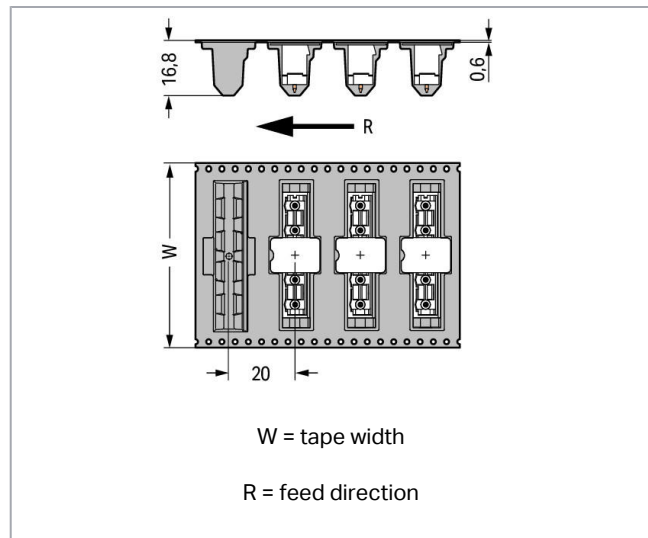
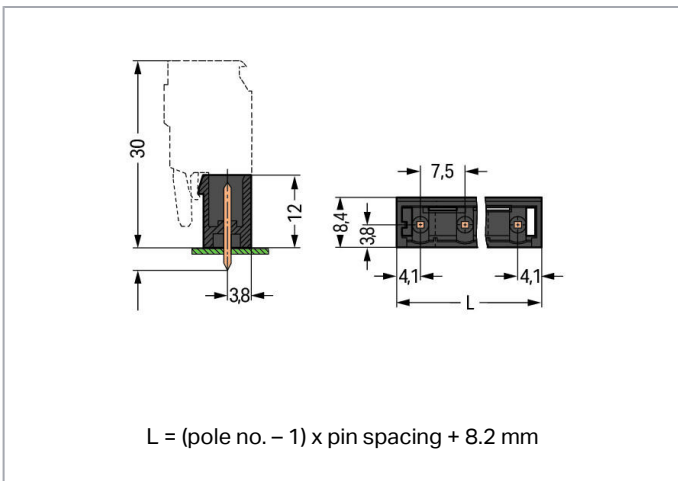
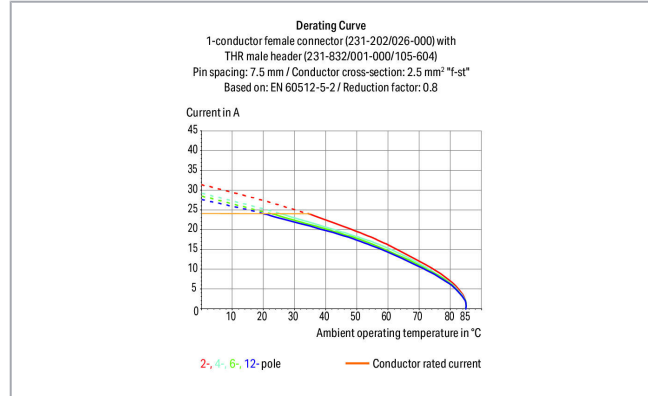
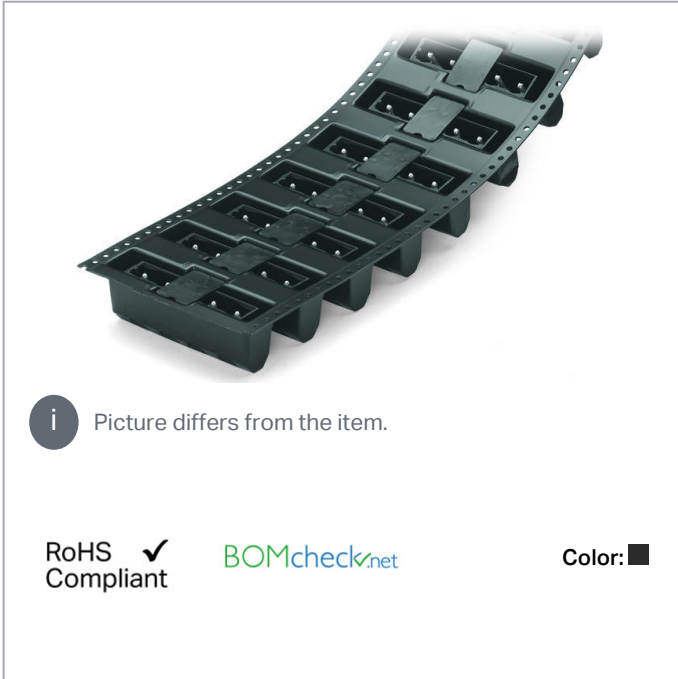


# Data sheet | Item number: 231-238/001-000/105-604/997-409

THR male header; 1.0 x 1.0 mm solder pin; straight; in tape-and-reel packaging; Pin spacing 7.5 mm; 8-pole; black



[www.wago.com/231-238/001-000/105-604/997-409](http://www.wago.com/231-238/001-000/105-604/997-409)



## Item description

- THR male headers for reflow soldering in SMT applications
- Available in tape-and-reel packaging for automated pick-and-place PCB assembly

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

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Do you have any questions about our products?

We are always happy to take your call at +49 (571) 887-44222.



- Also available in bulk packaging for manual placement
- Male headers may be mounted horizontally or vertically
- With coding fingers

**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.

**Data****Electrical data****Ratings per IEC/EN**

Ratings per	IEC/EN 60664-1
Nominal voltage (III/3)	500 V
Rated surge voltage (III/3)	6 kV
Rated voltage (III/2)	630 V
Rated surge voltage (III/2)	6 kV
Nominal voltage (II/2)	1000 V
Rated surge voltage (II/2)	6 kV
Rated current	12 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)	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	10 A

**Ratings per CSA**

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

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



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

Pole No.	8
Total number of potentials	8
Number of connection types	1
Number of levels	1

### Physical data

Pin spacing	7.5 mm / 0.295 inch
Width	60.7 mm / 2.39 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 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

### Plug-in connection

Contact type (pluggable connector)	Male connector/plug
Connector (connection type)	for PCB
Mismating protection	No
Mating direction to the PCB	90°

### PCB contact

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

### Material data

Color	black
Material group	I

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

Insulation material	Polyphthalamide (PPA GF)
Flammability class per UL94	V0
Contact material	Electrolytic copper (E <sub>Cu</sub> )
Contact plating	tin-plated
Weight	2.7 g

### Environmental requirements


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


Packaging type	bag
Country of origin	DE
GTIN	4055143474856
Customs tariff number	85366990990

### Approvals / Certificates

#### Country specific Approvals

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

#### UL-Approvals

Logo	Approval	Additional Approval Text	Certificate name
	UR Underwriters Laboratories Inc.	UL 1059	E45172

### Counterpart



Item no.231-208/026-000

1-conductor female plug; 2.5 mm<sup>2</sup>; Pin spacing 7.5 mm; 8-pole; 2,50 mm<sup>2</sup>; gray[www.wago.com/231-208/026-000](http://www.wago.com/231-208/026-000)

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

## Compatible products

### Marking accessories



**Item no.: 210-833**  
Marking strips; on reel; 6 mm wide; plain; Self-adhesive; white

[www.wago.com/210-833](http://www.wago.com/210-833)



**Item no.: 210-834**  
Marking strips; on reel; 5 mm wide; plain; Self-adhesive; white

[www.wago.com/210-834](http://www.wago.com/210-834)

### Coding



**Item no.: 231-130**  
Coding key; snap-on type; light gray

[www.wago.com/231-130](http://www.wago.com/231-130)

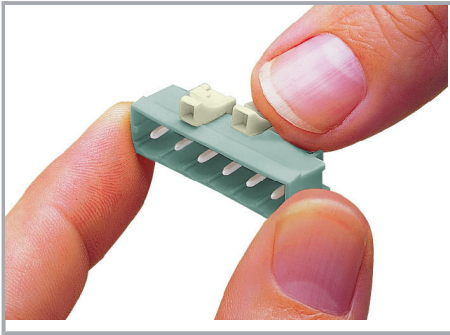


**Item no.: 231-500**  
Spacer; for formation of groups; light gray

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

## 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!