

**Data sheet | Item number: 231-546/001-000**

THT male header; 1.0 x 1.0 mm solder pin; angled; Pin spacing 5.08 mm; 16-pole; orange



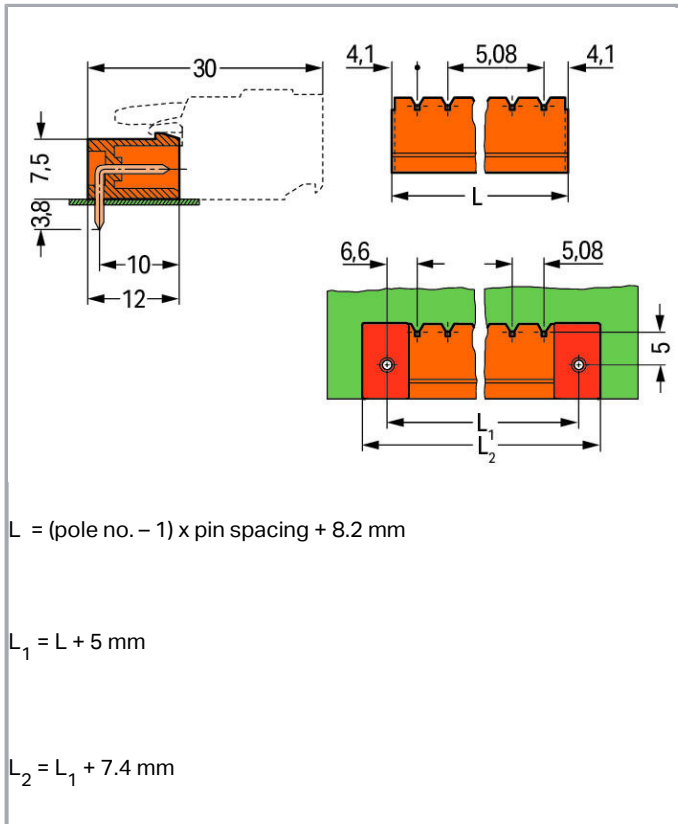
[www.wago.com/231-546/001-000](http://www.wago.com/231-546/001-000)



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
- Pin cross-section: 1 x 1 mm
- With coding fingers

### Safety information 1:

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. The circuit design should ensure header pins, which can be touched, are not live when unmated.

### Data

#### Electrical data

#### Ratings per IEC/EN 60664-1

| Ratings per             | IEC/EN 60664-1 |
|-------------------------|----------------|
| Nominal voltage (III/3) | 320 V          |

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|                             |   |
|-----------------------------|---|
| Rated surge voltage (III/3) | 4 kV  |
| Rated voltage (III/2)       | 320 V   |
| Rated surge voltage (III/2) | 4 kV  |
| Nominal voltage (II/2)      | 630 V   |
| Rated surge voltage (II/2)  | 4 kV  |
| Rated current               | 12 A  |
| Legend (ratings)            | (III / 2) $\hat{=}$ Overvoltage category III / Pollution degree 2 |

### 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  |

### Approvals per UL 1977

|                       |       |
|-----------------------|-------|
| Rated voltage UL 1977 | 600 V |
| Rated current UL 1977 | 10 A  |

### Approvals per CSA

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

### Connection data

|                            |    |
|----------------------------|----|
| Pole No.                   | 16 |
| Total number of potentials | 16 |
| Number of connection types | 1  |
| Number of levels           | 1  |

### Geometrical Data

|                         |                      |
|-------------------------|----------------------|
| Pin spacing             | 5,08 mm / 0.2 inch   |
| Width                   | 84,4 mm / 3.323 inch |
| Height                  | 12,2 mm / 0.48 inch  |
| Height from the surface | 8,4 mm / 0.331 inch  |
| Depth                   | 12 mm / 0.472 inch   |

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|                                      |                          |
|--------------------------------------|--------------------------|
| Solder pin length                    | 3.8 mm                   |
| Solder pin dimensions                | 1 x 1 mm                 |
| Drilled hole diameter with tolerance | 1,4 <sup>(+0,1)</sup> mm |

### Plug connection

|                                    |                     |
|------------------------------------|---------------------|
| Contact type (pluggable connector) | Male connector/plug |
| Connector (connection type)        | for PCB             |
| Mismating protection               | No                  |
| Mating direction to the PCB        | 0°                  |

### PCB contact

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

### Material Data

|                             |  |
|-----------------------------|--|
| Color                       | orange                                 |
| Material group              | I                                      |
| Insulation material         | Polyamide 66 (PA 66)                   |
| Flammability class per UL94 | V0                                     |
| Contact material            | Electrolytic copper (E <sub>Cu</sub> ) |
| Contact plating             | tin-plated                             |
| Fire load                   | 0.094 MJ                               |
| Weight                      | 5.3 g                                  |

### Environmental Requirements

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

### Commercial data

|                       |                        |
|-----------------------|------------------------|
| Product Group         | 3 (Multi Conn. System) |
| Packaging type        | BOX                    |
| Country of origin     | DE                     |
| GTIN                  | 4044918867436          |
| Customs tariff number | 85366990990            |



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## Approvals / Certificates



### Country specific Approvals

| Logo   | Approval                              | Additional Approval Text | Certificate name |
|--|---------------------------------------|--------------------------|------------------|
|  | CSA<br>DEKRA Certification B.V.       | C22.2                    | 1466354          |
|  | KEMA/KEUR<br>DEKRA Certification B.V. | EN 61984                 | 2190761.01       |




### Ship Approvals

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











### UL-Approvals

| Logo   | Approval                             | Additional Approval Text | Certificate name |
|--|--------------------------------------|--------------------------|------------------|
|  | UL<br>UL International Germany GmbH  | UL 1977                  | E45171           |
|  | UR<br>Underwriters Laboratories Inc. | UL 1059                  | E45172           |

### Counterpart

|  |   |  |
|--|---|--|
|  | Item no.231-316/026-000<br>1-conductor female plug; 2.5 mm <sup>2</sup> ; Pin spacing 5.08 mm; 16-pole; 2,50 mm <sup>2</sup> ; orange       | <a href="http://www.wago.com/231-316/026-000">www.wago.com/231-316/026-000</a>   |
|  | Item no.231-2316/026-000<br>2-conductor female connector; 2.5 mm <sup>2</sup> ; Pin spacing 5.08 mm; 16-pole; 2,50 mm <sup>2</sup> ; orange | <a href="http://www.wago.com/231-2316/026-000">www.wago.com/231-2316/026-000</a> |
|  | Item no.231-2316/037-000  | <a href="http://www.wago.com/231-2316">www.wago.com/231-2316</a>                 |

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|  |   |  |
|--|---|--|
|  | 2-conductor female connector; Locking lever; 2.5 mm <sup>2</sup> ; Pin spacing 5.08 mm; 16-pole; 2,50 mm <sup>2</sup> ; orange  | /037-000   |
|    | <b>Item no.2231-316/026-000</b><br>1-conductor female plug; push-button; 2.5 mm <sup>2</sup> ; Pin spacing 5.08 mm; 16-pole; 2,50 mm <sup>2</sup> ; orange                            | <a href="http://www.wago.com/2231-316/026-000">www.wago.com/2231-316/026-000</a> |
|    | <b>Item no.2231-316/031-000</b><br>1-conductor female plug; push-button; clamping collar; 2.5 mm <sup>2</sup> ; Pin spacing 5.08 mm; 16-pole; 2,50 mm <sup>2</sup> ; orange           | <a href="http://www.wago.com/2231-316/031-000">www.wago.com/2231-316/031-000</a> |
|    | <b>Item no.2231-316/037-000</b><br>1-conductor female plug; push-button; Locking lever; 2.5 mm <sup>2</sup> ; Pin spacing 5.08 mm; 16-pole; 2,50 mm <sup>2</sup> ; orange             | <a href="http://www.wago.com/2231-316/037-000">www.wago.com/2231-316/037-000</a> |
|    | <b>Item no.231-316/027-000</b><br>1-conductor female plug; clamping collar; 2.5 mm <sup>2</sup> ; Pin spacing 5.08 mm; 16-pole; 2,50 mm <sup>2</sup> ; orange                         | <a href="http://www.wago.com/231-316/027-000">www.wago.com/231-316/027-000</a>   |
|    | <b>Item no.2231-316/102-000</b><br>1-conductor female plug; push-button; with integrated end plate; 2.5 mm <sup>2</sup> ; Pin spacing 5.08 mm; 16-pole; 2,50 mm <sup>2</sup> ; orange | <a href="http://www.wago.com/2231-316/102-000">www.wago.com/2231-316/102-000</a> |
|    | <b>Item no.231-316/037-000</b><br>1-conductor female plug; Locking lever; 2.5 mm <sup>2</sup> ; Pin spacing 5.08 mm; 16-pole; 2,50 mm <sup>2</sup> ; orange                           | <a href="http://www.wago.com/231-316/037-000">www.wago.com/231-316/037-000</a>   |
|   | <b>Item no.231-316/031-000</b><br>1-conductor female plug; clamping collar; 2.5 mm <sup>2</sup> ; Pin spacing 5.08 mm; 16-pole; 2,50 mm <sup>2</sup> ; orange                         | <a href="http://www.wago.com/231-316/031-000">www.wago.com/231-316/031-000</a>   |
|  | <b>Item no.231-316/102-000</b><br>1-conductor female plug; with integrated end plate; 2.5 mm <sup>2</sup> ; Pin spacing 5.08 mm; 16-pole; 2,50 mm <sup>2</sup> ; orange               | <a href="http://www.wago.com/231-316/102-000">www.wago.com/231-316/102-000</a>   |
|  | <b>Item no.232-316/026-000</b><br>1-conductor female plug; angled; 2.5 mm <sup>2</sup> ; Pin spacing 5.08 mm; 16-pole; 2,50 mm <sup>2</sup> ; orange                                  | <a href="http://www.wago.com/232-316/026-000">www.wago.com/232-316/026-000</a>   |
|  | <b>Item no.232-416/026-000</b><br>1-conductor female plug; angled; 2.5 mm <sup>2</sup> ; Pin spacing 5.08 mm; 16-pole; 2,50 mm <sup>2</sup> ; orange                                  | <a href="http://www.wago.com/232-416/026-000">www.wago.com/232-416/026-000</a>   |

## Compatible products

### Marking accessories



**Item no.: 210-833**  
Marking strips; on reel; 6 mm wide; plain; Self-adhesive; white

[www.wago.com/210-833](http://www.wago.com/210-833)

**Item no.: 210-834**

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



Marking strips; on reel; 5 mm wide; plain; Self-adhesive; white

[www.wago.com/210-834](http://www.wago.com/210-834)

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#### Coding



Item no.: 231-129

Coding key; snap-on type; light gray

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



Item no.: 231-500

Spacer; for formation of groups; light gray

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

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## Downloads

### CAD/CAE-Data

#### CAD data

2D/3D Models 231-546/001-000

[URL](#)

[Download](#)

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#### CAE data

EPLAN Data Portal 231-546/001-000

[URL](#)

[Download](#)

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#### PCB Design

Symbol and Footprint 231-546/001-000

[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:

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

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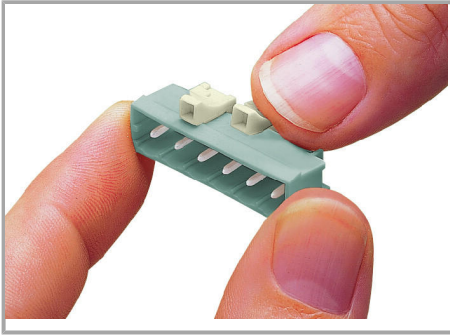
- STL
- 3D STEP
- TARGET 3001!
- View Logic ViewDraw
- Quadcept
- Zuken CadStar 3 and 4
- Zuken CR-5000 and CR-8000

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

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## 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!