MCD 1,5/ 6-G1F-3,81 - PCB header

1842953

https://www.phoenixcontact.com/de/produkte/1842953

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PCB headers, nominal cross section: 1.5 mm^2, color: green, nominal current: 8 A, rated voltage (III/2): 160 V, contact surface: Tin, contact connection type: Pin, number of potentials: 12, number of rows: 2, number of positions: 6, number of connections: 12, product range: MCD 1,5/.. -G1F, 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: Screw locking mechanism, mounting: Threaded flange, 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
- Screwable flange for superior mechanical stability
- Maximum flexibility when it comes to device design – one header for connectors with different connection technologies
- Conductor connection on several levels enables higher contact density

Commercial data

Item number	1842953
Packing unit	50 pc
Minimum order quantity	50 pc
Sales key	E1 - Leiterplattenanschl.
Product key	AABSHC
Catalog page	Page 235 (C-1-2013)
GTIN	4017918112158
Weight per piece (including packing)	10,6 g
Weight per piece (excluding packing)	9,38 g
Customs tariff number	85366930
Country of origin	DE

Technical data

Product properties

Type	Standard
Product line	COMBICON Connectors S
Product type	PCB headers
Product family	MCD 1,5/..-G1F
Number of positions	6
Pitch	3.81 mm
Number of connections	12
Number of rows	2
Mounting flange	Threaded flange
Number of potentials	12
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	1.2 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

Flange

Tightening torque	0.3 Nm

Material specifications

Material data - contact

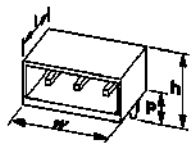
Note	WEEE/RoHS-compliant, free of whiskers according to IEC 60068-2-82/JEDEC JESD 201
Contact material	Cu alloy
Surface characteristics	Tin-plated
Metal surface contact area (top layer)	Tin (3 - 5 µm Sn)
Metal surface contact area (middle layer)	Nickel (1 - 3 µm Ni)
Metal surface soldering area (top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

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

Material data - housing

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]	33.25 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

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.	8 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	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)
Sweep speed	5g (60.1 Hz ... 150 Hz)
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	1.2 mΩ
Contact resistance R_2	1.3 mΩ
Contact resistance R_2 2nd level	2.2 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	Half-sine
Acceleration	30g
Shock duration	18 ms
Test directions	X-, Y- and Z-axis (pos. and neg.)

Ambient conditions

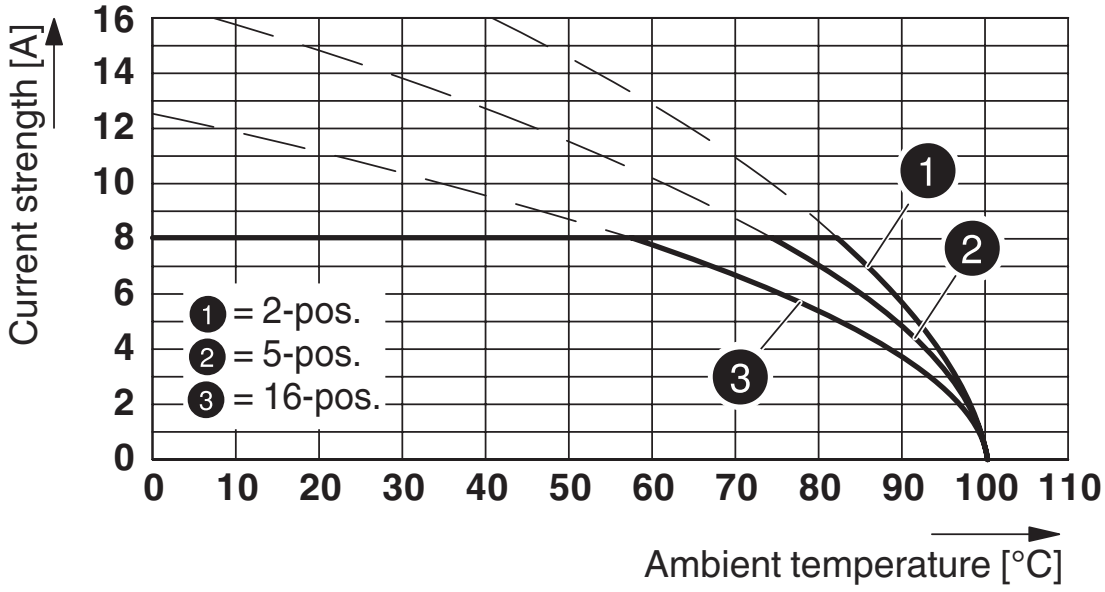
Ambient temperature (operation)	-40 °C ... 100 °C (dependent on the derating curve)
Ambient temperature (storage/transport)	-40 °C ... 70 °C
Relative humidity (storage/transport)	30 % ... 70 %
Ambient temperature (assembly)	-5 °C ... 100 °C

Packaging specifications

Type of packaging	packed in cardboard

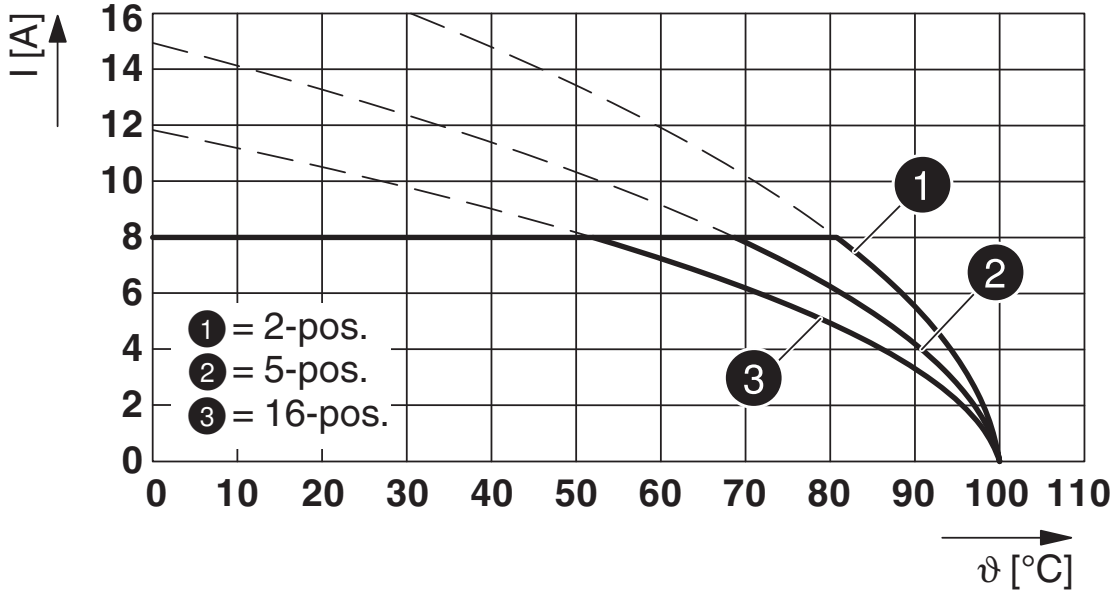
Drawings

Diagram



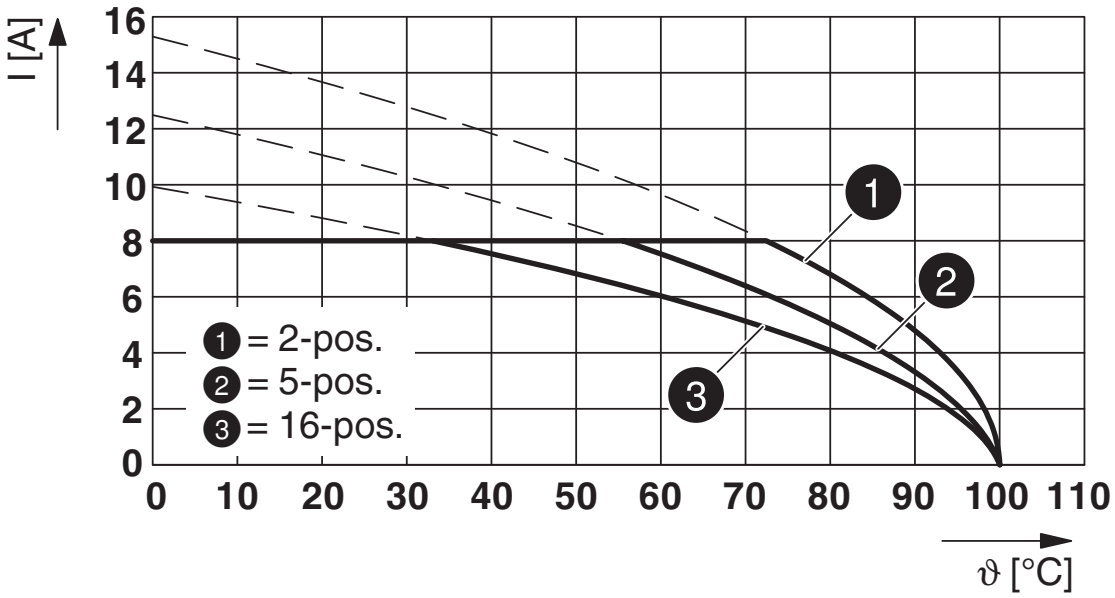
Type: MC 1,5/...-STF-3,81 with MCD 1,5/...-G1F-3,81

Diagram



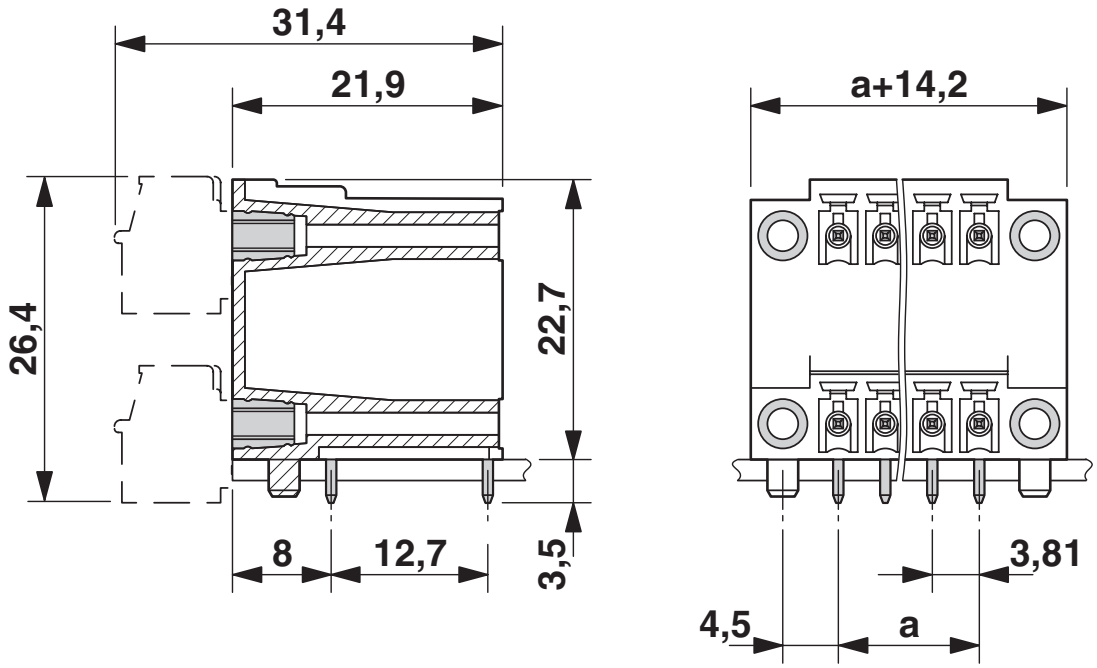
Type: FRONT-MC 1,5/...-STF-3,81 with MCD 1,5/...-G1F-3,81

Diagram

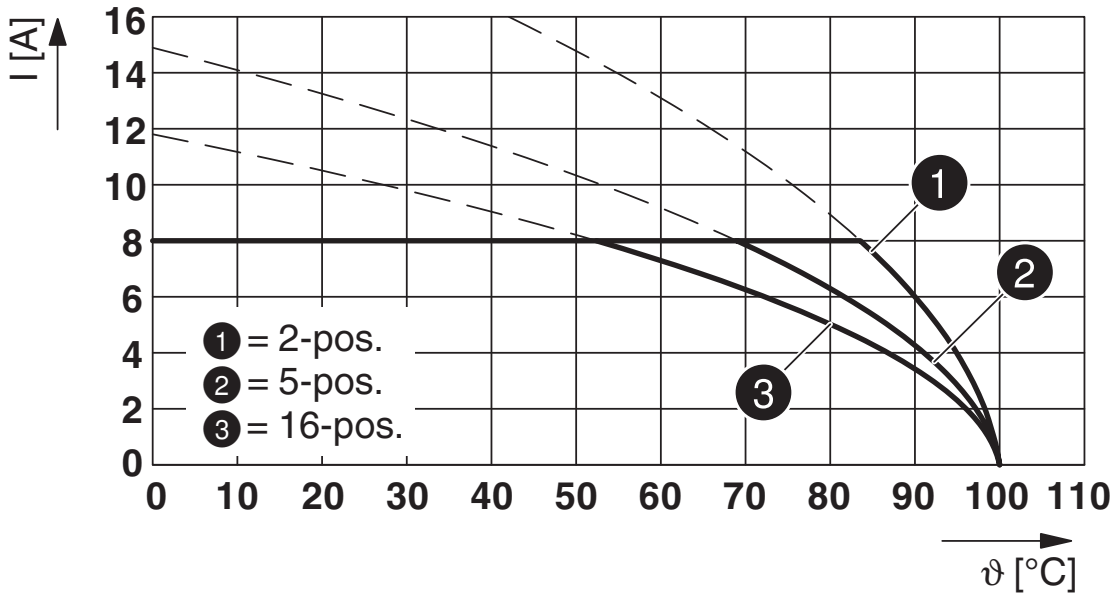


Type: MCV(W/R) 1,5/...-STF-3,81 with MCD 1,5/...-G1F-3,81

Dimensional drawing

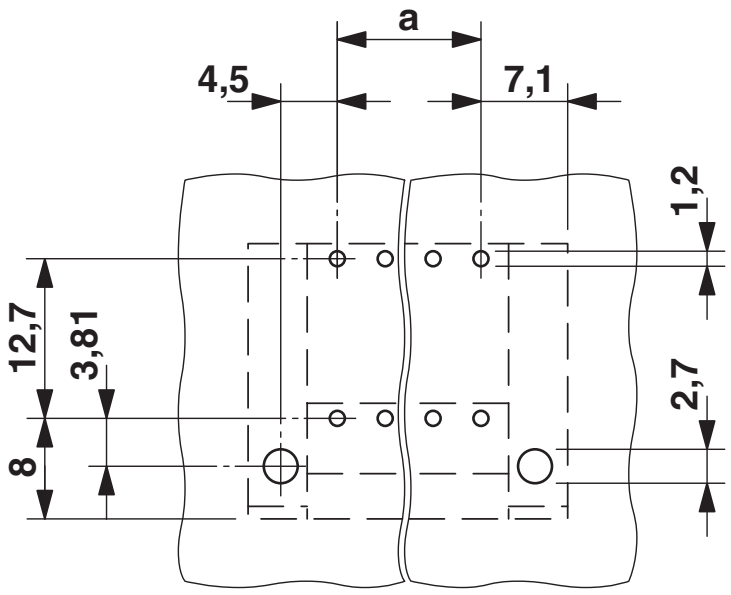


Diagram

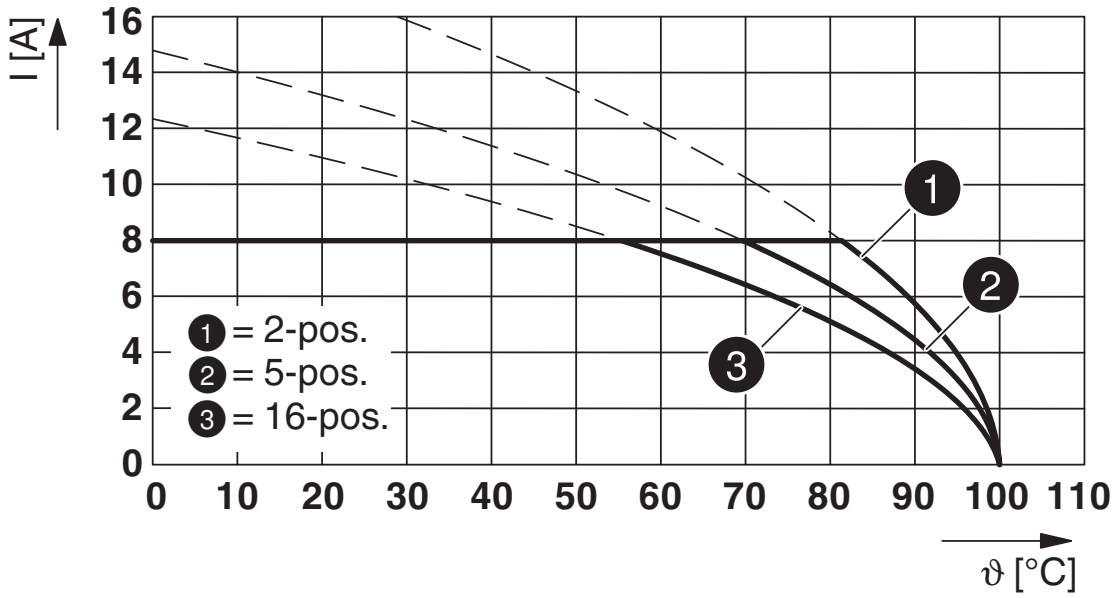


Type: FK-MCP 1,5/...-STF-3,81 with MCD 1,5/...-G1F-3,81

Drilling plan/solder pad geometry



Diagram



Type: FMC 1,5/...-STF-3,81 with MCD 1,5/...-G1F-3,81

Approvals

To download certificates, visit the product detail page: https://www.phoenixcontact.com/de/produkte/1842953

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	-	-

EAC
Approval ID: B.01687

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	-	-

Classifications

ECLASS

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

ETIM

ETIM 8.0	EC002637

UNSPSC

UNSPSC 21.0	39121400

Environmental product compliance

REACh SVHC	Lead 7439-92-1

China RoHS	Environmentally Friendly Use Period = 50 years
	For information on hazardous substances, refer to the manufacturer’s declaration available under “Downloads”

Accessories

CP-MSTB - Coding profile

1734634

https://www.phoenixcontact.com/de/produkte/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/de/produkte/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

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

1748396

https://www.phoenixcontact.com/de/produkte/1748396



PCB connector, nominal cross section: 1.5 mm^2, color: green, nominal current: 8 A, rated voltage (III/2): 160 V, contact surface: Tin, contact connection type: Socket, number of potentials: 6, number of rows: 1, number of positions: 6, number of connections: 6, 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/ 6-STF-3,81 - PCB connector

1827745

https://www.phoenixcontact.com/de/produkte/1827745



PCB connector, nominal cross section: 1.5 mm^2, color: green, nominal current: 8 A, rated voltage (III/2): 160 V, contact surface: Tin, contact connection type: Socket, number of potentials: 6, number of rows: 1, number of positions: 6, number of connections: 6, 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

MCD 1,5/ 6-G1F-3,81 - PCB header

1842953

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MCVR 1,5/ 6-STF-3,81 - PCB connector

1828388

https://www.phoenixcontact.com/de/produkte/1828388



PCB connector, nominal cross section: 1.5 mm^2, color: green, nominal current: 8 A, rated voltage (III/2): 160 V, contact surface: Tin, contact connection type: Socket, number of potentials: 6, number of rows: 1, number of positions: 6, number of connections: 6, 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/ 6-STF-3,81 - PCB connector

1828537

https://www.phoenixcontact.com/de/produkte/1828537



PCB connector, nominal cross section: 1.5 mm^2, color: green, nominal current: 8 A, rated voltage (III/2): 160 V, contact surface: Tin, contact connection type: Socket, number of potentials: 6, number of rows: 1, number of positions: 6, number of connections: 6, 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

MCD 1,5/ 6-G1F-3,81 - PCB header

1842953

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

1850893

https://www.phoenixcontact.com/de/produkte/1850893



PCB connector, nominal cross section: 1.5 mm^2, color: green, nominal current: 8 A, rated voltage (III/2): 160 V, contact surface: Tin, contact connection type: Socket, number of potentials: 6, number of rows: 1, number of positions: 6, number of connections: 6, 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/ 6-STF-3,81 - PCB connector

1851274

https://www.phoenixcontact.com/de/produkte/1851274



PCB connector, nominal cross section: 1.5 mm^2, color: green, nominal current: 8 A, rated voltage (III/2): 160 V, contact surface: Tin, contact connection type: Socket, number of potentials: 6, number of rows: 1, number of positions: 6, number of connections: 6, 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

MCD 1,5/ 6-G1F-3,81 - PCB header

1842953

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MCC 1/ 6-STZF-3,81 - PCB connector

1852406

https://www.phoenixcontact.com/de/produkte/1852406

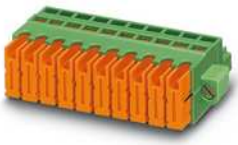


PCB connector, nominal cross section: 1 mm^2, color: green, nominal current: 8 A, rated voltage (III/2): 160 V, contact connection type: Socket, number of potentials: 6, number of rows: 1, number of positions: 6, number of connections: 6, product range: MCC 1/..-STZF, pitch: 3.81 mm, connection method: 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 [mm^2] data: 5A/MCC-MT 0,2-0,35 (1859988); 8A/MCC-MT 0,5-1,0 (1859991)

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

1897584

https://www.phoenixcontact.com/de/produkte/1897584



PCB connector, nominal cross section: 0.5 mm^2, color: green, nominal current: 6 A, rated voltage (III/2): 200 V, contact surface: Tin, contact connection type: Socket, number of potentials: 6, number of rows: 1, number of positions: 6, number of connections: 6, 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

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