) mm |
| PCB thickness (max.) | 1.5 mm |

Mechanical data

| | |
|---|---|
| Mounting type | Mounting flange |
| Mounting type | Feed-through mounting 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 | 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 _{Cu}) |
| Contact Plating | Tin |
| Fire load | 0.224 MJ |
| Weight | 14 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 | 4044918258074 |
| Customs tariff number | 85369010000 |

Product Classification

| | |
|-------------|----------------------|
| UNSPSC | 39121409 |
| eCl@ss 10.0 | 27-44-03-09 |
| eCl@ss 9.0 | 27-44-03-09 |
| 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 |
|---------------------------------------|-----------|------------------|
| CB DEKRA Certification B.V. | IEC 61984 | NL-113351 |
| CSA DEKRA Certification B.V. | C22.2 | 1466354 |
| KEMA/KEUR DEKRA Certification B.V. | EN 61984 | 71-130478 REV.1 |
| UL Underwriters Laboratories Inc. | UL 1977 | E45171 |
| UL Underwriters Laboratories Inc. | UL 1059 | E45172 |

Approvals for marine applications



| Approval | Standard | Certificate Name |
|------------------------------------|-----------|-------------------|
| ABS American Bureau of Shipping | - | 24-0095975-PDA |
| BV Bureau Veritas S.A. | IEC 60998 | 11915/E0 BV |
| DNV DNV GL SE | - | TAE000016Z |
| PRS Polski Rejestr Statków | - | TE/1095/880590/23 |

Downloads

Environmental Product Compliance

Compliance Search

Environmental Product Compliance
231-610/017-000



Documentation

Additional Information

Technical Section

03.04.2019

pdf

2027.26 KB



CAD/CAE-Data

CAD data

2D/3D Models
231-610/017-000



CAE data

EPLAN Data Portal
231-610/017-000



ZUKEN Portal
231-610/017-000



PCB Design

Symbol and Footprint
via SamacSys
231-610/017-000



Symbol and Footprint
via Ultra Librarian
231-610/017-000



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.: 216-241](#)

Ferrule; Sleeve for 0.5 mm² / 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 mm² / 20 AWG; un-insulated; electro-tin plated; electrolytic copper; gastight crimped; acc. to DIN 46228, Part 1/08.92



[Item No.: 216-101](#)

Ferrule; Sleeve for 0.5 mm² / AWG 22; un-insulated; electro-tin plated; silver-colored



[Item No.: 216-242](#)

Ferrule; Sleeve for 0.75 mm² / 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 mm² / 18 AWG; insulated; electro-tin plated; electrolytic copper; gastight crimped; acc. to DIN 46228, Part 4/09.90; gray



[Item No.: 216-202](#)

Ferrule; Sleeve for 0.75 mm² / 18 AWG; insulated; electro-tin plated; gray



[Item No.: 216-142](#)

Ferrule; Sleeve for 0.75 mm² / 18 AWG; un-insulated; electro-tin plated; electrolytic copper; gastight crimped; acc. to DIN 46228, Part 1/08.92



[Item No.: 216-102](#)

Ferrule; Sleeve for 0.75 mm² / AWG 20; un-insulated; electro-tin plated; silver-colored



[Item No.: 216-243](#)

Ferrule; Sleeve for 1 mm² / AWG 18; insulated; electro-tin plated; electrolytic copper; gastight crimped; acc. to DIN 46228, Part 4/09.90; red

1.1.1.1 Ferrule



Item No.: 216-263
 Ferrule; Sleeve for 1 mm² / AWG 18; insulated; electro-tin plated; electrolytic copper; gastight crimped; acc. to DIN 46228, Part 4/09.90; red

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; un-insulated; electro-tin plated

Item No.: 216-143
 Ferrule; Sleeve for 1 mm² / AWG 18; un-insulated; electro-tin plated; electrolytic copper; gastight crimped; acc. to DIN 46228, Part 1/08.92



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

Item No.: 216-244
 Ferrule; Sleeve for 1.5 mm² / 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 mm² / AWG 16; 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 mm² / AWG 16; 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 mm² / AWG 16; un-insulated; electro-tin plated; electrolytic copper; gastight crimped; acc. to DIN 46228, Part 1/08.92; silver-colored

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

Item No.: 216-106
 Ferrule; Sleeve for 2.5 mm² / AWG 14; un-insulated; 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

1.1.3 Marking

1.1.3.1 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

1.1.4 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