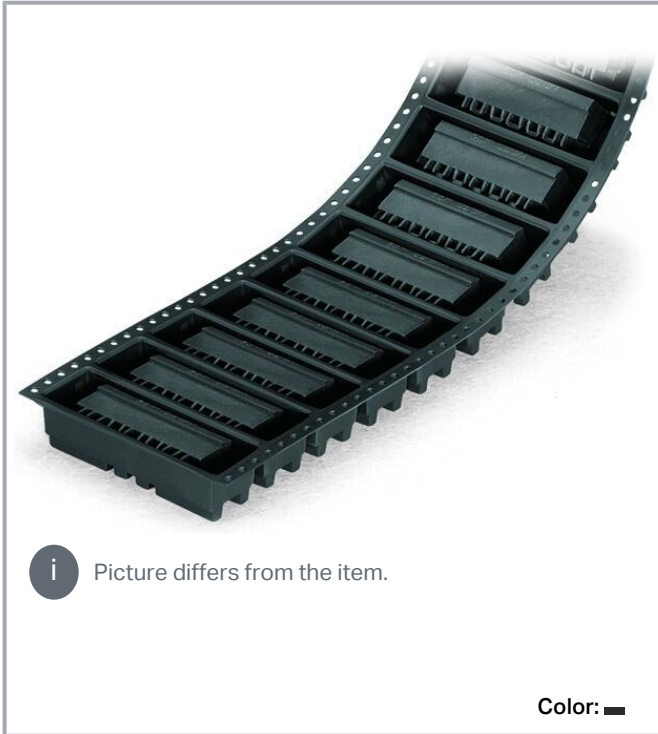


Data sheet | Item number: 231-465/001-000/105-604/997-407

THR male header; 1.2 x 1.2 mm solder pin; angled; in tape-and-reel packaging; Pin spacing 5 mm; 5-pole; black



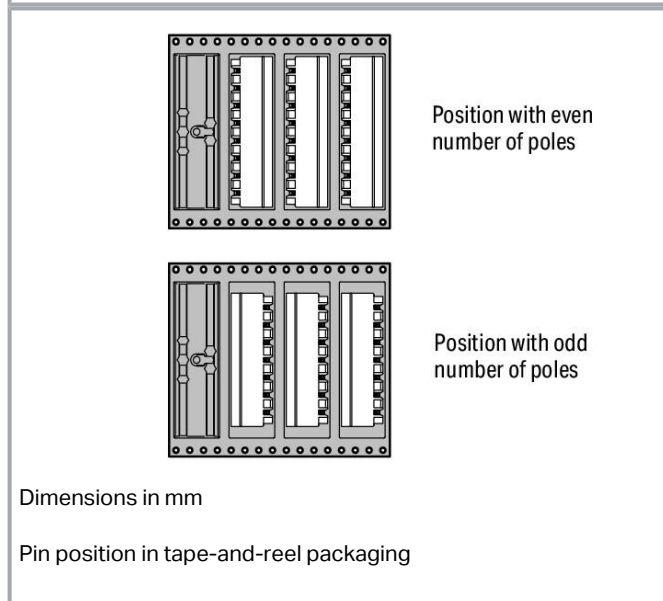
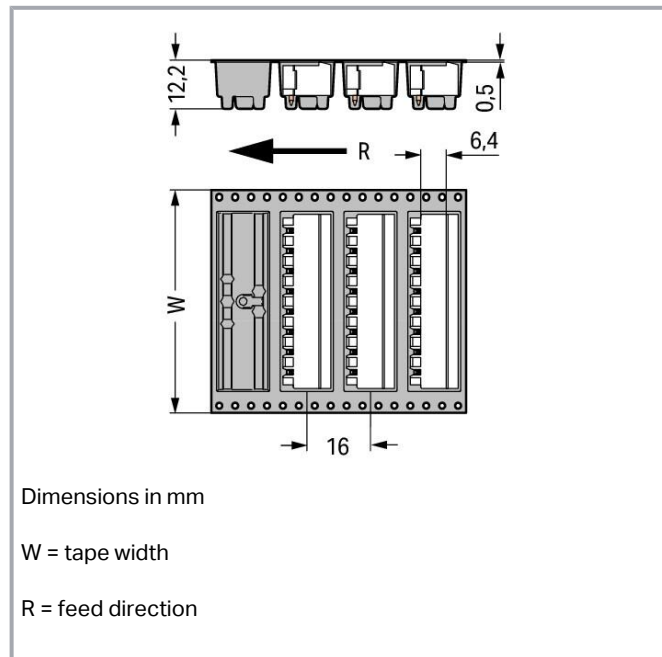
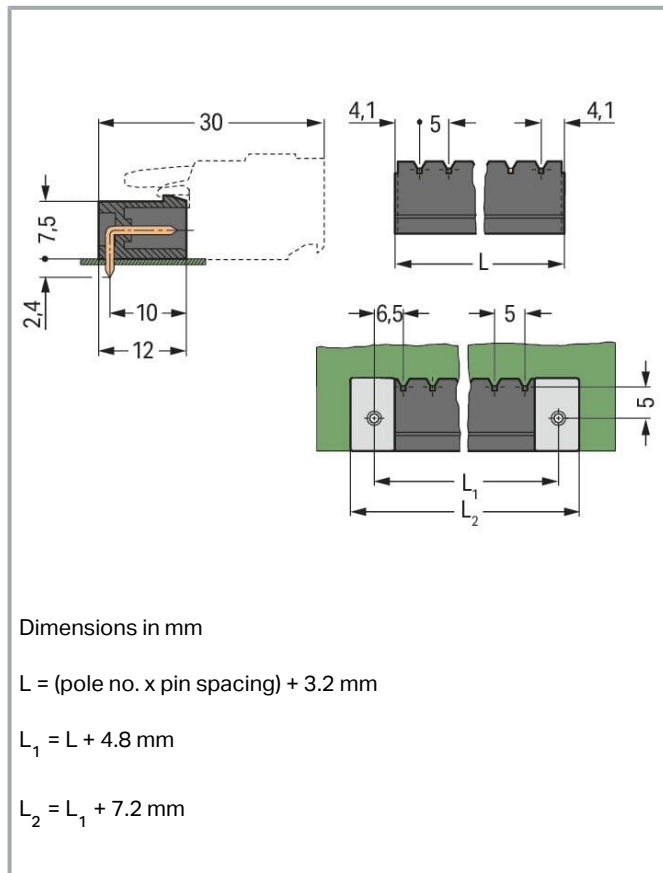
[www.wago.com/231-465/001-000/105-604/997-407](http://www.wago.com/231-465/001-000/105-604/997-407)



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

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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

## 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  
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 1059

Approvals per	UL 1059

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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 1977

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

### Ratings per CSA

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	5
Number of connection types	1
Number of levels	1

### Connection 1

Pole number	5
-------------	---

### Physical data

Pin spacing	5 mm / 0.197 inches
Width	28.2 mm / 1.11 inches
Height	10.8 mm / 0.425 inches
Height from the surface	8.4 mm / 0.331 inches
Depth	12 mm / 0.472 inches
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
Reel diameter of tape-and-reel packaging	330 mm
Tape width	56 mm

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## Mechanical Data

Variable coding	Yes
Anti-rotation protection	Yes

## 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	0°
Locking of plug-in connection	none

## PCB contact

PCB contact	THR
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	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
Weight	2.2 g
MSL gemäß J-STD 020D	1

## Environmental requirements

Limit temperature range	-60 ... +100 °C
Processing temperature	-35 ... +60 °C

## Commercial data

eCl@ss 10.0	27-44-04-02
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eCl@ss 9.0	27-44-04-02
ETIM 8.0	EC002637
ETIM 7.0	EC002637
PU (SPU)	170 pcs
Packaging type	bag
Country of origin	DE
GTIN	4050821042815
Customs tariff number	85366990990

## Environmental Product Compliance

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

### General approvals

Logo	Approval	Additional Approval Text	Certificate name
	CSA DEKRA Certification B.V.	C22.2	1466354

## 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

### 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!

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## Downloads

### Documentation

#### Additional Information

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

## CAD/CAE-Data

### CAD data

2D/3D Models 231-465/001-000/105-604/997-407	URL	Download
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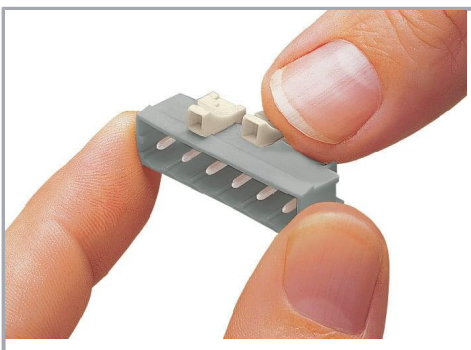
## Environmental Product Compliance

### Compliance Search

Environmental Product Compliance 231-465/001-000/105-604/997-407	URL	Download
THR male header; 1.2 x 1.2 mm solder pin; angled; in tape-and-reel packaging; Pin spacing 5 mm; 5-pole; black		

## Installation Notes

### Coding



Coding a male header – fitting coding key(s).

## Product family

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



**MCS MIDI Classic**

[Show all products from the family](#)

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

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