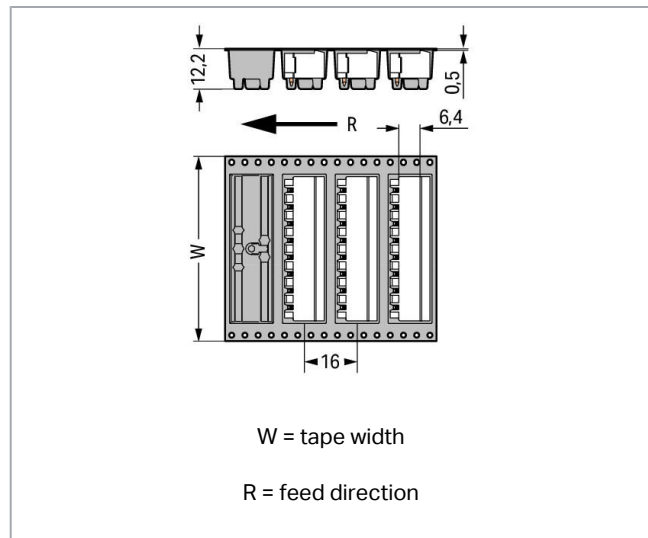
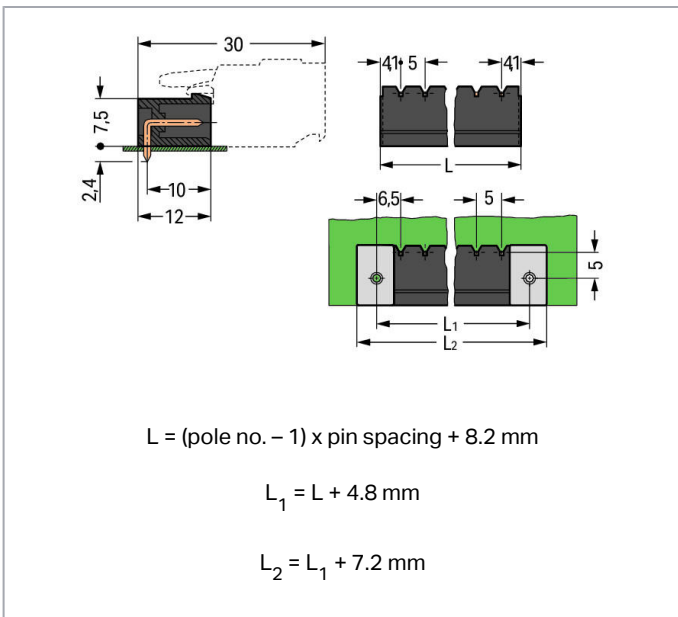
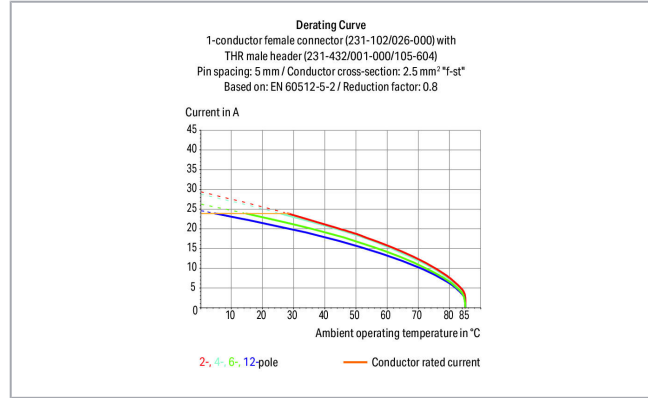
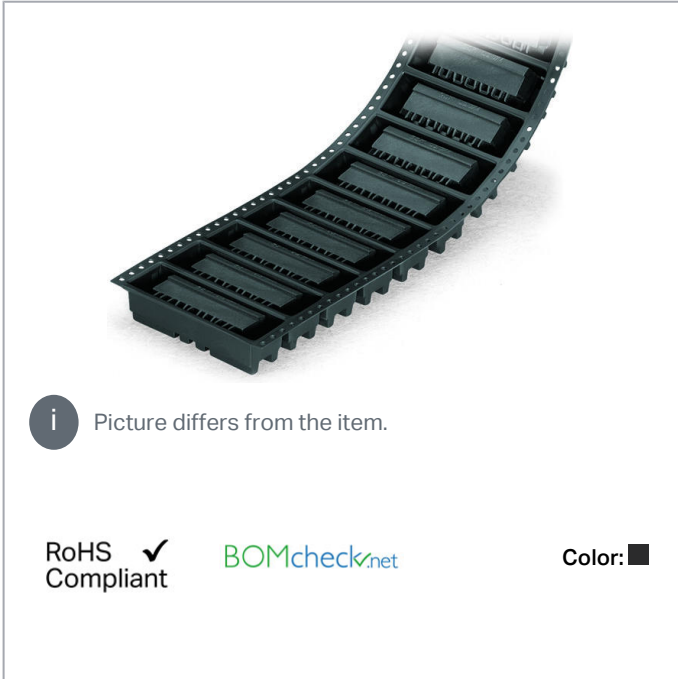


Data sheet | Item number: 231-441/001-000/105-604/997-409  
 THR male header; 1.0 x 1.0 mm solder pin; angled; in tape-and-reel  
 packaging; Pin spacing 5 mm; 11-pole; black



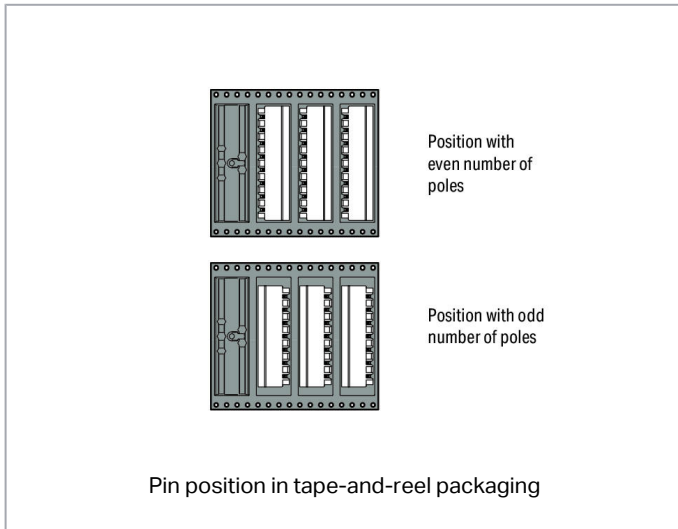
[www.wago.com/231-441/001-000/105-604/997-409](http://www.wago.com/231-441/001-000/105-604/997-409)



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

### 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)	320 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	12 A

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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
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.	11
Total number of potentials	11
Number of connection types	1
Number of levels	1

**Physical data**

Pin spacing	5 mm / 0.197 inch
Width	58.2 mm / 2.291 inch
Height	10.8 mm / 0.425 inch
Height from the surface	8.4 mm / 0.331 inch
Depth	12 mm / 0.472 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

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Tape width	88 mm
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**Plug-in connection**

Contact type (pluggable connector)	Male connector/plug
Connector (connection type)	for PCB
Mismating protection	No
Mating direction to the PCB	0°

**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
Insulation material	Polyphthalamide (PPA GF)
Flammability class per UL94	V0
Contact material	Electrolytic copper (E <sub>Cu</sub> )
Contact plating	tin-plated
Weight	7.3 g

**Environmental requirements**

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

**Commercial data**

Packaging type	bag
Country of origin	DE
GTIN	4055143706568
Customs tariff number	85366990990

**Approvals / Certificates****Country specific Approvals**

Logo	Approval	Additional Approval Text	Certificate name
	CSA	C22.2	1466354

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DEKRA Certification B.V.

## Counterpart



Item no.231-111/026-000

1-conductor female plug; 2.5 mm<sup>2</sup>; Pin spacing 5 mm; 11-pole; 2,50 mm<sup>2</sup>; gray

[www.wago.com/231-111/026-000](http://www.wago.com/231-111/026-000)

## Compatible products

### Coding



Item no.: 231-129

Coding key; snap-on type; light gray

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



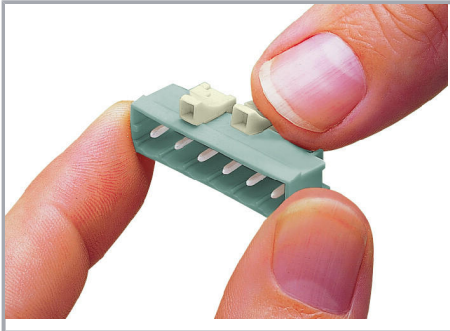
Item no.: 231-500

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](#)

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