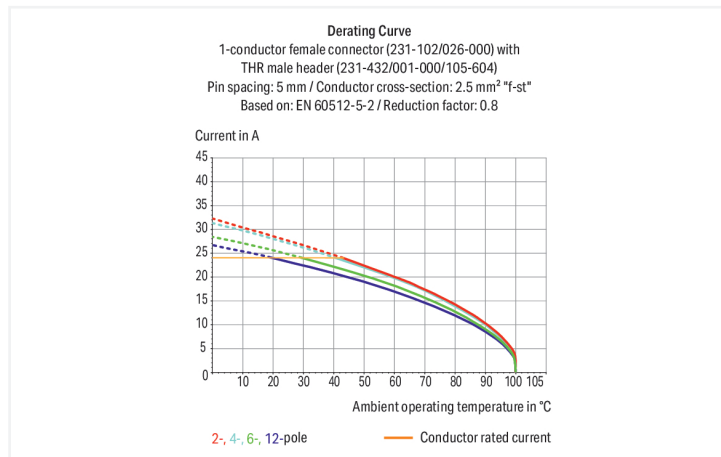


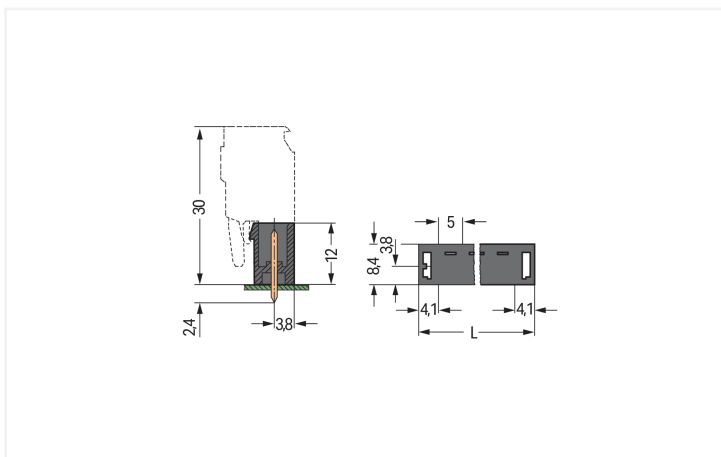
Data Sheet | Item Number: 231-139/001-000/105-604

THR male header; 1.0 x 1.0 mm solder pin; straight; Pin spacing 5 mm; 9-pole; black

<https://www.wago.com/231-139/001-000/105-604>



Color: ■ black



Dimensions in mm

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

Male connector, 231 Series, with 5 mm pin spacing

Enjoy seamless electrical installations with this male connector (item number 231-139/001-000/105-604). The dimensions are (48.2 x 14.4 x 8.4) mm (width x height x depth).

The contact surface is coated with tin. 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
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 60664-1 | | |
|---------------------------------|----------------|-------|-------|
| Overvoltage category | III | III | II |
| Pollution degree | 3 | 2 | 2 |
| Nominal voltage | 320 V | 320 V | 630 V |
| Rated impulse withstand voltage | 4 kV | 4 kV | 4 kV |
| Rated current | 12 A | 12 A | 12 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 | 10 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 | 9 |
| Number of connection types | 1 |
| Number of levels | 1 |

| Connection 1 | |
|--------------|---|
| Pole number | 9 |

Physical data

| | |
|------------------------------------|------------------------|
| Pin spacing | 5 mm / 0.197 inches |
| Width | 48.2 mm / 1.898 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 x 1 mm |
| Plated through-hole diameter (THR) | 1.4 (+0.1) mm |

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 |
| 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

| | |
|-----------------------|------------------------|
| Product Group | 3 (Multi Conn. System) |
| PU (SPU) | 100 pcs |
| Packaging type | Box |
| Country of origin | PL |
| GTIN | 4050821013648 |
| 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 |

Environmental Product Compliance

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

Approvals / Certificates

General approvals



| Approval | Standard | Certificate Name |
|---------------------------------------|-----------|------------------|
| CB DEKRA Certification B.V. | IEC 61984 | NL-113351 |
| CSA DEKRA Certification B.V. | C22.2 | LR 18677-25 |
| KEMA/KEUR DEKRA Certification B.V. | EN 61984 | 71-130478 REV.1 |
| UL Underwriters Laboratories Inc. | UL 1059 | E45172 |
| UR Underwriters Laboratories Inc. | UL 1977 | E45171 |

Approvals for marine applications



| Approval | Standard | Certificate Name |
|---|----------|------------------|
| ABS American Bureau of Ship- ping | - | 24-0095975-PDA |

Downloads

Environmental Product Compliance

Compliance Search



Documentation

Additional Information

| | | | |
|-------------------|------------|-------------------|--|
| Technical Section | 03.04.2019 | pdf 2027.26 KB | |
| | | pdf 535.32 KB | |

CAD/CAE-Data

CAD data



CAE data



PCB Design



1 Compatible Products

1.1 System counterpart

1.1.1 Female connector/socket



Item No.: [231-109/026-000](#)

1-conductor female connector; CAGE CLAMP®; 2.5 mm²; Pin spacing 5 mm; 9-pole; 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).