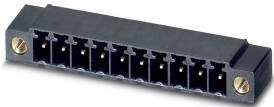


# Printed-circuit board connector - MC 1,5/ 5-GF-3,81 P20 THRR44 - 1011095

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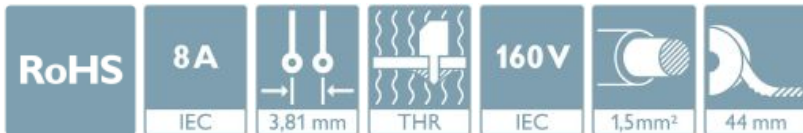
PCB header, nominal cross section: 1.5 mm<sup>2</sup>, color: black, nominal current: 8 A, rated voltage (III/2): 160 V, contact surface: Tin, type of contact: Male connector, Number of rows: 1, Number of positions per row: 5, product range: MC 1,5/..-GF-THR, pitch: 3.81 mm, mounting: THR soldering, pin layout: Linear pinning, solder pin [P]: 2 mm, plug-in system: MINI COMBICON, Locking: Screw locking, type of packaging: 44 mm wide tape



The figure shows a 10-position version of the product

## Your advantages

- ✓ Designed for integration into the SMT soldering process
- ✓ Screwable flange for superior mechanical stability
- ✓ Maximum flexibility when it comes to device design – one header for connectors with different connection technologies



## Key Commercial Data

Packing unit	1
GTIN	
GTIN	4055626485126
Custom tariff number	85366930

## Technical data

### Item properties

Brief article description	Feed-through header
Plug-in system	MINI COMBICON
Type of contact	Male connector
Range of articles	MC 1,5/..-GF-THR
Pitch	3.81 mm
Number of positions	5

# Printed-circuit board connector - MC 1,5/ 5-GF-3,81 P20 THRR44 - 1011095

## Technical data

### Item properties

Mounting type	THR soldering
Pin layout	Linear pinning
Number of levels	1
Pin connector pattern alignment	Standard

### Electrical parameters

Nominal current	8 A
Nom. voltage	160 V
Rated voltage (III/3)	160 V
Rated voltage (III/2)	160 V
Rated voltage (II/2)	250 V
Rated surge voltage (III/3)	2.5 kV
Rated surge voltage (III/2)	2.5 kV
Rated surge voltage (II/2)	2.5 kV

### Material data - contact

Note	WEEE/RoHS-compliant, free of whiskers according to IEC 60068-2-82/ JEDEC JESD 201
Contact material	Cu alloy
Surface characteristics	Tin-plated
Metal surface contact area (top layer)	Tin (3 - 5 µm Sn)
Metal surface contact area (middle layer)	Nickel (1 - 3 µm Ni)
Metal surface soldering area (top layer)	Tin (3 - 5 µm Sn)
Metal surface soldering area (middle layer)	Nickel (1 - 3 µm Ni)

### Material data - housing

Housing color	black (9005)
Insulating material	LCP
Insulating material group	IIIa
CTI according to IEC 60112	175
Flammability rating according to UL 94	V0

### Flange specifications

Type of locking	Screw locking
Mounting flange	Threaded flange
Torque	0.3 Nm

### Dimensions for the product

# Printed-circuit board connector - MC 1,5/ 5-GF-3,81 P20 THRR44 - 1011095

## Technical data

### Dimensions for the product

Caption	Schematische Abbildung - weitere Details siehe Produktfamilienzeichnung im Download Center
Length [ l ]	9.2 mm
Width [ w ]	29.44 mm
Height [ h ]	10 mm
Pitch	3.81 mm
Height (without solder pin)	8 mm
Solder pin [P]	2 mm
Pin dimensions	0.8 x 0.8 mm

### Dimensions for PCB design

Hole diameter	1.4 mm
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### Packaging information

Type of packaging	44 mm wide tape
Pieces per package	330
Denomination packing units	Pcs.
[W] tape width	44 mm
[A] coil diameter	330 mm
[W2] coil overall dimension	50.4 mm
Outer packaging type	Transparent-Bag
ESD level	(D) electrostatically conductive
Specification	DIN EN 61340-5-1 (VDE 0300-5-1): 2008-07

### Processing notes

Process	Reflow/wave soldering
Specification	Following IPC/JEDEC J-STD-020D.1:2008-03
	Following IEC 61760-1:2006-04
	Following IEC 60068-2-58:2005-02
Moisture Sensitive Level	MSL 1
Classification temperature T <sub>c</sub>	260 °C
Solder cycles in the reflow	3

### Ambient conditions

Ambient temperature (storage/transport)	-40 °C ... 70 °C
Ambient temperature (assembly)	-5 °C ... 100 °C
Ambient temperature (operation)	-40 °C ... 100 °C (dependent on the derating curve)

### Air clearances and creepage distances

# Printed-circuit board connector - MC 1,5/ 5-GF-3,81 P20 THRR44 - 1011095

## Technical data

### Air clearances and creepage distances

Clearances and creepage distances	IEC 60664-1:2007-04
Specification	IEC 60664-1:2007-04
Minimum clearance - inhomogeneous field (III/3)	1.5 mm
Minimum clearance - inhomogeneous field (III/2)	1.5 mm
Minimum clearance - inhomogeneous field (II/2)	1.5 mm
Minimum creepage distance value (III/3)	2.5 mm
Minimum creepage distance value (III/2)	1.6 mm
Minimum creepage distance value (II/2)	3.2 mm

### Mechanical tests (A)

Test specification	IEC 61984
Insertion strength per pos. approx.	8 N
Withdraw strength per pos. approx.	6 N
Polarization when inserted requirement >20 N	Test passed
Contact holder in insert requirements >20 N	Test passed

### Durability tests (B)

Specification	IEC 60512-9-1:2010-03
Contact resistance R <sub>1</sub>	1.4 mΩ
Insertion/withdrawal cycles	25
Contact resistance R <sub>2</sub>	1.5 mΩ
Impulse withstand voltage at sea level	2.95 kV

### Thermal tests (C)

Specification	IEC 60512-5-1:2002-02
Number of positions	20
Upper limiting temperature requirements <100 °C	Test passed

### Climatic tests (D)

Specification	ISO 6988:1985-02
Cold stress	-40 °C/2 h
Thermal stress	100 °C/168 h
Corrosive stress	0.2 dm <sup>3</sup> SO <sub>2</sub> on 300 dm <sup>3</sup> /40 °C/1 cycle
Impulse withstand voltage at sea level	2.95 kV
Power-frequency withstand voltage	1.39 kV

### Environmental and durability tests (E)

Specification	IEC 61984:2008-10
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# Printed-circuit board connector - MC 1,5/ 5-GF-3,81 P20 THRR44 - 1011095

## Technical data

### Environmental and durability tests (E)

Result, degree of protection, IP code	Finger safety with IP20 test finger
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### Vibration test

Specification	IEC 60068-2-6:2007-12
Frequency	10 - 150 - 10 Hz
Sweep speed	1 octave/min
Amplitude	0.35 mm (10 - 60.1 Hz)
Acceleration	5 g (60.1 - 150 Hz)
Test duration per axis	2.5 h

### Standards and Regulations

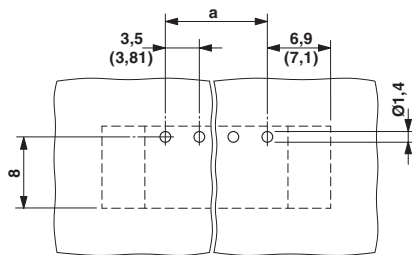
Flammability rating according to UL 94	V0
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### Environmental Product Compliance

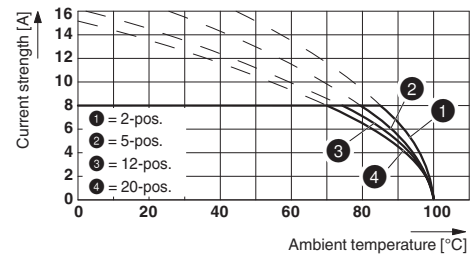
China RoHS	Environmentally friendly use period: unlimited = EFUP-e
	No hazardous substances above threshold values

## Drawings

Drilling diagram



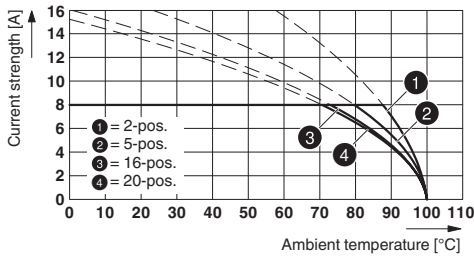
Diagram



Type: FK-MCP 1,5/...-STF-3,81 with MC 1,5/...-GF-3,81 P... THR

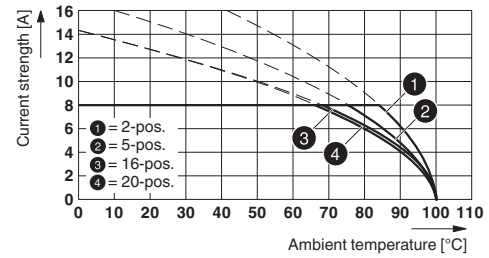
# Printed-circuit board connector - MC 1,5/ 5-GF-3,81 P20 THRR44 - 1011095

Diagram



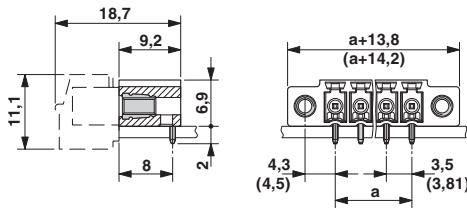
Type: MC 1,5/...-STF-3,81 with MC 1,5/...-GF-3,81 P26THR

Diagram

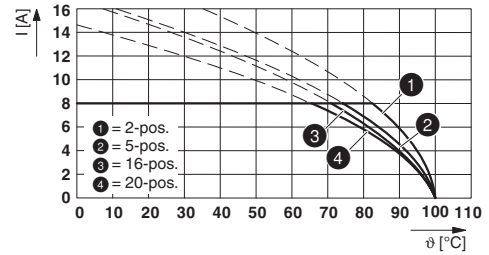


Type: FRONT-MC 1,5/...-STF-3,81 with MC 1,5/...-GF-3,81 P...THR

Dimensional drawing

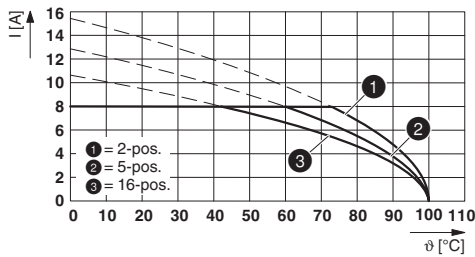


Diagram



Type: FMC 1,5/...-STF-3,81 with MC 1,5/...-GF-3,81 P...THR

Diagram



Type: MCV(W/R) 1,5/...-STF-3,81 with MC 1,5/...-GF-3,81 P...THR

## Classifications

eCl@ss

eCl@ss 5.1	27260700
eCl@ss 6.0	27260700
eCl@ss 7.0	27440402
eCl@ss 9.0	27440402

# Printed-circuit board connector - MC 1,5/ 5-GF-3,81 P20 THRR44 - 1011095

## Classifications

### ETIM

ETIM 6.0	EC002637
ETIM 7.0	EC002637

## Approvals


### Approvals


#### Approvals

VDE Gutachten mit Fertigungsüberwachung / IECEE CB Scheme / EAC / cULus Recognized

#### Ex Approvals

## Approval details


VDE Gutachten mit Fertigungsüberwachung		<a href="http://www2.vde.com/de/Institut/Online-Service/VDE-gepruefteProdukte/Seiten/Online-Suche.aspx">http://www2.vde.com/de/Institut/Online-Service/ VDE-gepruefteProdukte/Seiten/Online-Suche.aspx</a>	40011723
Nominal voltage UN		160 V	
Nominal current IN		8 A	

IECEE CB Scheme		<a href="http://www.iecee.org/">http://www.iecee.org/</a>	DE1-60987-B1B2
Nominal voltage UN		160 V	
Nominal current IN		8 A	

EAC		B.01742
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## Approvals

cULus Recognized		<a href="http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm">http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm</a>	E60425-20110128
	B	D	
Nominal voltage UN	300 V	300 V	
Nominal current IN	8 A	8 A	