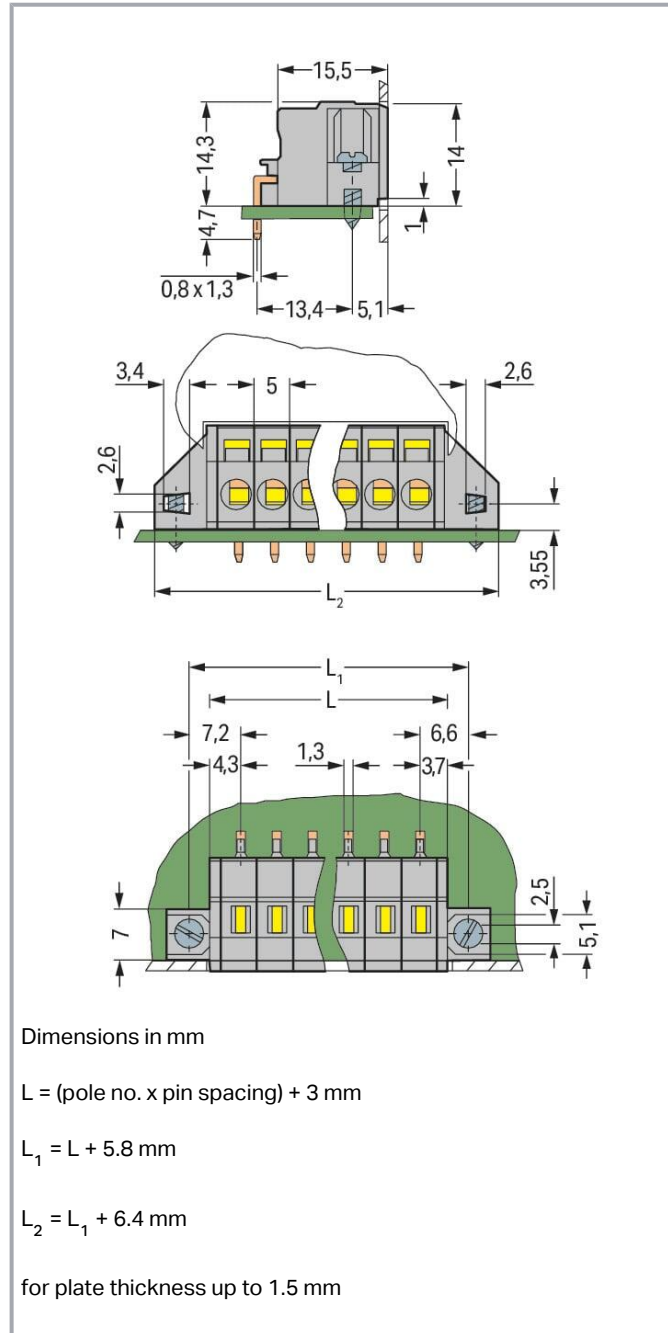
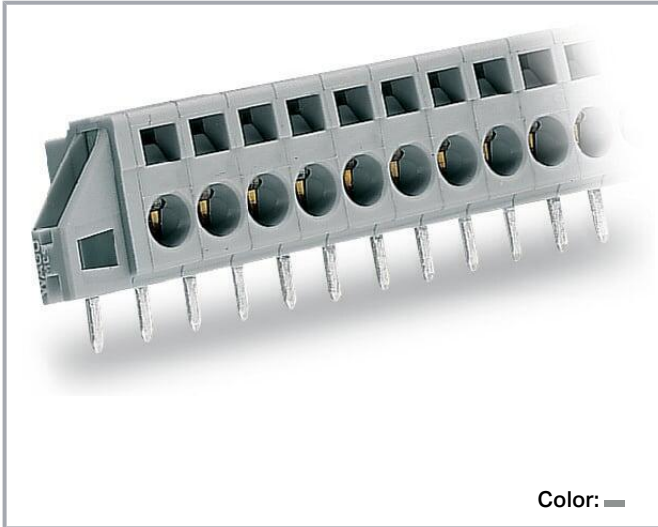


Data sheet | Item number: 231-610/023-000

PCB terminal block; 2.5 mm²; Pin spacing 5 mm; 10-pole; CAGE CLAMP®; clamping collar; 2,50 mm²; gray



www.wago.com/231-610/023-000



Subject to changes. Please also observe the further product documentation!

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Item description

- Feedthrough PCB terminal strips with screwdriver-actuated CAGE CLAMP®
- With flanges for PCB or front-panel mounting – either flush with enclosure or protruding

Data

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

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

Ratings per UL 1059

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

Subject to changes. Please also observe the further product documentation!

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Ratings per CSA

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

Connection data

| | |
|----------------------------|----|
| Connection points | 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 | 65.2 mm / 2.567 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 with tolerance | 1.8 ^(+0.1) mm |

Subject to changes. Please also observe the further product documentation!

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| | |
|----------------------|--------|
| PCB thickness (max.) | 1.5 mm |
|----------------------|--------|

Mechanical Data

| | |
|---------------|---|
| Mounting type | Mounting flange |
| Mounting type | Feed-through mounting Panel mounting |

Plug-in connection

| | |
|--------------------------------------|----|
| Plugging without loss of pin spacing | No |
|--------------------------------------|----|

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 | 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 | 0.368 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) |
| eCl@ss 10.0 | 27-44-03-09 |

Subject to changes. Please also observe the further product documentation!




| | |
|-----------------------|---------------|
| eCl@ss 9.0 | 27-44-03-09 |
| ETIM 8.0 | EC002637 |
| ETIM 7.0 | EC002637 |
| PU (SPU) | 25 pcs |
| Packaging type | box |
| Country of origin | DE |
| GTIN | 4044918279857 |
| Customs tariff number | 85369010000 |

Environmental Product Compliance


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

Approvals / Certificates

General approvals

| Logo | Approval | Additional Approval Text | Certificate name |
|--|--|--------------------------|------------------|
| | CB DEKRA Certification B.V. | IEC 61984 | NL-39756 /A1 |
|  | CSA DEKRA Certification B.V. | C22.2 | 1466354 |
|  | KEMA/KEUR DEKRA Certification B.V. | EN 61984 | 71-121453 |
|  | UR Underwriters Laboratories Inc. | UL 1977 | E45171 |

Approvals for marine applications

| Logo | Approval | Additional Approval Text | Certificate name |
|--|---|--------------------------|------------------|
|  | ABS American Bureau of Shipping | - | 19-HG1869876-PDA |
| | BV Bureau Veritas S.A. | IEC 60998 | 11915/DO BV |

Subject to changes. Please also observe the further product documentation!

BUREAU
VERITAS

DNV GL

Det Norske Veritas, Germanischer Lloyd

TAE000016Z

Optional accessories

Ferrule

| Ferrule | | |
|---------|--|--|
| I | Item no.: 216-101 Ferrule; Sleeve for 0.5 mm ² / AWG 22; uninsulated; electro-tin plated; silver-colored | www.wago.com/216-101 |
| I | Item no.: 216-104 Ferrule; Sleeve for 1.5 mm ² / AWG 16; uninsulated; electro-tin plated; silver-colored | www.wago.com/216-104 |
| II | Item no.: 216-106 Ferrule; Sleeve for 2.5 mm ² / AWG 14; uninsulated; electro-tin plated; silver-colored | www.wago.com/216-106 |
| I | Item no.: 216-102 Ferrule; Sleeve for 0.75 mm ² / AWG 20; uninsulated; electro-tin plated; silver-colored | www.wago.com/216-102 |
| I | Item no.: 216-103 Ferrule; Sleeve for 1 mm ² / AWG 18; uninsulated; electro-tin plated | www.wago.com/216-103 |
| I | Item no.: 216-123 Ferrule; Sleeve for 1 mm ² / AWG 18; uninsulated; electro-tin plated; silver-colored | www.wago.com/216-123 |
| I | Item no.: 216-122 Ferrule; Sleeve for 0.75 mm ² / AWG 20; uninsulated; electro-tin plated; silver-colored | www.wago.com/216-122 |
| II | Item no.: 216-124 Ferrule; Sleeve for 1.5 mm ² / AWG 16; uninsulated; electro-tin plated | www.wago.com/216-124 |
| I | Item no.: 216-142 Ferrule; Sleeve for 0.75 mm ² / 18 AWG; uninsulated; electro-tin plated; electrolytic copper; gastight crimped; acc. to DIN 46228, Part 1/08.92 | www.wago.com/216-142 |
| I | Item no.: 216-132 Ferrule; Sleeve for 0.34 mm ² / AWG 24; uninsulated; electro-tin plated | www.wago.com/216-132 |
| I | Item no.: 216-121 Ferrule; Sleeve for 0.5 mm ² / AWG 22; uninsulated; electro-tin plated; silver-colored | www.wago.com/216-121 |
| I | Item no.: 216-143 Ferrule; Sleeve for 1 mm ² / AWG 18; uninsulated; electro-tin plated; electrolytic copper; gastight crimped; acc. to DIN 46228, Part 1/08.92 | www.wago.com/216-143 |

Subject to changes. Please also observe the further product documentation!

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| | | |
|---|---|--|
| | Item no.: 216-131 Ferrule; Sleeve for 0.25 mm ² / AWG 24; uninsulated; electro-tin plated; silver-colored | www.wago.com/216-131 |
| 1 | Item no.: 216-141 Ferrule; Sleeve for 0.5 mm ² / 20 AWG; uninsulated; electro-tin plated; electrolytic copper; gastight crimped; acc. to DIN 46228, Part 1/08.92 | www.wago.com/216-141 |
| 1 | Item no.: 216-152 Ferrule; Sleeve for 0.34 mm ² / AWG 24; uninsulated; electro-tin plated | www.wago.com/216-152 |
|  | Item no.: 216-203 Ferrule; Sleeve for 1 mm ² / AWG 18; insulated; electro-tin plated; red | www.wago.com/216-203 |
|  | Item no.: 216-202 Ferrule; Sleeve for 0.75 mm ² / 18 AWG; insulated; electro-tin plated; gray | www.wago.com/216-202 |
| 1 | Item no.: 216-151 Ferrule; Sleeve for 0.25 mm ² / AWG 24; uninsulated; electro-tin plated | www.wago.com/216-151 |
|  | Item no.: 216-204 Ferrule; Sleeve for 1.5 mm ² / AWG 16; insulated; electro-tin plated; black | www.wago.com/216-204 |
| 1 | Item no.: 216-144 Ferrule; Sleeve for 1.5 mm ² / AWG 16; uninsulated; electro-tin plated; electrolytic copper; gastight crimped; acc. to DIN 46228, Part 1/08.92; silver-colored | www.wago.com/216-144 |
|  | Item no.: 216-201 Ferrule; Sleeve for 0.5 mm ² / 20 AWG; insulated; electro-tin plated; white | www.wago.com/216-201 |
|  | Item no.: 216-223 Ferrule; Sleeve for 1 mm ² / AWG 18; insulated; electro-tin plated; red | www.wago.com/216-223 |
|  | Item no.: 216-241 Ferrule; Sleeve for 0.5 mm ² / 20 AWG; insulated; electro-tin plated; electrolytic copper; gastight crimped; acc. to DIN 46228, Part 4/09.90; white | www.wago.com/216-241 |
|  | Item no.: 216-242 Ferrule; Sleeve for 0.75 mm ² / 18 AWG; insulated; electro-tin plated; electrolytic copper; gastight crimped; acc. to DIN 46228, Part 4/09.90; gray | www.wago.com/216-242 |
|  | Item no.: 216-222 Ferrule; Sleeve for 0.75 mm ² / 18 AWG; insulated; electro-tin plated; gray | www.wago.com/216-222 |
|  | Item no.: 216-221 Ferrule; Sleeve for 0.5 mm ² / 20 AWG; insulated; electro-tin plated; white | www.wago.com/216-221 |
|  | Item no.: 216-224 Ferrule; Sleeve for 1.5 mm ² / AWG 16; insulated; electro-tin plated; black | www.wago.com/216-224 |
|  | Item no.: 216-243 Ferrule; Sleeve for 1 mm ² / AWG 18; insulated; electro-tin plated; electrolytic copper; gastight crimped; acc. to DIN 46228, Part 4/09.90; red | www.wago.com/216-243 |
|  | Item no.: 216-244 Ferrule; Sleeve for 1.5 mm ² / AWG 16; insulated; electro-tin plated; electrolytic copper; gastight crimped; acc. to DIN 46228, Part 4/09.90; black | www.wago.com/216-244 |
|  | Item no.: 216-263 | |

Subject to changes. Please also observe the further product documentation!

Ferrule; Sleeve for 1 mm² / AWG 18; insulated; electro-tin plated; electrolytic copper; gastight crimped; acc. to DIN 46228, Part 4/09.90; red www.wago.com/216-263

**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

www.wago.com/216-264**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

www.wago.com/216-284**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

www.wago.com/216-262**Item no.: 216-301**

Ferrule; Sleeve for 0.25 mm² / AWG 24; insulated; electro-tin plated; yellow

www.wago.com/216-301**Item no.: 216-321**

Ferrule; Sleeve for 0.25 mm² / AWG 24; insulated; electro-tin plated; yellow

www.wago.com/216-321**Item no.: 216-322**

Ferrule; Sleeve for 0.34 mm² / 22 AWG; insulated; electro-tin plated; light turquoise

www.wago.com/216-322**Item no.: 216-302**

Ferrule; Sleeve for 0.34 mm² / 22 AWG; insulated; electro-tin plated; light turquoise

www.wago.com/216-302**Marking accessories**

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

www.wago.com/210-332/500-202**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

www.wago.com/210-332/500-206**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

www.wago.com/210-332/500-205**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

www.wago.com/210-332/500-204**Mounting**

Mounting accessories

**Item no.: 209-147**

Self-tapping screw

www.wago.com/209-147**Item no.: 231-194**

Self-tapping screw; B 2.2x13, fixing hole 1.8 mm Ø

www.wago.com/231-194**Item no.: 231-195**

Screw with nut; M2x12; for fixing element

www.wago.com/231-195

Subject to changes. Please also observe the further product documentation!

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Tool

Operating tool

| | | |
|--|--|--|
|  | <p>Item no.: 210-657 Operating tool; Blade: 3.5 x 0.5 mm; with a partially insulated shaft; short; multicoloured</p> | www.wago.com/210-657 |
|  | <p>Item no.: 210-720 Operating tool; Blade: 3.5 x 0.5 mm; with a partially insulated shaft; multicoloured</p> | www.wago.com/210-720 |

Downloads

Documentation

Additional Information

| | | | |
|------------------------|------------|--------|----------|
| Technical Section | 2019 Apr 3 | pdf | Download |
| Technical explanations | | 2.0 MB | |

CAD/CAE-Data

CAD data

| | | |
|------------------------------|-----|----------|
| 2D/3D Models 231-610/023-000 | URL | Download |
|------------------------------|-----|----------|

CAE data

| | | |
|-----------------------------------|-----|----------|
| EPLAN Data Portal 231-610/023-000 | URL | Download |
|-----------------------------------|-----|----------|

| | | |
|------------------------------|-----|----------|
| ZUKEN Portal 231-610/023-000 | URL | Download |
|------------------------------|-----|----------|

| | | |
|-----------------------------------|-----|----------|
| EPLAN Data Portal 231-610/023-000 | URL | Download |
|-----------------------------------|-----|----------|

PCB Design

| | | |
|--------------------------------------|-----|----------|
| Symbol and Footprint 231-610/023-000 | URL | Download |
|--------------------------------------|-----|----------|

CAx data for your PCB design, consisting of "schematic symbols and PCB footprints", allow easy integration of the WAGO component into your development environment.

Supported formats:

- Accel EDA 14 & 15
- Altium 6 to current version
- Cadence Allegro
- DesignSpark

Subject to changes. Please also observe the further product documentation!



- Eagle Libraries
- KiCad
- Mentor Graphics BoardStation
- Mentor Graphics Design Architect
- Mentor Graphics Design Expedition 99 and 2000
- OrCAD 9.X PCB and Capture
- PADS PowerPCB 3, 3.5, 4.X, and 5.X
- PADS PowerPCB and PowerLogic 3.0
- PCAD 2000, 2001, 2002, 2004, and 2006
- Pulsonix 8.5 or newer
- STL
- 3D STEP
- TARGET 3001!
- View Logic ViewDraw
- Quadcept
- Zuken CadStar 3 and 4
- Zuken CR-5000 and CR-8000

PCB Component Libraries (EDA), PCB CAD Library Ultra Librarian

Environmental Product Compliance

Compliance Search

| | | |
|--|-----|----------|
| Environmental Product Compliance 231-610/023-000 | URL | Download |
| PCB terminal block; 2.5 mm ² ; Pin spacing 5 mm; 10-pole; CAGE CLAMP®; clamping collar; 2,50 mm ² ; gray | | |

Installation Notes

Conductor termination

Subject to changes. Please also observe the further product documentation!

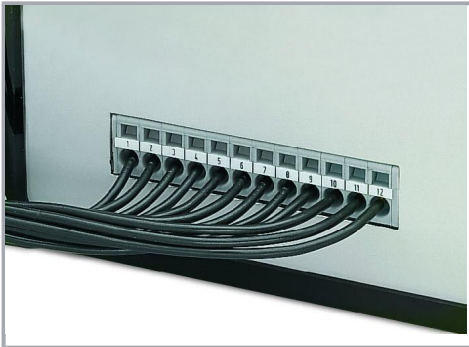
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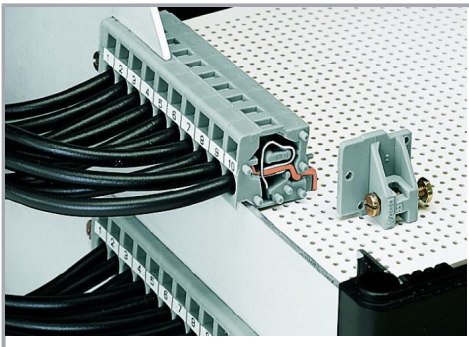
Feedthrough PCB terminal strips – front-entry conductor termination

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

Subject to changes. Please also observe the further product documentation!