

Data sheet | Item number: 231-165/040-000

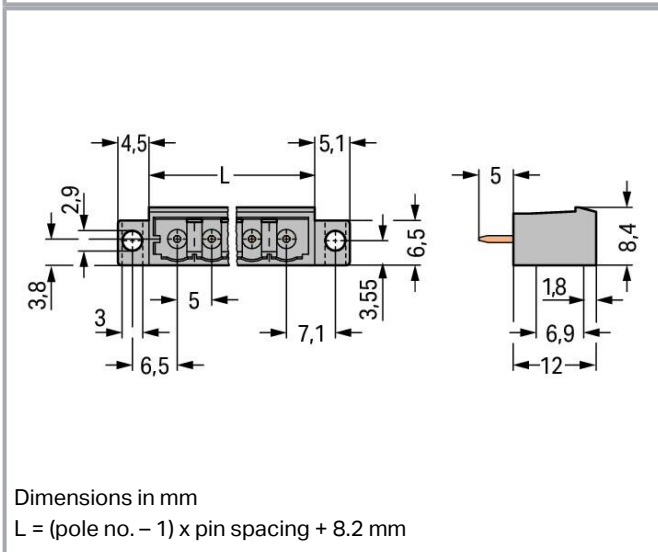
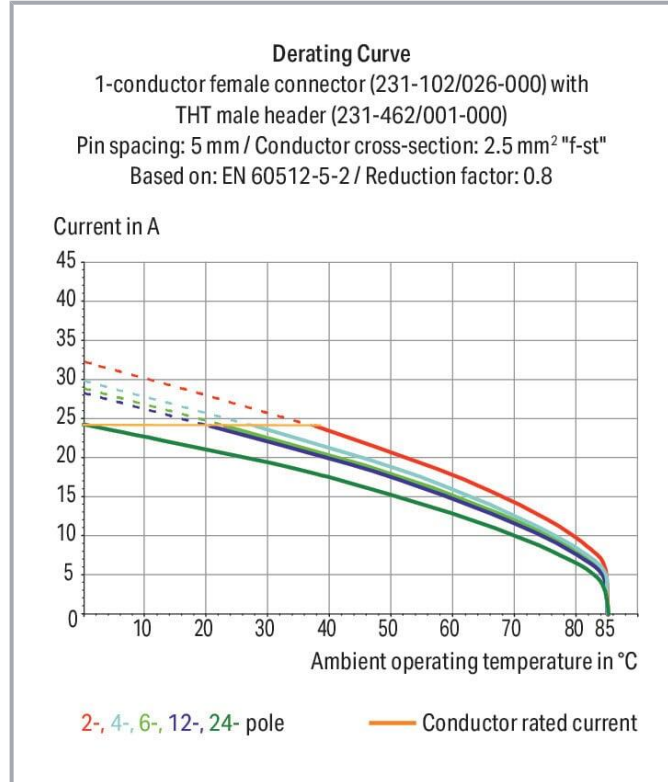
THT male header; 1.2 x 1.2 mm solder pin; straight; clamping collar; Pin spacing 5 mm; 5-pole; gray



[www.wago.com/231-165/040-000](http://www.wago.com/231-165/040-000)



Color:



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

WAGO GmbH & Co. KG  
Hansastr. 27  
32423 Minden  
Phone: +49571 887-0 | Fax: +49571 887-169  
Email: [info.de@wago.com](mailto:info.de@wago.com) | Web: [www.wago.com](http://www.wago.com)

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## Item description

- Horizontal or vertical PCB mounting via straight or angled solder pins
- 1.2 x 1.2 mm solder pins allow nominal current up to 16 A, enhancing stability of shorter headers
- With coding fingers

## 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)	250 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	16 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

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



Rated current UL (Use Group D)	10 A
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### Ratings per UL 1977

Rated voltage (UL 1977)	600 V
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Rated current UL 1977	15 A
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### Ratings per CSA

Approvals per	CSA
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Rated voltage CSA (Use Group B)	300 V
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Rated current CSA (Use Group B)	15 A
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Rated voltage CSA (Use Group D)	300 V
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Rated current CSA (Use Group D)	10 A
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### Connection data

Total number of potentials	5
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Number of connection types	1
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Number of levels	1
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### Connection 1

Pole number	5
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### Physical data

Pin spacing	5 mm / 0.197 inches
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Width	37.8 mm / 1.488 inches
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Height	17 mm / 0.669 inches
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Height from the surface	12 mm / 0.472 inches
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Depth	8.4 mm / 0.331 inches
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Solder pin length	5 mm
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Solder pin dimensions	1.2 x 1.2 mm
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Drilled hole diameter with tolerance	1.7 <sup>(+0.1)</sup> mm
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### Mechanical Data

Variable coding	Yes
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Mounting type	Mounting flange
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Mounting type	Feed-through mounting Panel mounting
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Anti-rotation protection	Yes
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**Plug-in connection**

Contact type (pluggable connector)	Male connector/plug
Connector (connection type)	for PCB
Mismating protection	No
Plugging without loss of pin spacing	No
Mating direction to the PCB	90 °
Locking of plug-in connection	none

**PCB contact**

PCB contact	THT
Solder pin arrangement	over the entire male 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	I
Insulation material	Polyamide (PA66)
Flammability class per UL94	V0
Contact material	Electrolytic copper (E <sub>Cu</sub> )
Contact plating	Tin
Fire load	0.059 MJ
Weight	2.3 g

**Environmental requirements**

Limit temperature range	-60 ... +100 °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

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ETIM 8.0	EC002637
ETIM 7.0	EC002637
ECCN	NO DATA
PU (SPU)	100 pcs
Packaging type	box
Country of origin	DE
GTIN	4045454644802
Customs tariff number	85366930000

## Environmental Product Compliance

RoHS Compliance Status	Compliant, No Exemption
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## Approvals / Certificates

### General approvals

Logo	Approval	Additional Approval Text	Certificate name
	CB DEKRA Certification B.V.	IEC 61984	NL-39756/A1
	CCC CQC	GB/T 13140.1	CQC03003003013
	CSA DEKRA Certification B.V.	C22.2	LR 18677-25
	KEMA/KEUR DEKRA Certification B.V.	EN 61984	71-121453
	UL Underwriters Laboratories Inc.	UL 1059	E45172
	UL Underwriters Laboratories Inc.	UL 1977	E45171

### Declarations of conformity and manufacturer's declarations

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

-

Railway  
Ready

### Approvals for marine applications

Logo	Approval	Additional Approval Text	Certificate name
	<b>ABS</b> American Bureau of Shipping	-	19- HG1869876- PDA
	<b>BV</b> Bureau Veritas S.A.	IEC 60998	11915/D0 BV
	<b>DNV</b> DNV GL SE	-	TAE000016Z

### Counterpart



Item no.231-105/026-000

1-conductor female connector; CAGE CLAMP®; 2.5 mm<sup>2</sup>; Pin spacing 5 mm; 5-pole; 2,50 mm<sup>2</sup>; gray

[www.wago.com/231-105/026-000](http://www.wago.com/231-105/026-000)

### Optional accessories

#### Mounting

##### Mounting accessories



Item no.: 209-147  
Self-tapping screw

[www.wago.com/209-147](http://www.wago.com/209-147)



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)

#### Coding

Intermediate plate

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**Item no.: 231-500**  
Spacer; for formation of groups; light gray

[www.wago.com/231-500](http://www.wago.com/231-500)

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Coding



**Item no.: 231-129**  
Coding key; snap-on type; light gray

[www.wago.com/231-129](http://www.wago.com/231-129)

## Downloads

### Documentation

#### Additional Information

Technical Section	2019 Apr 3	pdf	Download
Technical explanations		2.1 MB	

## CAD/CAE-Data

### CAD data

2D/3D Models 231-165/040-000	URL	Download
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### PCB Design

Symbol and Footprint via Ultra Librarian 231-165/040-000	URL	Download
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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
- Altair
- Altium 6 to current version
- Autodesk Fusion 360
- Cadence Allegro
- DesignSpark
- Eagle Libraries
- KiCad
- Mentor Graphics
- BoardStation
- Mentor Graphics Design Architect
- Mentor Graphics Design
- Expedition 99 and 2000

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



- 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
- Zuken eCADSTAR 2020 and 2021Zuken CR-5000 and CR-8000

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PCB Component Libraries (EDA), PCB CAD Library Ultra Librarian

Symbol and Footprint via SamacSys 231-165/040-000

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:

- 3D (stp)
- Altium
- CADSTAR
- Capture
- CircuitStudio
- CR-5000
- CR-8000
- DEHDL
- DesignSpark PCB
- DesignSpark PCB PRO
- DipTrace
- EAGLE
- Easy-PC
- EasyEDA
- eCADSTAR
- KiCad
- OrCAD\_Allegro16

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

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- PADS
- Proteus
- Pulsonix
- Quadcept
- SOLIDWORKS PCB
- TARGET 3001!
- xDX Designer
- Xpedition

PCB Component Libraries (EDA), PCB CAD Library SamacSys Electronic Component Search Engine

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#### CAE data

ZUKEN Portal 231-165/040-000	<a href="#">URL</a>	<a href="#">Download</a>
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#### Asset Administration Shell

Asset Administration Shell 231-165/040-000	<a href="#">URL</a>	<a href="#">Download</a>
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### Environmental Product Compliance

#### Compliance Search

Environmental Product Compliance 231-165/040-000	<a href="#">URL</a>	<a href="#">Download</a>
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THT male header; 1.2 x 1.2 mm solder pin; straight; clamping collar; Pin spacing 5 mm; 5-pole; gray

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### Installation Notes

#### Coding

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

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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!