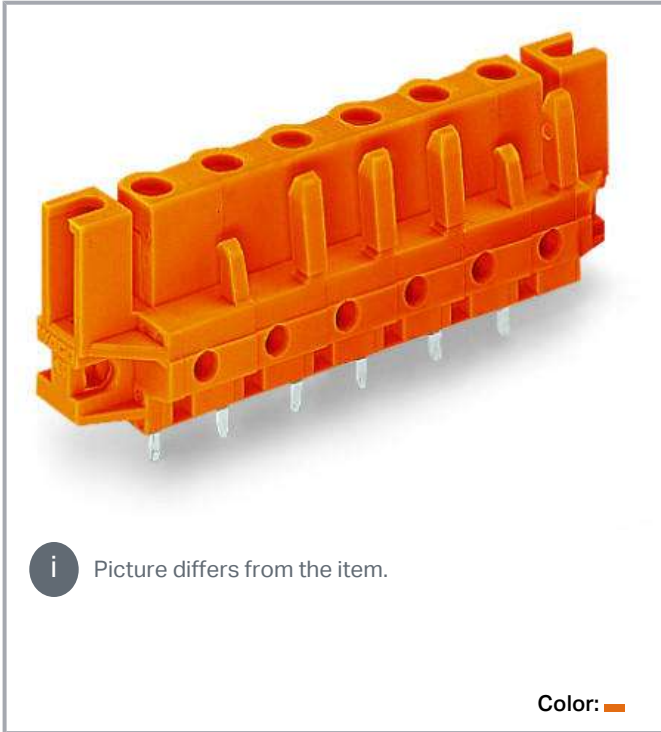


**Data sheet | Item number: 232-770/047-000**

THT female header; straight; Pin spacing 7.62 mm; 10-pole; Spacer flange; 0.6 x 1.0 mm solder pin; orange

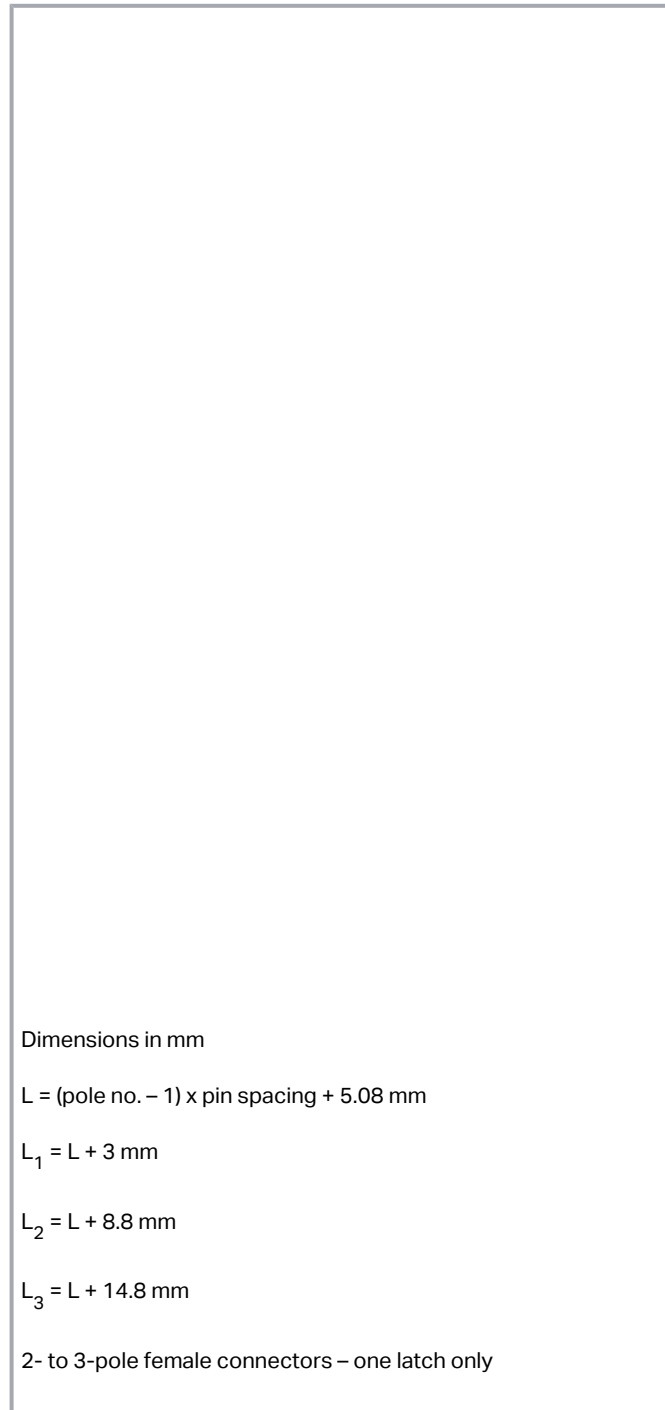
[www.wago.com/232-770\\_047-000](http://www.wago.com/232-770_047-000)



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

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Dimensions in mm

$L = (\text{pole no.} - 1) \times \text{pin spacing} + 5.08 \text{ mm}$

$L_1 = L + 3 \text{ mm}$

$L_2 = L + 8.8 \text{ mm}$

$L_3 = L + 14.8 \text{ mm}$

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

## Item description

- Horizontal or vertical PCB mounting via straight or angled solder pins

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



- For board-to-board and board-to-wire connections
- Touch-proof PCB outputs
- Easy-to-identify PCB inputs and outputs
- With coding fingers

## 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)     | 500 V   |
| Rated surge voltage (III/3) | 6 kV  |
| Rated voltage (III/2)       | 630 V   |
| Rated surge voltage (III/2) | 6 kV  |
| Nominal voltage (II/2)      | 1000 V  |
| Rated surge voltage (II/2)  | 6 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    |

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## Ratings per UL

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

## 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 | 10 |
| Number of connection types | 1  |
| Number of levels           | 1  |

## Connection 1

|                 |    |
|-----------------|----|
| Number of poles | 10 |
|-----------------|----|

## Physical data

|                                      |                          |
|--------------------------------------|--------------------------|
| Pin spacing                          | 7.62 mm / 0.3 inch       |
| Width                                | 88.46 mm / 3.483 inch    |
| Height                               | 23.25 mm / 0.915 inch    |
| Height from the surface              | 18.25 mm / 0.719 inch    |
| Depth                                | 11.6 mm / 0.457 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 |

## Mechanical data

|               |   |
|---------------|---|
| Mounting type | Mounting flange                               |
| Mounting type | Flush feed-through mounting<br>Panel mounting |

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



## Plug-in connection

|                                    |               |
|------------------------------------|---------------|
| Contact type (pluggable connector) | Female header |
| Connector (connection type)        | for PCB       |
| Mismating protection               | No            |
| Mating direction to the PCB        | 90°           |
| Locking of plug-in connection      | Without       |

## PCB contact

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

## Material data

|                             |                  |
|-----------------------------|------------------|
| Color                       | orange           |
| Material group              | I                |
| Insulation material         | Polyamide (PA66) |
| Flammability class per UL94 | V0               |
| Contact material            | Copper alloy     |
| Contact plating             | tin-plated       |
| Fire load                   | 0.241 MJ         |
| Weight                      | 11.9 g           |

## Environmental requirements

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

## Commercial data

|                       |                        |
|-----------------------|------------------------|
| Product Group         | 3 (Multi Conn. System) |
| PU (SPU)              | 25 Stück               |
| Packaging type        | box                    |
| Country of origin     | DE                     |
| GTIN                  | 4017332538206          |
| Customs tariff number | 85366990990            |

## Approvals / Certificates



### Ship Approvals

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



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| Logo  | Approval  | Additional Approval Text | Certificate name          |
|---|---|--------------------------|---------------------------|
|   | <b>ABS</b><br>American Bureau of Shipping               | -                        | 19-<br>HG15869876-<br>PDA |
|  | <b>BV</b><br>Bureau Veritas S.A.                        | IEC 60998                | 11915/D0 BV               |
|   | <b>DNV GL</b><br>Det Norske Veritas, Germanischer Lloyd | -                        | TAE000016Z                |

**UL-Approvals**

| Logo  | Approval                                    | Additional Approval Text | Certificate name |
|---|---|--------------------------|------------------|
|   | <b>UR</b><br>Underwriters Laboratories Inc. | UL 1977                  | E45171           |
|  | <b>UR</b><br>Underwriters Laboratories Inc. | UL 1059                  | E45172           |

**Counterpart**



Item no.731-640

1-conductor male connector; CAGE CLAMP®; 2,5 mm²; Pin spacing 7.62 mm; 10-pole; 2,50 mm²; orange

[www.wago.com/731-640](http://www.wago.com/731-640)

**Optional accessories**

**Testing accessories**

Testing accessories



Item no.: 210-136

Test plug; 2 mm Ø; with 500 mm cable

[www.wago.com/210-136](http://www.wago.com/210-136)



Item no.: 231-662

Test plugs for female connectors; for 7.5 mm and 7.62 mm pin spacing; 2,50 mm²; light gray

[www.wago.com/231-662](http://www.wago.com/231-662)

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

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## Downloads

### Documentation

#### Additional Information

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

### CAD files

#### CAE data

|                                   |     |          |
|-----------------------------------|-----|----------|
| EPLAN Data Portal 232-770/047-000 | URL | Download |
|-----------------------------------|-----|----------|

|                                   |     |          |
|-----------------------------------|-----|----------|
| EPLAN Data Portal 232-770/047-000 | URL | Download |
|-----------------------------------|-----|----------|

#### PCB Design

|                                      |     |          |
|--------------------------------------|-----|----------|
| Symbol and Footprint 232-770/047-000 | 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
- 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

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



- Quadcept
- Zuken CadStar 3 and 4
- Zuken 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 232-770/047-000

[URL](#)

[Download](#)

THT female header; straight; Pin spacing 7.62 mm; 10-pole; Spacer flange; 0.6 x 1.0 mm solder pin; orange

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## Installation Notes

### Application



The innovative flange design provides standard panel mounting options or various through-panel mounting configurations. Depending on the type of application and flange, female headers can be used either for through-panel or flush mounted applications.

## Product family

**MCS MIDI Classic**

[Show all products from the family](#)

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

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