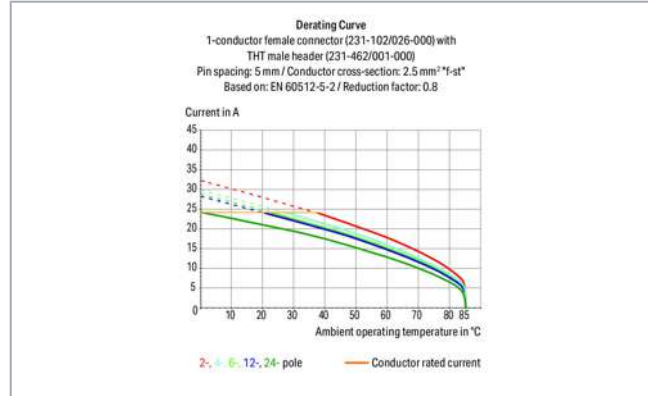
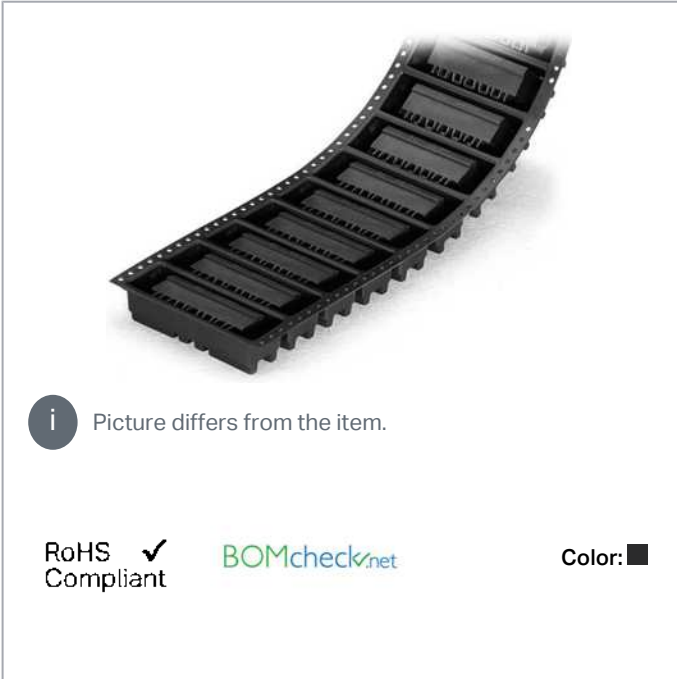


Data sheet | Item number: 231-472/001-000/105-604/997-409

Male header; 12-pole; THR; 1.2 x 1.2 mm solder pin; angled; pin spacing 5 mm; in tape-and-reel packaging; black



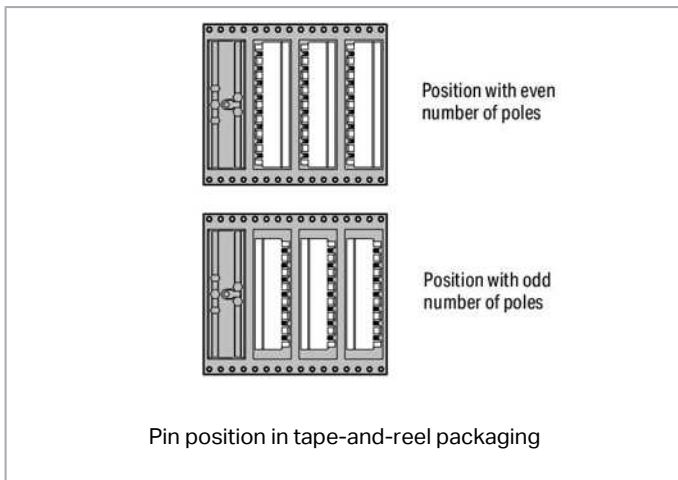
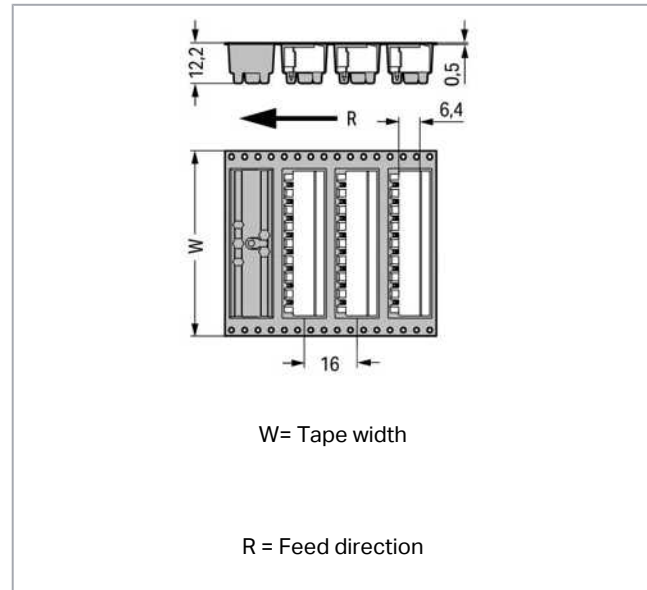
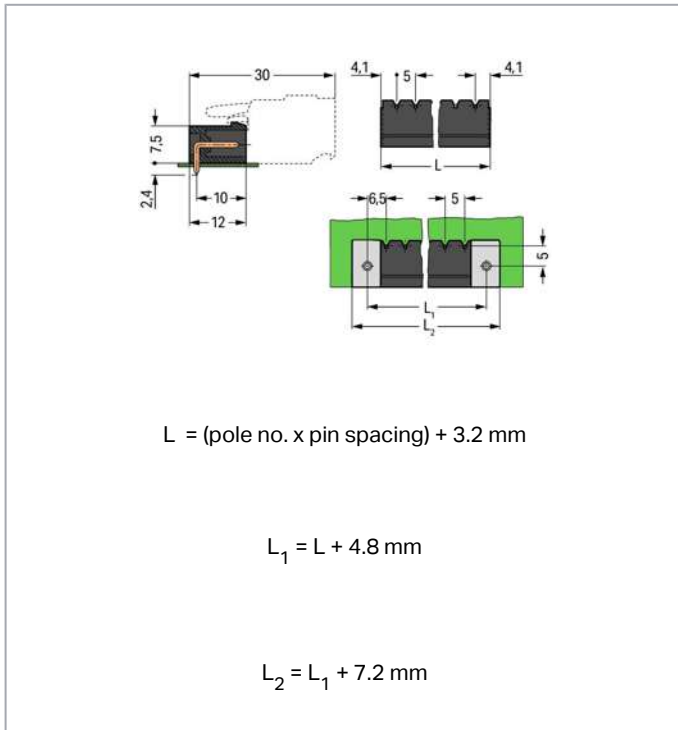
[www.wago.com/231-472\\_001-000\\_105-604\\_997-409](http://www.wago.com/231-472_001-000_105-604_997-409)



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
- 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!

**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 60664-1**

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

**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	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

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## Connection data

Pole No.	12
Total number of potentials	12
Number of connection types	1
Number of levels	1

## Physical data

Pin spacing	5 mm / 0.197 inch
Width	63.2 mm / 2.488 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	1.2 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	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	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> )

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Contact plating	tin-plated
Weight	4.9 g

### Environmental Requirements


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

Packaging type	bag
Country of origin	DE
GTIN	4050821004011
Customs tariff number	85366990990

### Approvals / Certificates

#### Country specific Approvals

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

### Counterpart



Item no.231-112/026-000

Female plug; 12-pole; 12 AWG max; pin spacing 5 mm; 1 conductor per pole; gray

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

### 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)

#### 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)

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

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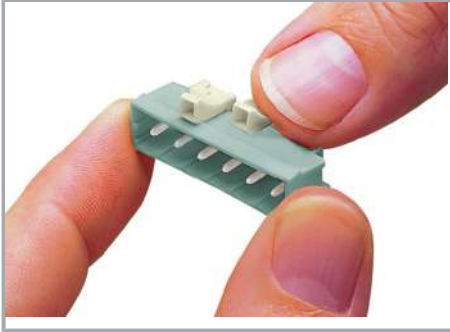


Item no.: 210-834

Marking strips; on reel; 5 mm wide; plain; Self-adhesive; white

## 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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