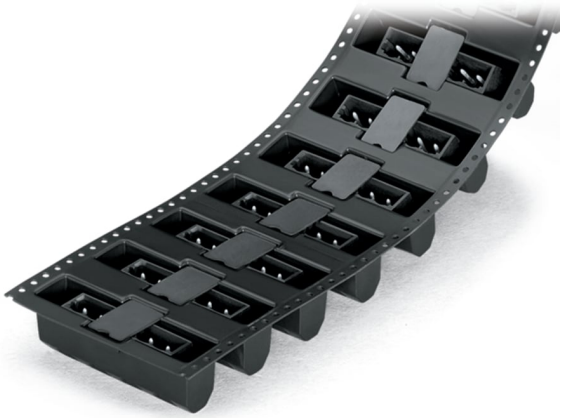
# Data Sheet | Item Number: 231-168/001-000/105-604/997-407

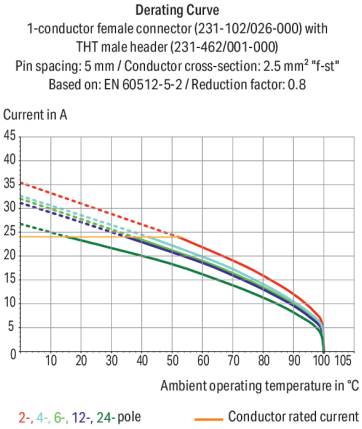
THR male header; 1.2 x 1.2 mm solder pin; straight; in tape-and-reel packaging; Pin spacing 5 mm; 8-pole; black

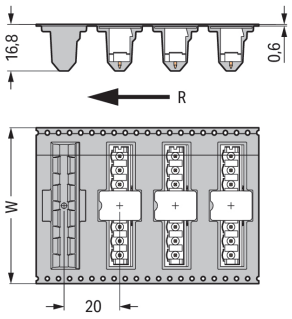
https://www.wago.com/231-168/001-000/105-604/997-407



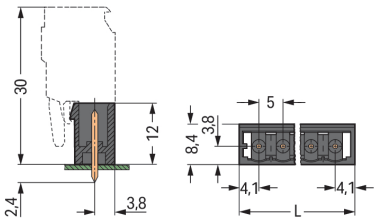
Color: ■ black

Similar to illustration




Dimensions in mm
W = tape widthR = feed direction




Dimensions in mm
L = (pole no. x pin spacing) + 3.2 mm

Male connector, 231 Series, with 5 mm pin spacing

This male connector (item number 231-168/001-000/105-604/997-407) provides hassle-free electrical installations. The item's dimensions are (43.2 x 14.4 x 8.4) mm (width x height x depth).

Tin is used for coating the contact surfaces. The pcb connector is designed for THR soldering.

## 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<br>Gold-plated or partially gold-plated contact surfaces<br>Other versions (or variants) can be requested from WAGO Sales or configured at https://configurator.wago.com/. |

## Electrical data

| Ratings per | IEC/EN 60664-1 | | |
|---|---|---|---|
| Overvoltage category | III | III | II |
| Pollution degree | 3 | 2 | 2 |
| Nominal voltage | 250 V | 320 V | 630 V |
| Rated impulse withstand voltage | 4 kV | 4 kV | 4 kV |
| Rated current | 16 A | 16 A | 16 A |

| Approvals per | UL 1059 | | |
|---|---|---|---|
| Use group | B | C | D |
| Rated voltage | 300 V | - | 300 V |
| Rated current | 10 A | - | 10 A |

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

| Approvals per | CSA | | |
|---|---|---|---|
| Use group | B | C | D |
| Rated voltage | 300 V | - | 300 V |
| Rated current | 10 A | - | 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 | 5 mm / 0.197 inches |
| Width | 43.2 mm / 1.701 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 $^{(+0.1)}$ mm |
| Reel diameter of tape-and-reel packaging | 330 mm |
| Tape width | 56 mm |

## Mechanical data

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


Continued on next page

## Plug-in connection

| | |
|---|---|
| Contact type (pluggable connector) | Male connector/plug |
| Connector (connection type) | for PCB |
| Mismating protection | No |
| Mating direction to the PCB | 90 ° |

## 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 (main housing) | Polyphthalamide (PPA GF) |
| Flammability class per UL94 | V0 |
| Contact material | Electrolytic copper ($E_{Cu}$) |
| Contact Plating | Tin |
| Fire load | 0.062 MJ |
| Weight | 3.1 g |
| MSL per J-STD 020D | 1 |

## Environmental requirements

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

## Commercial data

| | |
|---|---|
| PU (SPU) | 170 pcs |
| Packaging type | Bag |
| Country of origin | DE |
| GTIN | 4050821042662 |
| Customs tariff number | 85366930000 |

## Product Classification

| | |
|---|---|
| UNSPSC | 39121409 |
| eCl@ss 10.0 | 27-44-04-02 |
| eCl@ss 9.0 | 27-44-04-02 |
| ETIM 9.0 | EC002637 |
| ETIM 10.0 | EC002637 |
| ECCN | NO US CLASSIFICATION |


Continued on next page

## Environmental Product Compliance

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

## Approvals / Certificates

### General approvals

| Approval | Standard | Certificate Name |
|---|---|---|
| CSA<br>DEKRA Certification B.V. | C22.2 | 1466354 |

## Downloads

### Environmental Product Compliance

**Compliance Search**

## Documentation

**Additional Information**

| | | |
|---|---|---|
| Technical Section | 03.04.2019 | pdf<br>2027.26 KB |
| | | pdf<br>535.32 KB |

## CAD/CAE-Data

**CAD data**

**PCB Design**

## 1 Compatible Products

### 1.1 System counterpart

#### 1.1.1 Female connector/socket



Item No.: 231-108/026-000
1-conductor female connector; CAGE CLAMP®; 2.5 mm²; Pin spacing 5 mm; 8-pole; gray



Item No.: 2231-1108/126-000
1-conductor female connector; lever; Push-in CAGE CLAMP®; 2.5 mm²; Pin spacing 5 mm; 7-pole; Snap-in flange; gray



Item No.: 2231-1108/327-000
1-conductor female connector; lever; Push-in CAGE CLAMP®; 2.5 mm²; Pin spacing 5 mm; 8-pole; 2,50 mm²; gray



Item No.: 2231-1108/328-000
1-conductor female connector; lever; Push-in CAGE CLAMP®; 2.5 mm²; Pin spacing 5 mm; 8-pole; Centered locking levers; 2,50 mm²; gray


Continued on next page

### 1.1.1 Female connector/socket



Item No.: 2231-1108/328-000/335-000
1-conductor female connector; lever; Push-in CAGE CLAMP®; 2.5 mm²; Pin spacing 5 mm; 8-pole; Centered locking levers; Strain relief plate; gray



Item No.: 2231-1108/331-000
1-conductor female connector; lever; Push-in CAGE CLAMP®; 2.5 mm²; Pin spacing 5 mm; 8-pole; clamping collar; gray



Item No.: 2231-1108/327-047
1-conductor female connector; lever; Push-in CAGE CLAMP®; 2.5 mm²; Pin spacing 5 mm; 8-pole; direct marking; 2,50 mm²; gray



Item No.: 2231-1108/327-9037
1-conductor female connector; lever; Push-in CAGE CLAMP®; 2.5 mm²; Pin spacing 5 mm; 8-pole; direct marking; 2,50 mm²; gray



Item No.: 2231-1108/038-000
1-conductor female connector; lever; Push-in CAGE CLAMP®; 2.5 mm²; Pin spacing 5 mm; 8-pole; Lateral locking levers; 2,50 mm²; gray



Item No.: 2231-1108/038-000/335-000
1-conductor female connector; lever; Push-in CAGE CLAMP®; 2.5 mm²; Pin spacing 5 mm; 8-pole; Lateral locking levers; Strain relief plate; gray



Item No.: 2231-1108/327-000/335-000
1-conductor female connector; lever; Push-in CAGE CLAMP®; 2.5 mm²; Pin spacing 5 mm; 8-pole; Strain relief plate; gray

## 1.2 Optional Accessories

### 1.2.1 Coding

#### 1.2.1.1 Coding



Item No.: 231-129
Coding key; snap-on type; light gray

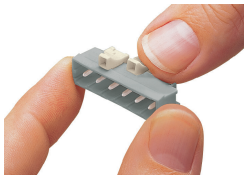
#### 1.2.1.2 Intermediate plate



Item No.: 231-500
Spacer; for formation of groups; light gray

## Installation Notes

### Coding



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