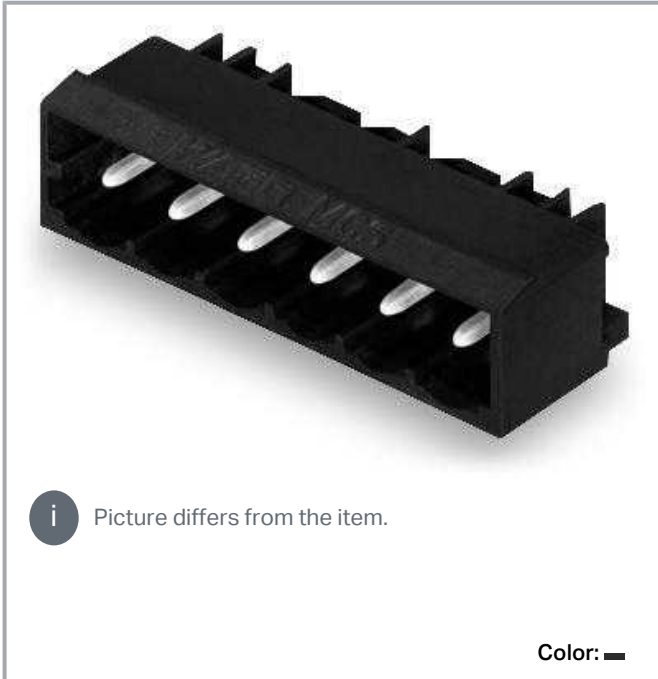


Data sheet | Item number: 231-470/001-000/105-604

Male header; 10-pole; THR; 1.2 x 1.2 mm solder pin; angled; pin spacing 5 mm; black



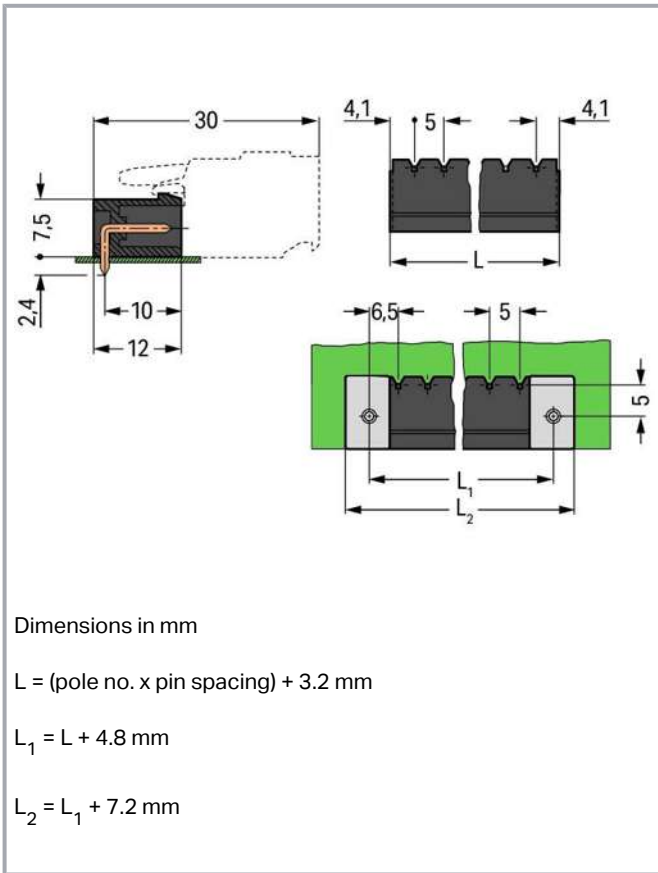
www.wago.com/231-470_001-000_105-604



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

WAGO Corporation
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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 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

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



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

IEC Approvals

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

UL Approvals

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	15 A

CSA Approvals

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

Total number of potentials	10
Number of connection types	1
Number of levels	1

Connection 1

Number of poles	10
-----------------	----

Physical data

Pin spacing	5 mm / 0.197 inch
Width	53.2 mm / 2.094 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 ^(+0.1) 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°
Locking of plug-in connection	Without

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

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Contact material	Electrolytic copper (E _{Cu})
Contact plating	tin-plated
Weight	4 g

Environmental requirements


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



Product Group	3 (Multi Conn. System)
PU (SPU)	100 Stück
Packaging type	box
Country of origin	PL
GTIN	4050821004059
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
	UL Underwriters Laboratories Inc.	UL 1059	E45172
	UR Underwriters Laboratories Inc.	UL 1977	E45171

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Counterpart



Item no. 231-110/026-000

Female plug; 10-pole; 12 AWG max; pin spacing 5 mm; 1 conductor per pole; gray

www.wago.com/231-110/026-000

Optional accessories

Coding

Intermediate plate



Item no.: 231-500

Spacer; for formation of groups; light gray

www.wago.com/231-500

Coding



Item no.: 231-129

Coding key; snap-on type; light gray

www.wago.com/231-129

Downloads

Documentation

Additional Information

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

CAD files

CAD data

2D/3D Models 231-470/001-000/105-604	URL	Download
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Environmental Product Compliance

Compliance Search

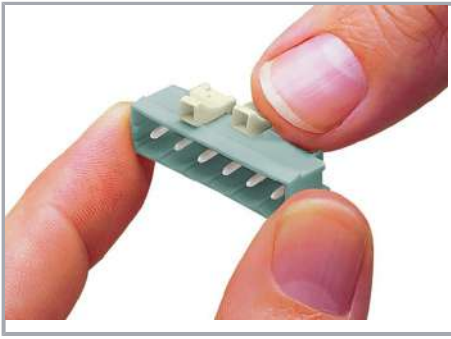
Environmental Product Compliance 231-470/001-000/105-604	URL	Download
THR male header; 1.2 x 1.2 mm solder pin; angled; Pin spacing 5 mm; 10-pole; black		

Installation Notes

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

Product family

MCS MIDI Classic

[Show all products from the family](#)

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