

**Data sheet | Item number: 231-462/001-000**

Male header; 2-pole; THT; 1.2 x 1.2 mm solder pin; angled; pin spacing 5 mm;  
gray



[www.wago.com/231-462\\_001-000](http://www.wago.com/231-462_001-000)



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

WAGO Corporation  
Germantown, WI 53022  
Phone: 1-800-DIN-RAIL (346-7245) | Fax: (262) 255-6222  
Email: [info.us@wago.com](mailto:info.us@wago.com) | Web: [www.wago.us](http://www.wago.us)

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We are always happy to take your call at +49 (571) 887-44222.



Dimensions in mm

$$L = (\text{pole no.} - 1) \times \text{pin spacing} + 8.2 \text{ mm}$$

$$L_1 = L + 5 \text{ mm}$$

$$L_2 = L_1 + 7.4 \text{ mm}$$

### 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

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## Data

### Notes

#### 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.

#### 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

### IEC Approvals

| Ratings per                 | IEC/EN 60664-1   |
|-----------------------------|--|
| Rated voltage (III / 3)     | 250 V  |
| 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               | 16 A   |
| Legend (ratings)            | (III / 2) $\triangleq$ Overvoltage category III / Pollution degree 2 |

### UL Approvals

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

### Ratings per UL

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

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## CSA Approvals

| 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 | 2 |
| Number of connection types | 1 |
| Number of levels           | 1 |

## Connection 1

|                 |   |
|-----------------|---|
| Number of poles | 2 |
|-----------------|---|

## Physical data

|                                      |                          |
|--------------------------------------|--------------------------|
| Pin spacing                          | 5 mm / 0.197 inch        |
| Width                                | 13.2 mm / 0.52 inch      |
| Height                               | 12.2 mm / 0.48 inch      |
| Height from the surface              | 8.4 mm / 0.331 inch      |
| Depth                                | 12 mm / 0.472 inch       |
| Solder pin length                    | 3.8 mm                   |
| Solder pin dimensions                | 1.2 x 1.2 mm             |
| Drilled hole diameter with tolerance | 1.7 <sup>(+0.1)</sup> mm |

## Plug-in connection

|                                    |                     |
|------------------------------------|---------------------|
| Contact type (pluggable connector) | Male connector/plug |
| Connector (connection type)        | for PCB             |
| Mismating protection               | No                  |
| Mating direction to the PCB        | 0°                  |
| Locking of plug-in connection      | Without             |

## PCB contact

|                        |  |
|------------------------|--|
| PCB Contact            | THT                                      |
| Solder pin arrangement | over the entire male connector (in-line) |

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

|                                     |   |
|-------------------------------------|---|
| Number of solder pins per potential | 1 |
|-------------------------------------|---|

### Material data

|                             |  |
|-----------------------------|--|
| Color                       | gray                                   |
| Material group              | I                                      |
| Insulation material         | Polyamide (PA66)                       |
| Flammability class per UL94 | V0                                     |
| Contact material            | Electrolytic copper (E <sub>Cu</sub> ) |
| Contact plating             | tin-plated                             |
| Fire load                   | 0.016 MJ                               |
| Weight                      | 0.9 g                                  |

### Environmental requirements


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

### Commercial data

|                       |                        |
|-----------------------|------------------------|
| Product Group         | 3 (Multi Conn. System) |
| PU (SPU)              | 200 Stück              |
| Packaging type        | box                    |
| Country of origin     | PL                     |
| GTIN                  | 4044918930314          |
| Customs tariff number | 8536694040             |

### Approvals / Certificates

#### Country specific Approvals

| Logo   | Approval                               | Additional Approval Text | Certificate name |
|--|--|--------------------------|------------------|
|  | <b>CB</b><br>DEKRA Certification B.V.  | IEC 61984                | NL-39756         |
|  | <b>CSA</b><br>DEKRA Certification B.V. | C22.2                    | LR 18677-25      |

#### Ship Approvals

| Logo | Approval   | Additional Approval Text | Certificate name |
|------|------------|--------------------------|------------------|
|      | <b>ABS</b> | -                        | 19-              |

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American Bureau of Shipping

HG1869876-PDA



**BV**  
Bureau Veritas S.A.

IEC 60998



11915/DO  
BV

**DNV GL**  
Det Norske Veritas, Germanischer Lloyd

-

TAE000016Z

### UL-Approvals

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

### Counterpart



**Item no.231-102/026-000**  
Female plug; 2-pole; 12 AWG max; pin spacing 5 mm; 1 conductor per pole; gray

[www.wago.com/231-102/026-000](http://www.wago.com/231-102/026-000)

### 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)

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**Downloads**

**Documentation**

**Additional Information**

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

**CAD files**

**CAD data**

|                              |     |          |
|------------------------------|-----|----------|
| 2D/3D Models 231-462/001-000 | URL | Download |
|------------------------------|-----|----------|

**CAE data**

|                                   |     |          |
|-----------------------------------|-----|----------|
| EPLAN Data Portal 231-462/001-000 | URL | Download |
|-----------------------------------|-----|----------|

|                                   |     |          |
|-----------------------------------|-----|----------|
| EPLAN Data Portal 231-462/001-000 | URL | Download |
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|                              |     |          |
|------------------------------|-----|----------|
| ZUKEN Portal 231-462/001-000 | URL | Download |
|------------------------------|-----|----------|

**PCB Design**

|                                      |     |          |
|--------------------------------------|-----|----------|
| Symbol and Footprint 231-462/001-000 | 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

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- 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

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## Environmental Product Compliance

### Compliance Search

Environmental Product Compliance 231-462/001-000

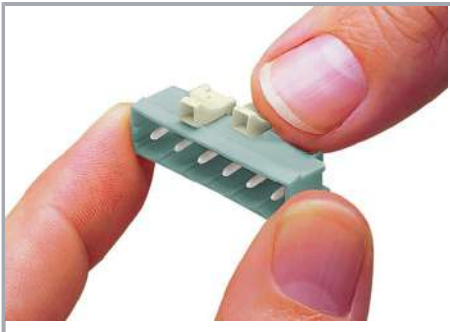
[URL](#)

[Download](#)

THT male header; 1.2 x 1.2 mm solder pin; angled; Pin spacing 5 mm; 2-pole; gray

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## Installation Notes



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

## Product family

**MCS MIDI Classic**

[Show all products from the family](#)

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