

## Data sheet | Item number: 231-481/001-000

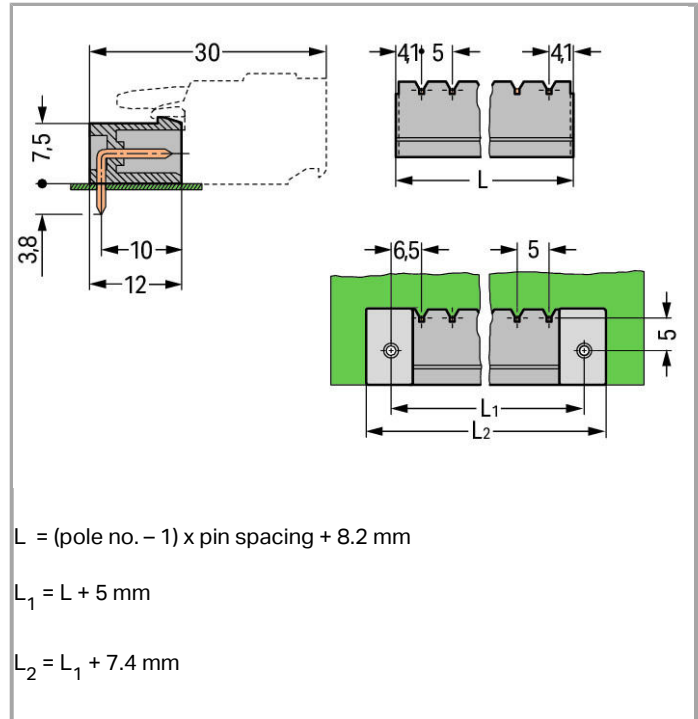
THT male header; 1.2 x 1.2 mm solder pin; angled; Pin spacing 5 mm; 21-pole

[www.wago.com/231-481/001-000](http://www.wago.com/231-481/001-000)



RoHS Compliant

Color:



### Item description

- Horizontal or vertical PCB mounting via straight or angled solder pins
- 1.2 x 1.2 mm solder pins allow nominal current up to 16 A, enhancing stability of shorter headers
- 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)	250 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	16 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)	15 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)	15 A
Rated voltage CSA (Use Group D)	300 V
Rated current CSA (Use Group D)	10 A

### Connection data

No. of poles	21
Total number of potentials	21
Number of levels	1

### Geometrical Data

Pin spacing	5 mm (0.197 inch)
Width	108.2 mm / 4.26 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	1.2 x 1.2 mm
Drilled hole diameter (tolerance)	1.7 <sup>(+0.1)</sup> 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
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## 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	0.114 MJ
Weight	7.79 g

## Environmental Requirements



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


Country of origin	DE
GTIN	4044918930949
Customs Tariff No.	85366990990
Product Group	3 (Multi Conn. System)

## Approvals / Certificates

### Country specific Approvals

Logo	Approval	Certificate name
	<b>CB</b> DEKRA Certification B.V.	NL-39756
	<b>CSA</b> DEKRA Certification B.V.	1466354
	<b>CSA</b> DEKRA Certification B.V.	1466354

### Ship Approvals

Logo	Approval	Certificate name
	<b>ABS</b> American Bureau of Shipping	14-HG1241537-PDA
	<b>DNV GL</b> 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

Coding

	Item no.: 231-129 Coding key; snap-on type	<a href="http://www.wago.com/231-129">www.wago.com/231-129</a>
	Item no.: 231-500 Spacer; for formation of groups	<a href="http://www.wago.com/231-500">www.wago.com/231-500</a>

Marking accessories

	Item no.: 210-833 Marking strips; on reel; 6 mm wide; plain; Self-adhesive	<a href="http://www.wago.com/210-833">www.wago.com/210-833</a>
	Item no.: 210-834 Marking strips; on reel; 5 mm wide; plain; Self-adhesive	<a href="http://www.wago.com/210-834">www.wago.com/210-834</a>

Downloads

smartDATA

PCB libraries

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



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EAGLE Library for WAGO Pluggable PCB Connectors (MULTI CONNECTION SYSTEM) 2.1	ZIP	Download
Compatible with EAGLE PCB Design Software Version 6.x or higher	6.2 MB	

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**CAD data**

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3D Download 231-481/001-000	URL	Download
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Subject to changes.

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