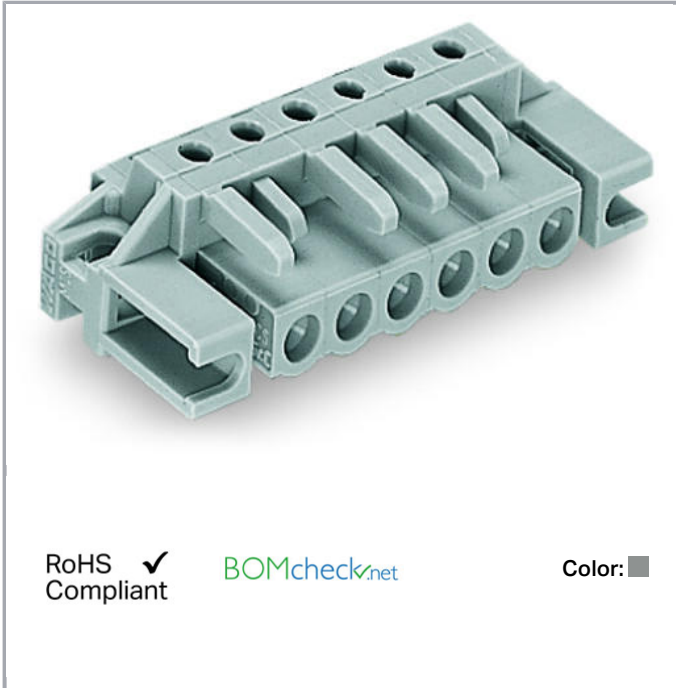


Data sheet | Item number: 232-233/047-000

THT female header; 0.6 x 1.0 mm solder pin; angled; Spacer flange; Pin spacing 5 mm; 3-pole; gray

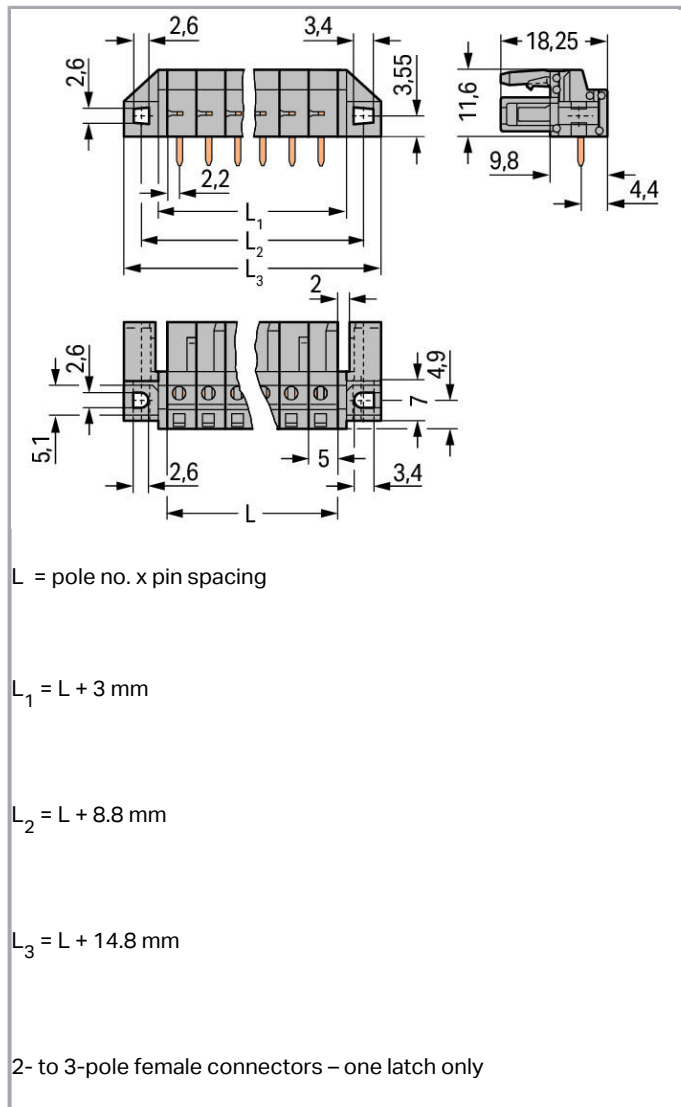
www.wago.com/232-233/047-000



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

WAGO Kontakttechnik GmbH & Co. KG
Hansastr. 27
32423 Minden
Phone: +49571 887-0 | Fax: +49571 887-169
Email: info.de@wago.com | Web: www.wago.com

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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

Safety information 1:

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



The *MULTI CONNECTION SYSTEM (MCS)* is designed without breaking capacity for compliance with DIN EN 61984. When used as intended, MCS Connectors shall 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.

Data

Electrical data

Ratings per IEC/EN 60664-1

| Ratings per | IEC/EN 60664-1 |
|---------------------------------|---|
| Rated voltage (III / 3) | 320 V |
| Rated impulse voltage (III / 3) | 4 kV |
| Rated voltage (III / 2) | 320 V |
| Rated impulse voltage (III / 2) | 4 kV |
| Rated voltage (II / 2) | 630 V |
| Rated impulse voltage (II / 2) | 4 kV |
| Rated current | 12 A |
| Legend (ratings) | (III / 2) $\hat{=}$ Overvoltage category III / Pollution degree 2 |

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 |
| Approvals per | UL 1059 |

Approvals per UL 1977

| | |
|---|-------|
| Rated voltage per UL 1977 (factory wiring only) | 600 V |
| Rated current per UL 1977 (factory wiring only) | 15 A |

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 |

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

Connection data

| | |
|----------------------------|---|
| No. of poles | 3 |
| Total number of potentials | 3 |
| Number of connection types | 1 |
| Number of levels | 1 |

Geometrical Data

| | |
|-----------------------------------|--------------------------|
| Pin spacing | 5 mm / 0.197 inch |
| Width | 30.8 mm / 1.213 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 (tolerance) | 1.3 ^(+0.1) mm |

Mechanical data

| | |
|------------------|----------------------------------|
| Mounting type | Mounting flange |
| Type of mounting | Flush mounting Panel mounting |

Plug connection

| | |
|------------------------------------|-------------------------|
| Contact type (pluggable connector) | Female connector/socket |
| Connector connection type | for PCBs |
| Mismating protection | No |
| Mating direction to the PCB | 0° |

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 | gray |
|-------|------|

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

| | |
|-----------------------------|----------------------|
| Material group | I |
| Insulating material | Polyamide 66 (PA 66) |
| Flammability class per UL94 | V0 |
| Contact material | Copper alloy |
| Contact plating | tin-plated |
| Fire load | 0.078 MJ |
| Weight | 3.7 g |

Environmental Requirements


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

Commercial data



| | |
|--------------------|------------------------|
| Product Group | 3 (Multi Conn. System) |
| Packaging type | BOX |
| Country of origin | DE |
| GTIN | 4044918624572 |
| Customs Tariff No. | 85366990990 |

Approvals / Certificates

Country specific Approvals

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

Ship Approvals

| Logo | Approval | Additional Approval Text | Certificate name |
|--|--|--------------------------|---------------------------|
|  | ABS American Bureau of Shipping | - | 19- HG15869876- PDA |
|  | DNV GL Det Norske Veritas, Germanischer Lloyd | - | TAE 000016Z |



UL-Approvals

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

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| Logo | Approval | Additional Approval Text | Certificate name |
|--|--------------------------------------|--------------------------|------------------|
|  | UL Underwriters Laboratories Inc. | UL 1059 | 20190731-E45172 |
|  | UR UL International Germany GmbH | UL 1977 | E45171 |

Counterpart



Item no.231-603

1-conductor male connector; 2.5 mm²; Pin spacing 5 mm; 3-pole; 2,50 mm²; gray

www.wago.com/231-603

Compatible products

Test Accessories

Item no.: 231-661

Test plugs for female connectors; for 5 mm and 5.08 mm pin spacing; 2,50 mm²; light gray

www.wago.com/231-661

Downloads

Documentation

Additional Information

| | | | |
|------------------------|-------------|---------------|----------|
| Technical explanations | Apr 3, 2019 | pdf 3.6 MB | Download |
|------------------------|-------------|---------------|----------|

CAD/CAE-Data

CAE data

| | | |
|-----------------------------------|-----|----------|
| EPLAN Data Portal 232-233/047-000 | URL | Download |
|-----------------------------------|-----|----------|

PCB Design

| | | |
|--------------------------------------|-----|----------|
| Symbol and Footprint 232-233/047-000 | 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.

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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

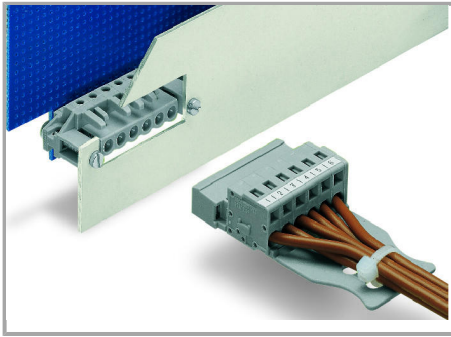
Installation Notes

Application

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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 mount applications.

Product family

MCS MIDI Classic

[Learn more about the product family.](#)

[Show all products from the family](#)

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