

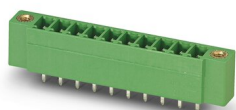
MCV 1,5/ 5-GF-3,81 - PCB header



1830622

<https://www.phoenixcontact.com/us/products/1830622>

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 documentation. Our general terms of use for downloads are valid.



PCB headers, nominal cross section: 1.5 mm², color: green, nominal current: 8 A, rated voltage (III/2): 160 V, contact surface: Tin, contact connection type: Pin, number of potentials: 5, number of rows: 1, number of positions: 5, number of connections: 5, product range: MCV 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: COMBICON MC 1,5, Pin connector pattern alignment: Standard, locking: Screw locking mechanism, mounting: Threaded flange, type of packaging: packed in cardboard

Your advantages

- Well-known mounting principle allows worldwide use
- Screwable flange for superior mechanical stability
- Vertical connection enables multi-row arrangement on the PCB
- Maximum flexibility when it comes to device design – one header for connectors with different connection technologies

Commercial data

Item number	1830622
Packing unit	1 pc
Minimum order quantity	250 pc
Sales key	AA02
Product key	AABSBF
Catalog page	Page 227 (C-1-2013)
GTIN	4017918051273
Weight per piece (including packing)	2.445 g
Weight per piece (excluding packing)	2.445 g
Customs tariff number	85366930
Country of origin	DE

MCV 1,5/ 5-GF-3,81 - PCB header

1830622

<https://www.phoenixcontact.com/us/products/1830622>



Technical data

Product properties

Type	Standard
Product line	COMBICON Connectors S
Product type	PCB headers
Product family	MCV 1,5/..-GF
Number of positions	5
Pitch	3.81 mm
Number of connections	5
Number of rows	1
Mounting flange	Threaded flange
Number of potentials	5
Pin layout	Linear pinning
Solder pins per potential	1

Electrical properties

Nominal current I_N	8 A
Nominal voltage U_N	160 V
Degree of pollution	3
Contact resistance	1.6 mΩ
Rated voltage (III/3)	160 V
Rated surge voltage (III/3)	2.5 kV
Rated voltage (III/2)	160 V
Rated surge voltage (III/2)	2.5 kV
Rated voltage (II/2)	250 V
Rated surge voltage (II/2)	2.5 kV

Mounting

Mounting type	Wave soldering
Pin layout	Linear pinning

Flange

Tightening torque	0.3 Nm
-------------------	--------

Material specifications

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)

MCV 1,5/ 5-GF-3,81 - PCB header

1830622

<https://www.phoenixcontact.com/us/products/1830622>

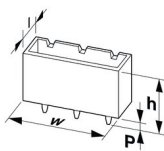


Metal surface soldering area (middle layer)	Nickel (1 - 3 µm Ni)
---	----------------------

Material data - housing

Color (Housing)	green (6021)
Insulating material	PBT
Insulating material group	IIIa
CTI according to IEC 60112	225
Flammability rating according to UL 94	V0

Dimensions

Dimensional drawing	
Pitch	3.81 mm
Width [w]	29.44 mm
Height [h]	12.6 mm
Length [l]	7.25 mm
Installed height	9.2 mm
Solder pin length [P]	3.4 mm
Pin dimensions	0.8 x 0.8 mm

PCB design

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

Mechanical tests

Visual inspection

Specification	IEC 60512-1-1:2002-02
Result	Test passed

Dimension check

Specification	IEC 60512-1-2:2002-02
Result	Test passed

Resistance of inscriptions

Specification	IEC 60068-2-70:1995-12
Result	Test passed

Polarization and coding

Specification	IEC 60512-13-5:2006-02
Result	Test passed

Contact holder in insert

Specification	IEC 60512-15-1:2008-05
---------------	------------------------

MCV 1,5/ 5-GF-3,81 - PCB header



1830622

<https://www.phoenixcontact.com/us/products/1830622>

Contact holder in insert Requirements >20 N	Test passed
--	-------------

Insertion and withdrawal forces

Result	Test passed
No. of cycles	25
Insertion strength per pos. approx.	7 N
Withdraw strength per pos. approx.	5 N

Electrical tests

Thermal test | Test group C

Specification	IEC 60512-5-1:2002-02
Tested number of positions	20

Insulation resistance

Specification	IEC 60512-3-1:2002-02
Insulation resistance, neighboring positions	> 5 MΩ

Air clearances and creepage distances |

Specification	IEC 60664-1:2007-04
Insulating material group	IIIa
Comparative tracking index (IEC 60112)	CTI 225
Rated insulation voltage (III/3)	160 V
Rated surge voltage (III/3)	2.5 kV
minimum clearance value - non-homogenous field (III/3)	1.5 mm
minimum creepage distance (III/3)	2.5 mm
Rated insulation voltage (III/2)	160 V
Rated surge voltage (III/2)	2.5 kV
minimum clearance value - non-homogenous field (III/2)	1.5 mm
minimum creepage distance (III/2)	1.6 mm
Rated insulation voltage (II/2)	250 V
Rated surge voltage (II/2)	2.5 kV
minimum clearance value - non-homogenous field (II/2)	1.5 mm
minimum creepage distance (II/2)	2.5 mm

Environmental and real-life conditions

Vibration test

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

Durability test

MCV 1,5/ 5-GF-3,81 - PCB header



1830622

<https://www.phoenixcontact.com/us/products/1830622>

Specification	IEC 60512-9-1:2010-03
Impulse withstand voltage at sea level	2.95 kV
Contact resistance R ₁	1.6 mΩ
Contact resistance R ₂	1.7 mΩ
Insertion/withdrawal cycles	25
Insulation resistance, neighboring positions	> 5 MΩ

Climatic test

Specification	ISO 6988:1985-02
Corrosive stress	0.2 dm ³ SO ₂ on 300 dm ³ /40 °C/1 cycle
Thermal stress	100 °C/168 h
Power-frequency withstand voltage	1.39 kV

Shocks

Specification	IEC 60068-2-27:2008-02
Pulse shape	Semi-sinusoidal
Acceleration	30g
Shock duration	18 ms
Test directions	X-, Y- and Z-axis (pos. and neg.)

Ambient conditions

Ambient temperature (operation)	-40 °C ... 100 °C (dependent on the derating curve)
Ambient temperature (storage/transport)	-40 °C ... 70 °C
Relative humidity (storage/transport)	30 % ... 70 %
Ambient temperature (assembly)	-5 °C ... 100 °C

Packaging specifications

Type of packaging	packed in cardboard
-------------------	---------------------

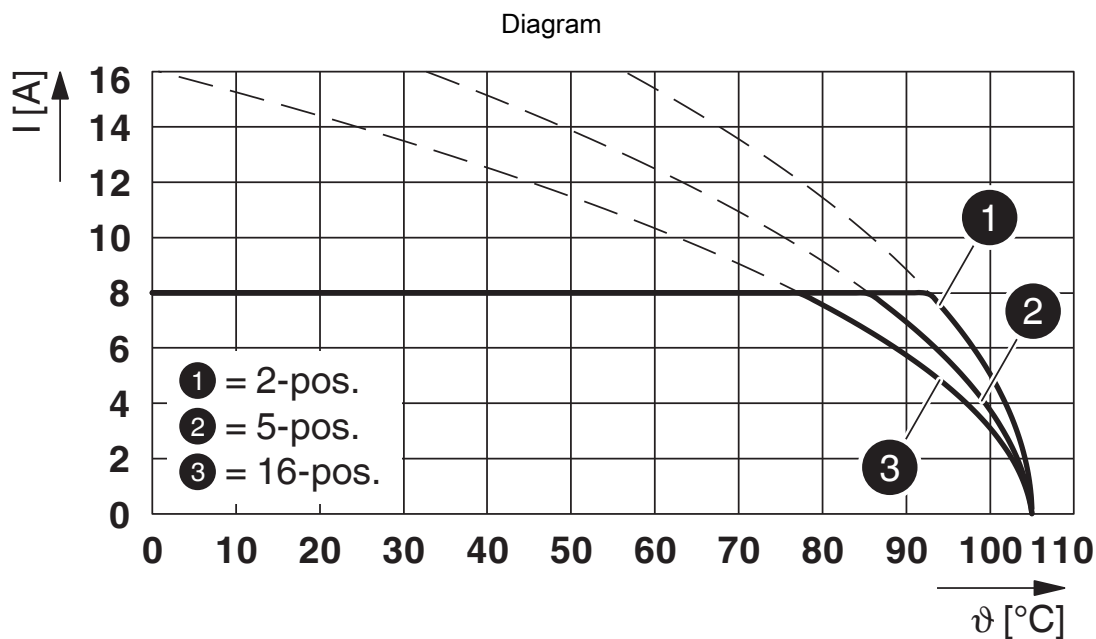
MCV 1,5/ 5-GF-3,81 - PCB header

1830622

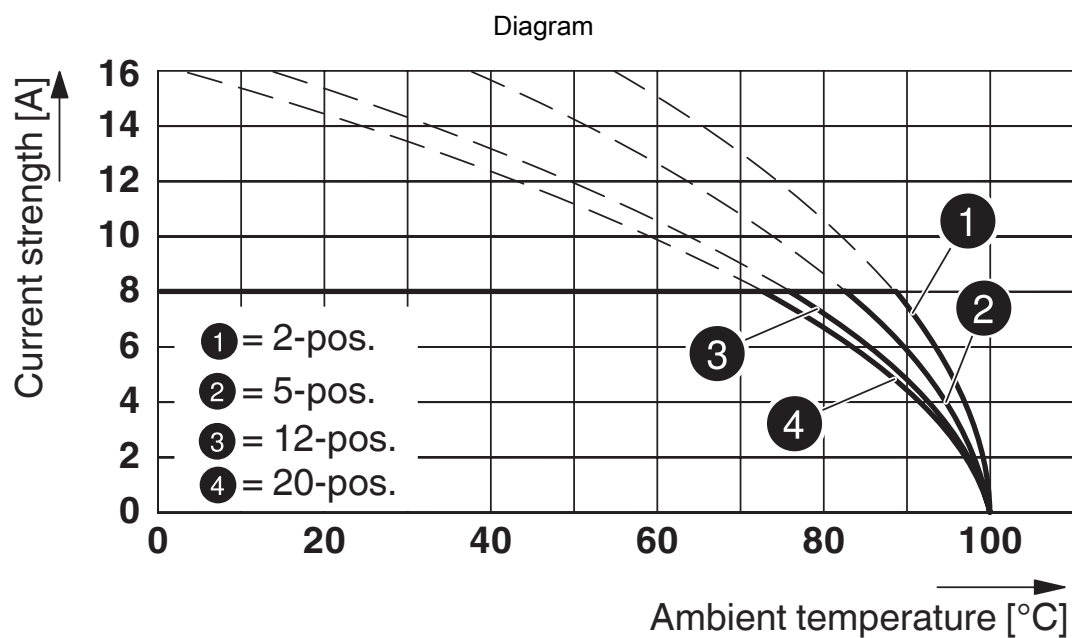
<https://www.phoenixcontact.com/us/products/1830622>



Drawings



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



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

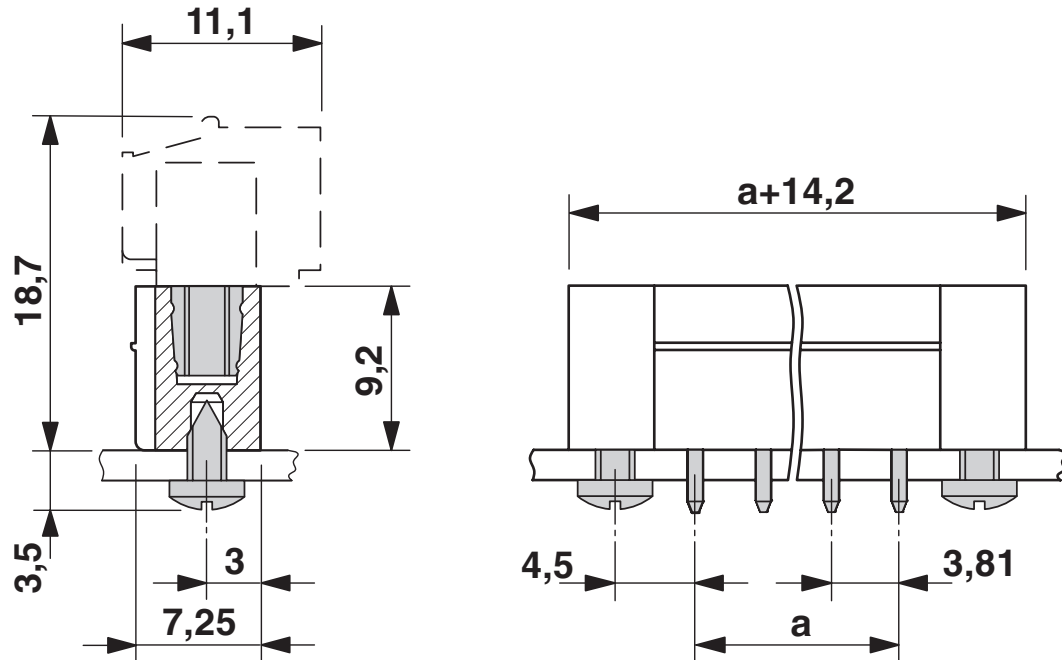
MCV 1,5/ 5-GF-3,81 - PCB header

1830622

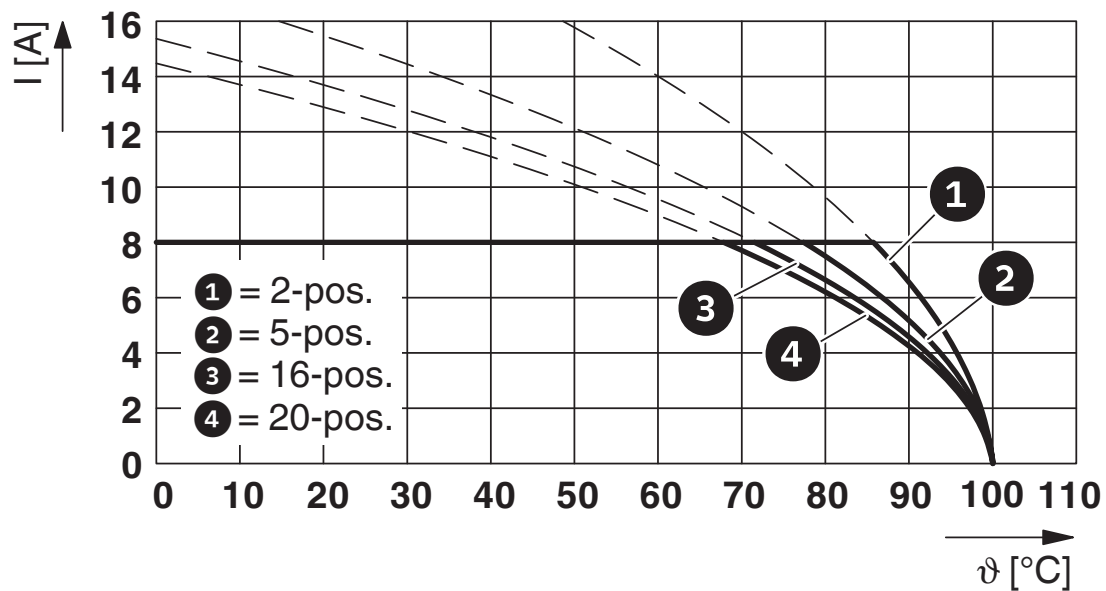
<https://www.phoenixcontact.com/us/products/1830622>



Dimensional drawing



Diagram

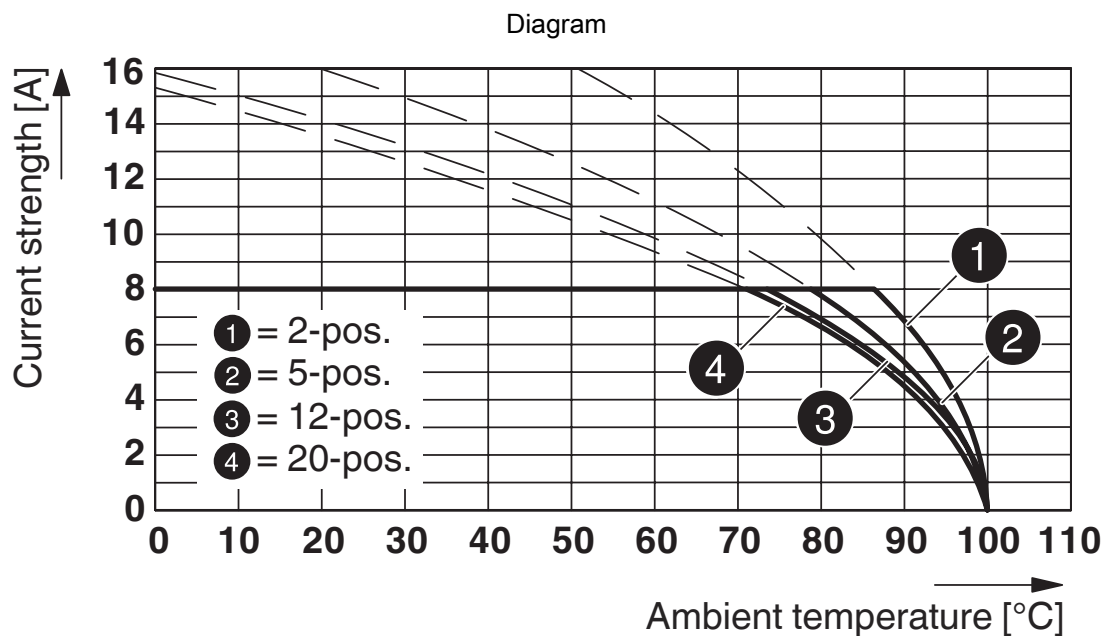


Type: FMC 1,5/...-STF-3,81 with MCV 1,5/...-GF-3,81

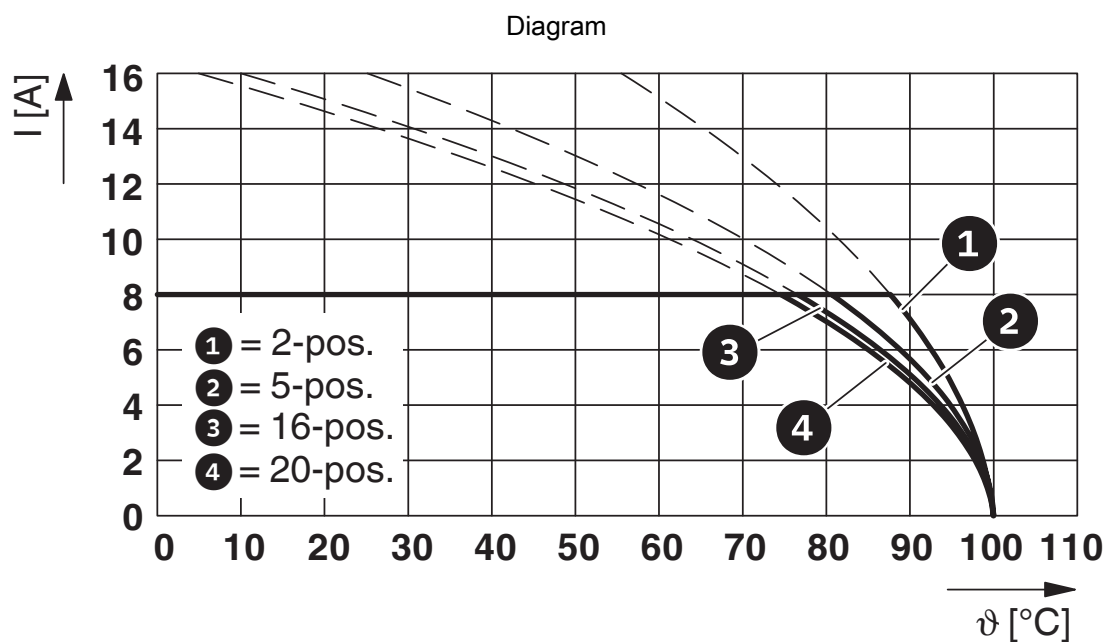
MCV 1,5/ 5-GF-3,81 - PCB header

1830622

<https://www.phoenixcontact.com/us/products/1830622>



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



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

MCV 1,5/ 5-GF-3,81 - PCB header



1830622

<https://www.phoenixcontact.com/us/products/1830622>

Approvals

To download certificates, visit the product detail page: <https://www.phoenixcontact.com/us/products/1830622>

 CSA Approval ID: 13631				
	Nominal voltage U_N	Nominal current I_N	Cross section AWG	Cross section mm^2
Use group B				
	300 V	8 A	-	-
Use group D				
	300 V	8 A	-	-

 cULus Recognized Approval ID: E60425-20110128				
	Nominal voltage U_N	Nominal current I_N	Cross section AWG	Cross section mm^2
Use group B				
	300 V	8 A	-	-
Use group D				
	300 V	8 A	-	-

 VDE Zeichengenehmigung Approval ID: 40011723				
	Nominal voltage U_N	Nominal current I_N	Cross section AWG	Cross section mm^2
	160 V	8 A	-	-

MCV 1,5/ 5-GF-3,81 - PCB header

1830622

<https://www.phoenixcontact.com/us/products/1830622>



Classifications

ECLASS

ECLASS-11.0	27460201
ECLASS-12.0	27460201
ECLASS-13.0	27460201

ETIM

ETIM 8.0	EC002637
----------	----------

UNSPSC

UNSPSC 21.0	39121400
-------------	----------

MCV 1,5/ 5-GF-3,81 - PCB header

1830622

<https://www.phoenixcontact.com/us/products/1830622>



Environmental product compliance

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

MCV 1,5/ 5-GF-3,81 - PCB header

1830622

<https://www.phoenixcontact.com/us/products/1830622>

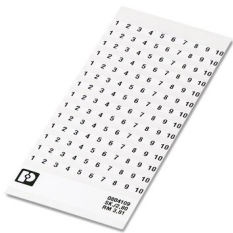


Accessories

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

0804109

<https://www.phoenixcontact.com/us/products/0804109>



Marker 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

CP-MSTB - Coding profile

1734634

<https://www.phoenixcontact.com/us/products/1734634>



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

MCV 1,5/ 5-GF-3,81 - PCB header

1830622

<https://www.phoenixcontact.com/us/products/1830622>



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

1748383

<https://www.phoenixcontact.com/us/products/1748383>

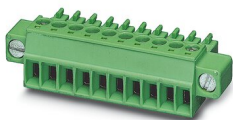


PCB connector, nominal cross section: 1.5 mm², color: green, nominal current: 8 A, rated voltage (III/2): 160 V, contact surface: Tin, contact connection type: Socket, number of potentials: 5, number of rows: 1, number of positions: 5, number of connections: 5, product range: FMC 1,5/...-STF, pitch: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

MC 1,5/ 5-STF-3,81 - PCB connector

1827732

<https://www.phoenixcontact.com/us/products/1827732>



PCB connector, nominal cross section: 1.5 mm², color: green, nominal current: 8 A, rated voltage (III/2): 160 V, contact surface: Tin, contact connection type: Socket, number of potentials: 5, number of rows: 1, number of positions: 5, number of connections: 5, 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 °, plug-in system: COMBICON MC 1,5, locking: Screw locking mechanism, mounting: Screw flange, type of packaging: packed in cardboard

MCV 1,5/ 5-GF-3,81 - PCB header

1830622

<https://www.phoenixcontact.com/us/products/1830622>



MCVR 1,5/ 5-STF-3,81 - PCB connector

1828375

<https://www.phoenixcontact.com/us/products/1828375>



PCB connector, nominal cross section: 1.5 mm², color: green, nominal current: 8 A, rated voltage (III/2): 160 V, contact surface: Tin, contact connection type: Socket, number of potentials: 5, number of rows: 1, number of positions: 5, number of connections: 5, 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 °, plug-in system: COMBICON MC 1,5, locking: Screw locking mechanism, mounting: Screw flange, type of packaging: packed in cardboard

MCVW 1,5/ 5-STF-3,81 - PCB connector

1828524

<https://www.phoenixcontact.com/us/products/1828524>



PCB connector, nominal cross section: 1.5 mm², color: green, nominal current: 8 A, rated voltage (III/2): 160 V, contact surface: Tin, contact connection type: Socket, number of potentials: 5, number of rows: 1, number of positions: 5, number of connections: 5, 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 °, plug-in system: COMBICON MC 1,5, locking: Screw locking mechanism, mounting: Screw flange, type of packaging: packed in cardboard

MCV 1,5/ 5-GF-3,81 - PCB header

1830622

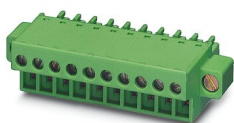
<https://www.phoenixcontact.com/us/products/1830622>



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

1850880

<https://www.phoenixcontact.com/us/products/1850880>

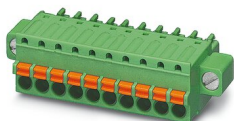


PCB connector, nominal cross section: 1.5 mm², color: green, nominal current: 8 A, rated voltage (III/2): 160 V, contact surface: Tin, contact connection type: Socket, number of potentials: 5, number of rows: 1, number of positions: 5, number of connections: 5, product range: FRONT-MC 1,5/...-STF, pitch: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

FK-MCP 1,5/ 5-STF-3,81 - PCB connector

1851261

<https://www.phoenixcontact.com/us/products/1851261>



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

MCV 1,5/ 5-GF-3,81 - PCB header

1830622

<https://www.phoenixcontact.com/us/products/1830622>



MCC 1/ 5-STZF-3,81 - PCB connector

1852396

<https://www.phoenixcontact.com/us/products/1852396>

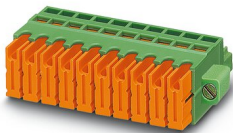


PCB connector, nominal cross section: 1 mm², color: green, nominal current: 8 A, rated voltage (III/2): 160 V, contact connection type: Socket, number of potentials: 5, number of rows: 1, number of positions: 5, number of connections: 5, product range: MCC 1/...-STZF, pitch: 3.81 mm, connection method: Crimp connection, conductor/PCB connection direction: 0 °, plug-in system: COMBICON MC 1,5, locking: Screw locking mechanism, 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)

QC 0,5/ 5-STF-3,81 - Printed-circuit board connector

1897571

<https://www.phoenixcontact.com/us/products/1897571>



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

Phoenix Contact 2023 © - all rights reserved
<https://www.phoenixcontact.com>

Phoenix Contact USA
586 Fulling Mill Road
Middletown, PA 17057, United States
(+717) 944-1300
info@phoenixcon.com