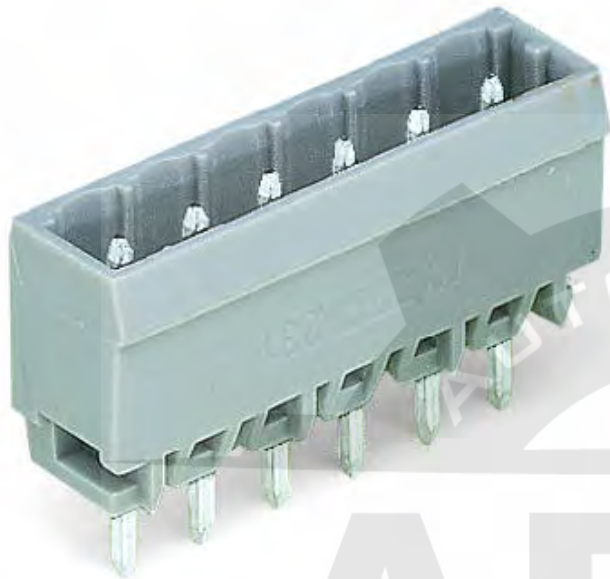


Data sheet | Item number: 231-180/001-000

THT male header; 1.2 x 1.2 mm solder pin; straight; Pin spacing 5 mm; 20-pole



231-180/001-000



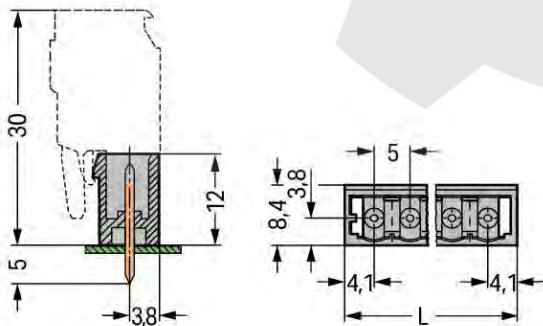
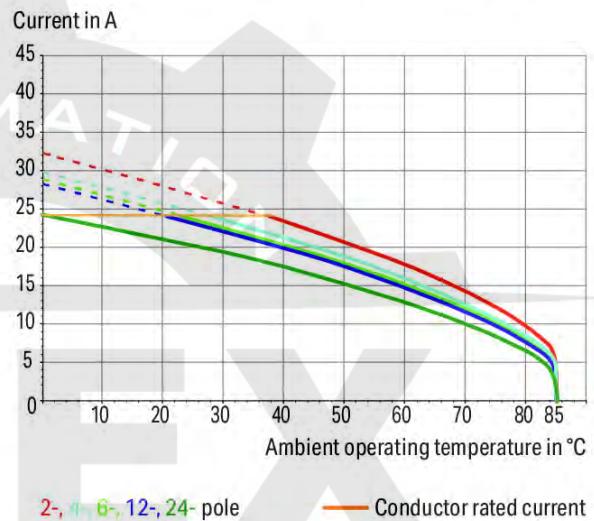
RoHS
Compliant

BOMcheck.net

Color: ■

Derating Curve

1-conductor female connector (231-102/026-000) with
THT male header (231-462/001-000)
Pin spacing: 5 mm / Conductor cross-section: 2.5 mm² "f-st"
Based on: EN 60512-5-2 / Reduction factor: 0.8



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

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

Safety information 1:

The *MULTI CONNECTION SYSTEM (MCS)* is designed without breaking capacity for compliance with DIN EN 61984. When used as intended, MCS Connectors shall 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

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

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 UL 1977

Rated voltage per UL 1977 (factory wiring only)	600 V
Rated current per UL 1977 (factory wiring only)	15 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	20
Total number of potentials	20
Number of connection types	1
Number of levels	1

Geometrical Data

Pin spacing	5 mm / 0.197 inch
Width	103.2 mm / 4.063 inch
Height	17 mm / 0.669 inch
Height from the surface	12 mm / 0.472 inch
Depth	8.4 mm / 0.331 inch
Solder pin length	5 mm
Solder pin dimensions	1.2 x 1.2 mm
Drilled hole diameter (tolerance)	1.7 ^(- ... +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	90°

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 (E _{Cu})
Contact plating	tin-plated
Fire load	0.11 MJ
Weight	7.45 g

Environmental Requirements

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

Product Group	3 (Multi Conn. System)
Country of origin	PL
GTIN	4044918928878
Customs Tariff No.	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	1466354
	CSA DEKRA Certification B.V.	C22.2	1466354

Ship Approvals

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

UL-Approvals

Logo	Approval	Additional Approval Text	Certificate name
	UR UL International Germany GmbH	UL 1977	E45171
	UR	UL 1977	E45171



UL International Germany GmbH

Compatible products

Coding



Item no.: 231-129
Coding key; snap-on type

231-129



Item no.: 231-500
Spacer; for formation of groups

231-500

Marking accessories



Item no.: 210-833
Marking strips; on reel; 6 mm wide; plain; Self-adhesive

210-833



Item no.: 210-834
Marking strips; on reel; 5 mm wide; plain; Self-adhesive

210-834

Downloads

CAD/CAE - Smart Data

PCB libraries

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

DesignSpark Library for WAGO Pluggable PCB Connectors (MULTI CONNECTION SYSTEM)	2.1	zip	Download
Compatible with DesignSpark PCB Version 4.x or higher	Oct 6, 2014	6.1 MB	

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	Oct 6, 2014	6.2 MB	

CAD data

3D Download 231-180/001-000	URL	Download
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Subject to changes.