

Printed-circuit board connector - MC 1,5/ 6-G-3,81 P20 THRR44 - 1011101

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PCB headers, nominal current: 8 A, rated voltage (III/2): 160 V, nominal cross section: 1.5 mm², number of positions: 6, pitch: 3.81 mm, color: black, contact surface: Tin, mounting: THR soldering, pin layout: Linear pinning, solder pin [P]: 2 mm




The figure shows a 10-position version of the product

Your advantages

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



Key Commercial Data

Packing unit	330 pc
Minimum order quantity	330 pc
GTIN	 4 055626 485133
GTIN	4055626485133

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/...-G-THR
Pitch	3.81 mm
Number of positions	6
Mounting type	THR soldering
Pin layout	Linear pinning
Number of levels	1
Number of connections	6
Number of potentials	6

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Technical data

Electrical parameters

Nominal current	8 A
Nom. voltage	160 V
Rated voltage	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 - 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

Dimensions for the product

Caption	Schematic representation – for additional information, see product range drawing in the Download Center
Length [l]	9.2 mm
Width [w]	24.25 mm
Height [h]	8.9 mm
Pitch	3.81 mm
Height (without solder pin)	6.9 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

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Technical data

Packaging information

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

General product information

Note	In accordance with IEC 61984, COMBICON connectors have no switching power (COC). During designated use, they must not be plugged in or disconnected when carrying voltage or under load.
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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 _c	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

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

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Durability tests (B)

Specification	IEC 60512-9-1:2010-03
Contact resistance R ₁	1.4 mΩ
Insertion/withdrawal cycles	25
Contact resistance R ₂	1.5 mΩ
Impulse withstand voltage at sea level	2.95 kV
Power-frequency withstand voltage	1.39 kV
Insulation resistance, neighboring positions	> 5 TΩ

Thermal tests (C)

Specification	IEC 60512-5-1:2002-02
Number of positions	20
Conductor cross section	1.5 mm ²
Test current	8 A DC
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 ³ SO ₂ on 300 dm ³ /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
Result, degree of protection, IP code	Finger safety with IP20 test finger

Standards and Regulations

Flammability rating according to UL 94	V0
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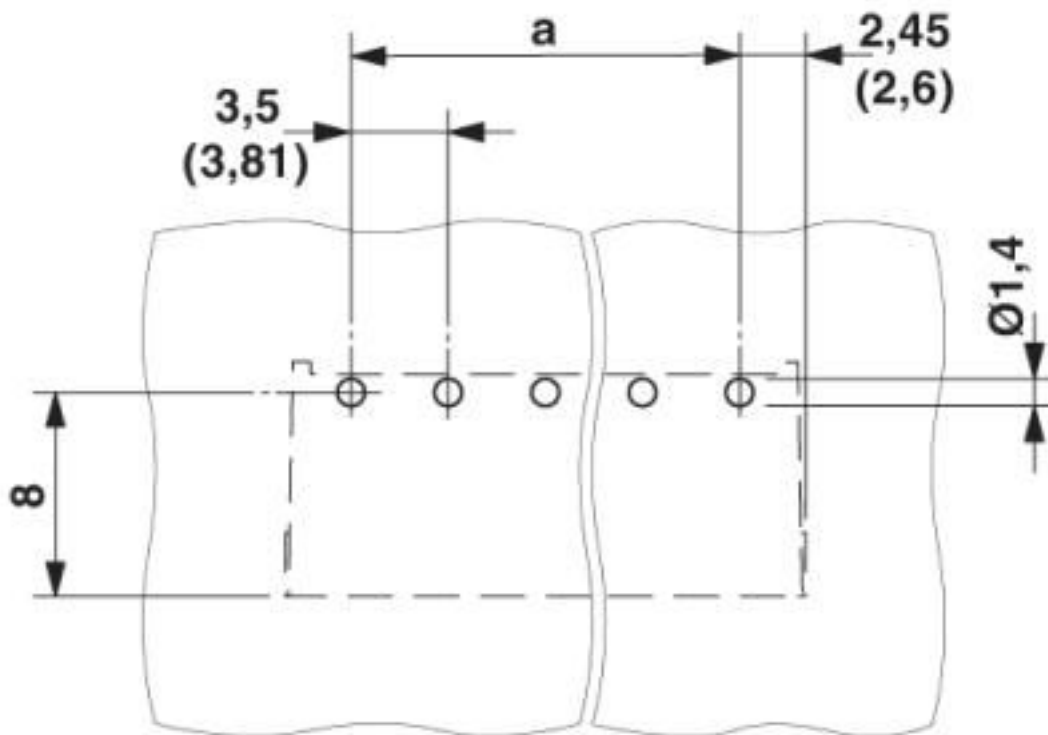
Environmental Product Compliance

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

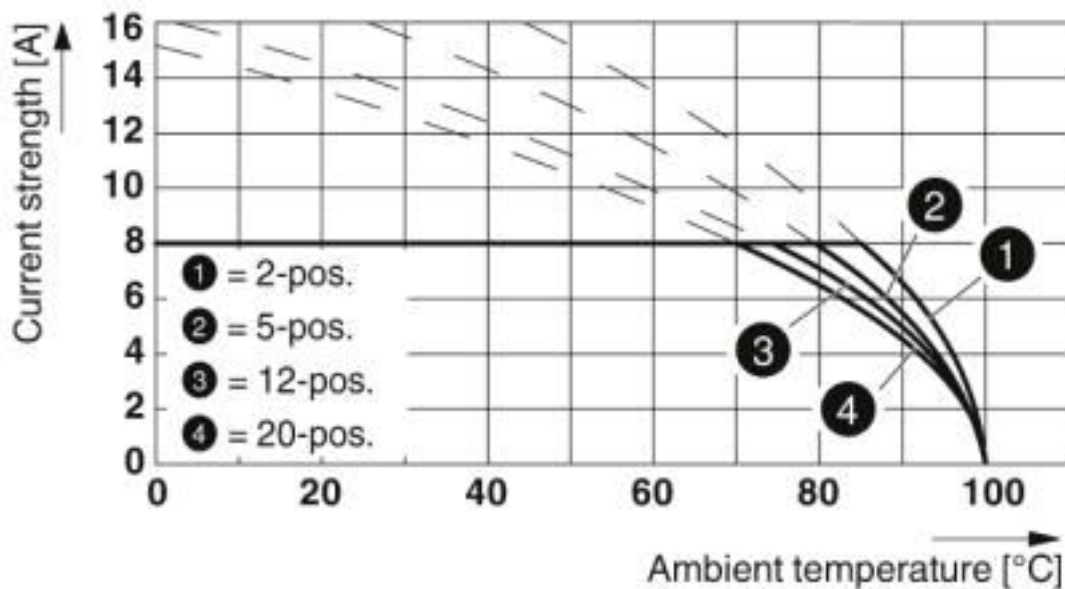
Drawings

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Drilling diagram



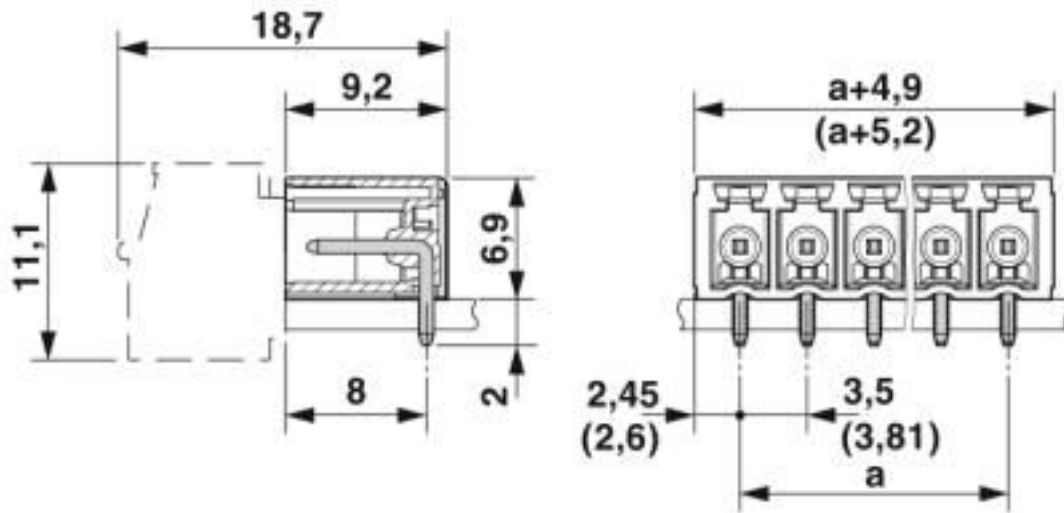
Diagram



Type: FK-MCP 1,5/...-ST(F)-3,81 with MC 1,5/...-G(F)-3,81 P.. THR(R...)

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Dimensional drawing



Classifications

eCl@ss

eCl@ss 10.0.1	27440402
eCl@ss 4.0	27260700
eCl@ss 4.1	27260700
eCl@ss 5.0	27260700
eCl@ss 5.1	27260700
eCl@ss 6.0	27260700
eCl@ss 7.0	27440402
eCl@ss 8.0	27440402
eCl@ss 9.0	27440402

ETIM

ETIM 5.0	EC002637
ETIM 6.0	EC002637
ETIM 7.0	EC002637

Approvals

Approvals

Approvals

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

Ex Approvals

Printed-circuit board connector - MC 1,5/ 6-G-3,81 P20 THRR44 - 1011101

Approvals

Approval details

IECEE CB Scheme		http://www.iecee.org/	DE1-60987-B1B2
Nominal voltage UN	160 V		
Nominal current IN	8 A		

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

EAC			B.01687
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cULus Recognized		http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm	E60425-20110128
	B	D	
Nominal voltage UN	300 V	300 V	
Nominal current IN	8 A	8 A	

Accessories

Additional products

Printed-circuit board connector - FMC 1,5/ 6-ST-3,81 - 1748011



PCB connector, nominal current: 8 A, rated voltage (III/2): 160 V, nominal cross section: 1.5 mm², number of positions: 6, pitch: 3.81 mm, connection method: Push-in spring connection, color: green, contact surface: Tin

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Accessories

Printed-circuit board connector - MC 1,5/ 6-ST-3,81 - 1803617



PCB connector, nominal current: 8 A, rated voltage (III/2): 160 V, nominal cross section: 1.5 mm², number of positions: 6, pitch: 3.81 mm, connection method: Screw connection with tension sleeve, color: green, contact surface: Tin

Printed-circuit board connector - MCVW 1,5/ 6-ST-3,81 - 1827017



PCB connector, nominal current: 8 A, rated voltage (III/2): 160 V, nominal cross section: 1.5 mm², number of positions: 6, pitch: 3.81 mm, connection method: Screw connection with tension sleeve, color: green, contact surface: Tin

Printed-circuit board connector - MCVR 1,5/ 6-ST-3,81 - 1827169



PCB connector, nominal current: 8 A, rated voltage (III/2): 160 V, nominal cross section: 1.5 mm², number of positions: 6, pitch: 3.81 mm, connection method: Screw connection with tension sleeve, color: green, contact surface: Tin

Printed-circuit board connector - FRONT-MC 1,5/ 6-ST-3,81 - 1850709



PCB connector, nominal current: 8 A, rated voltage (III/2): 160 V, nominal cross section: 1.5 mm², number of positions: 6, pitch: 3.81 mm, connection method: Front screw connection, color: green, contact surface: Tin

Printed-circuit board connector - FK-MCP 1,5/ 6-ST-3,81 - 1851083



PCB connector, nominal current: 8 A, rated voltage (III/2): 160 V, nominal cross section: 1.5 mm², number of positions: 6, pitch: 3.81 mm, connection method: Push-in spring connection, color: green, contact surface: Tin

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Accessories

Printed-circuit board connector - MCC 1/ 6-STZ-3,81 - 1852215



PCB connector, nominal current: 8 A, rated voltage (III/2): 160 V, nominal cross section: 1 mm², number of positions: 6, pitch: 3.81 mm, connection method: Crimp connection, color: green, Corresponding female crimp contacts with current [A] and conductor cross section range [mm²] data: 5A/MCC-MT 0,2-0,35 (1859988); 8A/MCC-MT 0,5-1,0 (1859991)

Printed-circuit board connector - QC 0,5/ 6-ST-3,81 - 1897432



PCB connector, nominal current: 6 A, rated voltage (III/2): 200 V, nominal cross section: 0.5 mm², number of positions: 6, pitch: 3.81 mm, connection method: Displacement connection, color: green, contact surface: Tin

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