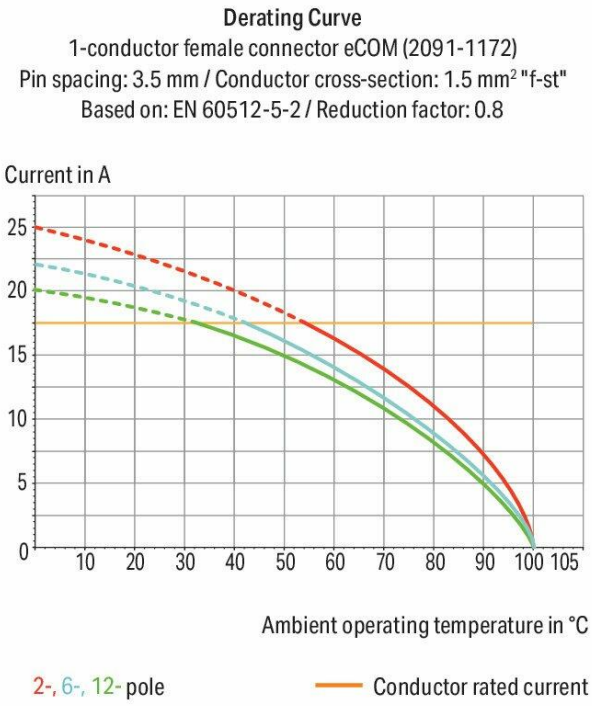
**Data sheet | Item number: 2091-1162/000-1000**

# 1-conductor THT female connector straight; push-button; Push-in CAGE CLAMP®; 1.5 mm²; Pin spacing 3.5 mm; 12-pole; 1.0 mm Ø solder pin; Gripping plate; direct marking; 1,50 mm²; light gray

www.wago.com/2091-1162/000-1000

Picture differs from the item.

**Color:**




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


WAGO GmbH & Co. KG
Hansastr. 27
32423 Minden
Phone: +49571 887-0 | Fax: +49571 887-169
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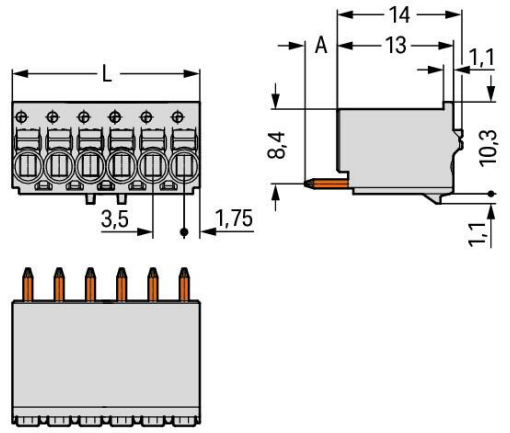
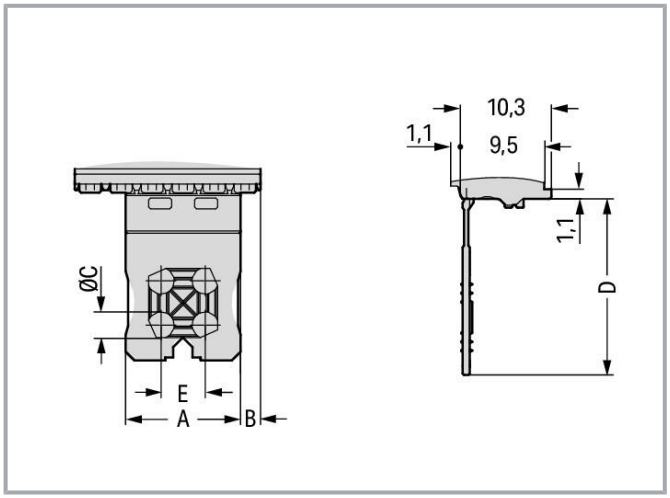



Dimensions in mm

L = pole no. x pin spacing

A = 3.6 mm THT solder pin

A = 2.4 mm THR solder pin




## Item description

- Universal connection for all conductor types
- Simple, push-in termination of solid and ferruled conductors
- Easy-to-use design does not require special tools
- Ability to wire while mated or unmated
- Integrated test ports for testing parallel to conductor entry
- Custom-installed solder pins

## Data

## Notes

Safety information

The **picoMAX® Pluggable Connection System** includes connectors without breaking capacity in accordance with DIN EN 61984. When used as intended, these connectors must not be connected /disconnected when live or under load. The circuit design should ensure header pins, which can be touched, are not live when unmated.

## Electrical data

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## Ratings per IEC/EN

| | |
|---|---|
| Ratings per | IEC/EN 60664-1 |
| Nominal voltage (III/3) | 160 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 | 10 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) | 10 A |
| Rated voltage UL (Use Group D) | 300 V |
| Rated current UL (Use Group D) | 10 A |

## Connection data

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

## Connection 1

| | |
|---|---|
| Connection technology | Push-in CAGE CLAMP® |
| Actuation type | Push-button |
| Actuation direction 1 | Operation parallel to conductor entry |
| Solid conductor | 0.2 … 1.5 mm² / 24 … 14 AWG |
| Fine-stranded conductor | 0.2 … 1.5 mm² / 24 … 14 AWG |
| Fine-stranded conductor; with insulated ferrule | 0.25 … 0.75 mm² |
| Fine-stranded conductor; with uninsulated ferrule | 0.25 … 1.5 mm² |
| Strip length | 8 … 9 mm / 0.31 … 0.35 inches |
| Conductor connection direction to PCB | 90 ° |
| Pole number | 12 |



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## Physical data

| | |
|---|---|
| Pin spacing | 3.5 mm / 0.138 inches |
| Width | 42 mm / 1.654 inches |
| Height | 38 mm / 1.496 inches |
| Depth | 11.4 mm / 0.449 inches |
| Solder pin length | 3.6 mm |
| Solder pin diameter | 1 mm |
| Drilled hole diameter with tolerance | 1.2 $^{(+0.1)}$ mm |

## Mechanical Data

| | |
|---|---|
| Variable coding | No |
| Design | With gripping plate |
| Anti-rotation protection | Yes |

## Plug-in connection

| | |
|---|---|
| Contact type (pluggable connector) | Female connector/socket |
| Connector (connection type) | for PCB |
| Mismating protection | No |
| Plugging without loss of pin spacing | Yes |
| Mating direction to the PCB | 90 ° |
| Locking of plug-in connection | none |

## PCB contact

| | |
|---|---|
| PCB contact | THT |

## Material Data

| | |
|---|---|
| Note (material data) | Information on material specifications can be found here |
| Color | light gray |
| Material group | I |
| Insulation material | Polyphthalamide (PPA GF) |
| Flammability class per UL94 | V0 |
| Clamping spring material | Chrome-nickel spring steel (CrNi) |
| Contact material | Electrolytic copper ($E_{Cu}$) |
| Contact plating | Tin |

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| | |
|---|---|
| Fire load | 0.033 MJ |
| Weight | 7.2 g |

## Environmental requirements

| | |
|---|---|
| Limit temperature range | -60 … +100 °C |
| Processing temperature | -35 … +60 °C |

## Commercial data

| | |
|---|---|
| eCl@ss 10.0 | 27-44-04-02 |
| eCl@ss 9.0 | 27-44-04-02 |
| ETIM 8.0 | EC002637 |
| ETIM 7.0 | EC002637 |
| PU (SPU) | 50 pcs |
| Packaging type | box |
| Country of origin | DE |
| GTIN | 4050821366898 |
| Customs tariff number | 85366990990 |

## Environmental Product Compliance

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

## Approvals / Certificates

### General approvals

| Logo | Approval | Additional Approval Text | Certificate name |
|---|---|---|---|
| | **CB**<br>DEKRA Certification B.V. | IEC 61984 | NL-49736 /A1 |
| | **CSA**<br>DEKRA Certification B.V. | C22.2 | 2362521 |
| | **KEMA/KEUR**<br>DEKRA Certification B.V. | EN 61984 | 71-102260 REV.1 |
| | **UL**<br>Underwriters Laboratories Inc. | UL 1977 | E45171 |

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| | | |
|---|---|---|
| UR<br>Underwriters Laboratories Inc. | UL 1059 | E45172 |

## Optional accessories

### Tool

Operating tool

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

### Testing and measuring

Testing accessories

**Item no.: 735-500**
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

### Coding

Coding

**Item no.: 2091-1610**
Coding key carrier; suitable for 3.5 mm pin spacing; orange
www.wago.com/2091-1610

## Downloads

### Documentation

#### Additional Information

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

## CAD/CAE-Data

#### PCB Design

| | | |
|---|---|---|
| Symbol and Footprint 2091-1162/000-1000<br>CAx data for your PCB design, consisting of "schematic symbols and PCB footprints", allow easy integration of the WAGO component into your development environment. | URL | Download |

**Supported formats:**

- Accel EDA 14 & 15
- Altium 6 to current version



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- 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

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

## Environmental Product Compliance

**Compliance Search**

| | | |
|---|---|---|
| Environmental Product Compliance 2091-1162/000-1000<br>1-conductor THT female connector straight; push-button; Push-in CAGE CLAMP®; 1.5 mm²; Pin spacing 3.5 mm; 12-pole; 1.0 mm Ø solder pin; Gripping plate; direct marking; 1,50 mm²; light gray | URL | Download |

## Installation Notes

**Conductor termination**



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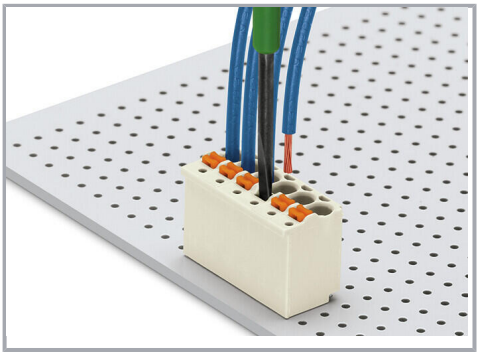
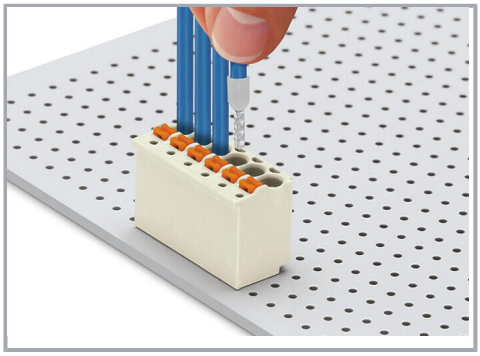


Terminating fine-stranded conductors and removing all conductor types via push-buttons.



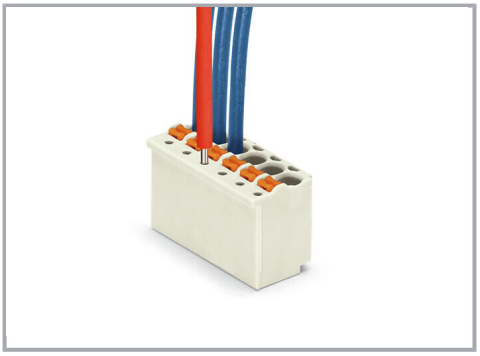
Solid and ferruled conductors are terminated by simply pushing them into unit.

## Marking


Pole marking via direct marking perpendicular to conductor entry.


Pole marking via factory direct marking.

## Testing



Testing via 1 mm Ø test pin – touch contact.