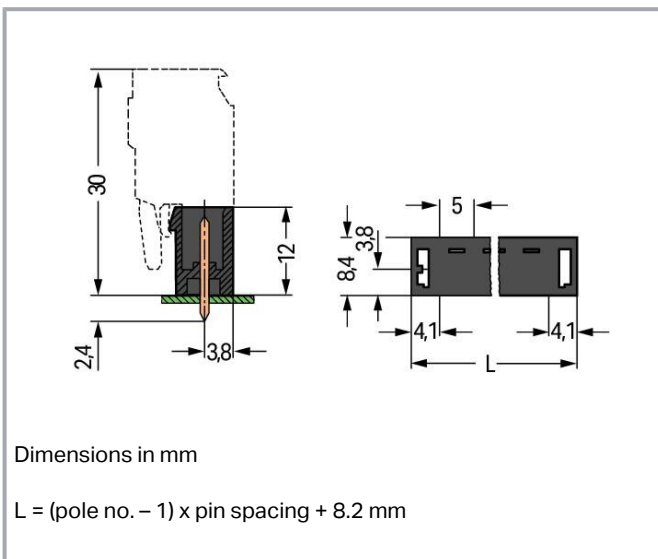
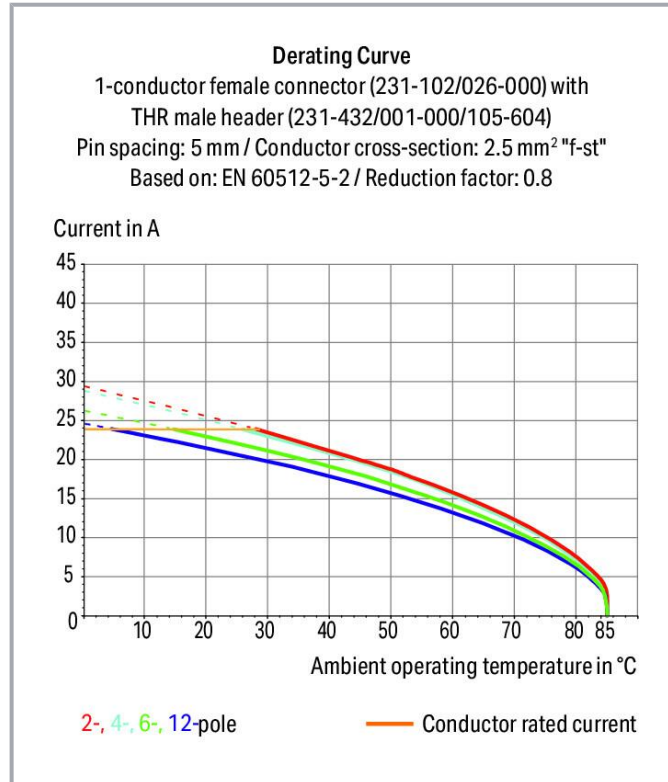


Data sheet | Item number: 231-142/001-000/105-604/997-409

THR male header; 1.0 x 1.0 mm solder pin; straight; in tape-and-reel packaging; Pin spacing 5 mm; 12-pole; black



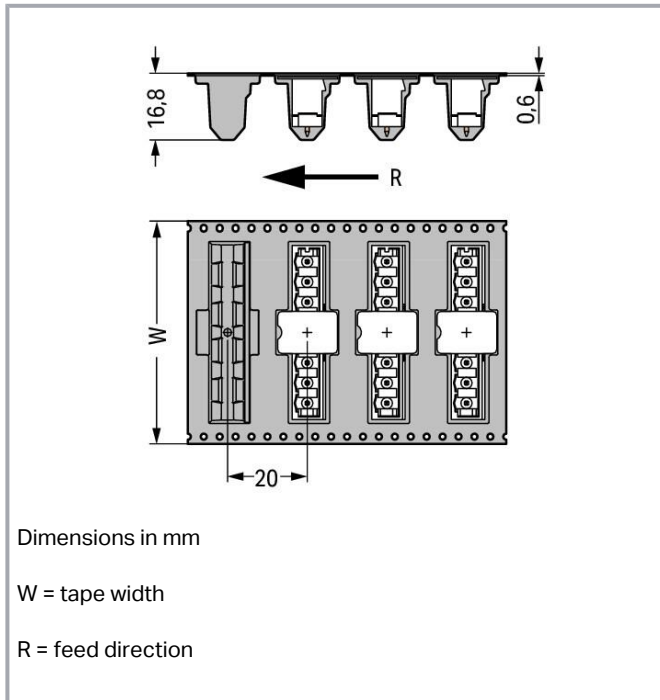
[www.wago.com/231-142/001-000/105-604/997-409](http://www.wago.com/231-142/001-000/105-604/997-409)



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
- 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/>.

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## 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 1059

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 1977

Rated voltage (UL 1977)	600 V
Rated current UL 1977	10 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	12
Number of connection types	1
Number of levels	1

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



## Connection 1

Pole number	12
-------------	----

## Physical data

Pin spacing	5 mm / 0.197 inches
Width	63.2 mm / 2.488 inches
Height	14.4 mm / 0.567 inches
Height from the surface	12 mm / 0.472 inches
Depth	8.4 mm / 0.331 inches
Solder pin length	2.4 mm
Solder pin dimensions	1 x 1 mm
Plated through-hole diameter (THR)	1.4 <sup>(+0.1)</sup> mm
Reel diameter of tape-and-reel packaging	330 mm
Tape width	88 mm

## 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	90 °
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
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Subject to changes. Please also observe the further product documentation!



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	2.9 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
eCl@ss 9.0	27-44-04-02
ETIM 8.0	EC002637
ETIM 7.0	EC002637
PU (SPU)	170 pcs
Packaging type	box
Country of origin	DE
GTIN	4055143472951
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

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



## Counterpart



Item no.231-112/026-000

1-conductor female connector; CAGE CLAMP®; 2.5 mm²; Pin spacing 5 mm; 12-pole; 2,50 mm²; gray

[www.wago.com/231-112/026-000](http://www.wago.com/231-112/026-000)

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

## CAD/CAE-Data

### CAE data

EPLAN Data Portal 231-142/001-000/105-604/997-409	URL	Download
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### CAD data

2D/3D Models 231-142/001-000/105-604/997-409	URL	Download
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## Environmental Product Compliance

### Compliance Search

Environmental Product Compliance 231-142/001-000/105-604/997-409	URL	Download
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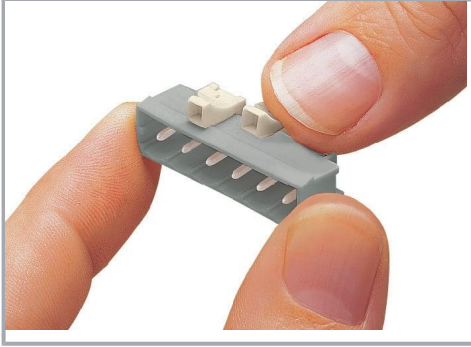
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THR male header; 1.0 x 1.0 mm solder pin; straight; in tape-and-reel packaging; Pin spacing 5 mm; 12-pole; black

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## Installation Notes

### Coding



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!