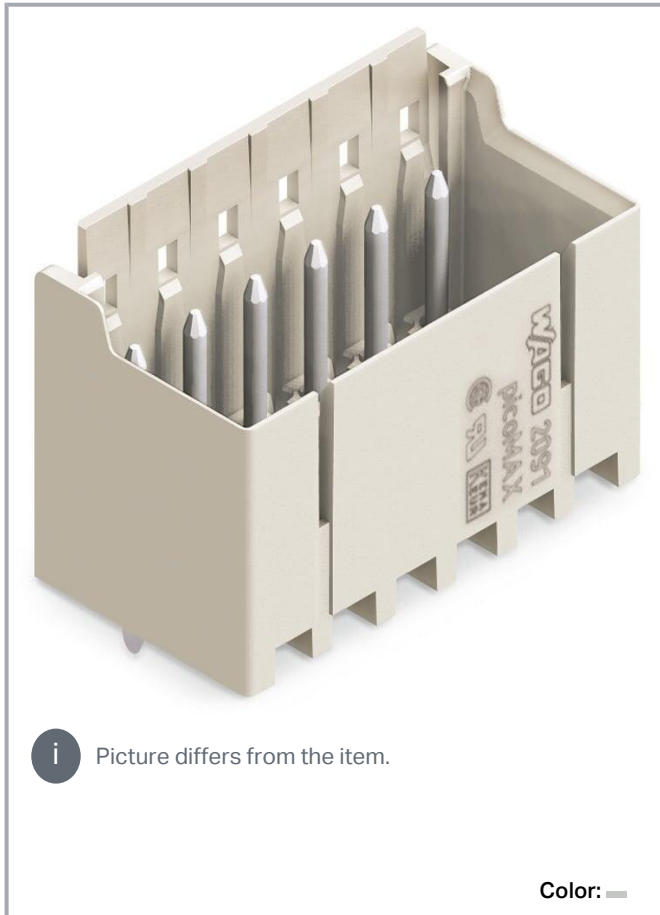


## Data sheet | Item number: 2091-1408

THT male header; 1.0 mm Ø solder pin; straight; Pin spacing 3.5 mm; 8-pole;  
light gray

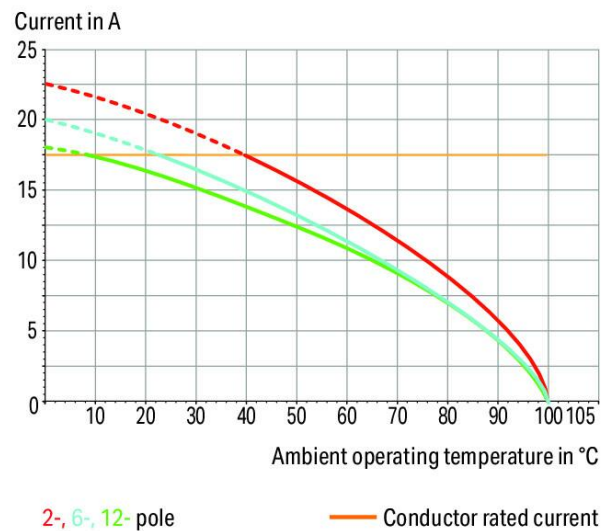
[www.wago.com/2091-1408](http://www.wago.com/2091-1408)



 Picture differs from the item.

Color: 

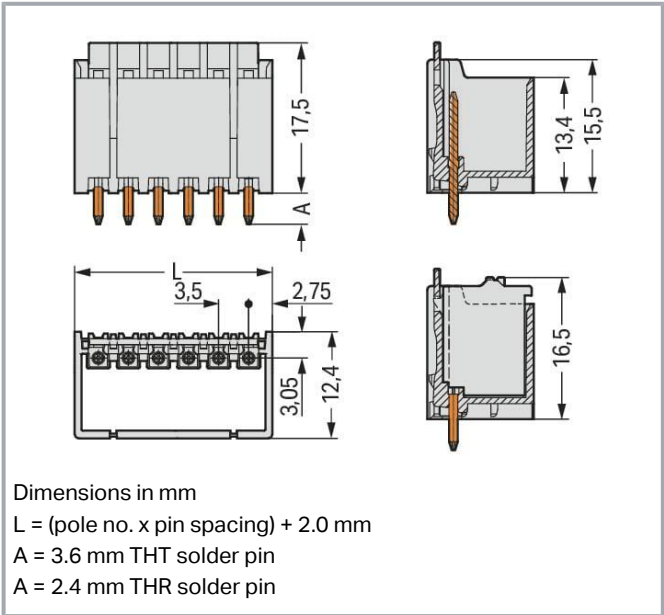
**Derating Curve**  
1-conductor female connector (2091-1122) with  
THT male header (2091-1402)  
Pin spacing: 3.5 mm / Conductor cross-section: 1.5 mm<sup>2</sup> "f-st"  
Based on: EN 60512-5-2 / Reduction factor: 0.8



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

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Item description

- Assembly of female connectors without loss of poles, allowing different functions to be divided within one male header ( $\geq 4$  poles)
- Coding pins inserted into the header interface prevent mismating, allowing subsequent coding in panel feedthrough applications
- The female connector is fully shrouded by the male header's housing, providing vibration resistance up to 20 g

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.

Variants:

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

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|                               |  |
|-------------------------------|--|
| 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) $\triangleq$ 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) | 10 A    |
| Rated voltage UL (Use Group D) | 300 V   |
| Rated current UL (Use Group D) | 10 A    |

### Connection data

|                            |   |
|----------------------------|---|
| Total number of potentials | 8 |
| Number of connection types | 1 |
| Number of levels           | 1 |

### Connection 1

|             |   |
|-------------|---|
| Pole number | 8 |
|-------------|---|

### Physical data

|                                      |                          |
|--------------------------------------|--------------------------|
| Pin spacing                          | 3.5 mm / 0.138 inches    |
| Width                                | 30 mm / 1.181 inches     |
| Height                               | 21.1 mm / 0.831 inches   |
| Height from the surface              | 17.5 mm / 0.689 inches   |
| Depth                                | 12.4 mm / 0.488 inches   |
| Solder pin length                    | 3.6 mm                   |
| Solder pin diameter                  | 1 mm                     |
| Drilled hole diameter with tolerance | 1.2 <sup>(+0.1)</sup> mm |

### Mechanical Data

|                 |     |
|-----------------|-----|
| Variable coding | Yes |
|-----------------|-----|

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|                          |     |
|--------------------------|-----|
| Anti-rotation protection | Yes |
|--------------------------|-----|

### Plug-in connection

|                                      |                     |
|--------------------------------------|---------------------|
| Contact type (pluggable connector)   | Male connector/plug |
| 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        | Locking latch       |

### 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   |
| Contact material            | Electrolytic copper (E <sub>Cu</sub> )                   |
| Contact plating             | Tin  |
| Fire load                   | 0.056 MJ   |
| Weight                      | 2.7 g  |

### Environmental requirements

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

### Commercial data

|               |                         |
|---------------|-------------------------|
| Product Group | 26 (picoMAX Connectors) |
| eCl@ss 10.0   | 27-44-04-02             |
| eCl@ss 9.0    | 27-44-04-02             |
| ETIM 8.0      | EC002637                |
| ETIM 7.0      | EC002637                |

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|                       |               |
|-----------------------|---------------|
| PU (SPU)              | 100 pcs       |
| Packaging type        | box           |
| Country of origin     | DE            |
| GTIN                  | 4050821161042 |
| Customs tariff number | 85366930000   |

## Environmental Product Compliance




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

## Approvals / Certificates

### General approvals

| Logo   | Approval                                     | Additional Approval Text | Certificate name |
|--|--|--------------------------|------------------|
|  | <b>CB</b><br>DEKRA Certification B.V.        | IEC 61984                | NL-49736 /A1     |
|    | <b>CSA</b><br>DEKRA Certification B.V.       | C22.2 No. 158            | 2362521          |
|   | <b>CSA</b><br>DEKRA Certification B.V.       | C22.2                    | 2362521          |
|  | <b>KEMA/KEUR</b><br>DEKRA Certification B.V. | EN 61984                 | 71-102260 REV.1  |
|  | <b>UL</b><br>Underwriters Laboratories Inc.  | UL 1977                  | E45171           |

## Counterpart




|   |   |  |
|---|---|--|
|  | <b>Item no.2091-1128</b><br>1-conductor female connector; push-button; Push-in CAGE CLAMP®; 1.5 mm²; Pin spacing 3.5 mm; 8-pole; 1,50 mm²; light gray                 | <a href="http://www.wago.com/2091-1128">www.wago.com/2091-1128</a>                   |
|  | <b>Item no.2091-1108</b><br>1-conductor female connector; push-button; Push-in CAGE CLAMP®; 1.5 mm²; Pin spacing 3.5 mm; 8-pole; Gripping plate; 1,50 mm²; light gray | <a href="http://www.wago.com/2091-1108">www.wago.com/2091-1108</a>                   |
|  | <b>Item no.2091-1108/000-1000</b>   | <a href="http://www.wago.com/2091-1108/000-1000">www.wago.com/2091-1108/000-1000</a> |

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|   |  |  |
|---|--|--|
|   | 1-conductor female connector; push-button; Push-in CAGE CLAMP®; 1.5 mm²; Pin spacing 3.5 mm; 8-pole; Gripping plate; direct marking; 1,50 mm²; light gray  | 1108/000-1000  |
|  | <b>Item no.2091-1108/000-5000</b><br>1-conductor female connector; push-button; Push-in CAGE CLAMP®; 1.5 mm²; Pin spacing 3.5 mm; 8-pole; Gripping plate; direct marking; 1,50 mm²; light gray                           | <a href="http://www.wago.com/2091-1108/000-5000">www.wago.com/2091-1108/000-5000</a> |
|  | <b>Item no.2091-1108/002-000</b><br>1-conductor female connector; push-button; Push-in CAGE CLAMP®; 1.5 mm²; Pin spacing 3.5 mm; 8-pole; Gripping plate sliding connector release; 1,50 mm²; light gray                  | <a href="http://www.wago.com/2091-1108/002-000">www.wago.com/2091-1108/002-000</a>   |
|  | <b>Item no.2091-1108/002-1000</b><br>1-conductor female connector; push-button; Push-in CAGE CLAMP®; 1.5 mm²; Pin spacing 3.5 mm; 8-pole; Gripping plate sliding connector release; direct marking; 1,50 mm²; light gray | <a href="http://www.wago.com/2091-1108/002-1000">www.wago.com/2091-1108/002-1000</a> |

Optional accessories

|   |   |  |
|---|---|--|
| Coding  |   |  |
| Coding  |   |  |
|  | <b>Item no.: 2091-1610</b><br>Coding key carrier; suitable for 3.5 mm pin spacing; orange | <a href="http://www.wago.com/2091-1610">www.wago.com/2091-1610</a> |

Downloads

Documentation

Additional Information

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

CAD/CAE-Data

CAD data

|                        |     |          |
|------------------------|-----|----------|
| 2D/3D Models 2091-1408 | URL | Download |
|------------------------|-----|----------|

PCB Design

|   |     |          |
|---|-----|----------|
| Symbol and Footprint via Ultra Librarian 2091-1408  | 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

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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
- Zuken eCADSTAR 2020 and 2021Zuken CR-5000 and CR-8000

---

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

Symbol and Footprint via SamacSys 2091-1408

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
- DEHDL

—  
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---

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- 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

|                        | URL | Download |
|------------------------|-----|----------|
| ZUKEN Portal 2091-1408 |     |          |

#### Asset Administration Shell

|                                      | URL | Download |
|--------------------------------------|-----|----------|
| Asset Administration Shell 2091-1408 |     |          |

## Environmental Product Compliance

#### Compliance Search

|  | URL | Download |
|--|-----|----------|
| Environmental Product Compliance 2091-1408   |     |          |
| THT male header; 1.0 mm Ø solder pin; straight; Pin spacing 3.5 mm; 8-pole; light gray |     |          |

## Installation Notes

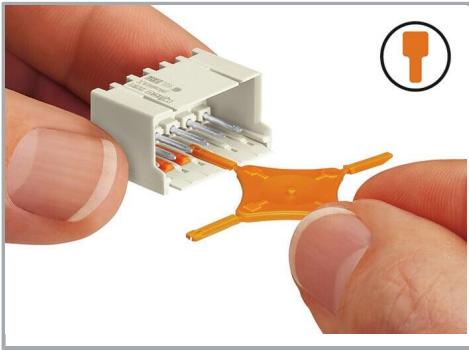
#### Coding

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Coding a male header (via coding key carrier and two keys for male header, see symbol).

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