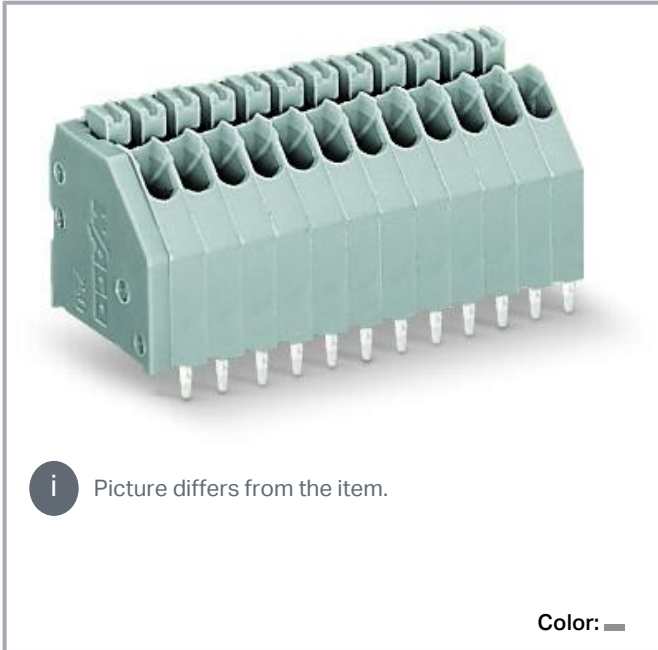# Data sheet | Item number: 250-319

PCB terminal block; push-button; 0.5 mm²; Pin spacing 2.5 mm; 19-pole;
Push-in CAGE CLAMP®; 0,50 mm²; gray
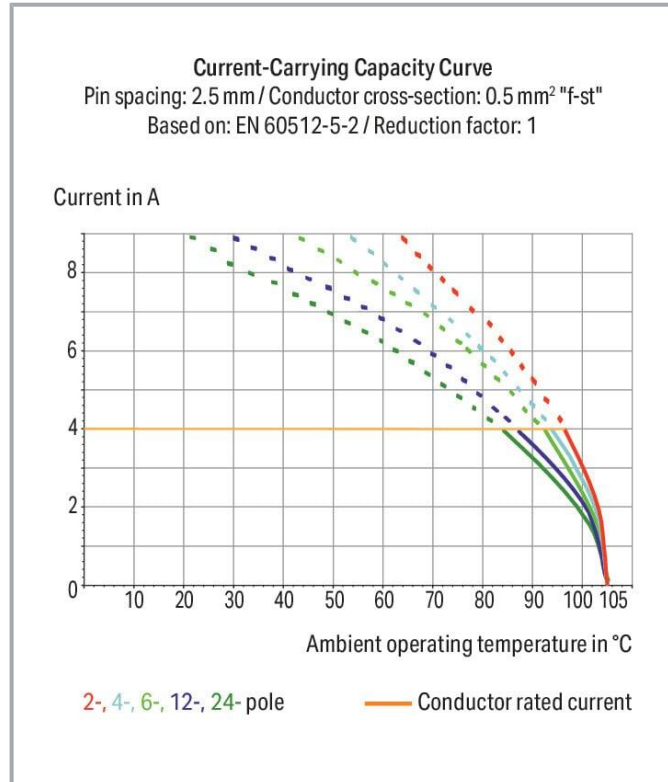
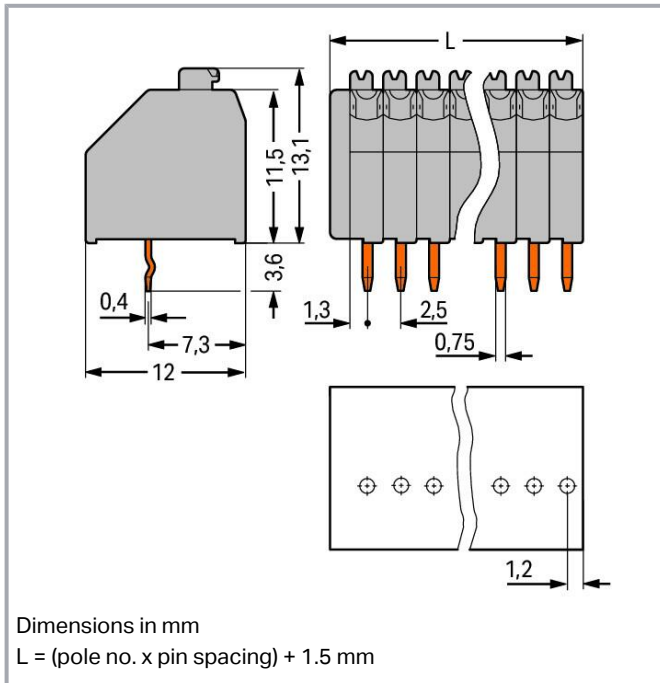www.wago.com/250-319



i Picture differs from the item.

Color:

## Current-Carrying Capacity Curve
Pin spacing: 2.5 mm / Conductor cross-section: 0.5 mm² "f-st"
Based on: EN 60512-5-2 / Reduction factor: 1

Current in A

Ambient operating temperature in °C

2-, 4-, 6-, 12-, 24- pole    ——— Conductor rated current

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

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Dimensions in mm
L = (pole no. x pin spacing) + 1.5 mm

## Item description

- Compact PCB terminal strips with push-buttons
- Push-in termination of solid conductors
- Termination/removal of fine-stranded conductors via push-buttons
- 45° conductor entry angle provides easy, space-saving wiring
- Custom color combinations
- Terminal strips also available with spacers upon request

## Data
## Notes

| | |
|---|---|
| Variants: | Other pole numbers |
| | Other colors |
| | Mixed-color PCB connector strips |
| | Terminal strips with spacers |
| | Direct marking |
| | Other versions (or variants) can be requested from WAGO Sales or configured at https://configurator.wago.com/. |

## Electrical data

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

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## Ratings per IEC/EN

| | |
|---|---|
| Ratings per | IEC/EN 60664-1 |
| Nominal voltage (III/3) | 100 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 | 4 A |
| Legend (ratings) | (III / 2) ≙ Overvoltage category III / Pollution degree 2 |

## Ratings per UL

| | |
|---|---|
| Approvals per | UL 1059 |
| Rated voltage UL (Use Group B) | 300 V |
| Rated current UL (Use Group B) | 5 A |
| Rated voltage UL (Use Group D) | 300 V |
| Rated current UL (Use Group D) | 5 A |

## Ratings per CSA

| | |
|---|---|
| Approvals per | CSA |
| Rated voltage CSA (Use Group B) | 300 V |
| Rated current CSA (Use Group B) | 2 A |
| Rated voltage CSA (Use Group D) | 300 V |
| Rated current CSA (Use Group D) | 2 A |

## Connection data

| | |
|---|---|
| Connection points | 19 |
| Total number of potentials | 19 |
| Number of connection types | 1 |
| Number of levels | 1 |

## Connection 1

| | |
|---|---|
| Connection technology | Push-in CAGE CLAMP® |
| Actuation type | Push-button |
| Solid conductor | 0.14 … 0.5 mm² / 24 … 20 AWG |
| Fine-stranded conductor | 0.2 … 0.5 mm² / 24 … 20 AWG |

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

| Conductor diameter | 0.4 … 0.8 mm / 24 … 20 AWG |
| --- | --- |
| Strip length | 8.5 … 9.5 mm / 0.33 … 0.37 inches |
| Conductor connection direction to PCB | 45 ° |
| Pole number | 19 |

## Physical data

| Pin spacing | 2.5 mm / 0.098 inches |
| --- | --- |
| Width | 49 mm / 1.929 inches |
| Height | 16.7 mm / 0.657 inches |
| Height from the surface | 13.1 mm / 0.516 inches |
| Depth | 12 mm / 0.472 inches |
| Solder pin length | 3.6 mm |
| Solder pin dimensions | 0.4 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 | 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 | Copper alloy |
| Contact plating | Tin |
| Fire load | 0.158 MJ |
| Weight | 6.6 g |

## Environmental requirements

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

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

## 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) | 80 (20) pcs |
| Packaging type | box |
| Country of origin | CH |
| GTIN | 4050821573258 |
| Customs tariff number | 85369010000 |

## Environmental Product Compliance

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

## Approvals / Certificates

### General approvals

| Logo | Approval | Additional Approval Text | Certificate name |
|---|---|---|---|
| | **CSA**<br>DEKRA Certification B.V. | C22.2 No. 158 | 1132097 |
| | **UL**<br>UL International Germany GmbH | UL 1059 | E45172 |

## Optional accessories

### Marking accessories

Marking strip

| | **Item no.: 210-331/250-207**<br>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<br>/250-207 |
|---|---|---|

**Item no.: 210-331/250-202**

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

| | 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.: 210-331/250-204** <br> 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.: 210-331/250-206** <br> 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 |

**Testing and measuring**

Testing accessories

| | **Item no.: 735-500** <br> WAGO Test pin; 1 mm Ø; 30 V AC / 60 V DC; CAT0; 1 A; 6 mm uninsulated; Test lead for soldering up to 0,5mm² | www.wago.com/735-500 |
|---|---|---|

**Tool**

Operating tool

| | **Item no.: 210-647** <br> Operating tool; Blade: 2.5 x 0.4 mm; with a partially insulated shaft; multicoloured | www.wago.com/210-647 |
|---|---|---|
| | **Item no.: 210-719** <br> Operating tool; Blade: 2.5 x 0.4 mm; with a partially insulated shaft | www.wago.com/210-719 |

## Downloads
## Documentation

**Additional Information**

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

## CAD/CAE-Data

**PCB Design**

| Symbol and Footprint via Ultra Librarian 250-319 | 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

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

- 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 250-319 | 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

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

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- 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 250-319 | URL | Download |
|---|---|---|

### CAE data

| ZUKEN Portal 250-319 | URL | Download |
|---|---|---|

### Asset Administration Shell

| Asset Administration Shell 250-319 | URL | Download |
|---|---|---|

## Environmental Product Compliance

### Compliance Search

| Environmental Product Compliance 250-319 | URL | Download |
|---|---|---|

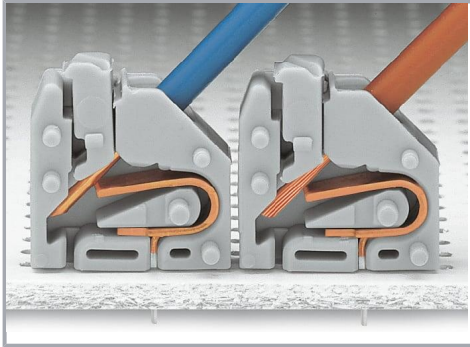Subject to changes. Please also observe the further product documentation!

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PCB terminal block; push-button; 0.5 mm²; Pin spacing 2.5 mm; 19-pole; Push-in
CAGE CLAMP®; 0,50 mm²; gray

## Installation Notes

### Conductor termination



Inserting solid conductors via push-in termination.
Inserting fine-stranded conductors via push-buttons, 250 Series – 3.5 mm pin spacing.
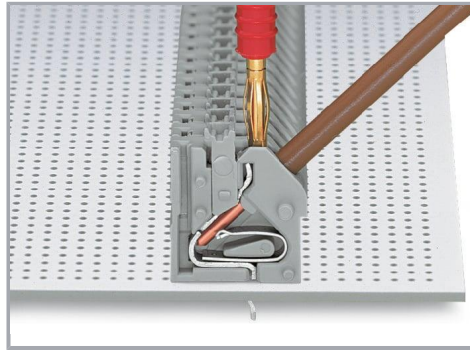
### Conductor termination



Space-saving wiring, 250 Series – 5 mm pin spacing.

### Testing

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

Do you have any questions about our products?
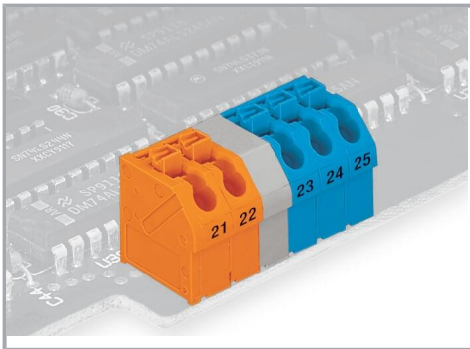We are always happy to take your call at +49 (571) 887-44222.

Testing with 11 mm Ø test pin, on the conductor, 250 Series – 2.5 … 3.5 mm pin spacing.
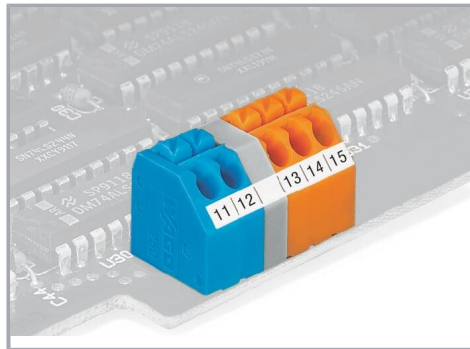


Testing with 2 mm Ø test plug, touch contact, 250 Series – 5 mm pin spacing.

**Marking**



Labeling via self-adhesive strips or direct marking. Mixed-color terminal strips (with or without spacer) are available upon request.



Labeling via self-adhesive strips or direct marking. Mixed-color terminal strips (with or without spacer) are available upon request.

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

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