Feed-through header - DFK-MC 1,5/ 8-GF-3,81

1827596

https://www.phoenixcontact.com/us/products/1827596

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Feed-through header, nominal cross section: 1.5 mm^2, color: green, nominal current: 8 A, rated voltage (III/2): 160 V, contact surface: Tin, type of contact: Male connector, number of potentials: 8, number of rows: 1, number of positions: 8, number of connections: 8, product range: DFK-MC 1,5/..-GF, pitch: 3.81 mm, connection method: Solder/Slip-on connection, mounting: Direct mounting, pin layout: Linear pinning, solder pin [P]: 9.4 mm, number of solder pins per potential: 1, plug-in system: COMBICON MC 1,5, Pin connector pattern alignment: Standard, locking: Screw locking, mounting: Threaded flange, type of packaging: packed in cardboard

Your advantages

- Free choice – permanent solder connection or standardized slip-on connection
- Cable connection on the inside of the device enables flexible positioning of the panel feed-through

Commercial Data

Item number	1827596
Packing unit	1 pc
Minimum order quantity	50 pc
Sales Key	A01
Product Key	AABWAA
Catalog Page	Page 240 (C-1-2013)
GTIN	4017918050153
Weight per Piece (including packing)	5.83 g
Weight per Piece (excluding packing)	5.6 g
Customs tariff number	85366990
Country of origin	PL

Technical Data

Product properties

Type	Feed-through header
Product line	COMBICON Connectors S
Product type	Feed-through header
Number of positions	8
Pitch	3.81 mm
Number of connections	8
Number of rows	1
Mounting flange	Threaded flange
Number of potentials	8
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	2.2 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

Mounting

Mounting type	Direct mounting
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 (5 - 7 µm Sn)
Metal surface contact area (middle layer)	Nickel (2 - 3 µm Ni)
Metal surface soldering area (top layer)	Tin (5 - 7 µm Sn)
Metal surface soldering area (middle layer)	Nickel (2 - 3 µm Ni)

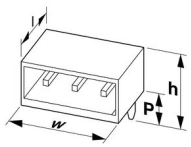
Material data - housing

Housing color	green (6021)
Insulating material	PA
Insulating material group	I
CTI according to IEC 60112	600
Flammability rating according to UL 94	V0

Notes

Notes on operation	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.

Dimensions

Dimensional drawing	
Pitch	3.81 mm
Width [w]	44.87 mm
Height [h]	20.4 mm
Length [l]	16.2 mm
Installed height	11 mm
Solder pin length [P]	9.4 mm

Mechanical tests

Test for conductor damage and slackening

Specification	IEC 60999-1:1999-11
Result	Test passed

Pull-out test

Specification	IEC 60999-1:1999-11
Conductor cross section/conductor type/tractive force setpoint/actual value	0.14 mm² / solid / > 7 N
	0.14 mm² / flexible / > 7 N
	1.5 mm² / solid / > 40 N
	1.5 mm² / flexible / > 40 N

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

Torque test

Specification	IEC 60999-1:1999-11

Contact holder in insert

Specification	IEC 60512-15-1:2008-05
Contact holder in insert Requirements >20 N	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

Visual inspection

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

Dimension check

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

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 - 60.1 Hz)
Sweep speed	5g (60.1 - 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	2.2 mΩ
Contact resistance R_2	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	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

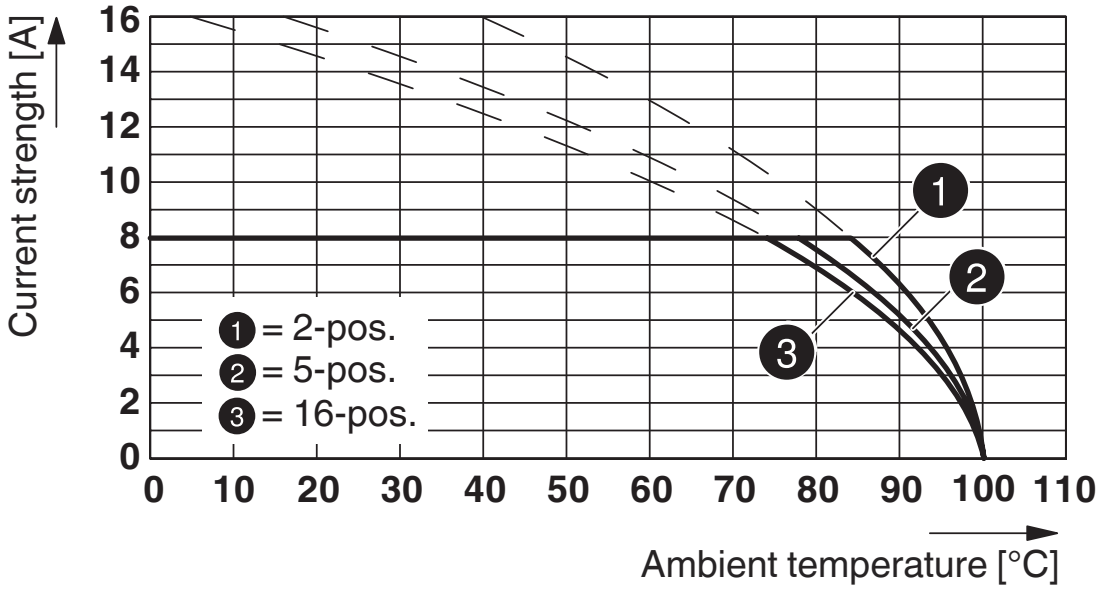
Type of packaging	packed in cardboard

Packaging specifications

Type of packaging	packed in cardboard

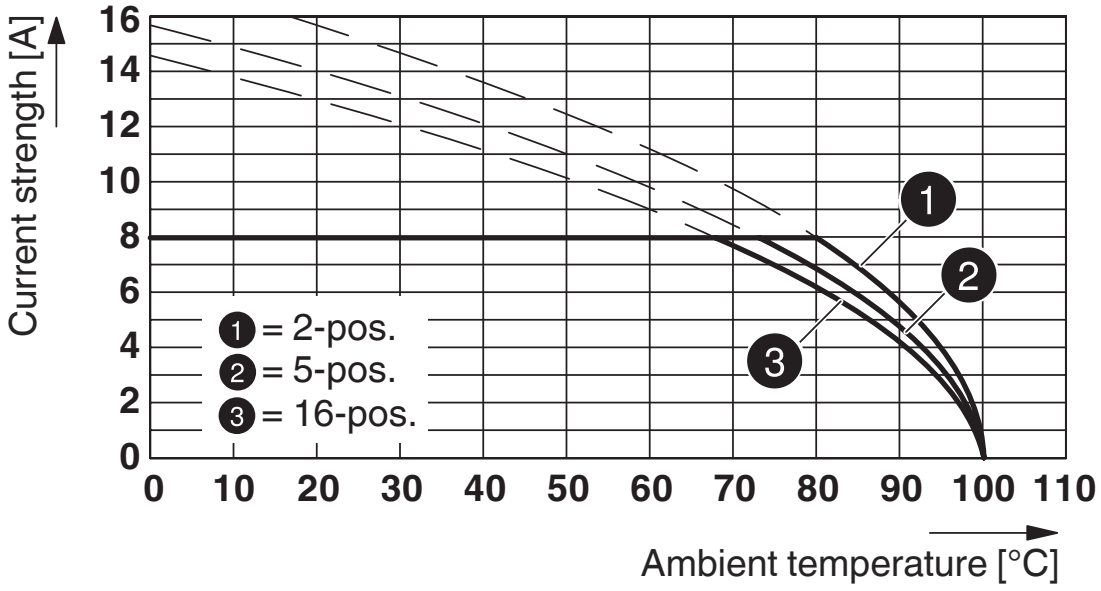
Drawings

Diagram



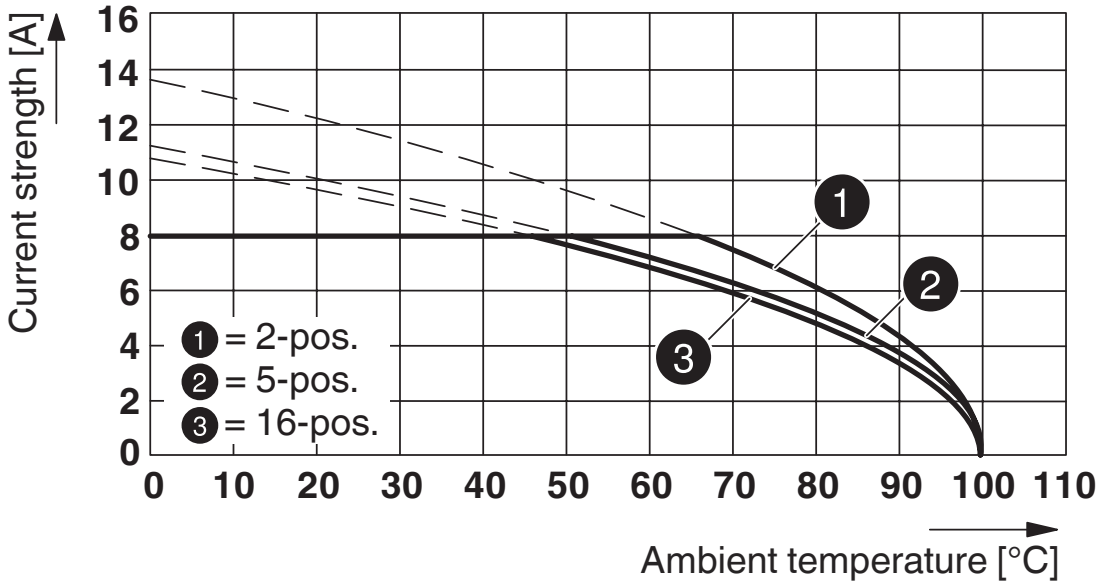
Type: MC 1,5/...-STF-3,81 with DFK-MC 1,5/...-GF-3,81 (with solder connection)

Diagram



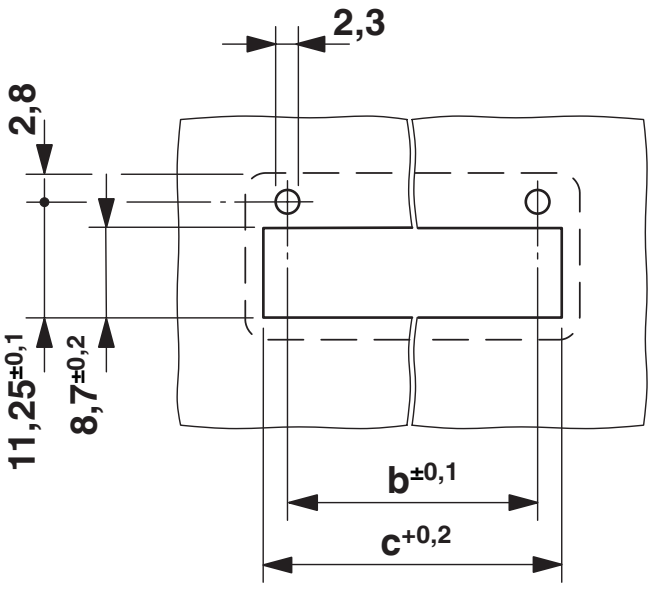
Type: MC 1,5/...-STF-3,81 with DFK-MC 1,5/...-GF-3,81 (with flat plug)

Diagram



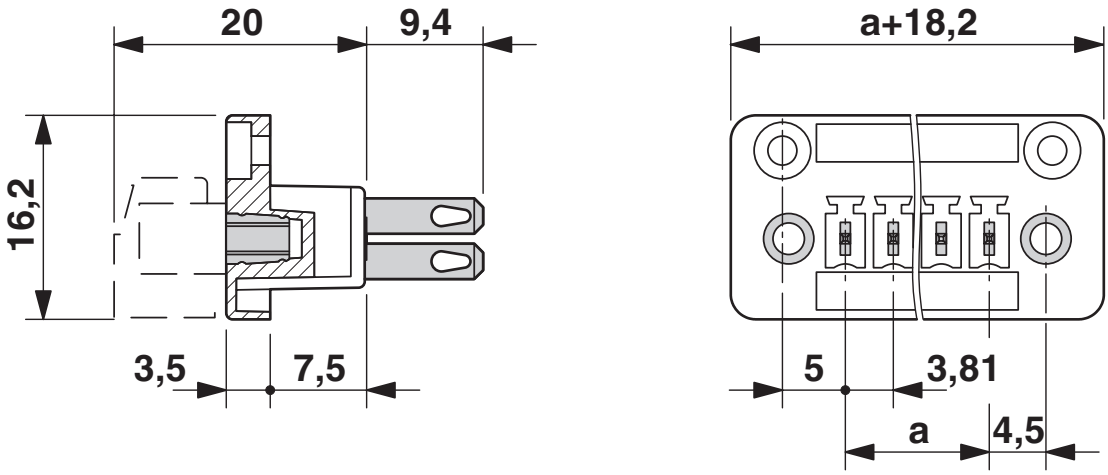
Type: FFRONT-MC 1,5/...-STF-3,81 with DFK-MC 1,5/...-GF-3,81

Drilling plan/solder pad geometry

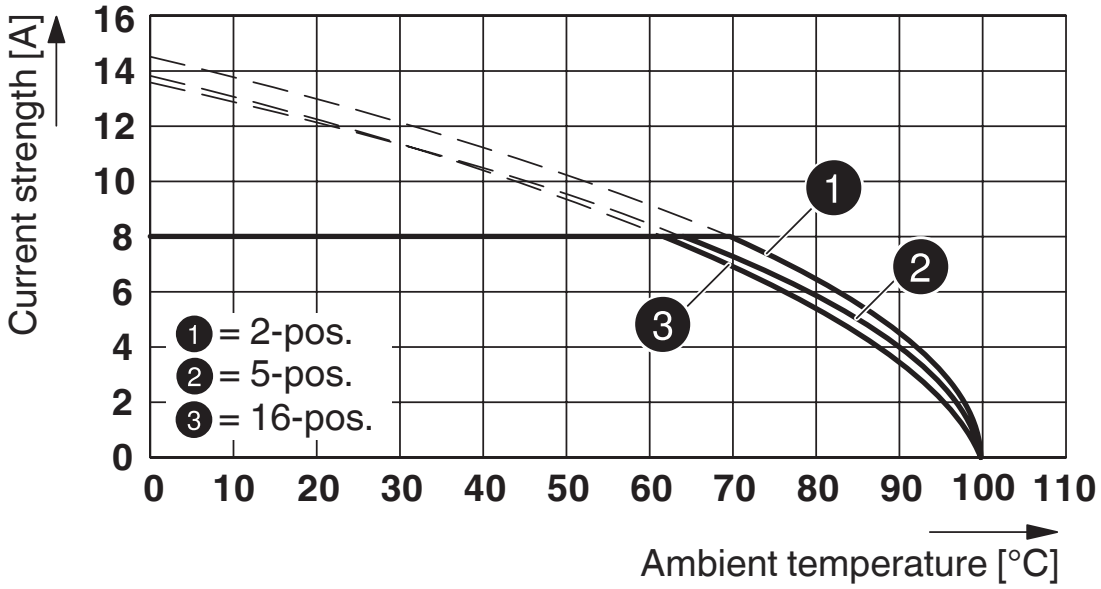


Dimension b: 6.19 mm + (no. of pos. x 3.81 mm)
Dimension c: Dim. b + 4.7 mm

Dimensional drawing

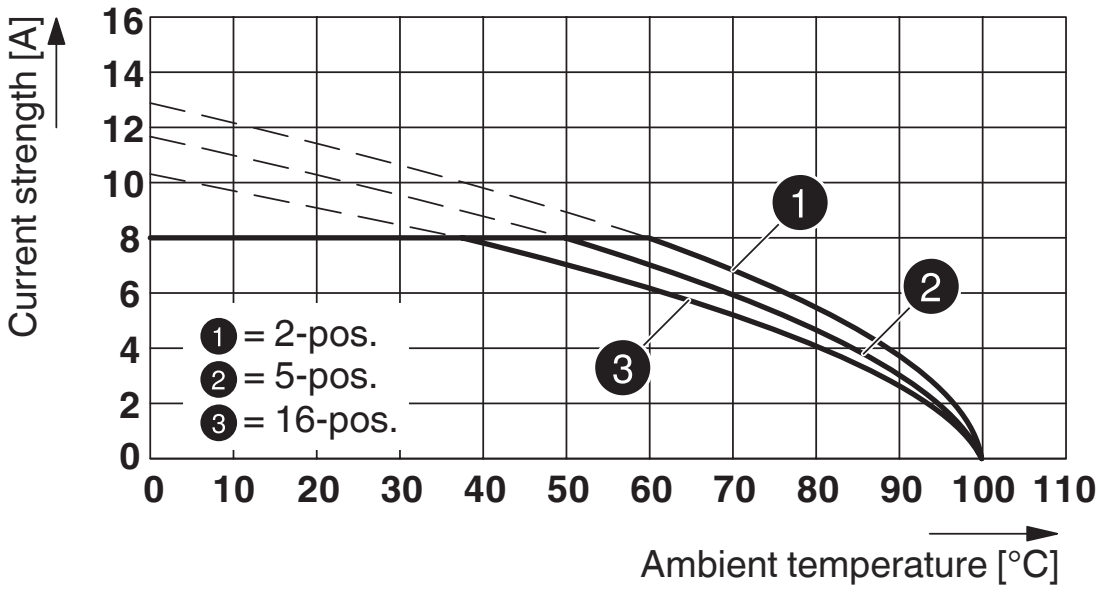


Diagram



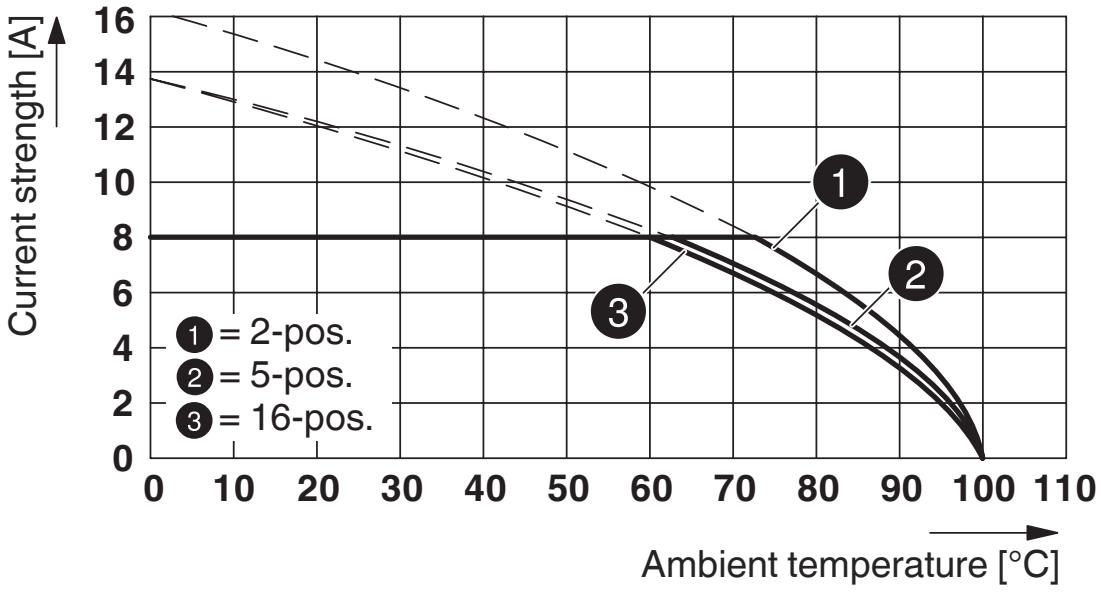
Type: FK-MCP 1,5/...-STF-3,81 with DFK-MC 1,5/..-GF-3,81

Diagram



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

Diagram



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

Approvals

CSA
Approval ID: 13631

	Nominal Voltage U_N	Nominal Current I_N	Cross Section AWG	Cross Section mm^2
	150 V	8 A	-	-

IECEE CB Scheme
Approval ID: DE1-60987-B1B2

	Nominal Voltage U_N	Nominal Current I_N	Cross Section AWG	Cross Section mm^2
	160 V	8 A	-	0.2 - 1.5

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-9.0	27440402
ECLASS-10.0.1	27440402
ECLASS-11.0	27460201

ETIM

ETIM 8.0	EC002637

UNSPSC

UNSPSC 21.0	39121400

Environmental Product Compliance

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

Accessories

Screw set

Screw set - DFK-MC SS - 0710015

https://www.phoenixcontact.com/us/products/0710015



Screw set, for securing the header to the housing wall, consists of M2 x 8 screw, spring washer and nut, 1 piece each

Coding profile

Coding profile - CP-MSTB - 1734634

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

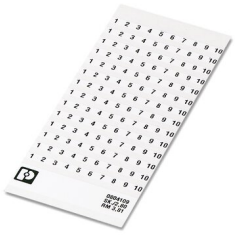
Coding profile, is inserted into the slot on the plug or inverted header, red insulating material



Marker card

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

Screwdriver

Screwdriver - SZS 0,4X2,5 VDE - 1205037

https://www.phoenixcontact.com/us/products/1205037



Screwdriver, slot-headed, VDE insulated, size: 0.4 x 2.5 x 80 mm, 2-component grip, with non-slip grip

Connector

Connector - C-SCF 1/2,8X0,8 - 3240153

https://www.phoenixcontact.com/us/products/3240153



Slip-on sleeve, non-insulated, 0.5 ... 1 mm^2, 2.8 x 0.8

Connector

Connector - C-SCFI 1,5/2,8X0,8 - 3240049

https://www.phoenixcontact.com/us/products/3240049

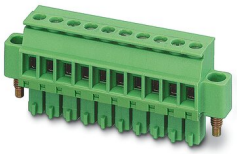


Slip-on sleeve, red, 0.5 ... 1.5 mm^2, 2.8 x 0.8

PCB connector

PCB connector - MCVR 1,5/ 8-STF-3,81 - 1828401

https://www.phoenixcontact.com/us/products/1828401

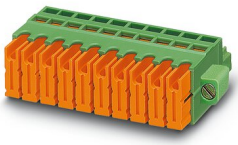


PCB connector, nominal cross section: 1.5 mm^2, color: green, nominal current: 8 A, rated voltage (III/2): 160 V, contact surface: Tin, type of contact: Female connector, number of potentials: 8, number of rows: 1, number of positions: 8, number of connections: 8, product range: MCVR 1,5/..-STF, pitch: 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: COMBICON MC 1,5, locking: Screw locking, mounting: Screw flange, type of packaging: packed in cardboard

Printed-circuit board connector

Printed-circuit board connector - QC 0,5/ 8-STF-3,81 - 1897607

https://www.phoenixcontact.com/us/products/1897607

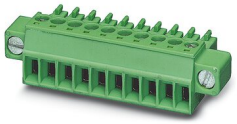


PCB connector, nominal cross section: 0.5 mm^2, color: green, nominal current: 6 A, rated voltage (III/2): 200 V, contact surface: Tin, type of contact: Female connector, number of potentials: 8, number of rows: 1, number of positions: 8, number of connections: 8, product range: QC 0,5/..-STF, pitch: 3.81 mm, connection method: Displacement connection, conductor/PCB connection direction: 0 °, number of solder pins per potential: 1, plug-in system: COMBICON MC 1,5, locking: Screw locking, mounting: Screw flange, type of packaging: packed in cardboard

PCB connector

PCB connector - MC 1,5/ 8-STF-3,81 - 1827761

https://www.phoenixcontact.com/us/products/1827761

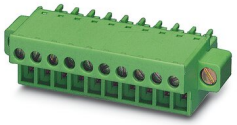


PCB connector, nominal cross section: 1.5 mm^2, color: green, nominal current: 8 A, rated voltage (III/2): 160 V, contact surface: Tin, type of contact: Female connector, number of potentials: 8, number of rows: 1, number of positions: 8, number of connections: 8, product range: MC 1,5/..-STF, pitch: 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: COMBICON MC 1,5, locking: Screw locking, mounting: Screw flange, type of packaging: packed in cardboard

Printed-circuit board connector

Printed-circuit board connector - FRONT-MC 1,5/ 8-STF-3,81 - 1850916

https://www.phoenixcontact.com/us/products/1850916



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

PCB connector

PCB connector - MCC 1/ 8-STZF-3,81 - 1852422

https://www.phoenixcontact.com/us/products/1852422

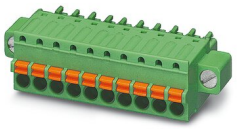


PCB connector, nominal cross section: 1 mm^2, color: green, nominal current: 8 A, rated voltage (III/2): 160 V, type of contact: Female connector, number of potentials: 8, number of rows: 1, number of positions: 8, number of connections: 8, product range: MCC 1/..-STZF, pitch: 3.81 mm, connection method: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

PCB connector

PCB connector - FK-MCP 1,5/ 8-STF-3,81 - 1851290

https://www.phoenixcontact.com/us/products/1851290



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

Feed-through header - DFK-MC 1,5/ 8-GF-3,81

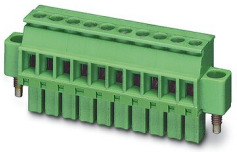
1827596

https://www.phoenixcontact.com/us/products/1827596

PCB connector

PCB connector - MCVW 1,5/ 8-STF-3,81 - 1828553

https://www.phoenixcontact.com/us/products/1828553



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

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