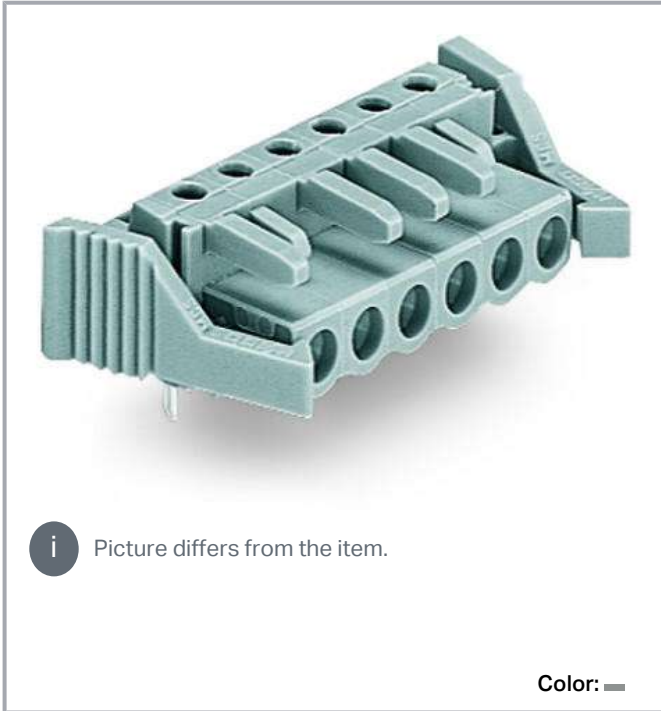


**Data sheet | Item number: 232-250/039-000**

THT female header; angled; Pin spacing 5 mm; 20-pole; Locking lever; 0.6 x 1.0 mm solder pin; gray



[www.wago.com/232-250\\_039-000](http://www.wago.com/232-250_039-000)



Picture differs from the item.

Color: —



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

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Dimensions in mm

L = pole no. x pin spacing

Distance to first solder pin: 2.2 mm

2- to 3-pole female connectors – one latch only

### Item description

- Horizontal or vertical PCB mounting via straight or angled solder pins
- For board-to-board and board-to-wire connections
- Touch-proof PCB outputs
- Easy-to-identify PCB inputs and outputs
- With coding fingers

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



## 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)     | 320 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               | 12 A  |
| Legend (ratings)            | (III / 2) ≙ 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 | 20 |
| Number of connection types | 1  |
| Number of levels           | 1  |

## Connection 1

|                 |    |
|-----------------|----|
| Number of poles | 20 |
|-----------------|----|

## Physical data

|                                      |                          |
|--------------------------------------|--------------------------|
| Pin spacing                          | 5 mm / 0.197 inch        |
| Width                                | 115.8 mm / 4.559 inch    |
| Height                               | 16.6 mm / 0.654 inch     |
| Height from the surface              | 11.6 mm / 0.457 inch     |
| Depth                                | 18.25 mm / 0.719 inch    |
| Solder pin length                    | 5 mm                     |
| Solder pin dimensions                | 0.6 x 1 mm               |
| Drilled hole diameter with tolerance | 1.3 <sup>(+0.1)</sup> mm |

## Plug-in connection

|                                    |               |
|------------------------------------|---------------|
| Contact type (pluggable connector) | Female header |
| Connector (connection type)        | for PCB       |
| Mismating protection               | No            |
| Mating direction to the PCB        | 0°            |
| Locking of plug-in connection      | locking lever |

## PCB contact

|                        |  |
|------------------------|--|
| PCB Contact            | THT  |
| Solder pin arrangement | over the entire female 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            | Copper alloy     |
| Contact plating             | tin-plated       |
| Fire load                   | 0.348 MJ         |
| Weight                      | 19.3 g           |

### Environmental requirements


|                         |                |
|-------------------------|----------------|
| Limit temperature range | -60 ... +85 °C |
|-------------------------|----------------|

### Commercial data


|                       |               |
|-----------------------|---------------|
| PU (SPU)              | 10 Stück      |
| Packaging type        | box           |
| Country of origin     | DE            |
| GTIN                  | 4050821689591 |
| Customs tariff number | 85366990990   |

### Approvals / Certificates

#### Country specific Approvals

| Logo   | Approval                        | Additional Approval Text | Certificate name |
|--|---------------------------------|--------------------------|------------------|
|  | CSA<br>DEKRA Certification B.V. | C22.2                    | 1466354          |

#### Ship Approvals

| Logo   | Approval                           | Additional Approval Text | Certificate name          |
|--|------------------------------------|--------------------------|---------------------------|
|  | ABS<br>American Bureau of Shipping | -                        | 19-<br>HG15869876-<br>PDA |
|  | BV                                 | IEC 60998                | 11915/D0 BV               |



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



Bureau Veritas S.A.

|   |   |             |
|---|---|-------------|
| <b>DNV GL</b><br>Det Norske Veritas, Germanischer Lloyd | - | TAE 000016Z |
|---|---|-------------|

**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.231-620**  
Male connector; 20-pole; Pin spacing 5 mm; gray

[www.wago.com/231-620](http://www.wago.com/231-620)

**Optional accessories**

**Testing accessories**

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

[www.wago.com/231-661](http://www.wago.com/231-661)

**Downloads**

**Documentation**

**Additional Information**

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

**CAD files**

**CAD data**

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

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2D/3D Models 232-250/039-000

[URL](#)

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### PCB Design

Symbol and Footprint 232-250/039-000

[URL](#)

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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
- 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

### CAE data

ZUKEN Portal 232-250/039-000

[URL](#)

[Download](#)

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## Environmental Product Compliance

### Compliance Search

Environmental Product Compliance 232-250/039-000

URL

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THT female header; angled; Pin spacing 5 mm; 20-pole; Locking lever; 0.6 x 1.0 mm solder pin; gray

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## Installation Notes

### Product family

**MCS MIDI Classic**

[Show all products from the family](#)

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