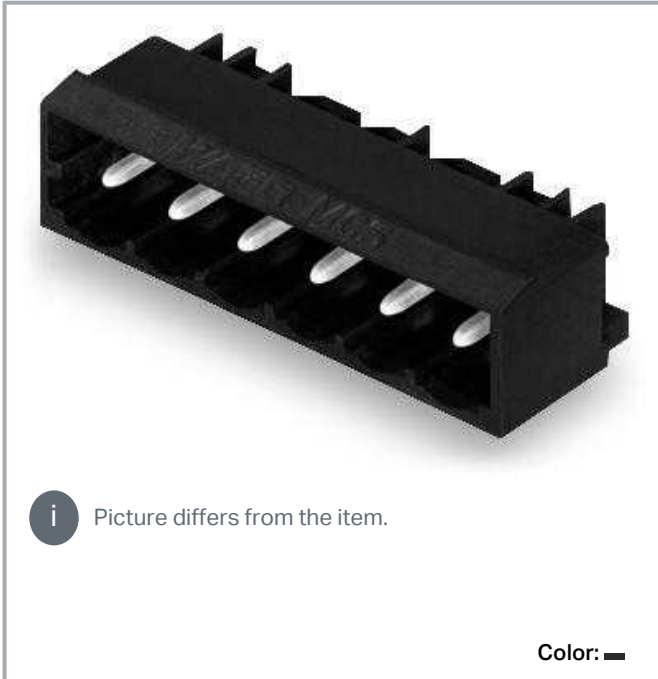


Data sheet | Item number: 231-441/001-000/105-604

Male header; 11-pole; THR; 1.0 x 1.0 mm solder pin; angled; pin spacing 5 mm; black



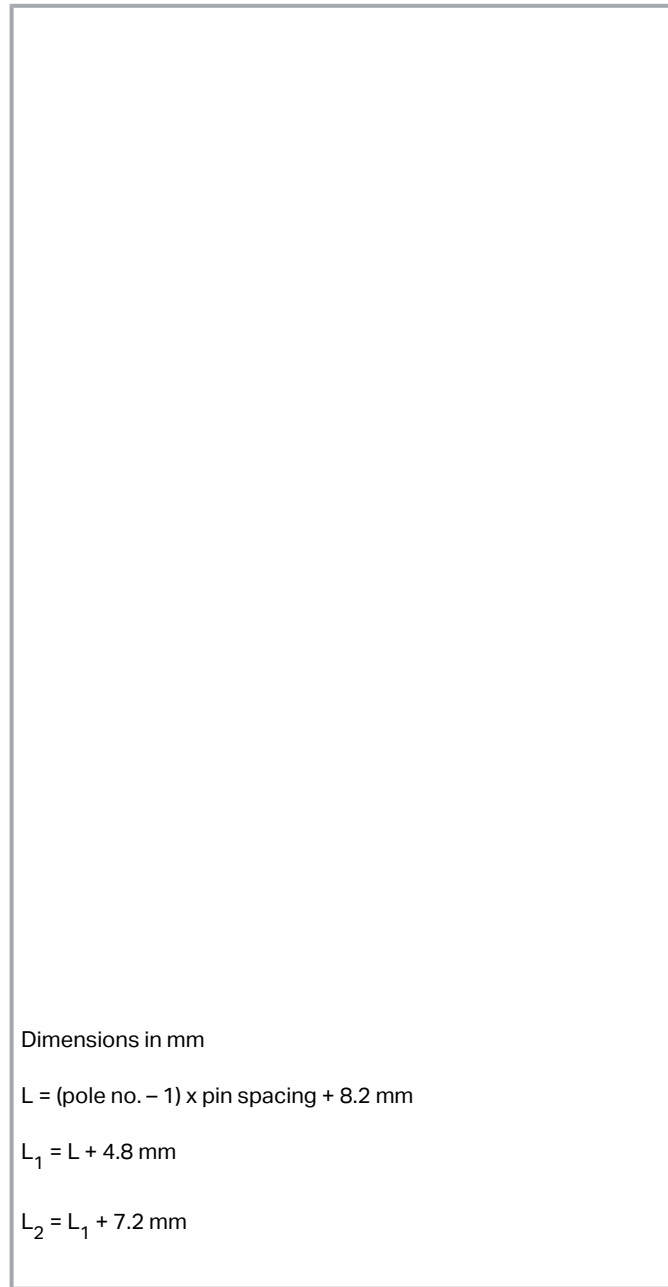
www.wago.com/231-441_001-000_105-604



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

WAGO Corporation
Germantown, WI 53022
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Dimensions in mm

$$L = (\text{pole no.} - 1) \times \text{pin spacing} + 8.2 \text{ mm}$$

$$L_1 = L + 4.8 \text{ mm}$$

$$L_2 = L_1 + 7.2 \text{ mm}$$

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

—
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- 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 ensure header pins, which can be touched, are not live when unmated.

Electrical data

IEC Approvals

Ratings per	IEC/EN 60664-1
Rated 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
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	10 A

CSA Approvals

Approvals per	CSA
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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	11
Number of connection types	1
Number of levels	1

Connection 1

Number of poles	11
-----------------	----

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 ^(+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

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

Material data

Color	black
Material group	I
Insulation material	Polyphthalamide (PPA GF)
Flammability class per UL94	V0
Contact material	Electrolytic copper (E _{Cu})
Contact plating	tin-plated
Weight of insulation material	2.48
Weight	3.5 g

Environmental requirements


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


PU (SPU)	100 Stück
Packaging type	box
Country of origin	PL
GTIN	4055143695350
Customs tariff number	85366990990

Approvals / Certificates

Country specific Approvals



Logo	Approval	Additional Approval Text	Certificate name
	CB DEKRA Certification B.V.	IEC 61984	NL-39756
	CSA DEKRA Certification B.V.	C22.2	LR 18677-25

Ship Approvals

Logo	Approval	Additional Approval Text	Certificate name
	ABS American Bureau of Shipping	-	19- HG1869876- PDA

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UL-Approvals

Logo	Approval	Additional Approval Text	Certificate name
	UL Underwriters Laboratories Inc.	UL 1059	E45172
	UR Underwriters Laboratories Inc.	UL 1977	E45171

Counterpart



Item no. 231-111/026-000

Female plug; 11-pole; 12 AWG max; pin spacing 5 mm; 1 conductor per pole; gray

www.wago.com/231-111/026-000

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

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Environmental Product Compliance

Compliance Search

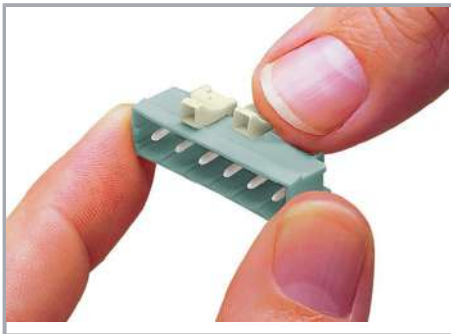
Environmental Product Compliance 231-441/001-000/105-604

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THR male header; 1.0 x 1.0 mm solder pin; angled; Pin spacing 5 mm; 11-pole; black

Installation Notes



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!