

MCD 1,5/14-G-3,81 - PCB header



1830075

<https://www.phoenixcontact.com/pc/products/1830075>

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: 28, number of rows: 2, number of positions: 14, number of connections: 28, product range: MCD 1,5/...-G, pitch: 3.81 mm, mounting: Wave soldering, pin layout: Linear pinning, solder pin [P]: 3.5 mm, number of solder pins per potential: 1, plug-in system: COMBICON MC 1,5, Pin connector pattern alignment: Standard, locking: without, mounting: without, type of packaging: packed in cardboard, In combination with MCV plug components, both an MCVW and an MCVR plug must be used.

Your advantages

- Well-known mounting principle allows worldwide use
- Conductor connection on several levels enables higher contact density
- Maximum flexibility when it comes to device design – one header for connectors with different connection technologies

Commercial data

Item number	1830075
Packing unit	50 pc
Minimum order quantity	1 pc
Product key	AABSHA
Catalog page	Page 234 (C-1-2013)
GTIN	4017918113711
Weight per piece (including packing)	12.074 g
Weight per piece (excluding packing)	10.961 g
Customs tariff number	85366930
Country of origin	DE

MCD 1,5/14-G-3,81 - PCB header

1830075

<https://www.phoenixcontact.com/pc/products/1830075>



Technical data

Product properties

Product type	PCB headers
Product family	MCD 1,5/...-G
Product line	COMBICON Connectors S
Type	Standard
Number of positions	14
Pitch	3.81 mm
Number of connections	28
Number of rows	2
Number of potentials	28
Mounting flange	without
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	3.6 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)	320 V
Rated surge voltage (II/2)	2.5 kV

Mounting

Mounting type	Wave soldering
Pin layout	Linear pinning

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

Material data - housing

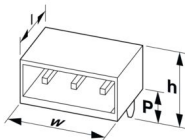
MCD 1,5/14-G-3,81 - PCB header

1830075

<https://www.phoenixcontact.com/pc/products/1830075>

Color (Housing)	green (6021)
Insulating material	PA
Insulating material group	I
CTI according to IEC 60112	600
Flammability rating according to UL 94	V0
Glow wire flammability index GWFI according to EN 60695-2-12	850
Glow wire ignition temperature GWIT according to EN 60695-2-13	775
Temperature for the ball pressure test according to EN 60695-10-2	125 °C

Dimensions

Dimensional drawing	
Pitch	3.81 mm
Width [w]	54.73 mm
Height [h]	26.2 mm
Length [l]	21.9 mm
Installed height	22.7 mm
Solder pin length [P]	3.5 mm
Pin dimensions	0.8 x 0.8 mm

PCB design

Pin spacing	12.70 mm
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

MCD 1,5/14-G-3,81 - PCB header

1830075

<https://www.phoenixcontact.com/pc/products/1830075>



Contact holder in insert

Specification	IEC 60512-15-1:2008-05
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.	4 N

Electrical tests

Thermal test | Test group C

Specification	IEC 60512-5-1:2002-02
Tested number of positions	16

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	I
Comparative tracking index (IEC 60112)	CTI 600
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 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)	1.5 mm
Rated insulation voltage (II/2)	320 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)	1.6 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)
Acceleration	5g (60.1 Hz ... 150 Hz)

MCD 1,5/14-G-3,81 - PCB header



1830075

<https://www.phoenixcontact.com/pc/products/1830075>

Test duration per axis	2.5 h
------------------------	-------

Durability test

Specification	IEC 60512-9-1:2010-03
Impulse withstand voltage at sea level	2.95 kV
Contact resistance R ₁	3.6 mΩ
Contact resistance R ₂	3.5 mΩ
Contact resistance R ₂ 2nd level	4.1 mΩ
Insertion/withdrawal cycles	25

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

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
-------------------	---------------------

MCD 1,5/14-G-3,81 - PCB header

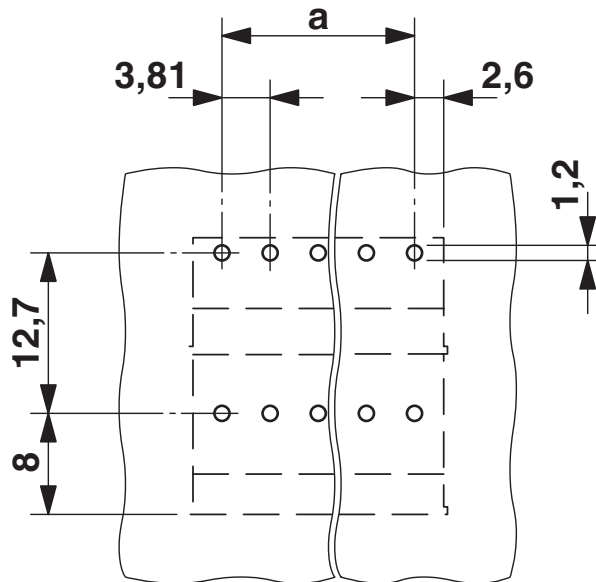
1830075

<https://www.phoenixcontact.com/pc/products/1830075>

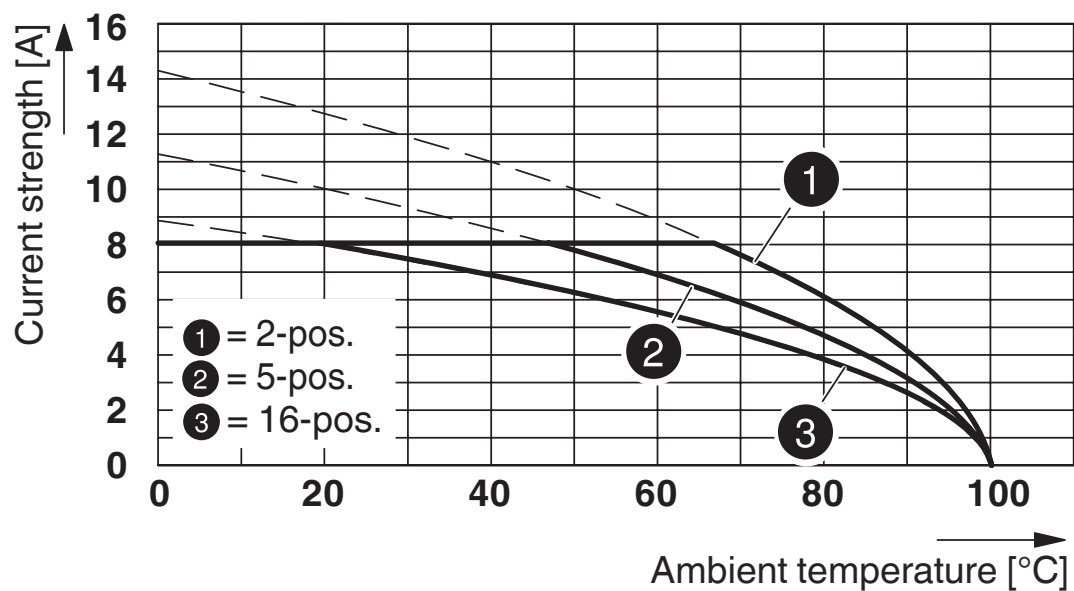


Drawings

Drilling plan/solder pad geometry



Diagram



Type: MCVR 1,5/...-ST-3,81 with MCD 1,5/...-G-3,81

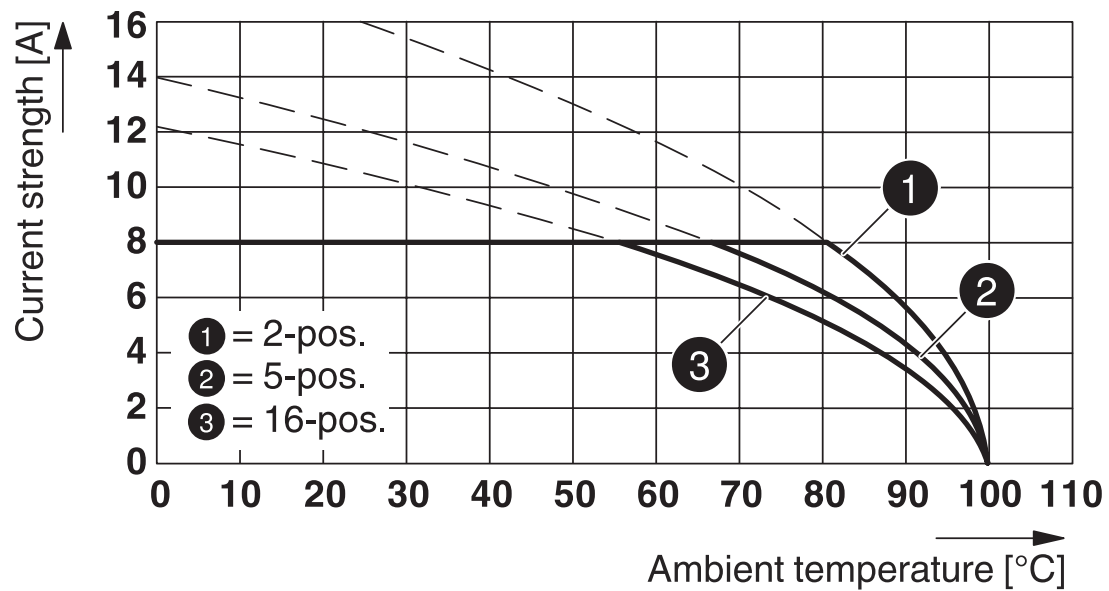
MCD 1,5/14-G-3,81 - PCB header

1830075

<https://www.phoenixcontact.com/pc/products/1830075>

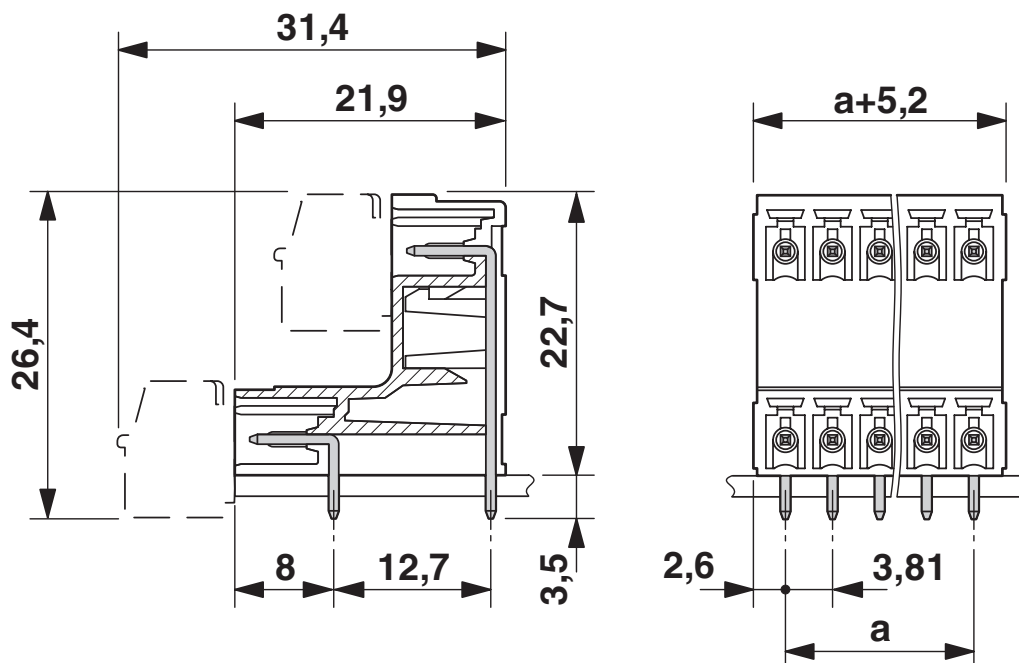


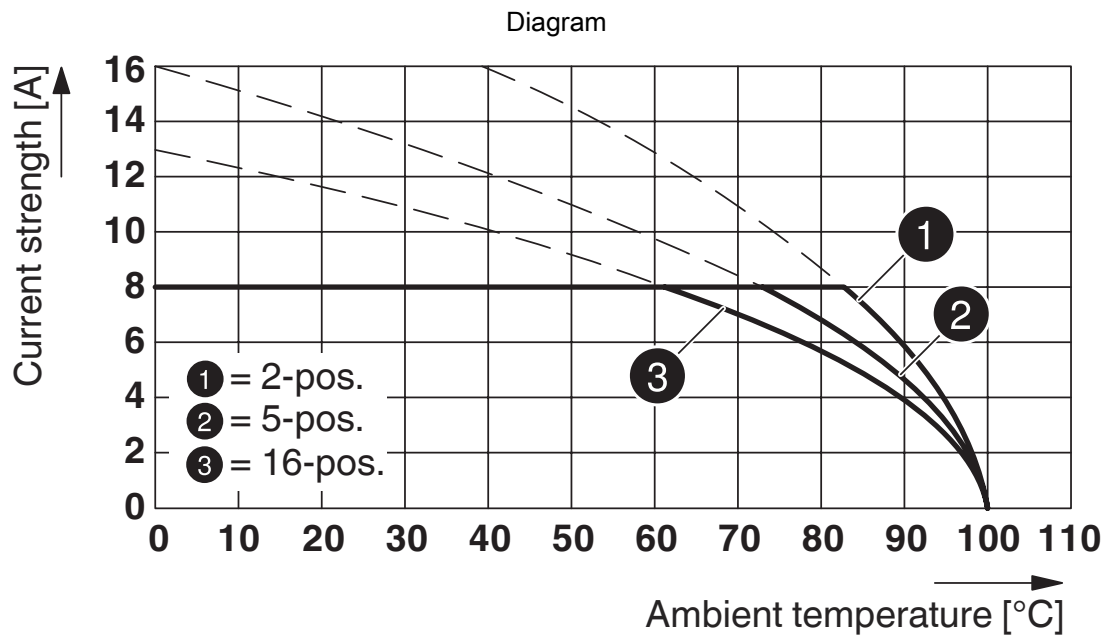
Diagram



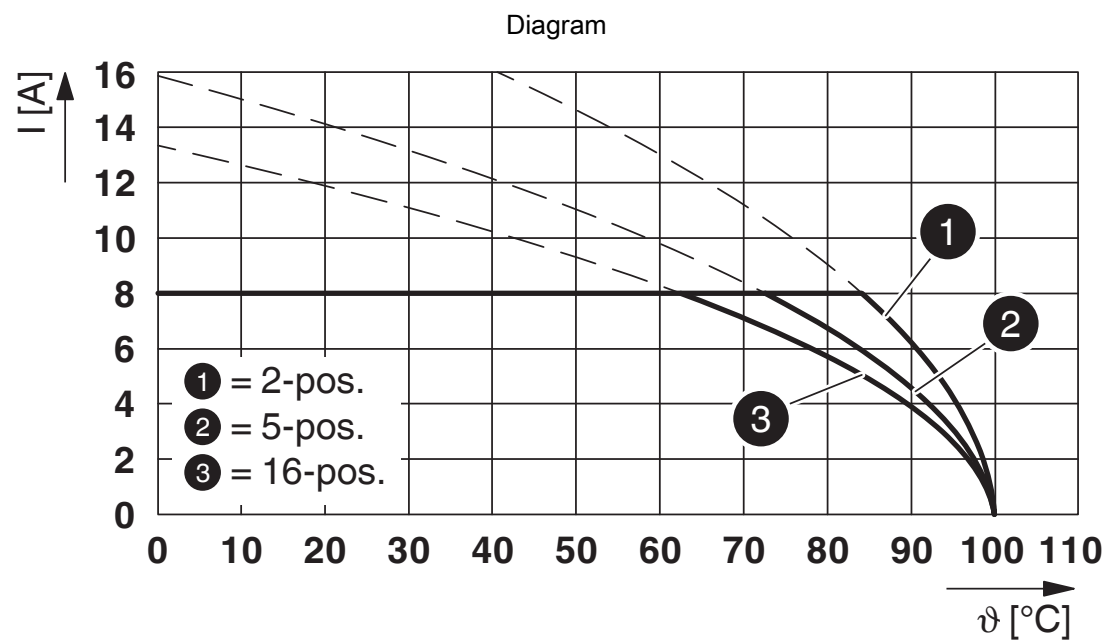
Type: FMC 1,5/...-ST-3,81 with MCD 1,5/...-G-3,81

Dimensional drawing





Type: FK-MCP 1,5/...-ST-3,81 with MCD 1,5/...-G-3,81



Type: MC 1,5/...-ST-3,81 with MCD 1,5/...-G-3,81

MCD 1,5/14-G-3,81 - PCB header



1830075

<https://www.phoenixcontact.com/pc/products/1830075>

Approvals

To download certificates, visit the product detail page: <https://www.phoenixcontact.com/pc/products/1830075>

 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	-	-

MCD 1,5/14-G-3,81 - PCB header

1830075

<https://www.phoenixcontact.com/pc/products/1830075>



Classifications

ECLASS

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

ETIM

ETIM 9.0	EC002637
----------	----------

UNSPSC

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

MCD 1,5/14-G-3,81 - PCB header

1830075

<https://www.phoenixcontact.com/pc/products/1830075>



Environmental product compliance

EU RoHS	
Fulfills EU RoHS substance requirements	Yes, No exemptions
China RoHS	
Environment friendly use period (EFUP)	EFUP-E
	No hazardous substances above the limits
EU REACH SVHC	
REACH candidate substance (CAS No.)	No substance above 0.1 wt%

MCD 1,5/14-G-3,81 - PCB header

1830075

<https://www.phoenixcontact.com/pc/products/1830075>



Accessories

CP-MSTB - Coding profile

1734634

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

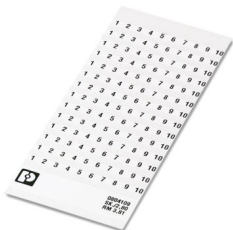
Coding profile, is inserted into the slot on the plug or inverted header, red insulating material



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

0804109

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



Marker card, Sheet, 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, Number of individual labels: 14

MCD 1,5/14-G-3,81 - PCB header

1830075

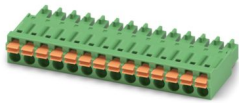
<https://www.phoenixcontact.com/pc/products/1830075>



FMC 1,5/14-ST-3,81 - PCB connectors

1748095

<https://www.phoenixcontact.com/pc/products/1748095>



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: 14, number of rows: 1, number of positions: 14, number of connections: 14, product range: FMC 1,5/...-ST, pitch: 3.81 mm, connection method: Push-in spring connection, conductor/PCB connection direction: 0 °, plug-in system: COMBICON MC 1,5, locking: without, mounting: without, type of packaging: packed in cardboard

MC 1,5/14-ST-3,81 - PCB connector

1803691

<https://www.phoenixcontact.com/pc/products/1803691>



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: 14, number of rows: 1, number of positions: 14, number of connections: 14, product range: MC 1,5/...-ST, 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: without, mounting: without, type of packaging: packed in cardboard

MCD 1,5/14-G-3,81 - PCB header

1830075

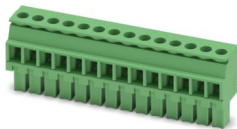
<https://www.phoenixcontact.com/pc/products/1830075>



MCVW 1,5/14-ST-3,81 - PCB connector

1827091

<https://www.phoenixcontact.com/pc/products/1827091>

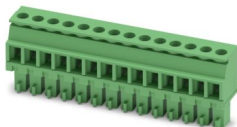


PCB connector, nominal cross section: 1.5 mm², color: green, nominal current: 8 A, rated voltage (III/2): 160 V, contact surface: Tin, contact connection type: Socket, number of potentials: 14, number of rows: 1, number of positions: 14, number of connections: 14, product range: MCVW 1,5/..-ST, pitch: 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: without, mounting: without, type of packaging: packed in cardboard

MCVR 1,5/14-ST-3,81 - PCB connector

1827240

<https://www.phoenixcontact.com/pc/products/1827240>



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: 14, number of rows: 1, number of positions: 14, number of connections: 14, product range: MCVR 1,5/..-ST, 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: without, mounting: without, type of packaging: packed in cardboard

MCD 1,5/14-G-3,81 - PCB header

1830075

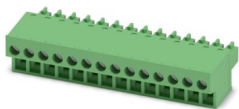
<https://www.phoenixcontact.com/pc/products/1830075>



FRONT-MC 1,5/14-ST-3,81 - PCB connectors

1850783

<https://www.phoenixcontact.com/pc/products/1850783>

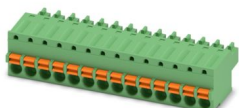


PCB connector, nominal cross section: 1.5 mm², color: green, nominal current: 8 A, rated voltage (III/2): 160 V, contact surface: Tin, contact connection type: Socket, number of potentials: 14, number of rows: 1, number of positions: 14, number of connections: 14, product range: FRONT-MC 1,5/...-ST, 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: without, mounting: without, type of packaging: packed in cardboard

FK-MCP 1,5/14-ST-3,81 - PCB connector

1851164

<https://www.phoenixcontact.com/pc/products/1851164>



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: 14, number of rows: 1, number of positions: 14, number of connections: 14, product range: FK-MCP 1,5/...-ST, pitch: 3.81 mm, connection method: Push-in spring connection, conductor/PCB connection direction: 0 °, plug-in system: COMBICON MC 1,5, locking: without, mounting: without, type of packaging: packed in cardboard

MCD 1,5/14-G-3,81 - PCB header

1830075

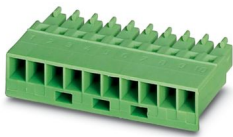
<https://www.phoenixcontact.com/pc/products/1830075>



MCC 1/14-STZ-3,81 - PCB connector

1852299

<https://www.phoenixcontact.com/pc/products/1852299>

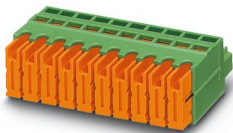


PCB connector, nominal cross section: 1 mm², color: green, nominal current: 8 A, rated voltage (III/2): 160 V, contact connection type: Socket, number of potentials: 14, number of rows: 1, number of positions: 14, number of connections: 14, product range: MCC 1/...-STZ, pitch: 3.81 mm, connection method: Crimp connection, conductor/PCB connection direction: 0 °, plug-in system: COMBICON MC 1,5, locking: without, mounting: without, 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 0,5/14-ST-3,81 - PCB connectors

1897513

<https://www.phoenixcontact.com/pc/products/1897513>



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: 14, number of rows: 1, number of positions: 14, number of connections: 14, product range: QC 0,5/...-ST, pitch: 3.81 mm, connection method: Displacement connection, conductor/PCB connection direction: 0 °, plug-in system: COMBICON MC 1,5, locking: without, mounting: without, type of packaging: packed in cardboard

Phoenix Contact 2024 © - all rights reserved
<https://www.phoenixcontact.com>

PHOENIX CONTACT GmbH & Co. KG
Flachsmarktstraße 8
D-32825 Blomberg
+49 (0) 5235-3 00
info@phoenixcontact.com