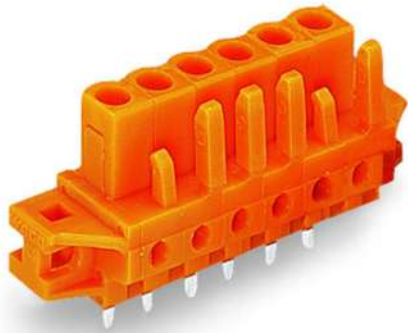


Data sheet | Item number: 232-181/031-000

THT female header; 0.6 x 1.0 mm solder pin; straight; clamping collar; Pin spacing 5.08 mm; 21-pole; orange



[www.wago.com/232-181\\_031-000](http://www.wago.com/232-181_031-000)



 Picture differs from the item.

RoHS  Compliant



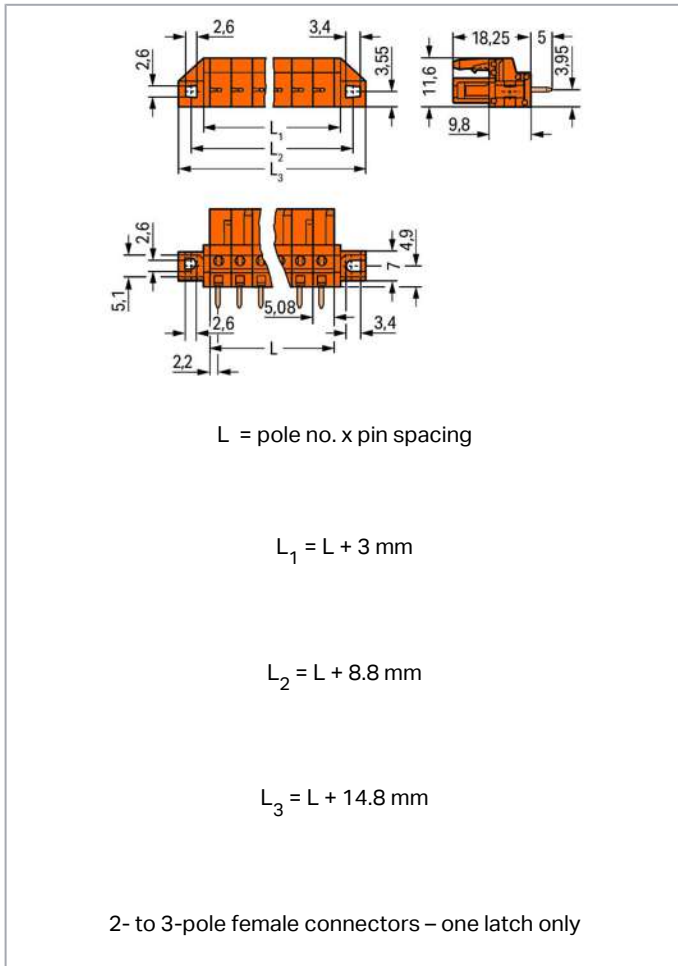
Color: 



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

WAGO Corporation  
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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:

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.

## Data

### Electrical data

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



### Ratings per IEC/EN 60664-1

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) $\triangleq$ Overvoltage category III / Pollution degree 2

### Ratings per UL 1059

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 1977

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

### Ratings per CSA

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

Pole No.	21
Total number of connection points	21
Total number of potentials	21
Number of connection types	1
Number of levels	1

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## Physical data

Pin spacing	5.08 mm / 0.2 inch
Width	121.48 mm / 4.783 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-in connection

Contact type (pluggable connector)	Female connector/socket
Connector (connection type)	for PCB
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

## Material Data

Color	orange
Material group	I
Insulation material	Polyamide (PA66)
Flammability class per UL94	V0
Contact material	Copper alloy
Contact plating	tin-plated
Weight	18.8 g

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## Environmental Requirements




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



Packaging type	BOX
Country of origin	DE
GTIN	4055143577656
Customs tariff number	85366990990

## Approvals / Certificates

### Ship Approvals

Logo	Approval	Additional Approval Text	Certificate name
	<b>ABS</b> American Bureau of Shipping	-	19- HG15869876- PDA
	<b>BV</b> Bureau Veritas S.A.	IEC 60998	11915/D0 BV
	<b>DNV GL</b> Det Norske Veritas, Germanischer Lloyd	-	TAE 000016Z

### UL-Approvals

Logo	Approval	Additional Approval Text	Certificate name
	<b>UL</b> UL International Germany GmbH	UL 1977	E45171
	<b>UR</b> Underwriters Laboratories Inc.	UL 1059	E45172 sec. 18

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



## Counterpart



Item no.231-651

1-conductor male connector; 2.5 mm<sup>2</sup>; Pin spacing 5.08 mm; 21-pole; 2,50 mm<sup>2</sup>; orange

[www.wago.com/231-651](http://www.wago.com/231-651)

## Compatible products

### 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)

### check



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.: 210-137

Test plug; 2.3 mm Ø; with 500 mm cable

[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)

## Downloads

### Documentation

#### Additional Information

Technical explanations

Apr 3, 2019

pdf  
3.6 MB

Download

### CAD files

#### CAD data

2D/3D Models 232-181/031-000

URL

Download

#### PCB Design

Symbol and Footprint 232-181/031-000

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.

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

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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

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#### CAE data

ZUKEN Portal 232-181/031-000

[URL](#)

[Download](#)

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#### Installation Notes

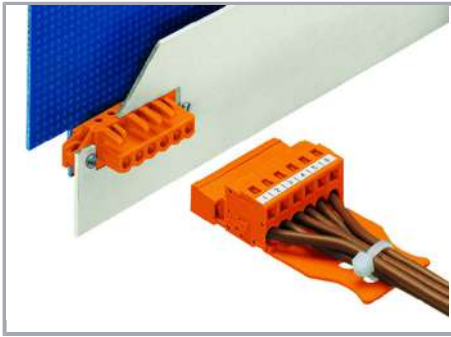
##### Application

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

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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

[Show all products from the family](#)

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