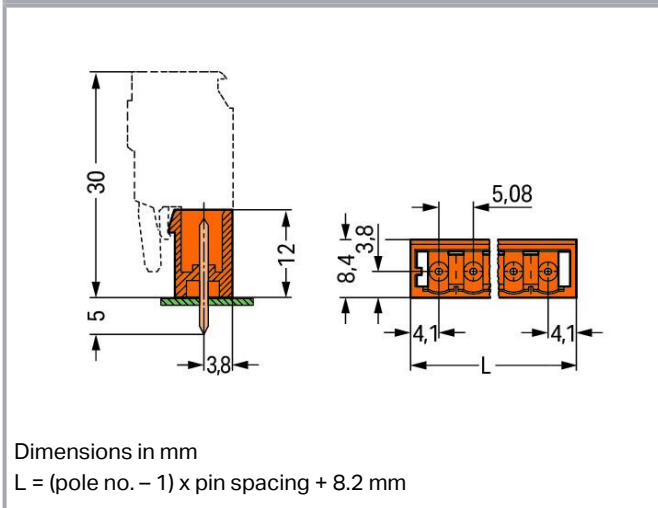
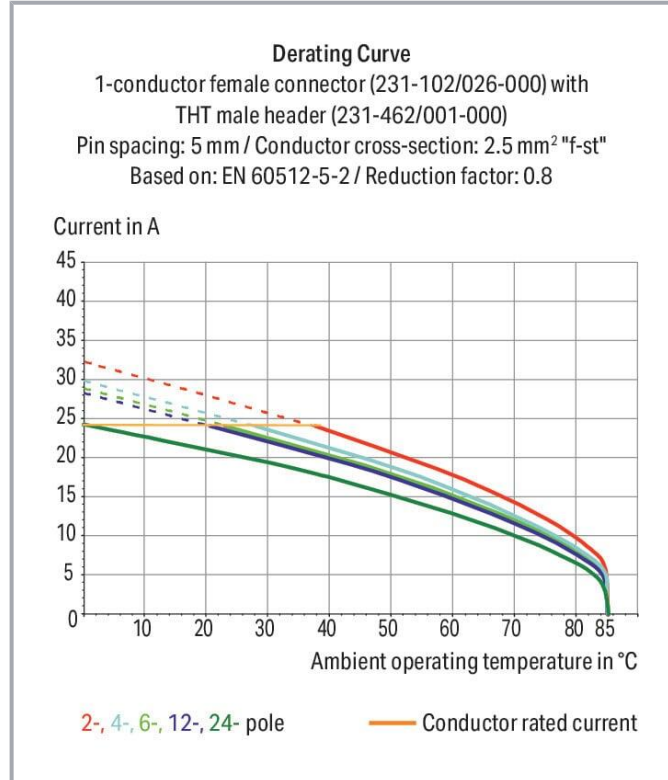


Data sheet | Item number: 231-378/001-000

THT male header; 1.2 x 1.2 mm solder pin; straight; Pin spacing 5.08 mm; 18-pole; orange



[www.wago.com/231-378/001-000](http://www.wago.com/231-378/001-000)



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

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## Item description

- Horizontal or vertical PCB mounting via straight or angled solder pins
- 1.2 x 1.2 mm solder pins allow nominal current up to 16 A, enhancing stability of shorter headers
- With coding fingers

## Data

### Notes

#### Safety information

The *MCS – MULTI 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. 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:

Other pole numbers  
3.8 mm pin projection for male headers with straight solder pins  
Gold-plated or partially gold-plated contact surfaces  
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)       | 250 V   |
| Rated impulse voltage (III/3) | 4 kV  |
| Rated voltage (III/2)         | 320 V   |
| Rated impulse voltage (III/2) | 4 kV  |
| Nominal voltage (II/2)        | 630 V   |
| Rated surge voltage (II/2)    | 4 kV  |
| Rated current                 | 16 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) | 15 A    |
| Rated voltage UL (Use Group D) | 300 V   |

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



|                                |      |
|--------------------------------|------|
| Rated current UL (Use Group D) | 10 A |
|--------------------------------|------|

### Ratings per UL 1977

|                         |       |
|-------------------------|-------|
| Rated voltage (UL 1977) | 600 V |
| Rated current UL 1977   | 15 A  |

### Ratings per CSA

|                                 |       |
|---------------------------------|-------|
| Approvals per                   | CSA   |
| Rated voltage CSA (Use Group B) | 300 V |
| Rated current CSA (Use Group B) | 15 A  |
| Rated voltage CSA (Use Group D) | 300 V |
| Rated current CSA (Use Group D) | 10 A  |

### Connection data

|                            |    |
|----------------------------|----|
| Total number of potentials | 18 |
| Number of connection types | 1  |
| Number of levels           | 1  |

### Connection 1

|             |    |
|-------------|----|
| Pole number | 18 |
|-------------|----|

### Physical data

|                                      |                          |
|--------------------------------------|--------------------------|
| Pin spacing                          | 5.08 mm / 0.2 inches     |
| Width                                | 94.56 mm / 3.723 inches  |
| Height                               | 17 mm / 0.669 inches     |
| Height from the surface              | 12 mm / 0.472 inches     |
| Depth                                | 8.4 mm / 0.331 inches    |
| Solder pin length                    | 5 mm                     |
| Solder pin dimensions                | 1.2 x 1.2 mm             |
| Drilled hole diameter with tolerance | 1.7 <sup>(+0.1)</sup> mm |

### Mechanical Data

|                          |     |
|--------------------------|-----|
| Variable coding          | Yes |
| Anti-rotation protection | Yes |

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



## Plug-in connection

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

## PCB contact

|                                     |  |
|-------------------------------------|--|
| PCB contact                         | THT                                      |
| Solder pin arrangement              | over the entire male connector (in-line) |
| Number of solder pins per potential | 1  |

## 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   |
| Contact material            | Electrolytic copper (E <sub>Cu</sub> )                   |
| Contact plating             | Tin  |
| Fire load                   | 0.1 MJ   |
| Weight                      | 6.7 g  |

## Environmental requirements

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

## Commercial data

|               |                        |
|---------------|------------------------|
| Product Group | 3 (Multi Conn. System) |
| 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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|                       |               |
|-----------------------|---------------|
| ECCN                  | NO DATA       |
| PU (SPU)              | 50 pcs        |
| Packaging type        | box           |
| Country of origin     | PL            |
| GTIN                  | 4044918930116 |
| Customs tariff number | 85366930000   |

## 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-39756/A1      |
|    | CCC<br>CQC                            | GB/T 13140.1             | CQC03003003013   |
|   | CSA<br>DEKRA Certification B.V.       | C22.2                    | 1466354          |
|  | KEMA/KEUR<br>DEKRA Certification B.V. | EN 61984                 | 71-121453        |
|  | UL<br>UL International Germany GmbH   | UL 1977                  | E45171           |
|  | UR<br>Underwriters Laboratories Inc.  | UL 1059                  | E45172           |


### Declarations of conformity and manufacturer's declarations

| Logo | Approval                      | Additional Approval Text | Certificate name |
|------|-------------------------------|--------------------------|------------------|
|      | Railway<br>WAGO GmbH & Co. KG | -                        | Railway Ready    |

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### Approvals for marine applications

| Logo   | Approval                                  | Additional Approval Text | Certificate name         |
|--|---|--------------------------|--------------------------|
|  | <b>ABS</b><br>American Bureau of Shipping | -                        | 19-<br>HG1869876-<br>PDA |

### Counterpart



Item no. 231-318/026-000

1-conductor female connector; CAGE CLAMP®; 2.5 mm<sup>2</sup>; Pin spacing 5.08 mm; 18-pole; 2,50 mm<sup>2</sup>; orange

[www.wago.com/231-318/026-000](http://www.wago.com/231-318/026-000)

### Optional accessories

#### Coding

Intermediate plate



Item no.: 231-500

Spacer; for formation of groups; light gray

[www.wago.com/231-500](http://www.wago.com/231-500)

Coding



Item no.: 231-129

Coding key; snap-on type; light gray

[www.wago.com/231-129](http://www.wago.com/231-129)

### Downloads

#### Documentation

#### Additional Information

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

### CAD/CAE-Data

#### CAD data

|                              |     |          |
|------------------------------|-----|----------|
| 2D/3D Models 231-378/001-000 | URL | Download |
|------------------------------|-----|----------|

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



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#### CAE data

|                                   |                     |                          |
|-----------------------------------|---------------------|--------------------------|
| EPLAN Data Portal 231-378/001-000 | <a href="#">URL</a> | <a href="#">Download</a> |
| ZUKEN Portal 231-378/001-000      | <a href="#">URL</a> | <a href="#">Download</a> |
| EPLAN Data Portal 231-378/001-000 | <a href="#">URL</a> | <a href="#">Download</a> |

#### PCB Design

|  |                     |                          |
|--|---------------------|--------------------------|
| Symbol and Footprint via Ultra Librarian 231-378/001-000 | <a href="#">URL</a> | <a href="#">Download</a> |
|--|---------------------|--------------------------|

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

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



- Zuken CadStar 3 and 4
- Zuken CR-5000 and CR-8000
- Zuken eCADSTAR 2020 and 2021 Zuken CR-5000 and CR-8000

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

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Symbol and Footprint via SamacSys 231-378/001-000

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
- 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

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

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### Asset Administration Shell

|  |                     |                          |
|--|---------------------|--------------------------|
| Asset Administration Shell 231-378/001-000 | <a href="#">URL</a> | <a href="#">Download</a> |
|--|---------------------|--------------------------|

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### Environmental Product Compliance

#### Compliance Search

|  |                     |                          |
|--|---------------------|--------------------------|
| Environmental Product Compliance 231-378/001-000 | <a href="#">URL</a> | <a href="#">Download</a> |
|--|---------------------|--------------------------|

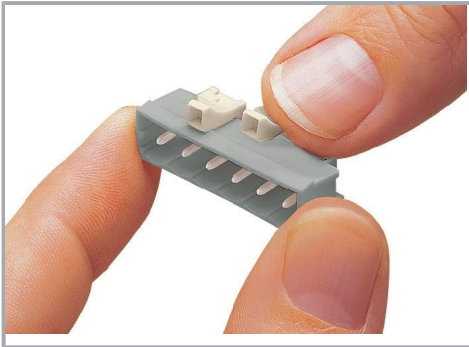
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THT male header; 1.2 x 1.2 mm solder pin; straight; Pin spacing 5.08 mm; 18-pole; orange

---

### Installation Notes

#### Coding



Coding a male header – fitting coding key(s).

### Product family

**MCS MIDI Classic**

[Show all products from the family](#)

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

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