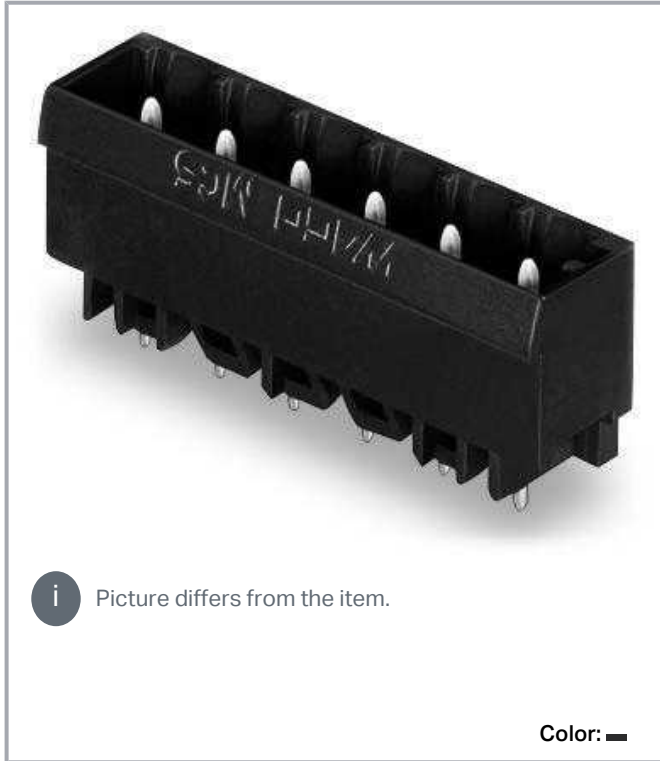


Data sheet | Item number: 231-162/001-000/105-604

Male header; 2-pole; THR; 1.2 x 1.2 mm solder pin; straight; pin spacing 5 mm; black



[www.wago.com/231-162\\_001-000\\_105-604](http://www.wago.com/231-162_001-000_105-604)



 Picture differs from the item.

Color: ■



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

WAGO Corporation  
Germantown, WI 53022  
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Email: [info.us@wago.com](mailto:info.us@wago.com) | Web: [www.wago.us](http://www.wago.us)

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### Item description

- THR male headers for reflow soldering in SMT applications
- Available in tape-and-reel packaging for automated pick-and-place PCB assembly
- 1.2 x 1.2 mm solder pins allow nominal current up to 16 A, enhancing stability of shorter headers
- Also available in bulk packaging for manual placement
- Male headers may be mounted horizontally or vertically
- 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  
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) $\hat{=}$ 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	15 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	2
Number of connection types	1
Number of levels	1

## Connection 1

Number of poles	2
-----------------	---

## Physical data

Pin spacing	5 mm / 0.197 inch
Width	13.2 mm / 0.52 inch
Height	14.4 mm / 0.567 inch
Height from the surface	12 mm / 0.472 inch
Depth	8.4 mm / 0.331 inch
Solder pin length	2.4 mm
Solder pin dimensions	1.2 x 1.2 mm
Plated through-hole diameter (THR)	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	THR
-------------	-----

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

Solder pin arrangement	over the entire male connector (in-line)
Number of solder pins per potential	1

### Material data

Color	black
Material group	I
Insulation material	Polyphthalamide (PPA GF)
Flammability class per UL94	V0
Contact material	Electrolytic copper (E <sub>Cu</sub> )
Contact plating	tin-plated
Fire load	0.019 MJ
Weight	1 g

### Environmental requirements


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

Product Group	3 (Multi Conn. System)
PU (SPU)	200 Stück
Packaging type	box
Country of origin	PL
GTIN	4050821042594
Customs tariff number	85366990990

### 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	LR 18677-25

#### UL-Approvals

Logo	Approval	Additional Approval Text	Certificate name

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



UL  
Underwriters Laboratories Inc.

UL 1059

E45172



UR  
Underwriters Laboratories Inc.

UL 1977

E45171

### Counterpart



Item no. 231-102/026-000  
Female plug; 2-pole; 12 AWG max; pin spacing 5 mm; 1 conductor per pole; gray

[www.wago.com/231-102/026-000](http://www.wago.com/231-102/026-000)

### 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)

### Downloads

#### Documentation

##### Additional Information

Technical explanations	2019 Apr 3	pdf 2.0 MB	Download
THR Soldering Process		pdf 548.2 kB	Download

### CAD files

#### CAD data

2D/3D Models 231-162/001-000/105-604	URL	Download
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#### PCB Design

Symbol and Footprint 231-162/001-000/105-604

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[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 231-162/001-000/105-604

[URL](#)

[Download](#)

THR male header; 1.2 x 1.2 mm solder pin; straight; Pin spacing 5 mm; 2-pole; black

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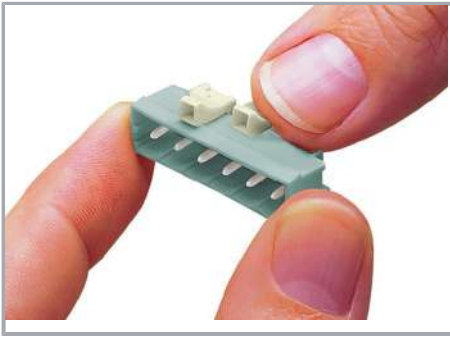
## Installation Notes

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!

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