THT female header; straight; Pin spacing 5 mm; 9-pole; 0.6 x 1.0 mm solder pin; gray



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Color	

 $\label{lem:condition} \textbf{Subject to changes. Please also observe the further product documentation!}$ 

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Dimensions in mm
L = (pole no. x pin spacing) + 1.5 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

 $\label{thm:continuity} \textbf{Subject to changes. Please also observe the further product documentation!}$ 

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# Data Notes

Safety information	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. 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**

# Ratings per IEC/EN

Ratings per	IEC/EN 60664-1
Nominal 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
Nominal voltage (II/2)	630 V
Rated surge voltage (II/2)	4 kV
Rated current	12 A
Legend (ratings)	(III / 2) ≙ Overvoltage category III / Pollution degree 2

# Ratings per UL

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

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# 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

Total number of potentials	9
Number of connection types	1
Number of levels	1

#### **Connection 1**

# Physical data

Pin spacing	5 mm / 0.197 inches
Width	46.5 mm / 1.831 inches
Height	23.25 mm / 0.915 inches
Height from the surface	18.25 mm / 0.719 inches
Depth	11.6 mm / 0.457 inches
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**

Variable coding	Yes
Anti-rotation protection	Yes

# Plug-in connection

Contact type (pluggable connector)	Female connector/socket
Connector (connection type)	for PCB
Mismating protection	No
Plugging without loss of pin spacing	No
Mating direction to the PCB	90 °

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

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Locking of plug-in connection	none	
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## **PCB** contact

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

## **Material Data**

Note (material data)

Information on material specifications can be found here

Color	gray	
Material group	1	
Insulation material	Polyamide (PA66)	
Flammability class per UL94	V0	
Contact material	Copper alloy	
Contact plating	Tin	
Fire load	0.196 MJ	
Weight	8.4 g	

## **Environmental requirements**

Limit temperature range	-60 +85 °C
Processing temperature	-35 +60 °C

#### Commercial data

Product Group	3 (Multi Conn. System)
eCl@ss 10.0	27-44-04-02
eCl@ss 9.0	27-44-04-02
ETIM 8.0	EC002637
ETIM 7.0	EC002637
PU (SPU)	50 pcs
Packaging type	box
Country of origin	DE
GTIN	4044918578455
Customs tariff number	85366990990

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Cortificato

## **Environmental Product Compliance**

RoHS Compliance Status Compliant, No Exemption

# Approvals / Certificates

## General approvals

		Certificate
Approval	Additional Approval Text	name
СВ	IEC 61984	NL-39756
DEKRA Certification B.V.		/A1
CSA	C22.2	1466354
DEKRA Certification B.V.		
KEMA/KEUR	EN 61984	71-
DEKRA Certification B.V.		121453
UL	UL 1059	E45172
Underwriters Laboratories Inc.		
UR	UL 1977	E45171
Underwriters Laboratories Inc.		
	CB DEKRA Certification B.V.  CSA DEKRA Certification B.V.  KEMA/KEUR DEKRA Certification B.V.  UL Underwriters Laboratories Inc.  UR	CB DEKRA Certification B.V.  CSA C22.2  DEKRA Certification B.V.  KEMA/KEUR DEKRA Certification B.V.  UL UL UL 1059 Underwriters Laboratories Inc.  UR

## Declarations of conformity and manufacturer's declarations

			Certificate
Logo	Approval	Additional Approval Text	name
	Railway	-	Railway
	WAGO GmbH & Co. KG		Ready

#### Approvals for marine applications

Logo	Approval	Additional Approval Text	Certificate name
	ABS	-	19-
	American Bureau of Shipping		HG15869876-
			PDA
	DNV GL	-	TAE 000016Z
	Det Norske Veritas, Germanischer Lloyd		
	LR	IEC 61984	96/20035 (E5)
	Lloyds Register		

## Counterpart

Item no.231-609

1-conductor male connector; CAGE CLAMP®; 2.5 mm²; Pin spacing 5 mm; 9-pole; 2,50 mm²; gray

Item no.231-609/019-000

www.wago.com/231-609

www.wago.com/231-609/019-

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1-conductor male connector; CAGE CLAMP®; 2.5 mm²; Pin spacing 5 mm; 9-pole; clamping collar; 2,50 mm²; gray

000

## Optional accessories

	measuring

Testing accessories

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

**Downloads** 

**Documentation** 

**Additional Information** 

2019 年4月3日

pdf 2.0 MB Download

CAD/CAE-Data

**CAE** data

EPLAN Data Portal 232-139

URL

Download

ZUKEN Portal 232-139

URL

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**PCB** Design

Symbol and Footprint 232-139

**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

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- 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

#### CAD data

2D/3D Models 232-139 URL Download

#### **Environmental Product Compliance**

Compliance Search

**Environmental Product Compliance 232-139** 

URL

Download

THT female header; straight; Pin spacing 5 mm; 9-pole; 0.6 x 1.0 mm solder pin; gray

#### **Installation Notes**

# **Product family**

MCS MIDI Classic

Show all products from the family

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