

Data sheet | Item number: 231-448/001-000

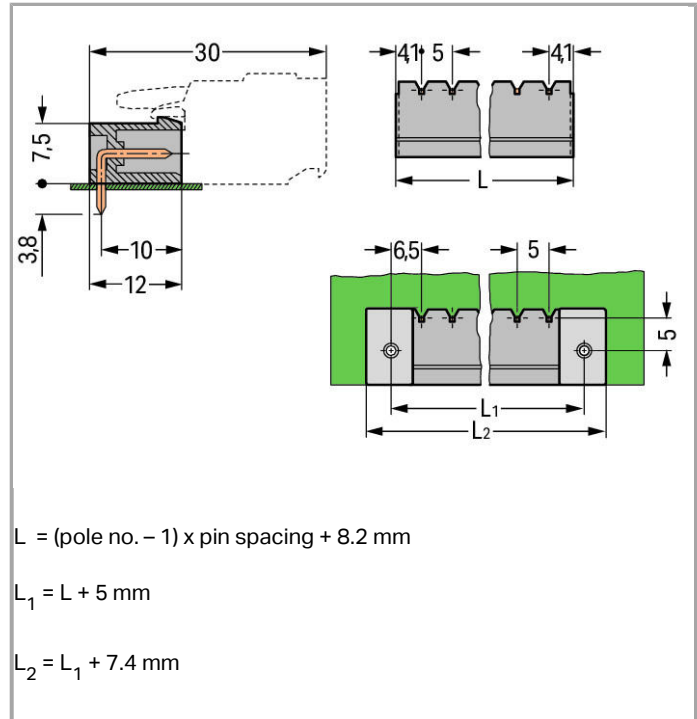
THT male header; 1.0 x 1.0 mm solder pin; angled; Pin spacing 5 mm; 18-pole

www.wago.com/231-448/001-000



RoHS Compliant

Color:



Item description

- Horizontal or vertical PCB mounting via straight or angled solder pins
- Pin cross-section: 1 x 1 mm
- With coding fingers

Other variants can be requested via the WAGO sales department or, if necessary, configured at <https://configurator.wago.com/>: 3.8 mm pin projection for male headers with straight solder pins, Gold-plated or partially gold-plated contact surfaces, Other pole numbers

Data

Electrical data

Ratings per IEC/EN 60664-1

Rated voltage (III / 3)	320 V
Rated impulse voltage (III / 3)	4 kV
Rated voltage (III / 2)	320 V
Rated impulse voltage (III / 2)	4 kV
Rated voltage (II / 2)	630 V
Rated impulse voltage (II / 2)	4 kV



Rated current	12 A
Legend (ratings)	(III / 2) $\hat{=}$ Overvoltage category III / Pollution degree 2

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

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

No. of poles	18
Total number of potentials	18
Number of levels	1

Geometrical Data

Pin spacing	5 mm (0.197 inch)
Width	93.2 mm / 3.669 inch
Height	12.2 mm / 0.48 inch
Height from the surface	8.4 mm / 0.331 inch
Depth	12 mm / 0.472 inch
Solder pin length	3.8 mm
Solder pin dimensions	1 x 1 mm
Drilled hole diameter (tolerance)	1.4 ^(+0.1) mm

Plug connection

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

PCB contact

PCB contact	THT
Solder pin arrangement	over the entire male connector, in line

Number of solder pins per potential	1
-------------------------------------	---

Material Data

Color	gray
Material group	I
Insulating material	Polyamide 66 (PA 66)
Flammability class per UL94	V0
Contact material	Electrolytic copper (Ecu)
Contact plating	tin-plated
Fire load	0.101 MJ
Weight	5.654 g

Environmental Requirements



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

Commercial data

Country of origin	DE
GTIN	4044918866576
Customs Tariff No.	85366990990
Product Group	3 (Multi Conn. System)

Approvals / Certificates

Country specific Approvals

Logo	Approval	Certificate name
	CB DEKRA Certification B.V.	NL-39756
	CSA DEKRA Certification B.V.	1466354
	CSA DEKRA Certification B.V.	1466354

Ship Approvals

Logo	Approval	Certificate name
	ABS American Bureau of Shipping	14-HG1241537-PDA
	DNV GL Det Norske Veritas, Germanischer Lloyd	TAE000016Z



UL-Approvals

Logo	Approval	Certificate name
	UL UL International Germany GmbH	E45172
	UR UL International Germany GmbH	E45171
	UR UL International Germany GmbH	E45171

Compatible products

Marking accessories

	Item no.: 210-833 Marking strips; on reel; 6 mm wide; plain; Self-adhesive	www.wago.com/210-833
	Item no.: 210-834 Marking strips; on reel; 5 mm wide; plain; Self-adhesive	www.wago.com/210-834

Coding

	Item no.: 231-129 Coding key; snap-on type	www.wago.com/231-129
	Item no.: 231-500 Spacer; for formation of groups	www.wago.com/231-500

Downloads

smartDATA

PCB libraries

EAGLE Library for WAGO Pluggable PCB Connectors (MULTI CONNECTION SYSTEM) Compatible with EAGLE PCB Design Software Version 6.x or higher	2.1 Nov 17, 2017	ZIP 6.2 MB	Download
DesignSpark Library for WAGO Pluggable PCB Connectors (MULTI CONNECTION SYSTEM) Compatible with DesignSpark PCB Version 4.x or higher	2.1 Oct 6, 2014	ZIP 6.1 MB	Download



TARGET Library for WAGO Pluggable PCB Connectors (Multi-Connection System) Compatible with TARGET PCB Design Software Version 17.x	1.1.0 Oct 6, 2014	ZIP 7.4 MB	Download
---	----------------------	---------------	----------

CAD data

3D Download 231-448/001-000	URL	Download
-----------------------------	-----	----------

Subject to changes.