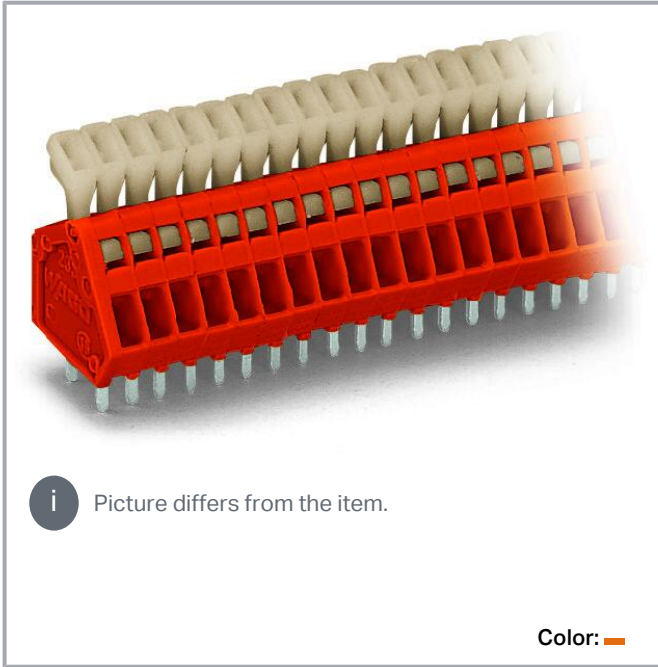


Data sheet | Item number: 233-512

PCB terminal block; push-button; 0.5 mm²; Pin spacing 2.54 mm; 12-pole;
CAGE CLAMP®; 0,50 mm²; orange

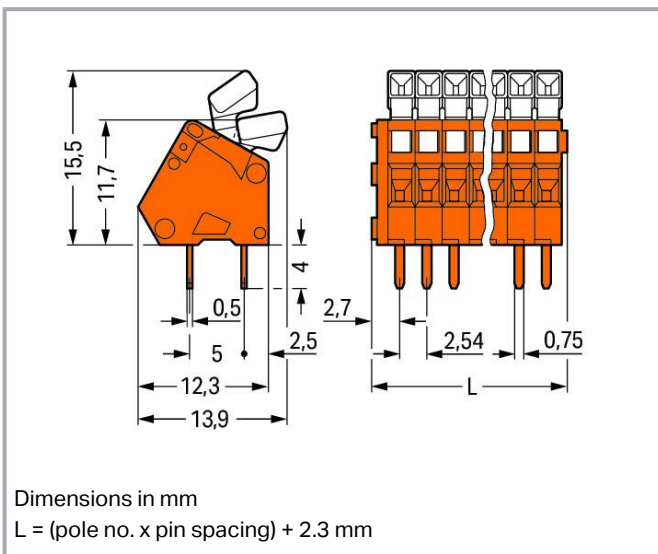
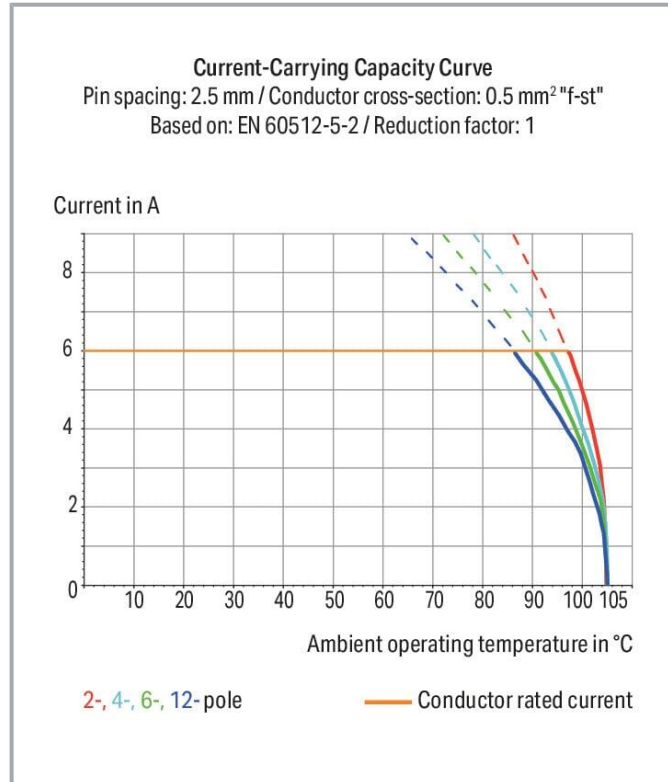


www.wago.com/233-512



i Picture differs from the item.

Color: ■



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

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Email: info.de@wago.com | Web: www.wago.com

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Item description

- PCB terminal strips with push-buttons and CAGE CLAMP® connection
- Double solder pins for high mechanical stability on PCB
- Ideal for in-the-field wiring thanks to simplified push-button actuation
- Convenient, tool-free operation

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 |

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

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| | |
|---------------------------------|-----|
| Rated current CSA (Use Group B) | 4 A |
|---------------------------------|-----|

Connection data

| | |
|----------------------------|----|
| Connection points | 12 |
| Total number of potentials | 12 |
| Number of connection types | 1 |
| Number of levels | 1 |

Connection 1

| | |
|---|---|
| Connection technology | CAGE CLAMP® |
| Actuation type | Push-button |
| 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 | 12 |

Physical data

| | |
|--------------------------------------|--------------------------|
| Pin spacing | 2.54 mm / 0.1 inches |
| Width | 32.78 mm / 1.291 inches |
| Height | 19.5 mm / 0.768 inches |
| Height from the surface | 15.5 mm / 0.61 inches |
| Depth | 13.9 mm / 0.547 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 | orange |
| 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 | 0.112 MJ |
| Weight | 4.9 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) | 140 (35) pcs |
| Packaging type | Box |
| Country of origin | CH |
| GTIN | 4045454050443 |
| Customs tariff number | 85369010000 |

Environmental Product Compliance

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

Approvals / Certificates





General approvals

Certificate



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

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| Logo | Approval | Additional Approval Text | name |
|--|---------------------------------------|--------------------------|----------------|
|  | CCA DEKRA Certification B.V. | EN 60998 | NTR NL 6946 |
|  | CCA DEKRA Certification B.V. | EN 60998 | 2153951.01 |
|  | 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- PDA |

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



BV
Bureau Veritas S.A.

IEC 60998

11915/DO
BVBUREAU
VERITAS

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.: 210-719

Operating tool; Blade: 2.5 x 0.4 mm; with a partially insulated shaft

www.wago.com/210-719

Marking accessories

Marking strip



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

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

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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

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 |

Downloads

Documentation

Additional Information

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

CAD/CAE-Data

PCB Design

Symbol and Footprint via Ultra Librarian 233-512 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

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



- 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 233-512

[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:

- 3D (stp)
- Altium
- CADSTAR
- Capture
- CircuitStudio
- CR-5000
- CR-8000

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

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- 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

CAE data

| | | |
|---------------------------|---------------------|--------------------------|
| ZUKEN Portal 233-512 | URL | Download |
| EPLAN Data Portal 233-512 | URL | Download |

CAD data

| | | |
|----------------------|---------------------|--------------------------|
| 2D/3D Models 233-512 | URL | Download |
|----------------------|---------------------|--------------------------|

Asset Administration Shell

| | | |
|------------------------------------|---------------------|--------------------------|
| Asset Administration Shell 233-512 | URL | Download |
|------------------------------------|---------------------|--------------------------|

Environmental Product Compliance

Compliance Search

Environmental Product Compliance 233-512

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

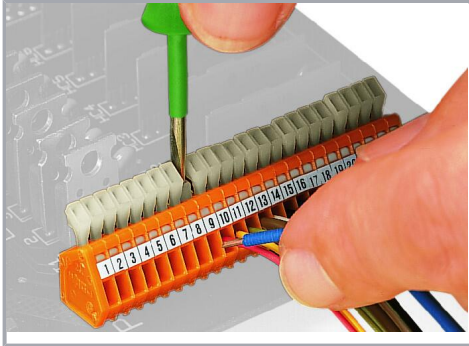
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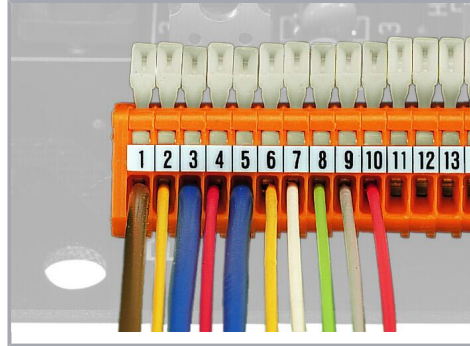
PCB terminal block; push-button; 0.5 mm²; Pin spacing 2.54 mm; 12-pole; CAGE CLAMP®; 0,50 mm²; orange

Installation Notes

Conductor termination



Inserting/removing a conductor.



Nominal cross-section: 0.5 mm² (20 AWG),
0.75 mm² (18 AWG) only in every other position

Marking



Labeling via self-adhesive marking strips or
factory direct marking.

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