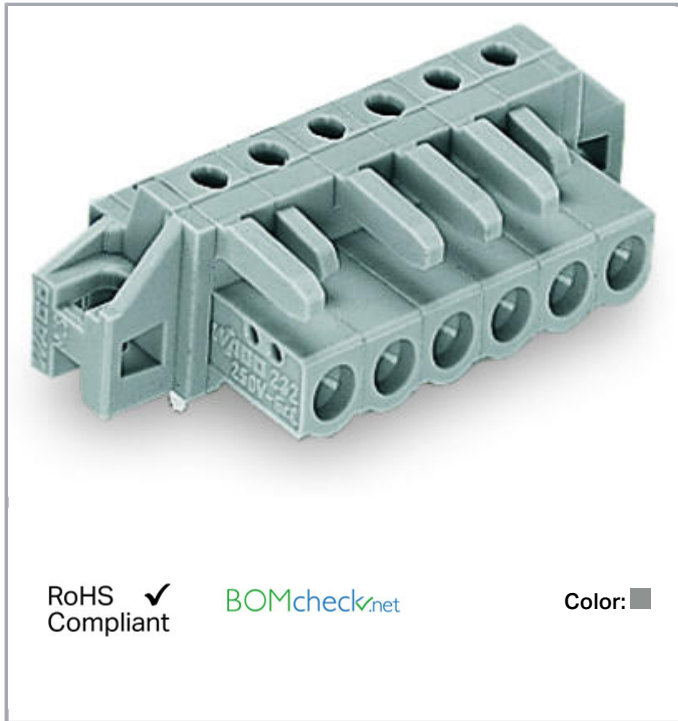


**Data sheet | Item number: 232-250/031-000**

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

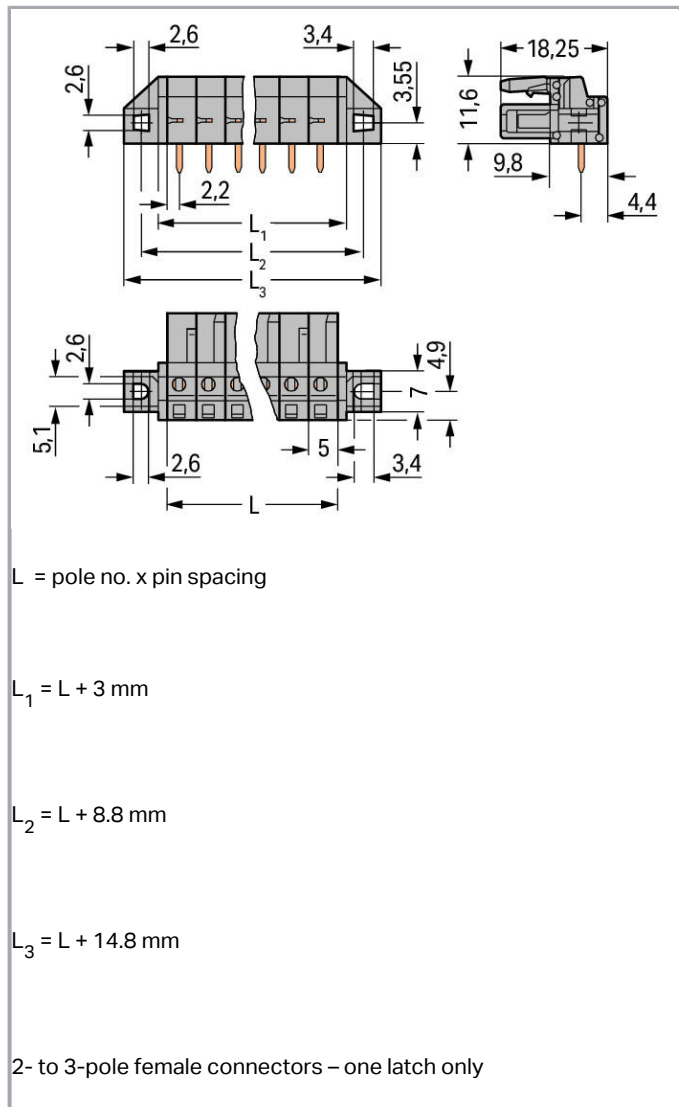
[www.wago.com/232-250/031-000](http://www.wago.com/232-250/031-000)



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

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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	20
Total number of potentials	20
Number of connection types	1
Number of levels	1

### Geometrical Data

Pin spacing	5 mm / 0.197 inch
Width	114.8 mm / 4.52 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 <sup>(+0.1)</sup> mm

### Mechanical data

Mounting type	Mounting flange
Type of mounting	Feed-through 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
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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	0.34 MJ
Weight	18.8 g

### Environmental Requirements


Limit temperature range	-60 ... +85 °C
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### Commercial data


Product Group	3 (Multi Conn. System)
Packaging type	BOX
Country of origin	DE
GTIN	4044918625135
Customs Tariff No.	85366990990

### Approvals / Certificates

#### Ship Approvals

Logo	Approval	Additional Approval Text	Certificate name
	<b>ABS</b> American Bureau of Shipping	-	19- HG15869876- PDA

#### UL-Approvals

Logo	Approval	Additional Approval Text	Certificate name
	<b>UR</b> UL International Germany GmbH	UL 1977	E45171

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

## Counterpart



**Item no.231-620**

1-conductor male connector; 2.5 mm<sup>2</sup>; Pin spacing 5 mm; 20-pole; 2,50 mm<sup>2</sup>; gray

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

## Compatible products

### Test Accessories

**Item no.: 210-136**

Test plug; 2 mm Ø; with 500 mm cable; red

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

**Item no.: 210-137**

Test plug; 2.3 mm Ø; with 500 mm cable; yellow

[www.wago.com/210-137](http://www.wago.com/210-137)

**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)

### assembling



**Item no.: 231-194**

Self-tapping screw; B 2.2x13, fixing hole 1.8 mm Ø

[www.wago.com/231-194](http://www.wago.com/231-194)



**Item no.: 231-195**

Screw with nut; M2x12; for fixing element

[www.wago.com/231-195](http://www.wago.com/231-195)



**Item no.: 231-295**

Screw with nut

[www.wago.com/231-295](http://www.wago.com/231-295)

## Downloads

### Documentation

#### Additional Information

Technical explanations

Apr 3, 2019

pdf  
3.6 MB

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### CAD/CAE-Data

#### CAD data

2D/3D Models 232-250/031-000

URL

Download

#### CAE data

EPLAN Data Portal 232-250/031-000

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

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[URL](#) [Download](#)

## PCB Design

Symbol and Footprint 232-250/031-000

[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:

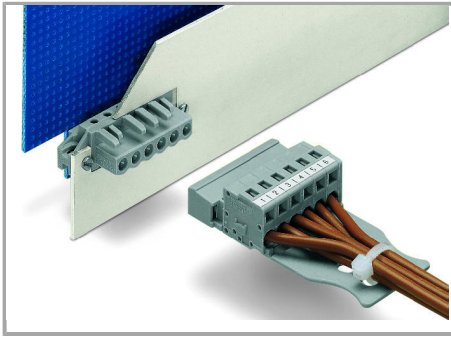
- Accel EDA 14 & 15
- Altium 6 to current version
- Cadence Allegro
- DesignSpark
- Eagle Libraries
- KiCad
- Mentor Graphics BoardStation
- Mentor Graphics Design Architect
- Mentor Graphics Design Expedition 99 and 2000
- OrCAD 9.X PCB and Capture
- PADS PowerPCB 3, 3.5, 4.X, and 5.X
- PADS PowerPCB and PowerLogic 3.0
- PCAD 2000, 2001, 2002, 2004, and 2006
- Pulsonix 8.5 or newer
- STL
- 3D STEP
- TARGET 3001!
- View Logic ViewDraw
- Quadcept
- Zuken CadStar 3 and 4
- Zuken CR-5000 and CR-8000

PCB Component Libraries (EDA), PCB CAD Library Ultra Librarian

## Installation Notes

### Application

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



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!