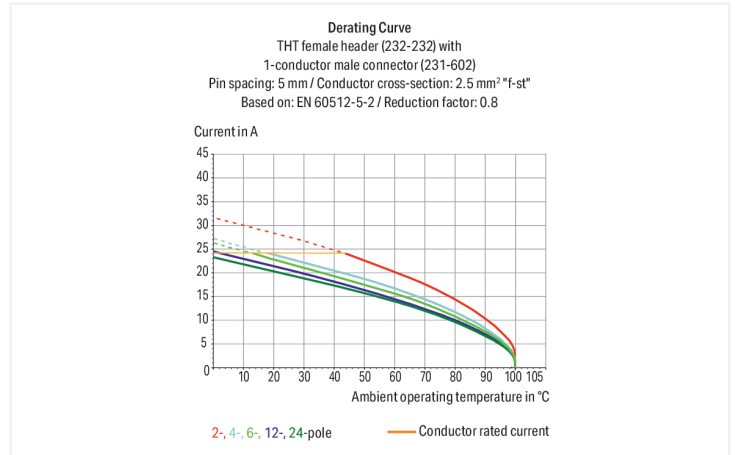


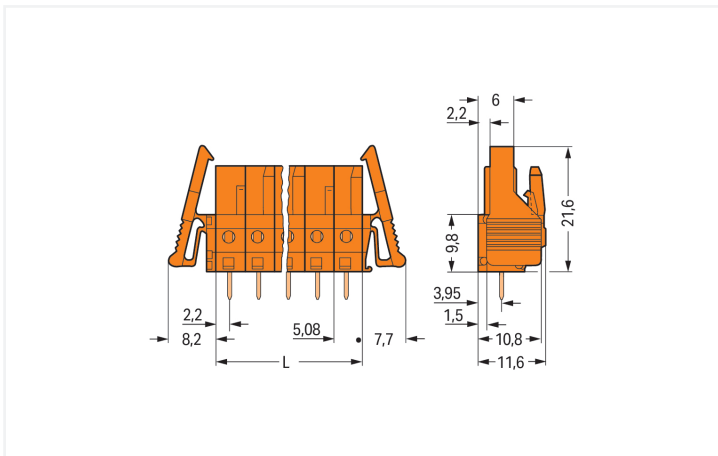
# Data Sheet | Item Number: 232-170/039-000

THT female header; straight; Pin spacing 5.08 mm; 10-pole; Locking lever; 0.6 x 1.0 mm solder pin; orange

<https://www.wago.com/232-170/039-000>



Color: ■ orange



Dimensions in mm

L = pole no. x pin spacing 2- to 3-pole female connectors – one latch only

Female connector, 232 Series, orange

Our female connector (item number 232-170/039-000) is designed for seamless electrical installations. The dimensions are (66.7 x 26.6 x 11.6) mm (width x height x depth).

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

| Ratings per                     | IEC/EN 60664-1 |       |       |
|---------------------------------|----------------|-------|-------|
| Overtoltage 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 | 15 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 | 15 A  | - | 10 A  |

## Connection Data

|                            |    |
|----------------------------|----|
| Clamping units             | 10 |
| Total number of potentials | 10 |
| Number of connection types | 1  |
| Number of levels           | 1  |

| Connection 1 |    |
|--------------|----|
| Pole number  | 10 |

## Physical data

|                                      |                        |
|--------------------------------------|------------------------|
| Pin spacing                          | 5.08 mm / 0.2 inches   |
| Width                                | 66.7 mm / 2.626 inches |
| Height                               | 26.6 mm / 1.047 inches |
| Height from the surface              | 21.6 mm / 0.85 inches  |
| Depth                                | 11.6 mm / 0.457 inches |
| Solder pin length                    | 5 mm                   |
| Solder pin dimensions                | 0.6 x 1 mm             |
| Drilled hole diameter with tolerance | 1.3 (+0.1) mm          |

## Mechanical data

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

### Plug-in connection

|                                    |                         |
|------------------------------------|-------------------------|
| Contact type (pluggable connector) | Female connector/socket |
| Connector (connection type)        | for PCB                 |
| Mismating protection               | No                      |
| Mating direction to the PCB        | 90 °                    |
| Locking of plug-in connection      | Locking lever           |

### PCB contact

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

### Material data

|                                    |  |
|------------------------------------|--|
| Note (material data)               | <a href="#">Information on material specifications can be found here</a> |
| Color                              | orange   |
| Material group                     | I  |
| Insulation material (main housing) | Polyamide (PA66)   |
| Flammability class per UL94        | V0   |
| Contact material                   | Copper alloy   |
| Contact Plating                    | Tin  |
| Fire load                          | 0.186 MJ   |
| Weight                             | 10.1 g   |

### Environmental requirements

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

### Environmental Testing

|   |   |
|---|---|
| Test specification:<br>Railway applications –<br>Rolling stock –<br>Electronic equipment            | DIN EN 50155 (VDE 0115-200):2022-06                 |
| Test procedure:<br>Railway applications –<br>Rolling stock equipment –<br>Vibration and shock tests | DIN EN 61373 (VDE 0115-0106):2011-04                |
| Spectrum/Mounting location  | Service life test, Category 1, Class A/B            |
| Functional test with noise-like oscillations  | Test passed according to Section 8 of the standard  |
| Frequency   | $f_1 = 5 \text{ Hz}$ to $f_2 = 150 \text{ Hz}$      |
| Acceleration  | 0.101g (highest test level used for all axes)       |
| Test duration per axis  | 10 min.   |
| Test directions   | X, Y and Z axes                                     |
| Monitoring of contact faults and interruptions  | Passed  |
| Voltage drop measurement before and after each axis   | Passed  |
| Simulated service life test through increased levels of noise-like oscillations                     | Test passed according to Section 9 of the standard  |
| Frequency   | $f_1 = 5 \text{ Hz}$ to $f_2 = 150 \text{ Hz}$      |
| Acceleration  | 0.572g (highest test level used for all axes)       |
| Test duration per axis  | 5 h   |
| Test directions   | X, Y and Z axes                                     |
| Extended testing: Monitoring of contact faults and interruptions                                    | Passed  |
| Extended testing: Voltage drop measurement before and after each axis                               | Passed  |
| Shock test  | Test passed according to Section 10 of the standard |

| Environmental Testing   |   |
|---|---|
| Shock pulse form  | Half sine                                 |
| Acceleration  | 5g (highest test level used for all axes) |
| Shock duration  | 30 ms                                     |
| Number of shocks (per axis)   | 3 pos. und 3 neg.                         |
| Test directions   | X, Y and Z axes                           |
| Extended testing: Monitoring of contact faults and interruptions      | Passed                                    |
| Extended testing: Voltage drop measurement before and after each axis | Passed                                    |
| Vibration and shock stress for rolling stock equipment                | Passed                                    |

| Commercial data       |                        |
|-----------------------|------------------------|
| Product Group         | 3 (Multi Conn. System) |
| PU (SPU)              | 25 pcs                 |
| Packaging type        | Box                    |
| Country of origin     | DE                     |
| GTIN                  | 4044918578790          |
| Customs tariff number | 85366990990            |

| 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 |
| CSA<br>CSA Group                     | C22.2    | 1466354          |
| UL<br>UL International Germany GmbH  | UL 1977  | E45171           |
| UL<br>Underwriters Laboratories Inc. | UL 1059  | E45172           |

| Declarations of conformity and manufacturer's declarations |          |                  |
|--|----------|------------------|
|  |          |                  |
| Approval   | Standard | Certificate Name |
| Railway<br>WAGO GmbH & Co. KG                              | -        | Railway Ready    |

Approvals for marine applications



| Approval                                | Standard  | Certificate Name |
|---|-----------|------------------|
| ABS<br>American Bureau of Ship-<br>ping | -         | 24-0095975-PDA   |
| BV<br>Bureau Veritas S.A.               | IEC 60998 | 11915/E0 BV      |
| DNV<br>DNV GL SE                        | -         | TAE000016Z       |

Downloads

Environmental Product Compliance

| Compliance Search                                      |                   |
|--|-------------------|
| Environmental Product<br>Compliance<br>232-170/039-000 | <a href="#">↓</a> |

Documentation

| Additional Information |            |                   |                   |
|------------------------|------------|-------------------|-------------------|
| Technical Section      | 03.04.2019 | pdf<br>2027.26 KB | <a href="#">↓</a> |

CAD/CAE-Data

| CAD data                        |                   |
|---------------------------------|-------------------|
| 2D/3D Models<br>232-170/039-000 | <a href="#">↓</a> |

| CAE data                             |                   |
|--------------------------------------|-------------------|
| EPLAN Data Portal<br>232-170/039-000 | <a href="#">↓</a> |
| ZUKEN Portal<br>232-170/039-000      | <a href="#">↓</a> |

PCB Design

|  |                   |
|--|-------------------|
| Symbol and Footprint<br>via SamacSys<br>232-170/039-000        | <a href="#">↓</a> |
| Symbol and Footprint<br>via Ultra Librarian<br>232-170/039-000 | <a href="#">↓</a> |

## 1 Compatible Products

### 1.1 System counterpart

#### 1.1.1 Male connector/plug



**Item No.: [231-640](#)**

1-conductor male connector; CAGE CLAMP®; 2.5 mm<sup>2</sup>; Pin spacing 5.08 mm; 10-pole; orange

## 1.2 Optional Accessories

### 1.2.1 Test and measurement

#### 1.2.1.1 Testing accessories



**Item No.: [231-661](#)**

Test plugs for female connectors; for 5 mm and 5.08 mm pin spacing; 2,50 mm<sup>2</sup>; light gray