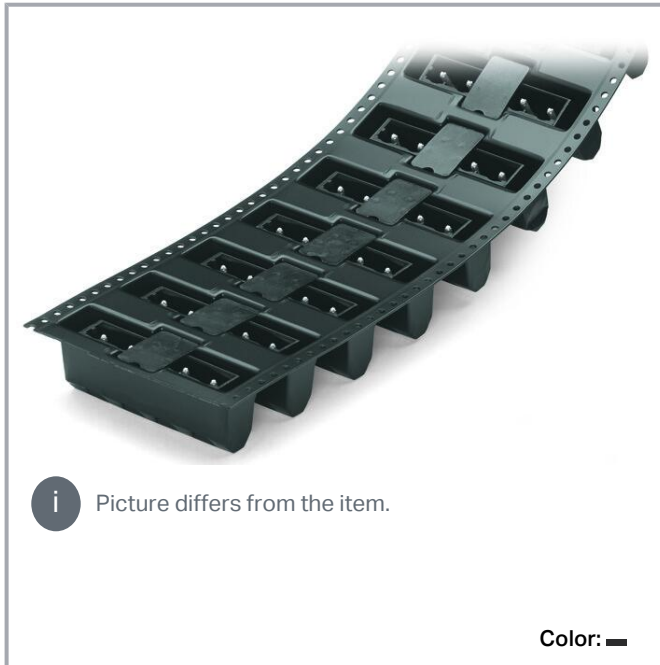


# Data sheet | Item number: 231-262/001-000/105-604/997-405

THR male header; 1.2 x 1.2 mm solder pin; straight; in tape-and-reel packaging; Pin spacing 7.5 mm; 2-pole; black

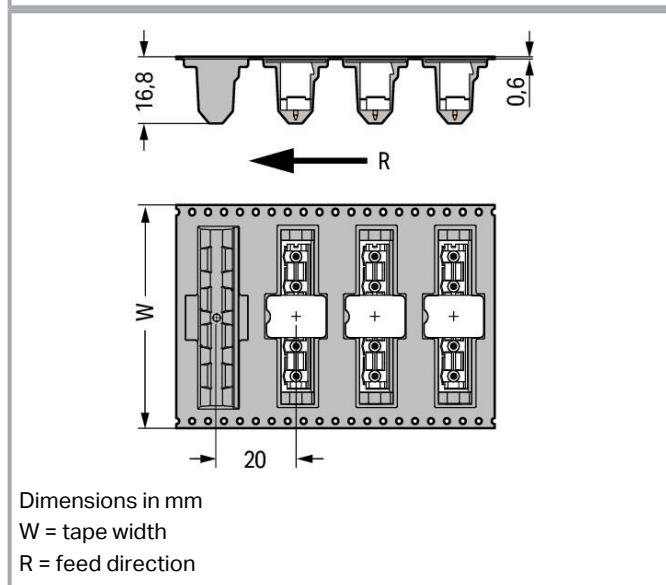
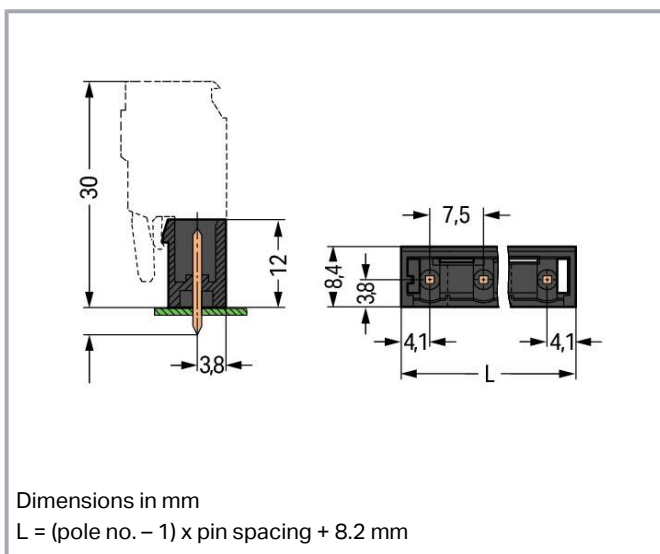
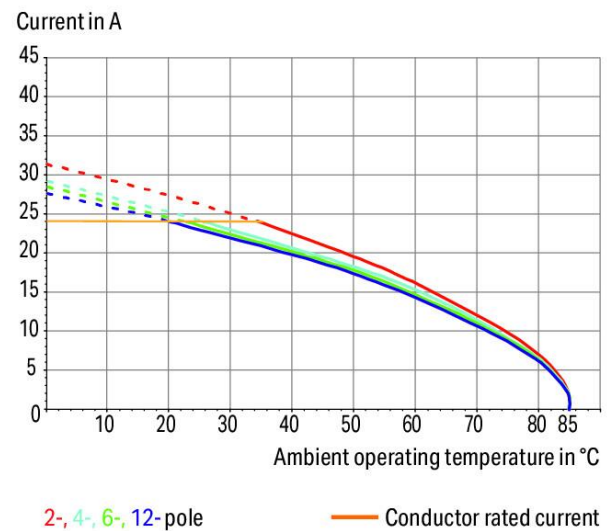
[www.wago.com/231-262/001-000/105-604/997-405](http://www.wago.com/231-262/001-000/105-604/997-405)



 Picture differs from the item.

Color: 

**Derating Curve**  
1-conductor female connector (231-202/026-000) with  
THR male header (231-832/001-000/105-604)  
Pin spacing: 7.5 mm / Conductor cross-section: 2.5 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

- THR male headers for reflow soldering in SMT applications
- Available in tape-and-reel packaging for automated pick-and-place PCB assembly
- 1.2 x 1.2 mm solder pins allow nominal current up to 16 A, enhancing stability of shorter headers
- Also available in bulk packaging for manual placement
- Male headers may be mounted horizontally or vertically
- 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  
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)       | 500 V                                                     |
| Rated impulse voltage (III/3) | 6 kV                                                      |
| Rated voltage (III/2)         | 630 V                                                     |
| Rated impulse voltage (III/2) | 6 kV                                                      |
| Nominal voltage (II/2)        | 1000 V                                                    |
| Rated surge voltage (II/2)    | 6 kV                                                      |
| Rated current                 | 16 A                                                      |
| Legend (ratings)              | (III / 2) ≙ Overvoltage category III / Pollution degree 2 |

### Ratings per UL

|               |         |
|---------------|---------|
| Approvals per | UL 1059 |
|---------------|---------|

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|                                |       |
|--------------------------------|-------|
| 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  |

### 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) | 10 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

|             |   |
|-------------|---|
| Pole number | 2 |
|-------------|---|

### Physical data

|                                          |                          |
|------------------------------------------|--------------------------|
| Pin spacing                              | 7.5 mm / 0.295 inches    |
| Width                                    | 15.7 mm / 0.618 inches   |
| Height                                   | 14.4 mm / 0.567 inches   |
| Height from the surface                  | 12 mm / 0.472 inches     |
| Depth                                    | 8.4 mm / 0.331 inches    |
| Solder pin length                        | 2.4 mm                   |
| Solder pin dimensions                    | 1.2 x 1.2 mm             |
| Plated through-hole diameter (THR)       | 1.7 <sup>(+0.1)</sup> mm |
| Reel diameter of tape-and-reel packaging | 330 mm                   |
| Tape width                               | 32 mm                    |

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## Mechanical data

|                          |     |
|--------------------------|-----|
| Variable coding          | Yes |
| 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 | No                  |
| Mating direction to the PCB          | 90 °                |
| Locking of plug-in connection        | none                |

## PCB contact

|                                     |                                          |
|-------------------------------------|------------------------------------------|
| PCB contact                         | THR                                      |
| 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                       | black                                                    |
| 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                   | 0.029 MJ                                                 |
| Weight                      | 0.9 g                                                    |
| MSL per J-STD 020D          | 1                                                        |

## Environmental requirements

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

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## 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      |
| ECCN                  | NO DATA       |
| PU (SPU)              | 170 pcs       |
| Packaging type        | bag           |
| Country of origin     | DE            |
| GTIN                  | 4050821004042 |
| Customs tariff number | 85366930000   |

## Environmental Product Compliance

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

## Approvals / Certificates

### General approvals

| Logo                                                                               | Approval                             | Additional Approval Text | Certificate name |
|------------------------------------------------------------------------------------|--------------------------------------|--------------------------|------------------|
|  | CSA<br>DEKRA Certification B.V.      | C22.2                    | 1466354          |
|  | UR<br>Underwriters Laboratories Inc. | UL 1059                  | E45172           |

## Counterpart



Item no. 231-202/026-000

1-conductor female connector; CAGE CLAMP®; 2.5 mm²; Pin spacing 7.5 mm; 2-pole; 2,50 mm²; gray

[www.wago.com/231-202/026-000](http://www.wago.com/231-202/026-000)

## Optional accessories

### Coding

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Intermediate plate

**Item no.: 231-500**

Spacer; for formation of groups; light gray

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

## Downloads

### Documentation

#### Additional Information

|                        |             |          |          |
|------------------------|-------------|----------|----------|
| Technical Section      | 2019 年4月3 日 | pdf      | Download |
| Technical explanations |             | 2.1 MB   |          |
| THR Soldering Process  |             | pdf      | Download |
|                        |             | 548.2 kB |          |

## CAD/CAE-Data

### CAD data

|                                              |     |          |
|----------------------------------------------|-----|----------|
| 2D/3D Models 231-262/001-000/105-604/997-405 | URL | Download |
|----------------------------------------------|-----|----------|

### Asset Administration Shell

|                                                            |     |          |
|------------------------------------------------------------|-----|----------|
| Asset Administration Shell 231-262/001-000/105-604/997-405 | URL | Download |
|------------------------------------------------------------|-----|----------|

### PCB Design

|                                                                   |     |          |
|-------------------------------------------------------------------|-----|----------|
| Symbol and Footprint via SamacSys 231-262/001-000/105-604/997-405 | 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

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- 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

Symbol and Footprint via Ultra Librarian 231-262/001-000/105-604/997-405

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
- 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

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- 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

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## Environmental Product Compliance

### Compliance Search

Environmental Product Compliance 231-262/001-000/105-604/997-405

URL

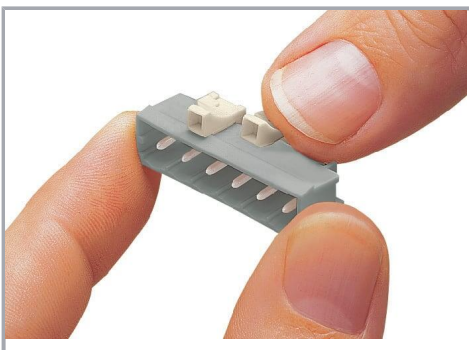
Download

THR male header; 1.2 x 1.2 mm solder pin; straight; in tape-and-reel packaging; Pin spacing 7.5 mm; 2-pole; black

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## Installation Notes

### Coding



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

## Product family

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**MCS MIDI Classic**

[Show all products from the family](#)

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