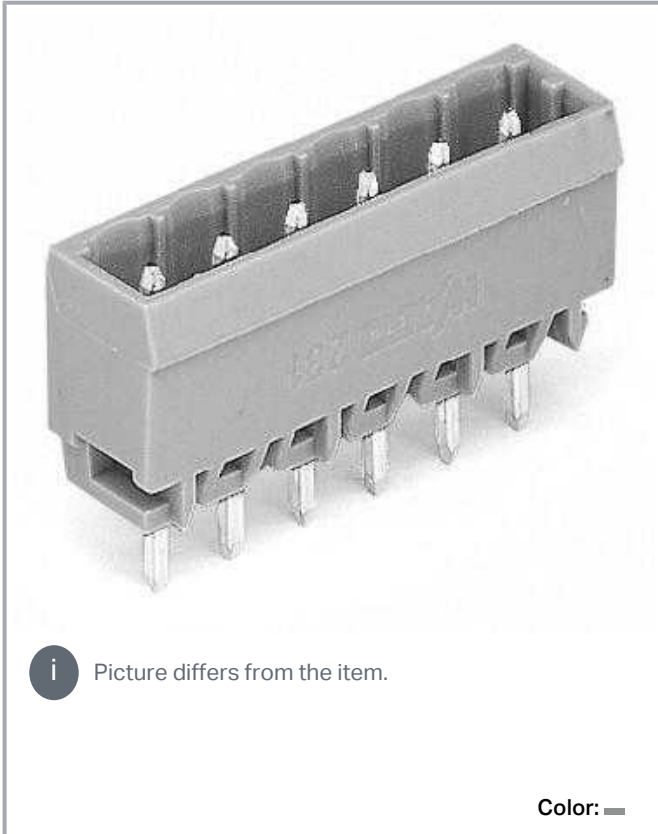


**Data sheet | Item number: 231-181/001-000**

Male header; 21-pole; THT; 1.2 x 1.2 mm solder pin; straight; pin spacing 5 mm; gray

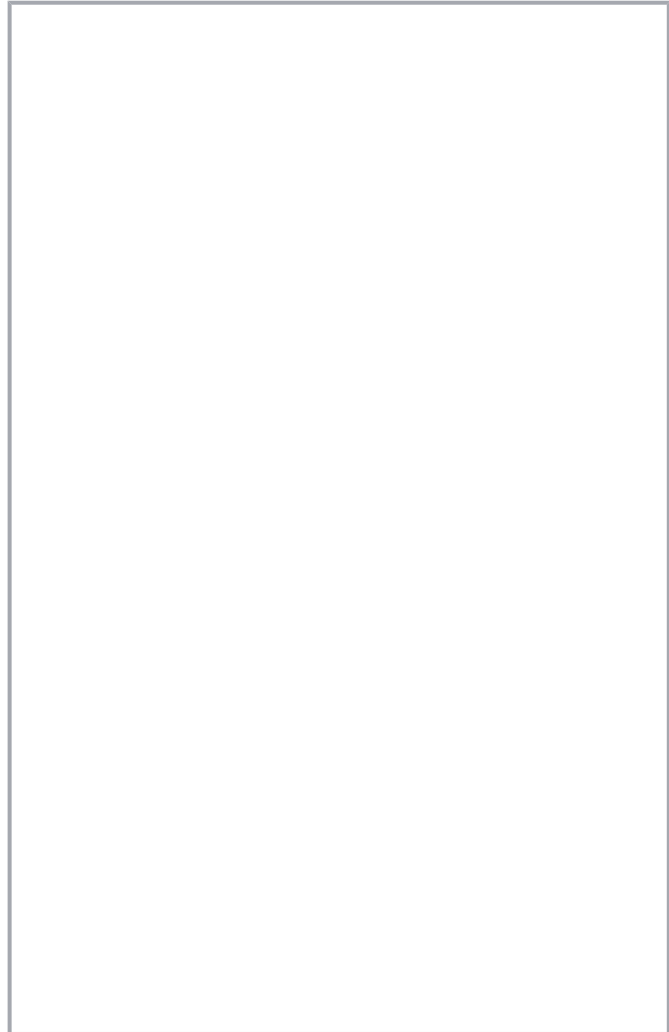


[www.wago.com/231-181\\_001-000](http://www.wago.com/231-181_001-000)



**i** Picture differs from the item.

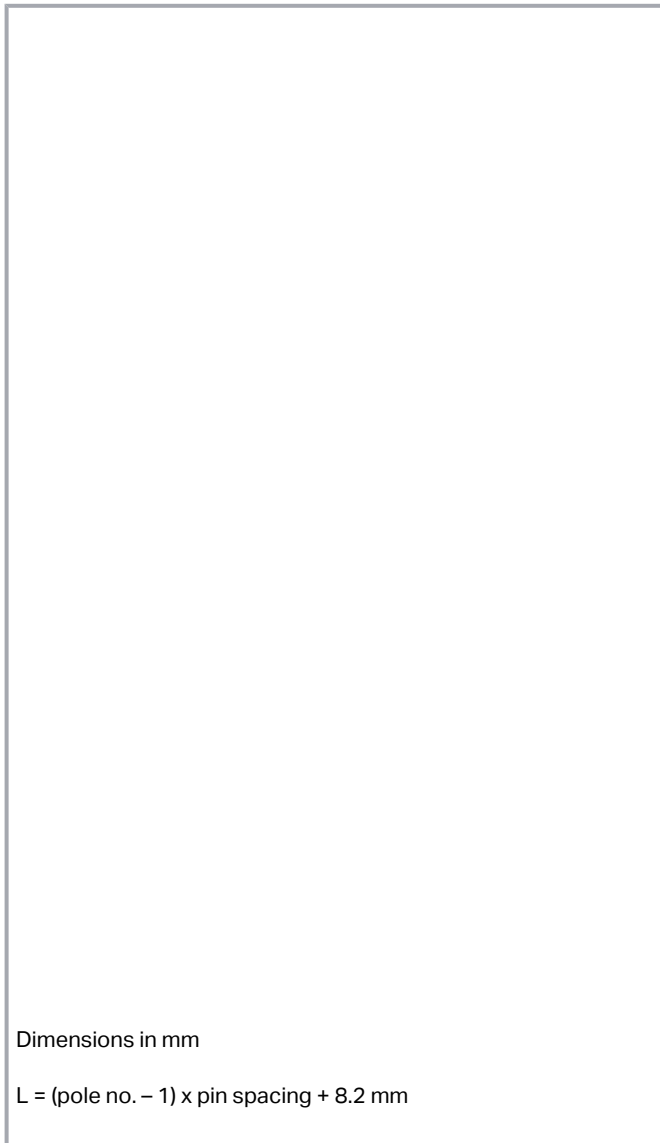
Color: —



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

WAGO Corporation  
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Dimensions in mm

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

### 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 1

The *MCS – MULTI CONNECTION SYSTEM* includes connectors

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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)	250 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	16 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)	15 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	15 A

### CSA Approvals

Approvals per	CSA
Rated voltage CSA (Use Group B)	300 V

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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	21
Number of connection types	1
Number of levels	1

### Connection 1

Number of poles	21
-----------------	----

### Physical data

Pin spacing	5 mm / 0.197 inch
Width	108.2 mm / 4.26 inch
Height	17 mm / 0.669 inch
Height from the surface	12 mm / 0.472 inch
Depth	8.4 mm / 0.331 inch
Solder pin length	5 mm
Solder pin dimensions	1.2 x 1.2 mm
Drilled hole diameter with tolerance	1.7 <sup>(+0.1)</sup> mm

### Plug-in connection

Contact type (pluggable connector)	Male connector/plug
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 male connector (in-line)
Number of solder pins per potential	1

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

## Material data

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-plated
Fire load	0.114 MJ
Weight	7.8 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	PL
GTIN	4044918928922
Customs tariff number	8536694040

## Approvals / Certificates

### Country specific Approvals

Logo	Approval	Additional Approval Text	Certificate name
	<b>CB</b> DEKRA Certification B.V.	IEC 61984	NL-39756
	<b>CSA</b> DEKRA Certification B.V.	C22.2	1466354

### Ship Approvals

Logo	Approval	Additional Approval Text	Certificate name
	<b>ABS</b> American Bureau of Shipping	-	19- HG1869876-

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**BV**  
Bureau Veritas S.A.

IEC 60998



11915/DO  
BV

**DNV GL**  
Det Norske Veritas, Germanischer Lloyd

-

TAE000016Z

**UL-Approvals**

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

**Counterpart**



**Item no.231-121/026-000**  
Female plug; 21-pole; 12 AWG max; pin spacing 5 mm; 1 conductor per pole; gray

[www.wago.com/231-121/026-000](http://www.wago.com/231-121/026-000)

**Optional accessories**

**Coding**

Intermediate plate



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

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

Coding



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

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

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



**Downloads**

**Documentation**

**Additional Information**

Technical explanations	2019 Apr 3	pdf 2.0 MB	Download
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**CAD files**

**CAD data**

2D/3D Models 231-181/001-000	URL	Download
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**CAE data**

EPLAN Data Portal 231-181/001-000	URL	Download
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ZUKEN Portal 231-181/001-000	URL	Download
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EPLAN Data Portal 231-181/001-000	URL	Download
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**PCB Design**

Symbol and Footprint 231-181/001-000	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
- 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

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

- 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 231-181/001-000

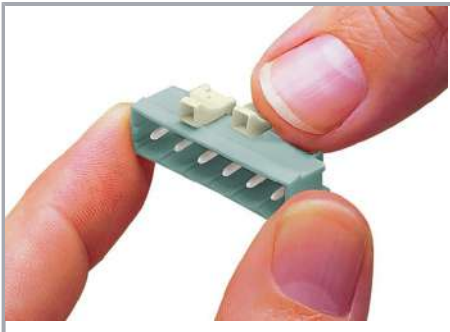
[URL](#)

[Download](#)

THT male header; 1.2 x 1.2 mm solder pin; straight; Pin spacing 5 mm; 21-pole; gray

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## 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!

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