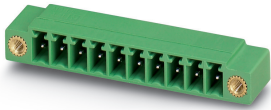


Printed-circuit board connector - MC 1,5/ 3-GF-3,81 - 1827871

Please be informed that the data shown in this PDF Document is generated from our Online Catalog. Please find the complete data in the user's documentation. Our General Terms of Use for Downloads are valid (<http://phoenixcontact.com/download>)

PCB headers, nominal cross section: 1.5 mm², color: green, nominal current: 8 A, rated voltage (III/2): 160 V, contact surface: Tin, type of contact: Male connector, number of potentials: 3, Number of rows: 1, Number of positions per row: 3, number of connections: 3, product range: MC 1,5/..-GF, pitch: 3.81 mm, mounting: Wave soldering, pin layout: Linear pinning, solder pin [P]: 3.4 mm, Number of solder pins per potential: 1, plug-in system: MINI COMBICON, Pin connector pattern alignment: Standard, Locking: Screw locking, mounting: Threaded flange, type of packaging: packed in cardboard




The figure shows a 10-position version of the product

Your advantages

- Well-known mounting principle allows worldwide use
- 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	250 pc
Minimum order quantity	250 pc
GTIN	 4 017918 050320
GTIN	4017918050320
Weight per Piece (excluding packing)	1.686 g
Weight per piece (including packing)	1.883 g
Custom tariff number	85366930
Country of origin	Germany

Technical data

Item properties

Brief article description	PCB header
Connector system	MINI COMBICON
Type of contact	Male connector
Range of articles	MC 1,5/..-GF
Pitch	3.81 mm
Number of positions	3
Drive form screw head	Slotted

Printed-circuit board connector - MC 1,5/ 3-GF-3,81 - 1827871

Technical data

Item properties

Mounting type	Wave soldering
Pin layout	Linear pinning
Locking	Threaded flange
Number of rows	1
Number of connections	3
Number of potentials	3
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	green (6021)
Insulating material	PBT
Insulating material group	IIIa
CTI according to IEC 60112	225
Flammability rating according to UL 94	V0

Flange specifications

Type of locking	Screw locking
-----------------	---------------

Dimensions for the product

Caption	Schematische Abbildung - weitere Details siehe Produktfamilienzeichnung im Download Center
Length [l]	9.2 mm
Width [w]	21.82 mm
Height [h]	10.3 mm

Printed-circuit board connector - MC 1,5/ 3-GF-3,81 - 1827871

Technical data

Dimensions for the product

Pitch	3.81 mm
Height (without solder pin)	6.9 mm
Solder pin [P]	3.4 mm
Pin dimensions	0.8 x 0.8 mm

Dimensions for PCB design

Hole diameter	1.2 mm
---------------	--------

Packaging information

Type of packaging	packed in cardboard
Pieces per package	250
Denomination packing units	Pcs.

Ambient conditions

Ambient temperature (storage/transport)	-40 °C ... 70 °C
Relative humidity (storage/transport)	30 % ... 70 %
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)	2.5 mm

Mechanical tests (A)

Test specification	IEC 61984
Insertion strength per pos. approx.	6 N
Withdraw strength per pos. approx.	4 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 ₁	1.3 mΩ
Insertion/withdrawal cycles	25
Contact resistance R ₂	1.5 mΩ
Impulse withstand voltage at sea level	2.95 kV
Insulation resistance, neighboring positions	> 5 MΩ

Thermal tests (C)

Printed-circuit board connector - MC 1,5/ 3-GF-3,81 - 1827871

Technical data

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 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

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	5g (60.1 - 150 Hz)
Test duration per axis	2.5 h

Standards and Regulations

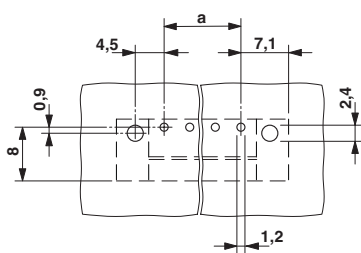
Connection in acc. with standard	EN-VDE
----------------------------------	--------

Environmental Product Compliance

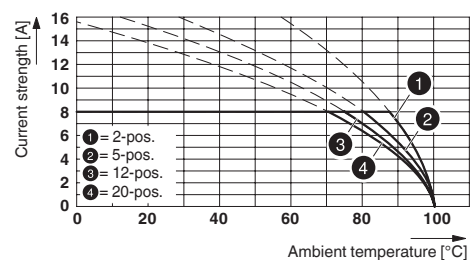
China RoHS	Environmentally Friendly Use Period = 50 years
	For details about hazardous substances go to tab "Downloads", Category "Manufacturer's declaration"

Drawings

Drilling diagram



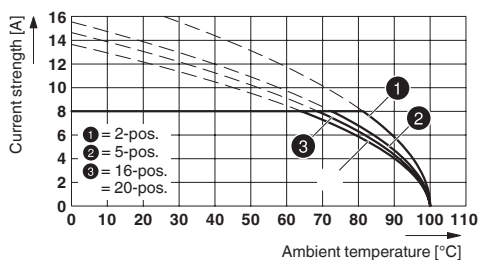
Diagram



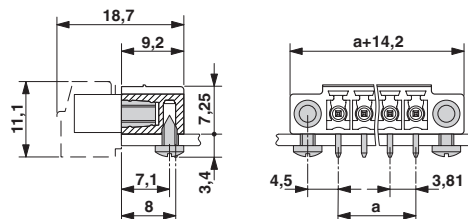
Type: MC 1,5/...-STF-3,81 with MC 1,5/...-GF-3,81

Printed-circuit board connector - MC 1,5/ 3-GF-3,81 - 1827871

Diagram

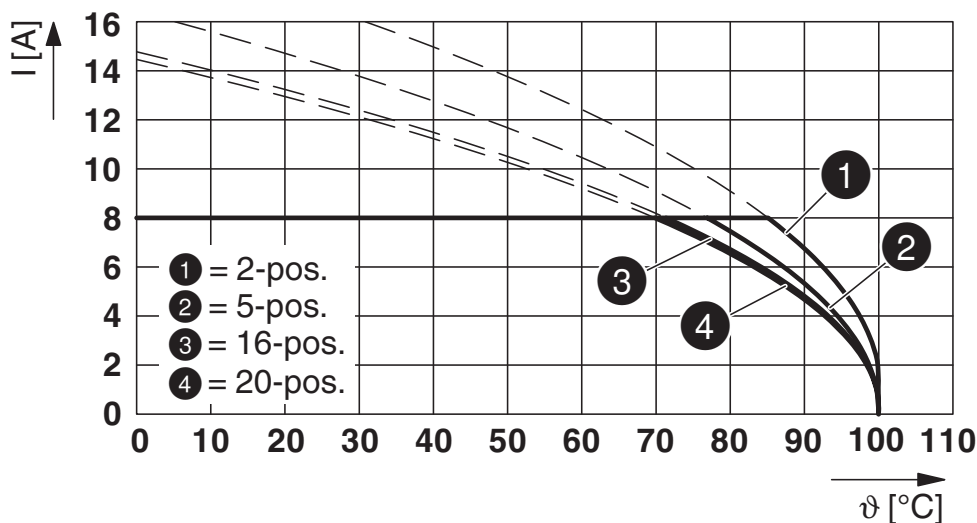


Dimensional drawing



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

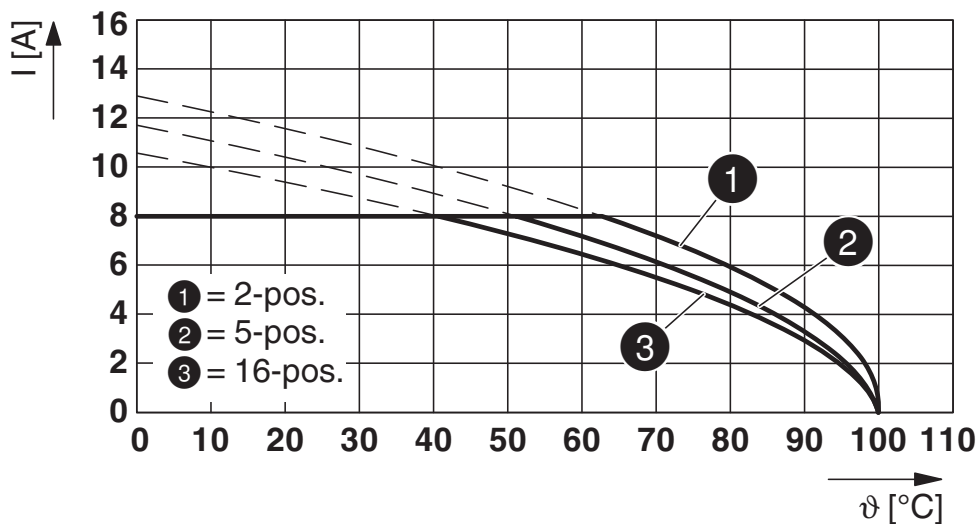
Diagram



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

Printed-circuit board connector - MC 1,5/ 3-GF-3,81 - 1827871

Diagram



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

Classifications

eCl@ss

eCl@ss 10.0.1	27440402
eCl@ss 11.0	27460201
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 9.0	27440402

ETIM

ETIM 3.0	EC001121
ETIM 4.0	EC002637
ETIM 6.0	EC002637
ETIM 7.0	EC002637

UNSPSC

UNSPSC 6.01	30211810
UNSPSC 7.0901	39121409
UNSPSC 11	39121409
UNSPSC 12.01	39121409
UNSPSC 13.2	39121409
UNSPSC 18.0	39121409

Printed-circuit board connector - MC 1,5/ 3-GF-3,81 - 1827871

Classifications

UNSPSC

UNSPSC 19.0	39121409
UNSPSC 20.0	39121409
UNSPSC 21.0	39121409

Approvals

Approvals

Approvals

VDE Gutachten mit Fertigungsüberwachung / CSA / IEC60335 CB Scheme / EAC / cULus Recognized

Ex Approvals

Approval details

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	

CSA		http://www.csagroup.org/services-industries/product-listing/	13631
Nominal voltage UN		B 300 V	D 300 V
Nominal current IN		8 A	8 A

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

EAC		B.01687
-----	--	---------

Printed-circuit board connector - MC 1,5/ 3-GF-3,81 - 1827871

Approvals

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

Accessories

Coding element

Coding profile - CP-MSTB - 1734634

Coding profile, is inserted into the slot on the plug or inverted header, red insulating material



Fiber optic

Fiber optic - MC 1,5/10-LWL 1,5-3,81 - 1841174

MINI COMBICON fiber optics, 3.81 mm pitch, 10-pos., separable for other numbers of positions (minimum: 2-pos.), inserts into the back of the MC header, color: transparent, dimension a: 1.5 mm



Fiber optic - MC 1,5/10-LWL 2,3-3,81 - 1841190

MINI COMBICON fiber optics, 3.81 mm pitch, 10-pos., separable for other numbers of positions (minimum: 2-pos.), inserts into the back of the MC header, color: transparent, dimension a: 2.3 mm



Fiber optic - MC 1,5/10-LWL 4-3,81 - 1841213

MINI COMBICON fiber optics, 3.81 mm pitch, 10-pos., separable for other numbers of positions (minimum: 2-pos.), inserts into the back of the MC header, color: transparent, dimension a: 4 mm



Printed-circuit board connector - MC 1,5/ 3-GF-3,81 - 1827871

Accessories

Labeled terminal marker

Marker card - SK 3,81/2,8:FORTL.ZAHLEN - 0804109



Marker card, Card, white, labeled, horizontal: consecutive numbers 1 ... 10, 11 ... 20, etc. up to 91 ... (99)100, mounting type: adhesive, for terminal block width: 3.81 mm, lettering field size: 3.81 x 2.8 mm

Additional products

Printed-circuit board connector - FMC 1,5/ 3-STF-3,81 - 1748367



PCB connector, nominal cross section: 1.5 mm², color: green, nominal current: 8 A, rated voltage (III/2): 160 V, contact surface: Tin, type of contact: Female connector, number of potentials: 3, Number of rows: 1, Number of positions per row: 3, number of connections: 3, product range: FMC 1,5/..-STF, pitch: 3.81 mm, connection method: Push-in spring connection, conductor/PCB connection direction: 0 °, Number of solder pins per potential: 1, plug-in system: MINI COMBICON, Locking: Screw locking, mounting: Screw flange, type of packaging: packed in cardboard

Printed-circuit board connector - MC 1,5/ 3-STF-3,81 - 1827716



PCB connector, nominal cross section: 1.5 mm², color: green, nominal current: 8 A, rated voltage (III/2): 160 V, contact surface: Tin, type of contact: Female connector, number of potentials: 3, Number of rows: 1, Number of positions per row: 3, number of connections: 3, product range: MC 1,5/..-STF, pitch: 3.81 mm, connection method: Screw connection with tension sleeve, screw head form: L Slotted, conductor/PCB connection direction: 0 °, Number of solder pins per potential: 1, plug-in system: MINI COMBICON, Locking: Screw locking, mounting: Screw flange, type of packaging: packed in cardboard

Printed-circuit board connector - MCVR 1,5/ 3-STF-3,81 - 1828359



PCB connector, nominal cross section: 1.5 mm², color: green, nominal current: 8 A, rated voltage (III/2): 160 V, contact surface: Tin, type of contact: Female connector, number of potentials: 3, Number of rows: 1, Number of positions per row: 3, number of connections: 3, product range: MCVR 1,5/..-STF, pitch: 3.81 mm, connection method: Screw connection with tension sleeve, screw head form: L Slotted, conductor/PCB connection direction: 90 °, Number of solder pins per potential: 1, plug-in system: MINI COMBICON, Locking: Screw locking, mounting: Screw flange, type of packaging: packed in cardboard

Printed-circuit board connector - MCVW 1,5/ 3-STF-3,81 - 1828508



PCB connector, nominal cross section: 1.5 mm², color: green, nominal current: 8 A, rated voltage (III/2): 160 V, contact surface: Tin, type of contact: Female connector, number of potentials: 3, Number of rows: 1, Number of positions per row: 3, number of connections: 3, product range: MCVW 1,5/..-STF, pitch: 3.81 mm, connection method: Screw connection with tension sleeve, screw head form: L Slotted, conductor/PCB connection direction: -90 °, Number of solder pins per potential: 1, plug-in system: MINI COMBICON, Locking: Screw locking, mounting: Screw flange, type of packaging: packed in cardboard

Printed-circuit board connector - MC 1,5/ 3-GF-3,81 - 1827871

Accessories

Printed-circuit board connector - FRONT-MC 1,5/ 3-STF-3,81 - 1850864



PCB connector, nominal cross section: 1.5 mm², color: green, nominal current: 8 A, rated voltage (III/2): 160 V, contact surface: Tin, type of contact: Female connector, number of potentials: 3, Number of rows: 1, Number of positions per row: 3, number of connections: 3, product range: FRONT-MC 1,5/..-STF, pitch: 3.81 mm, connection method: Front screw connection, conductor/PCB connection direction: 0 °, Number of solder pins per potential: 1, plug-in system: MINI COMBICON, Locking: Screw locking, mounting: Screw flange, type of packaging: packed in cardboard

Printed-circuit board connector - FK-MCP 1,5/ 3-STF-3,81 - 1851245



PCB connector, nominal cross section: 1.5 mm², color: green, nominal current: 8 A, rated voltage (III/2): 160 V, contact surface: Tin, type of contact: Female connector, number of potentials: 3, Number of rows: 1, Number of positions per row: 3, number of connections: 3, product range: FK-MCP 1,5/..-STF, pitch: 3.81 mm, connection method: Push-in spring connection, conductor/PCB connection direction: 0 °, Number of solder pins per potential: 1, plug-in system: MINI COMBICON, Locking: Screw locking, mounting: Screw flange, type of packaging: packed in cardboard

Printed-circuit board connector - MCC 1/ 3-STZF-3,81 - 1852370



PCB connector, nominal cross section: 1 mm², color: green, nominal current: 8 A, rated voltage (III/2): 160 V, type of contact: Female connector, number of potentials: 3, Number of rows: 1, Number of positions per row: 3, number of connections: 3, product range: MCC 1/..-STZF, pitch: 3.81 mm, connection method: Crimp connection, conductor/PCB connection direction: 0 °, Number of solder pins per potential: 1, plug-in system: MINI COMBICON, Locking: Screw locking, mounting: Screw flange, type of packaging: packed in cardboard, 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/ 3-STF-3,81 - 1897555



PCB connector, nominal cross section: 0.5 mm², color: green, nominal current: 6 A, rated voltage (III/2): 200 V, contact surface: Tin, type of contact: Female connector, number of potentials: 3, Number of rows: 1, Number of positions per row: 3, number of connections: 3, product range: QC 0,5/..-STF, pitch: 3.81 mm, connection method: Displacement connection, conductor/PCB connection direction: 0 °, Number of solder pins per potential: 1, plug-in system: MINI COMBICON, Locking: Screw locking, mounting: Screw flange, type of packaging: packed in cardboard