

## Fișă tehnică | Număr articol: 232-180/031-000

THT female header; 0.6 x 1.0 mm solder pin; straight; clamping collar; Pin spacing 5.08 mm; 20-pole; orange

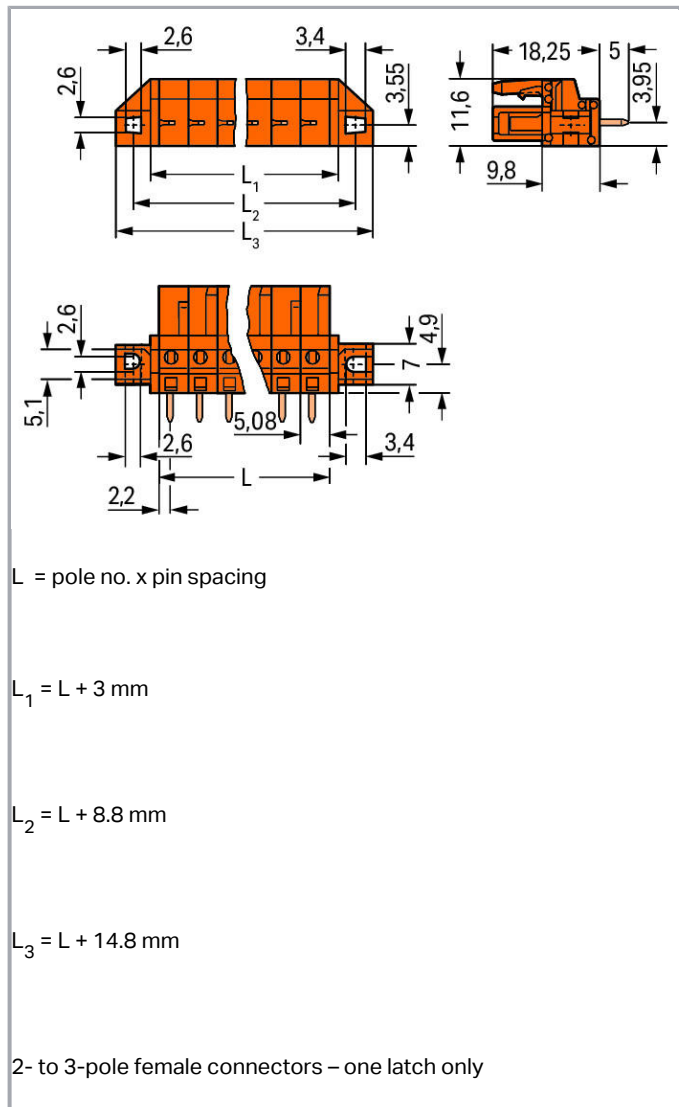
[www.wago.com/232-180/031-000](http://www.wago.com/232-180/031-000)



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Aveți întrebări despre produsele noastre?  
Vă stăm la dispoziție pentru preluarea apelului la +40 (0) 31 421 85 68.



## Descriere articol

- 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:

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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.

## Date

### Electrical data

#### Ratings per IEC/EN 60664-1

Ratings per	IEC/EN 60664-1
Nominal 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) $\triangleq$ 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 UL 1977	600 V
Rated current UL 1977	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

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**Connection data**

Pole No.	20
Total number of connection points	20
Total number of potentials	20
Number of connection types	1
Number of levels	1

**Geometrical Data**

Pin spacing	5.08 mm / 0.2 inch
Width	116.4 mm / 4.583 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	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	90°

**PCB contact**

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

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## Material Data

Color	orange
Material group	I
Insulation material	Polyamide 66 (PA 66)
Flammability class per UL94	V0
Contact material	Copper alloy
Contact plating	tin-plated
Fire load	0,302 MJ
Weight	17,9g

## 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	4044918624411
Customs tariff number	85366990990

## Aprobări / certificate

### Ship Approvals

Emblemă	Aprobare	Text de aprobare suplimentar	Nume certificat
	<b>ABS</b> American Bureau of Shipping	-	19- HG15869876- PDA

### UL-Approvals

Emblemă	Aprobare	Text de aprobare suplimentar	Nume certificat
	<b>UL</b> UL International Germany GmbH	UL 1977	E45171
	<b>UR</b> Underwriters Laboratories Inc.	UL 1059	E45172 sec. 18

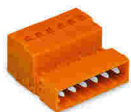
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## Counterpart



Nr. articol: 231-650

1-conductor male connector; 2.5 mm<sup>2</sup>; Pin spacing 5.08 mm; 20-pole; 2,50 mm<sup>2</sup>; orange

[www.wago.com/231-650](http://www.wago.com/231-650)

## Produce compatibile

### check



Nr. articol: 210-136

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

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



Nr. articol: 210-137

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

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



Nr. articol: 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



Nr. articol: 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)



Nr. articol: 231-195

Screw with nut; M2x12; for fixing element

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



Nr. articol: 231-295

Screw with nut

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

## Descărcări

### Documentation

#### Additional Information

Technical explanations

Apr 3, 2019

pdf  
3,6 MB

Descărcare

## CAD/CAE-Data

### CAD data

Supus modificărilor.



2D/3D Models 232-180/031-000

[URL](#)

[Descărcare](#)

#### CAE data

EPLAN Data Portal 232-180/031-000

[URL](#)

[Descărcare](#)

#### PCB Design

Symbol and Footprint 232-180/031-000

[URL](#)

[Descărcare](#)

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

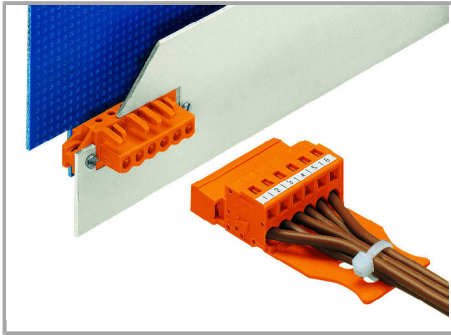
## Installation Notes

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## 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 mount applications.

## Familie de produse

*MCS* MIDI Classic

Afișare globală produse din familie.

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