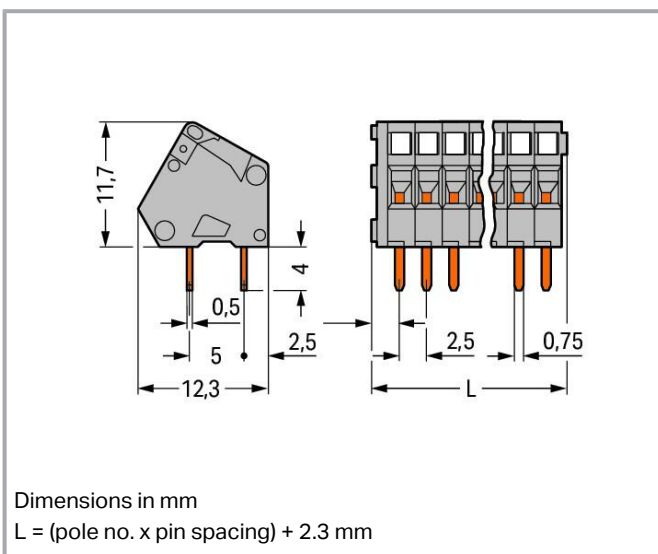
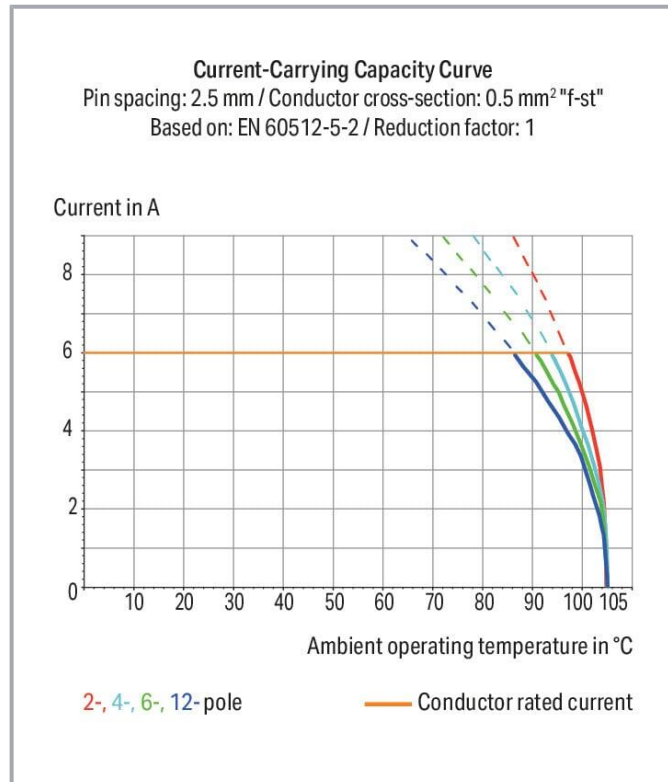
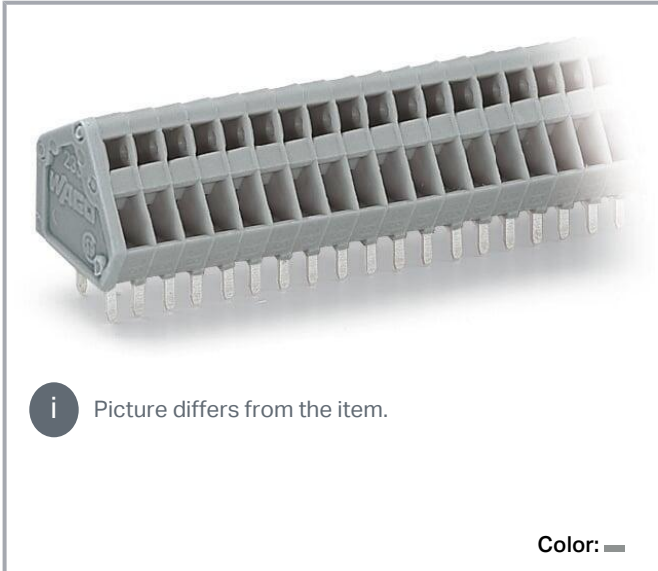


Data sheet | Item number: 233-110

PCB terminal block; 0.5 mm²; Pin spacing 2.5 mm; 10-pole; CAGE CLAMP®;
0,50 mm²; gray

www.wago.com/233-110



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

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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

Notes

| | |
|-----------|--|
| Variants: | Other pole numbers |
| | Other colors |
| | Mixed-color PCB connector strips |
| | Direct marking |
| | 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) | 63 V |
| Rated impulse voltage (III/3) | 2.5 kV |
| Rated voltage (III/2) | 160 V |
| Rated impulse voltage (III/2) | 2.5 kV |
| Nominal voltage (II/2) | 320 V |
| Rated surge voltage (II/2) | 2.5 kV |
| Rated current | 6 A |
| Legend (ratings) | (III / 2) ≙ Overvoltage category III / Pollution degree 2 |

Ratings per UL

| Approvals per | UL 1059 |
|--------------------------------|---------|
| Rated voltage UL (Use Group B) | 150 V |
| Rated current UL (Use Group B) | 4 A |

Ratings per CSA

| Approvals per | CSA |
|---------------------------------|-------|
| Rated voltage CSA (Use Group B) | 150 V |
| Rated current CSA (Use Group B) | 4 A |

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

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 ... 0.5 mm ² / 28 ... 20 AWG |
| Fine-stranded conductor | 0.08 ... 0.5 mm ² / 28 ... 20 AWG |
| Fine-stranded conductor; with insulated ferrule | 0.25 mm ² |
| Fine-stranded conductor; with uninsulated ferrule | 0.25 mm ² |
| Note (conductor cross-section) | Terminating 0.75 mm ² /18 AWG conductors is possible; however insulation diameter allows only every other clamping unit to be terminated with this conductor size. |
| Strip length | 5 ... 6 mm / 0.2 ... 0.24 inches |
| Conductor connection direction to PCB | 30 ° |
| Pole number | 10 |

Physical data

| | |
|--------------------------------------|--------------------------|
| Pin spacing | 2.5 mm / 0.098 inches |
| Width | 27.3 mm / 1.075 inches |
| Height | 15.7 mm / 0.618 inches |
| Height from the surface | 11.7 mm / 0.461 inches |
| Depth | 12.1 mm / 0.476 inches |
| Solder pin length | 4 mm |
| Solder pin dimensions | 0.5 x 0.75 mm |
| Drilled hole diameter with tolerance | 1.1 ^(+0.1) mm |

PCB contact

| | |
|-------------------------------------|--|
| PCB contact | THT |
| Solder pin arrangement | over the entire terminal strip (in-line) |
| Number of solder pins per potential | 2 |

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



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 | 0.044 MJ |
| Weight | 3.5 g |

Environmental requirements

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

Commercial data

| | |
|-----------------------|--------------------------------|
| Product Group | 4 (Printed Circuit Connectors) |
| eCl@ss 10.0 | 27-44-04-01 |
| eCl@ss 9.0 | 27-44-04-01 |
| ETIM 8.0 | EC002643 |
| ETIM 7.0 | EC002643 |
| ECCN | NO DATA |
| PU (SPU) | 180 (45) pcs |
| Packaging type | box |
| Country of origin | CH |
| GTIN | 4045454049249 |
| Customs tariff number | 85369010000 |

Environmental Product Compliance

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

Approvals / Certificates

General approvals

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

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| Logo | Approval | Additional Approval Text | Certificate name |
|--|---------------------------------------|--------------------------|------------------|
|  | CCA DEKRA Certification B.V. | EN 60998 | 2153951.01 |
|  | CCA DEKRA Certification B.V. | EN 60998 | NTR NL 6946 |
|  | CCA DEKRA Certification B.V. | EN 60947-7-4 | NTR NL 7786 |
|  | CSA DEKRA Certification B.V. | C22.2 | 1465035 |
|  | KEMA/KEUR DEKRA Certification B.V. | EN 60947-7-4 | 71-111040 |
|  | UL UL International Germany GmbH | UL 1059 | E45172 |

Declarations of conformity and manufacturer's declarations

| Logo | Approval | Additional Approval Text | Certificate name |
|--|--|--------------------------|------------------|
|  | EU-Declaration of Conformity WAGO GmbH & Co. KG | - | - |
|  | UK-Declaration of Conformity WAGO GmbH & Co. KG | - | - |

Approvals for marine applications

| Logo | Approval | Additional Approval Text | Certificate name |
|------|------------------------------------|--------------------------|-------------------|
| | ABS American Bureau of Shipping | - | 19- HG1869876- |

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









DNV
DNV GL SE

TAE000016Z

Optional accessories





Tool

Operating tool

| | | |
|---|--|--|
|  | Item no.: 210-648 Operating tool; Blade: 2.5 x 0.4 mm; with a partially insulated shaft; angled; short | www.wago.com/210-648 |
|  | Item no.: 210-647 Operating tool; Blade: 2.5 x 0.4 mm; with a partially insulated shaft; multicoloured | www.wago.com/210-647 |
|  | Item no.: 210-719 Operating tool; Blade: 2.5 x 0.4 mm; with a partially insulated shaft | www.wago.com/210-719 |
|  | Item no.: 233-332 Operating tool; made of insulating material; white | www.wago.com/233-332 |
|  | Item no.: 233-331 Operating tool; insulated; yellow | www.wago.com/233-331 |
|  | Item no.: 233-335 Operating tool; green | www.wago.com/233-335 |

Ferrule









Ferrule

| | | |
|---|--|--|
|  | Item no.: 216-131 Ferrule; Sleeve for 0.25 mm ² / AWG 24; uninsulated; electro-tin plated; silver-colored | www.wago.com/216-131 |
|  | Item no.: 216-151 Ferrule; Sleeve for 0.25 mm ² / AWG 24; uninsulated; electro-tin plated | www.wago.com/216-151 |
|  | Item no.: 216-301 Ferrule; Sleeve for 0.25 mm ² / AWG 24; insulated; electro-tin plated; yellow | www.wago.com/216-301 |
|  | Item no.: 216-321 Ferrule; Sleeve for 0.25 mm ² / AWG 24; insulated; electro-tin plated; yellow | www.wago.com/216-321 |

Marking accessories

Marking strip

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

| | | |
|---|---|--|
|  | Item no.: 210-331/250-207 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; white | www.wago.com/210-331/250-207 |
|  | Item no.: 210-331/250-202 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; white | www.wago.com/210-331/250-202 |
|  | Item no.: 210-331/254-204 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; white | www.wago.com/210-331/254-204 |
|  | Item no.: 210-331/250-204 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; white | www.wago.com/210-331/250-204 |
|  | Item no.: 210-331/254-206 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; white | www.wago.com/210-331/254-206 |
|  | Item no.: 210-331/250-206 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; white | www.wago.com/210-331/250-206 |
|  | Item no.: 210-331/254-202 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; white | www.wago.com/210-331/254-202 |
|  | Item no.: 210-331/254-207 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; white | www.wago.com/210-331/254-207 |

Downloads

Documentation

Additional Information

| | | | |
|------------------------|------------|--------|----------|
| Technical Section | 2019 Apr 3 | pdf | Download |
| Technical explanations | | 2.1 MB | |

CAD/CAE-Data

CAE data

| | | |
|---------------------------|-----|----------|
| EPLAN Data Portal 233-110 | URL | Download |
| ZUKEN Portal 233-110 | URL | Download |

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

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PCB Design

Symbol and Footprint via Ultra Librarian 233-110

[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
- Altair
- Altium 6 to current version
- Autodesk Fusion 360
- Cadence Allegro
- DesignSpark
- 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
- Zuken eCADSTAR 2020 and 2021Zuken CR-5000 and CR-8000

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

Symbol and Footprint via SamacSys 233-110

[URL](#)

[Download](#)

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

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Supported formats:

- 3D (stp)
- Altium
- CADSTAR
- Capture
- CircuitStudio
- CR-5000
- CR-8000
- DEHDL
- DesignSpark PCB
- DesignSpark PCB PRO
- DipTrace
- EAGLE
- Easy-PC
- EasyEDA
- eCADSTAR
- KiCad
- OrCAD_Allegro16
- PADS
- Proteus
- Pulsonix
- Quadcept
- SOLIDWORKS PCB
- TARGET 3001!
- xDX Designer
- Xpedition

PCB Component Libraries (EDA), PCB CAD Library SamacSys Electronic Component Search Engine

CAD data

| 2D/3D Models 233-110 | URL | Download |
|----------------------|-----|----------|
|----------------------|-----|----------|

Asset Administration Shell

Asset Administration Shell 233-110

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Environmental Product Compliance

Compliance Search

Environmental Product Compliance 233-110

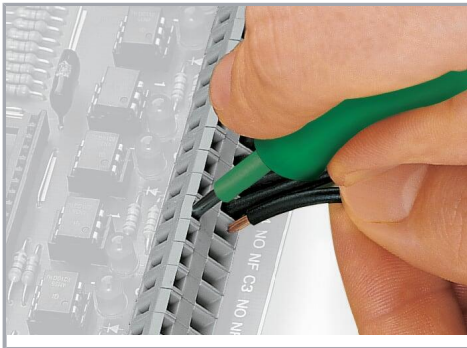
[URL](#)

[Download](#)

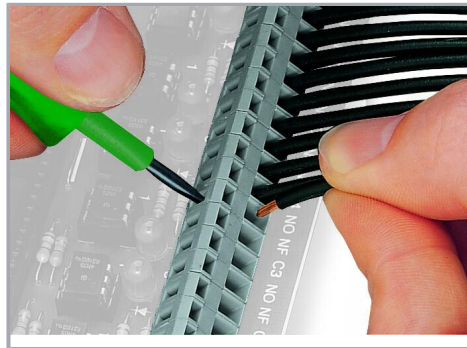
PCB terminal block; 0.5 mm²; Pin spacing 2.5 mm; 10-pole; CAGE CLAMP®; 0,50 mm²; gray

Installation Notes

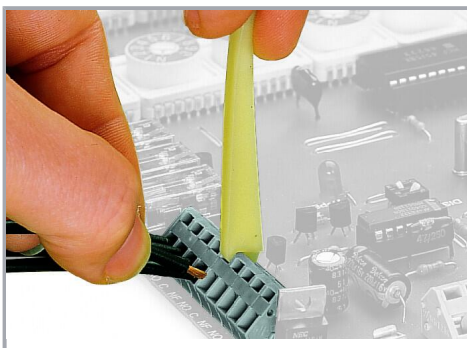
Conductor termination



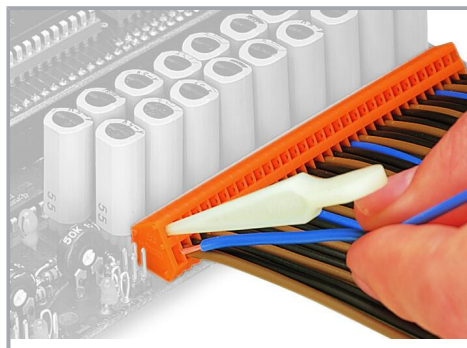
Inserting a conductor via 3.5 mm screwdriver. Screwdriver actuation parallel to conductor entry



Inserting a conductor via 3.5 mm screwdriver. Screwdriver actuation perpendicular to conductor entry



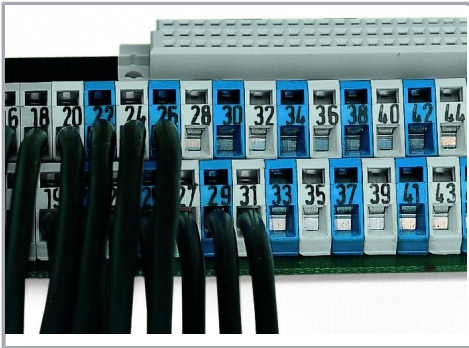
Inserting a conductor via operating tool.



Compared to standard screwdrivers, these operating tools are far more convenient for wiring PCB terminal strips at factory.

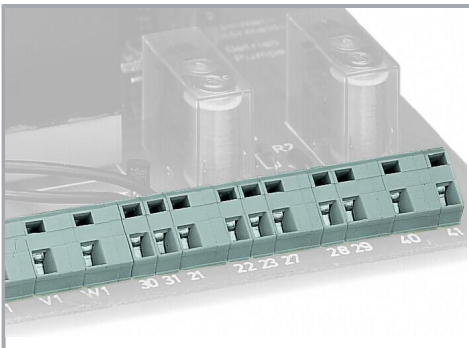
Installation

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



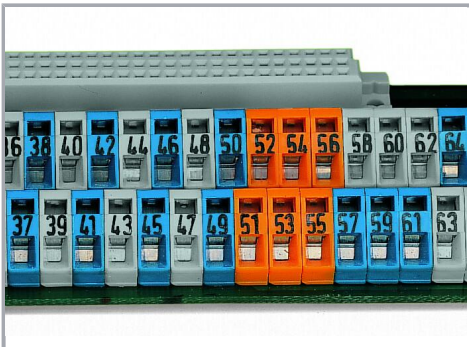
PCB Terminal Strips placed behind each other save space – staggering them by half the pin spacing simplifies subsequent wiring of the first row.

Installation

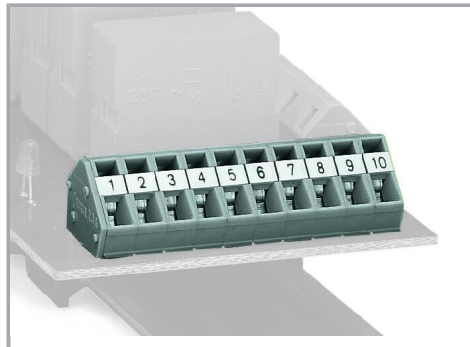


Combining PCB terminal blocks with different pin spacing.

Marking



Optional: Labeling via factory direct marking.



Optional: Labeling with self-adhesive marking strips possible

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