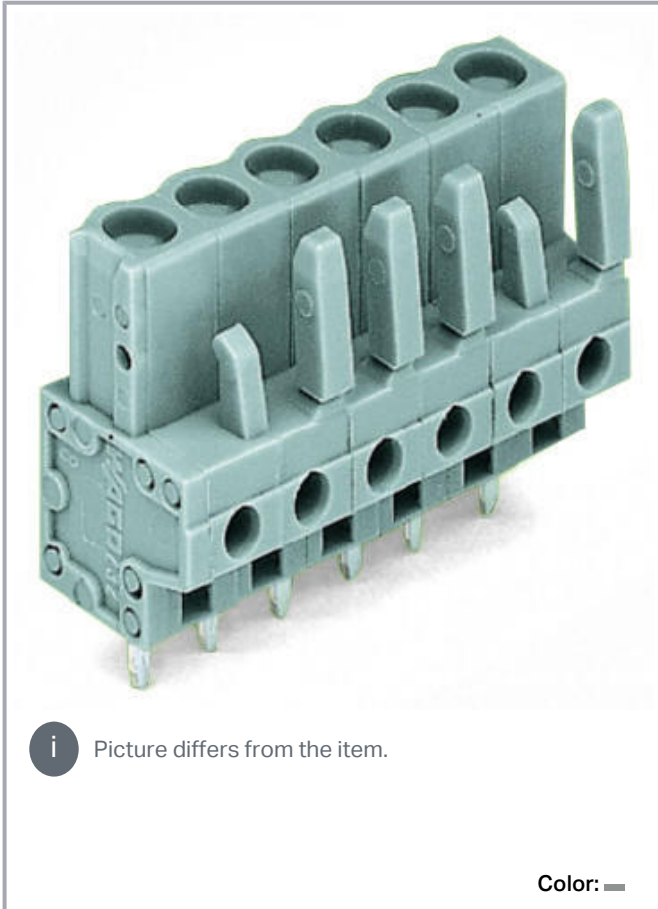


Data sheet | Item number: 232-149

THT female header; straight; Pin spacing 5 mm; 19-pole; 0.6 x 1.0 mm solder pin; gray

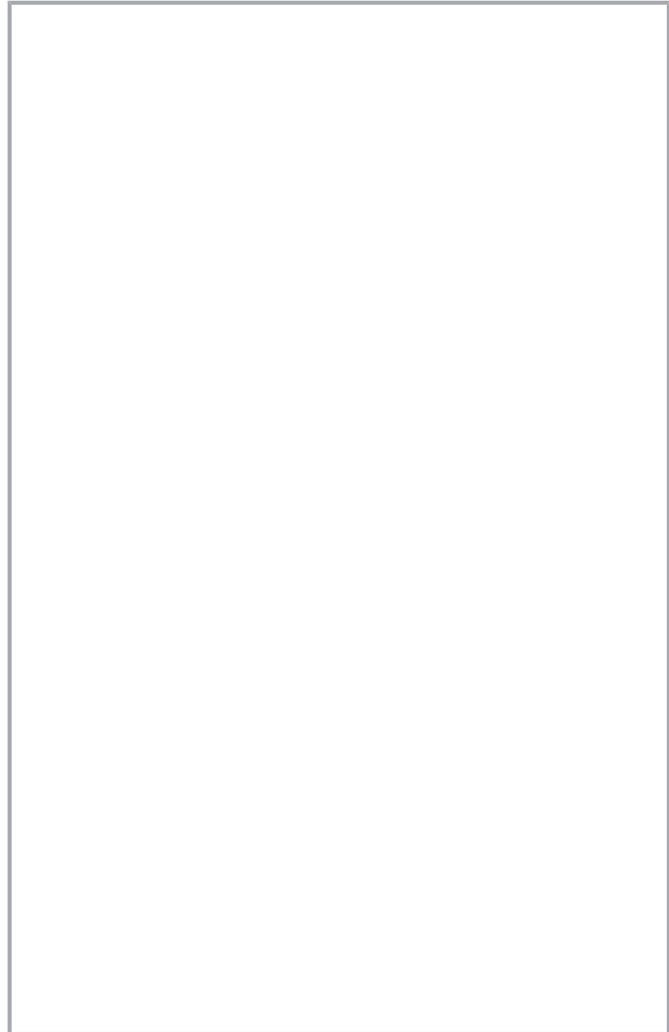


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i Picture differs from the item.

Color:



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

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Dimensions in mm

$L = (\text{pole no.} \times \text{pin spacing}) + 1.5 \text{ mm}$

2- to 3-pole female connectors – one latch only

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

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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

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

Connection data

Total number of potentials	19
----------------------------	----

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



Number of connection types	1
Number of levels	1
Pole No.	19

Physical data

Pin spacing	5 mm / 0.197 inch
Width	96.5 mm / 3.799 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 ^(+0.1) mm

Plug-in connection

Contact type (pluggable connector)	Female connector/socket
Connector (connection type)	for PCB
Mismating protection	No
Mating direction to the PCB	90°
Locking of plug-in connection	Without

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
Material group	I
Insulation material	Polyamide (PA66)
Flammability class per UL94	V0
Contact material	Copper alloy
Contact plating	tin-plated
Fire load	0.307 MJ
Weight	17.6 g

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

Environmental requirements



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

Commercial data



Product Group	3 (Multi Conn. System)
PU (SPU)	10 Stück
Packaging type	box
Country of origin	DE
GTIN	4044918578639
Customs tariff number	85366990990

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

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
	LR Lloyds Register	IEC 61984	96/20035 (E5)

UL-Approvals

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

Counterpart



Item no.231-619

1-conductor male connector; CAGE CLAMP®; 2.5 mm²; Pin spacing 5 mm; 19-pole; 2,50 mm²; gray

www.wago.com/231-619



Item no.231-619/019-000

1-conductor male connector; CAGE CLAMP®; 2.5 mm²; Pin spacing 5 mm; 19-pole; clamping collar; 2,50 mm²; gray

www.wago.com/231-619/019-000

Optional accessories

Testing and measuring

Testing 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
2.0 MB

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CAD/CAE-Data

CAD data

2D/3D Models 232-149

URL

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PCB Design

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[URL](#)

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Symbol and Footprint 232-149

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

CAE data

ZUKEN Portal 232-149	URL	Download
EPLAN Data Portal 232-149	URL	Download

Environmental Product Compliance

Compliance Search

Environmental Product Compliance 232-149

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Data sheet | Item number: 232-149

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THT female header; straight; Pin spacing 5 mm; 19-pole; 0.6 x 1.0 mm solder pin; gray

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Installation Notes

Product family

MCS MIDI Classic

[Show all products from the family](#)

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