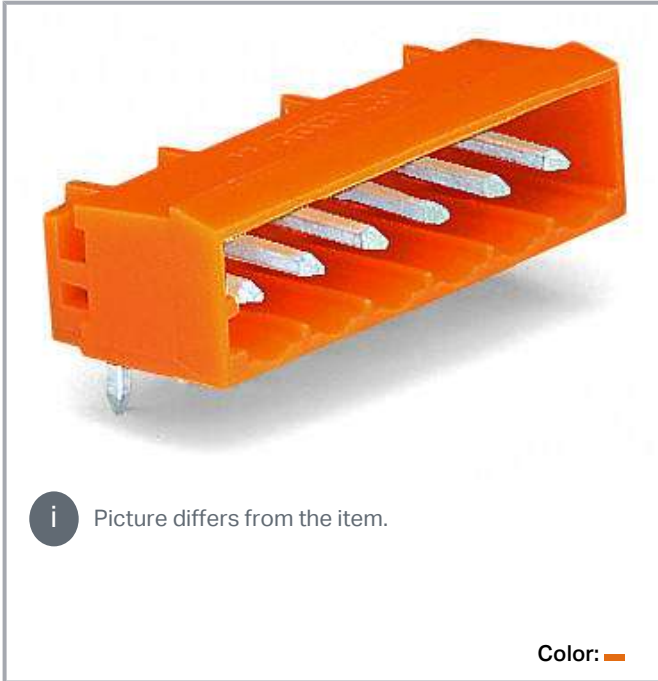


Data sheet | Item number: 231-549/001-000

Male header; 19-pole; THT; 1.0 x 1.0 mm solder pin; angled; pin spacing 5.08 mm; orange



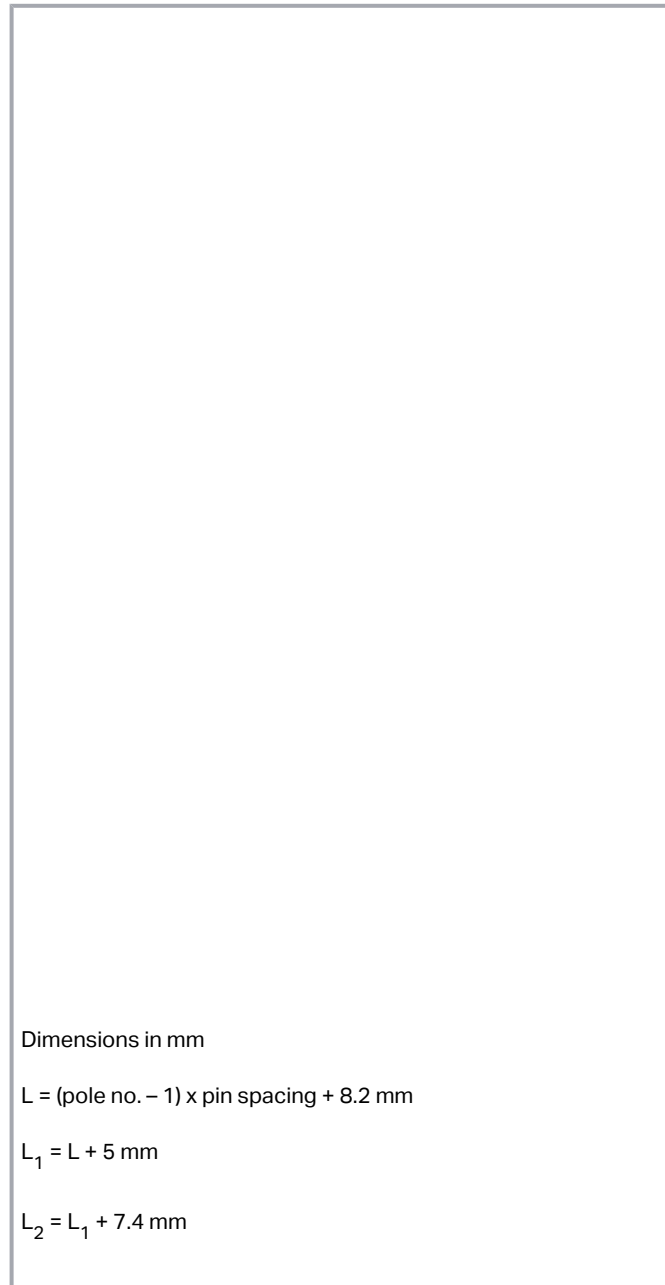
www.wago.com/231-549_001-000



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

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Germantown, WI 53022
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Dimensions in mm

$$L = (\text{pole no.} - 1) \times \text{pin spacing} + 8.2 \text{ mm}$$

$$L_1 = L + 5 \text{ mm}$$

$$L_2 = L_1 + 7.4 \text{ mm}$$

Item description

- Horizontal or vertical PCB mounting via straight or angled solder pins
- Pin cross-section: 1 x 1 mm
- With coding fingers

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



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)	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

UL Approvals

Approvals per	UL 1059
Rated voltage UL (Use Group B)	300 V
Rated current UL (Use Group B)	10 A
Rated voltage UL (Use Group D)	300 V
Rated current UL (Use Group D)	10 A

Ratings per UL

Rated voltage UL 1977	600 V
Rated current UL 1977	10 A

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CSA Approvals

Approvals per	CSA
Rated voltage CSA (Use Group B)	300 V
Rated current CSA (Use Group B)	10 A
Rated voltage CSA (Use Group D)	300 V
Rated current CSA (Use Group D)	10 A

Connection data

Total number of potentials	19
Number of connection types	1
Number of levels	1

Connection 1

Number of poles	19
-----------------	----

Physical data

Pin spacing	5.08 mm / 0.2 inch
Width	99.64 mm / 3.923 inch
Height	12.2 mm / 0.48 inch
Height from the surface	8.4 mm / 0.331 inch
Depth	12 mm / 0.472 inch
Solder pin length	3.8 mm
Solder pin dimensions	1 x 1 mm
Drilled hole diameter with tolerance	1.4 ^(+0.1) mm

Plug-in connection

Contact type (pluggable connector)	Male connector/plug
Connector (connection type)	for PCB
Mismating protection	No
Mating direction to the PCB	0°
Locking of plug-in connection	Without

PCB contact

PCB Contact	THT
Solder pin arrangement	over the entire male connector (in-line)

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

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	Electrolytic copper (E _{Cu})
Contact plating	tin-plated
Fire load	0.107 MJ
Weight	6.2 g

Environmental requirements



Limit temperature range	-60 ... +100 °C
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Commercial data

Product Group	3 (Multi Conn. System)
PU (SPU)	50 Stück
Packaging type	box
Country of origin	DE
GTIN	4044918867542
Customs tariff number	8536694040



Approvals / Certificates

Country specific Approvals



Logo	Approval	Additional Approval Text	Certificate name
	CB DEKRA Certification B.V.	IEC 61984	NL-39756
	CSA DEKRA Certification B.V.	C22.2	1466354
	KEMA/KEUR DEKRA Certification B.V.	EN 61984	2190761.01

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






Ship Approvals

Logo	Approval	Additional Approval Text	Certificate name
	ABS American Bureau of Shipping	-	19- HG1869876- PDA
	BV Bureau Veritas S.A.	IEC 60998	11915/DO BV

UL-Approvals

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

Counterpart

	Item no.231-319/026-000 1-conductor female connector; CAGE CLAMP®; 2.5 mm²; Pin spacing 5.08 mm; 19-pole; 2,50 mm²; orange	www.wago.com/231-319/026-000
	Item no.2231-319/026-000 Female plug; 19-pole; push-button; 12 AWG max; pin spacing 5.08 mm; 1-conductor per pole; orange	www.wago.com/2231-319/026-000
	Item no.2231-319/031-000 Female plug; 19-pole; push-button; mounting flange; 12 AWG max; pin spacing 5.08 mm; 1-conductor per pole; orange	www.wago.com/2231-319/031-000
	Item no.2231-319/037-000 Female plug; 19-pole; push-button; locking lever; 12 AWG max; pin spacing 5.08 mm; 1-conductor per pole; orange	www.wago.com/2231-319/037-000
	Item no.2231-319/102-000 Female plug; 19-pole; push-button; with integrated end plate; 12 AWG max; pin spacing 5.08 mm; 1-conductor per pole; orange	www.wago.com/2231-319/102-000

Item no.231-319/031-000

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



1-conductor female connector; CAGE CLAMP®; 2.5 mm²; Pin spacing 5.08 mm; 19-pole; clamping collar; 2,50 mm²; orange

www.wago.com/231-319/031-000



Item no.231-319/027-000

1-conductor female connector; CAGE CLAMP®; 2.5 mm²; Pin spacing 5.08 mm; 19-pole; clamping collar; 2,50 mm²; orange

www.wago.com/231-319/027-000



Item no.231-319/037-000

1-conductor female connector; CAGE CLAMP®; 2.5 mm²; Pin spacing 5.08 mm; 19-pole; Lateral locking levers; 2,50 mm²; orange

www.wago.com/231-319/037-000



Item no.232-319/026-000

1-conductor female connector, angled; CAGE CLAMP®; 2.5 mm²; Pin spacing 5.08 mm; 19-pole; 2,50 mm²; orange

www.wago.com/232-319/026-000



Item no.232-419/026-000

1-conductor female connector, angled; CAGE CLAMP®; 2.5 mm²; Pin spacing 5.08 mm; 19-pole; 2,50 mm²; orange

www.wago.com/232-419/026-000



Item no.231-319/102-000

1-conductor female connector; CAGE CLAMP®; 2.5 mm²; Pin spacing 5.08 mm; 19-pole; with integrated end plate; 2,50 mm²; orange

www.wago.com/231-319/102-000

Optional accessories

Coding

Intermediate plate



Item no.: 231-500

Spacer; for formation of groups; light gray

www.wago.com/231-500

Coding



Item no.: 231-129

Coding key; snap-on type; light gray

www.wago.com/231-129

Downloads

Documentation

Additional Information

Technical explanations

2019 Apr 3

pdf
2.0 MB

Download

CAD files

CAD data

2D/3D Models 231-549/001-000

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ZURB models 231-549/001-000

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CAE data

EPLAN Data Portal 231-549/001-000

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

ZUKEN Portal 231-549/001-000

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EPLAN Data Portal 231-549/001-000

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

PCB Design

Symbol and Footprint 231-549/001-000

[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

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Environmental Product Compliance

Compliance Search

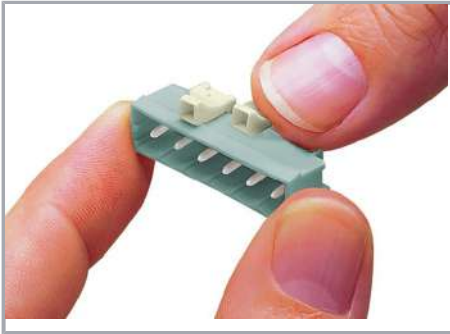
Environmental Product Compliance 231-549/001-000

[URL](#)

[Download](#)

THT male header; 1.0 x 1.0 mm solder pin; angled; Pin spacing 5.08 mm; 19-pole; orange

Installation Notes



Coding a male header – fitting coding key(s).

Product family

MCS MIDI Classic

[Show all products from the family](#)

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