

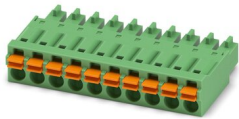
FMC 1,5/10-ST-3,81 - Printed-circuit board connector



1748053

<https://www.phoenixcontact.com/us/products/1748053>

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 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: 10, number of rows: 1, number of positions: 10, number of connections: 10, 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

Your advantages

- Time saving push-in connection, tools not required
- Defined contact force ensures that contact remains stable over the long term
- Intuitive use through colour coded actuation lever
- Operation and conductor connection from one direction enable integration into front of device

Commercial data

Item number	1748053
Packing unit	1 pc
Minimum order quantity	50 pc
Sales key	AA02
Product key	AABFBA
Catalog page	Page 200 (C-1-2013)
GTIN	4046356311090
Weight per piece (including packing)	6.023 g
Weight per piece (excluding packing)	5.85 g
Customs tariff number	85366990
Country of origin	CN

FMC 1,5/10-ST-3,81 - Printed-circuit board connector



1748053

<https://www.phoenixcontact.com/us/products/1748053>

Technical data

Product properties

Type	Standard
Product line	COMBICON Connectors S
Product type	PCB connector
Product family	FMC 1,5/..-ST
Number of positions	10
Pitch	3.81 mm
Number of connections	10
Number of rows	1
Mounting flange	without
Number of potentials	10

Electrical properties

Nominal current I_N	8 A
Nominal voltage U_N	160 V
Degree of pollution	3
Contact resistance	1.5 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

Connection data

Connection technology

Type	Standard
Connector system	COMBICON MC 1,5
Nominal cross section	1.5 mm ²
Contact connection type	Socket

Interlock

Locking type	without
Mounting flange	without

Conductor connection

Connection method	Push-in spring connection
Conductor/PCB connection direction	0 °
Conductor cross section rigid	0.2 mm ² ... 1.5 mm ²
Conductor cross section flexible	0.2 mm ² ... 1.5 mm ²
Conductor cross section AWG	24 ... 16
Conductor cross section flexible, with ferrule without plastic	0.25 mm ² ... 1.5 mm ²

FMC 1,5/10-ST-3,81 - Printed-circuit board connector



1748053

<https://www.phoenixcontact.com/us/products/1748053>

sleeve	
Conductor cross section, flexible, with ferrule, with plastic sleeve	0.14 mm ² ... 0.75 mm ²
Cylindrical gauge a x b / diameter	2.4 mm x 1.5 mm / 1.6 mm
Stripping length	10 mm

Specifications for ferrules without insulating collar

recommended crimping tool	1212034 CRIMPFOX 6
ferrules without insulating collar, according to DIN 46228-1	Cross section: 0.25 mm ² ; Length: 7 mm
	Cross section: 0.34 mm ² ; Length: 7 mm
	Cross section: 0.5 mm ² ; Length: 8 mm ... 10 mm
	Cross section: 0.75 mm ² ; Length: 8 mm ... 10 mm
	Cross section: 1 mm ² ; Length: 8 mm ... 10 mm
	Cross section: 1.5 mm ² ; Length: 10 mm

Specifications for ferrules with insulating collar

recommended crimping tool	1212034 CRIMPFOX 6
ferrules with insulating collar, according to DIN 46228-4	Cross section: 0.14 mm ² ; Length: 8 mm
	Cross section: 0.25 mm ² ; Length: 8 mm ... 10 mm
	Cross section: 0.34 mm ² ; Length: 8 mm ... 10 mm
	Cross section: 0.5 mm ² ; Length: 8 mm ... 10 mm
	Cross section: 0.75 mm ² ; Length: 10 mm

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	hot-dip tin-plated
Metal surface terminal point (top layer)	Tin (4 - 8 µm Sn)
Metal surface contact area (top layer)	Tin (4 - 8 µm Sn)

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

Material data – actuating element

Insulating material	PBT
Insulating material group	IIIa

FMC 1,5/10-ST-3,81 - Printed-circuit board connector

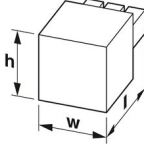


1748053

<https://www.phoenixcontact.com/us/products/1748053>

CTI according to IEC 60112	275
Flammability rating according to UL 94	V0

Dimensions

Dimensional drawing	
Pitch	3.81 mm
Width [w]	38.54 mm
Height [h]	7.75 mm
Length [l]	21.9 mm

Mounting

Connection method	Push-in spring connection
-------------------	---------------------------

Mechanical tests

Conductor connection

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

Test for conductor damage and slackening

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

Repeated connection and disconnection

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	0.2 mm ² / solid / > 10 N
	0.2 mm ² / flexible / > 10 N
	1.5 mm ² / solid / > 40 N
	1.5 mm ² / flexible / > 40 N

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

Resistance of inscriptions

Specification	IEC 60068-2-70:1995-12
---------------	------------------------

FMC 1,5/10-ST-3,81 - Printed-circuit board connector



1748053

<https://www.phoenixcontact.com/us/products/1748053>

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

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	1.5 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

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

Electrical tests

Thermal test Test group C	
Specification	IEC 60512-5-1:2002-02

FMC 1,5/10-ST-3,81 - Printed-circuit board connector



1748053

<https://www.phoenixcontact.com/us/products/1748053>

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 |

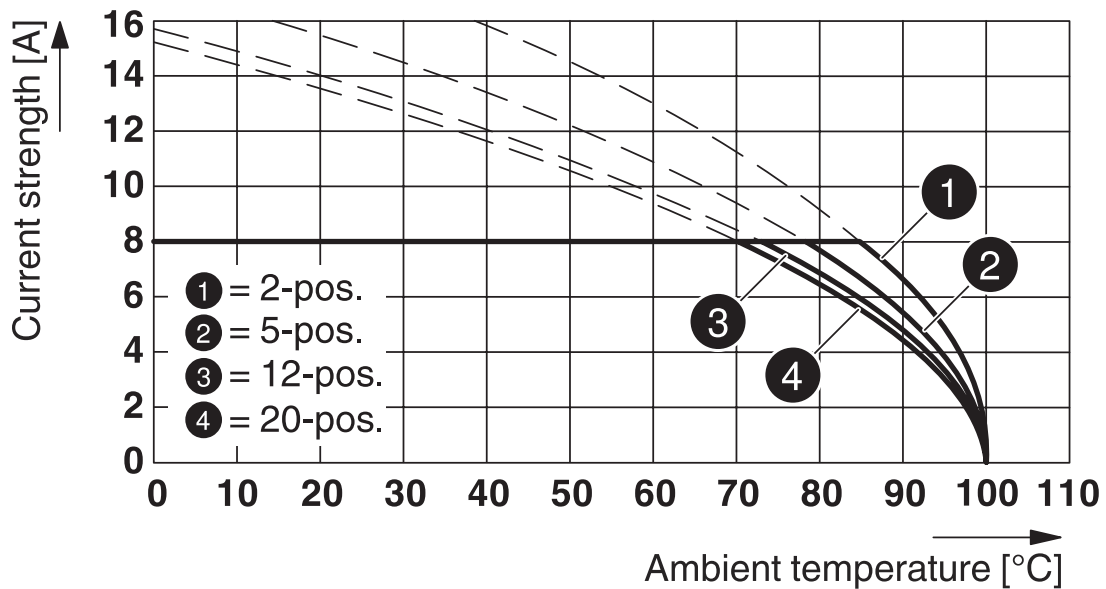
Specification	IEC 60664-1:2007-04
Insulating material group	I
Comparative tracking index (IEC 60112)	CTI 600
Rated insulation voltage (III/3)	160 V
Rated surge voltage (III/3)	2.5 kV
minimum clearance value - non-homogenous field (III/3)	1.5 mm
minimum creepage distance (III/3)	2 mm
Rated insulation 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

Packaging specifications

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

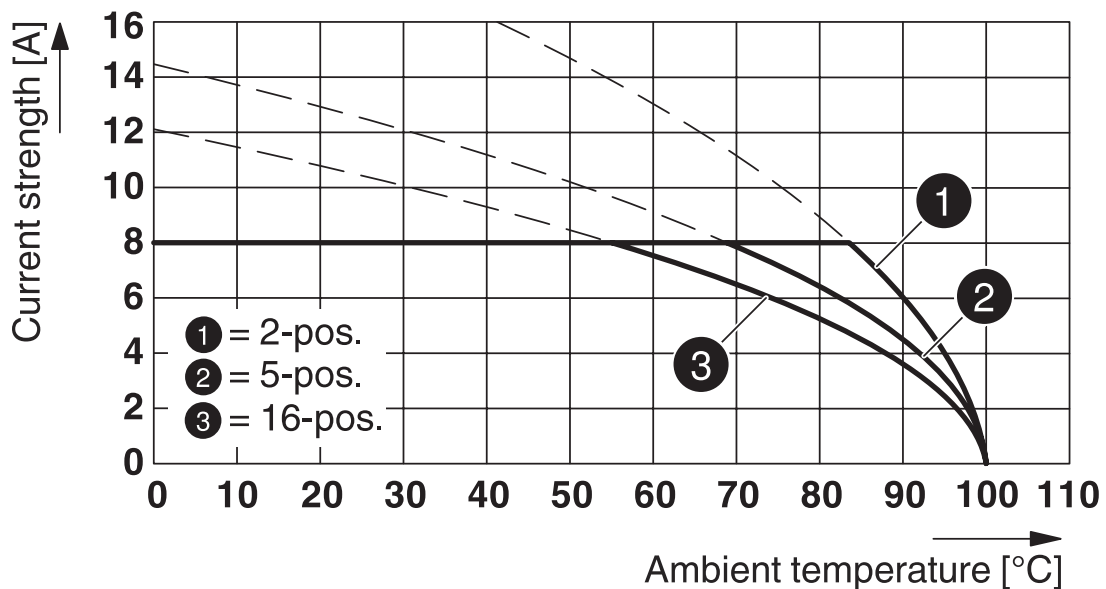
Drawings

Diagram



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

Diagram

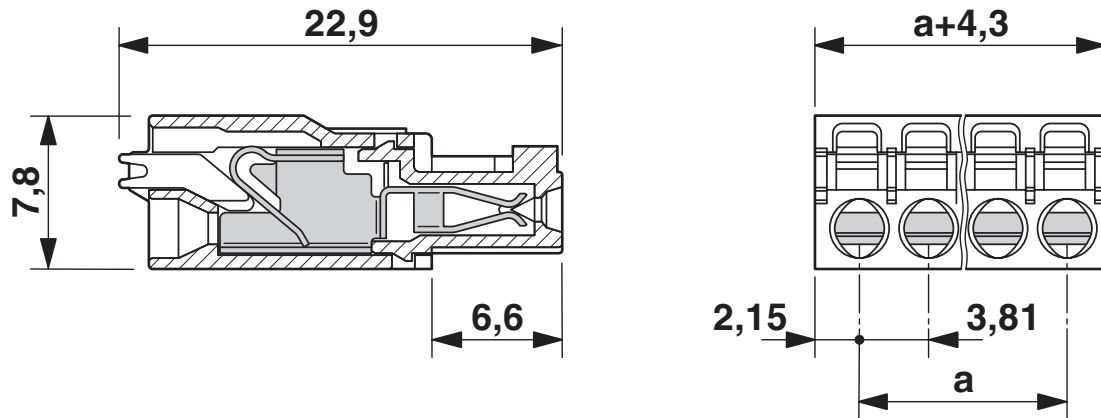


Type: FMC 1,5/...-ST-3,81 with MCD 1,5/...-G1-3,81

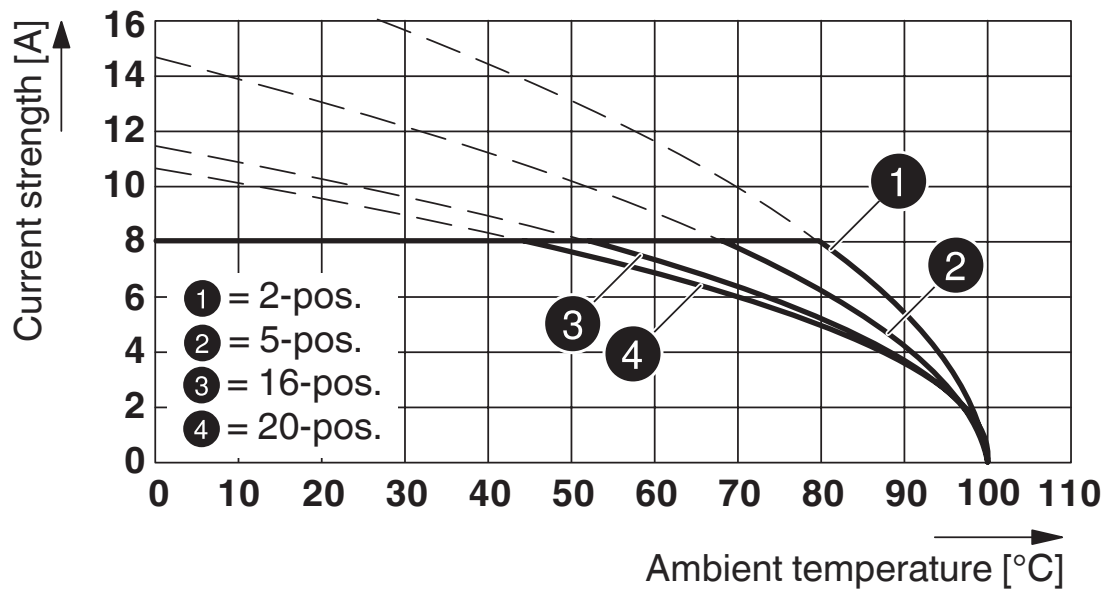
1748053

<https://www.phoenixcontact.com/us/products/1748053>

Dimensional drawing



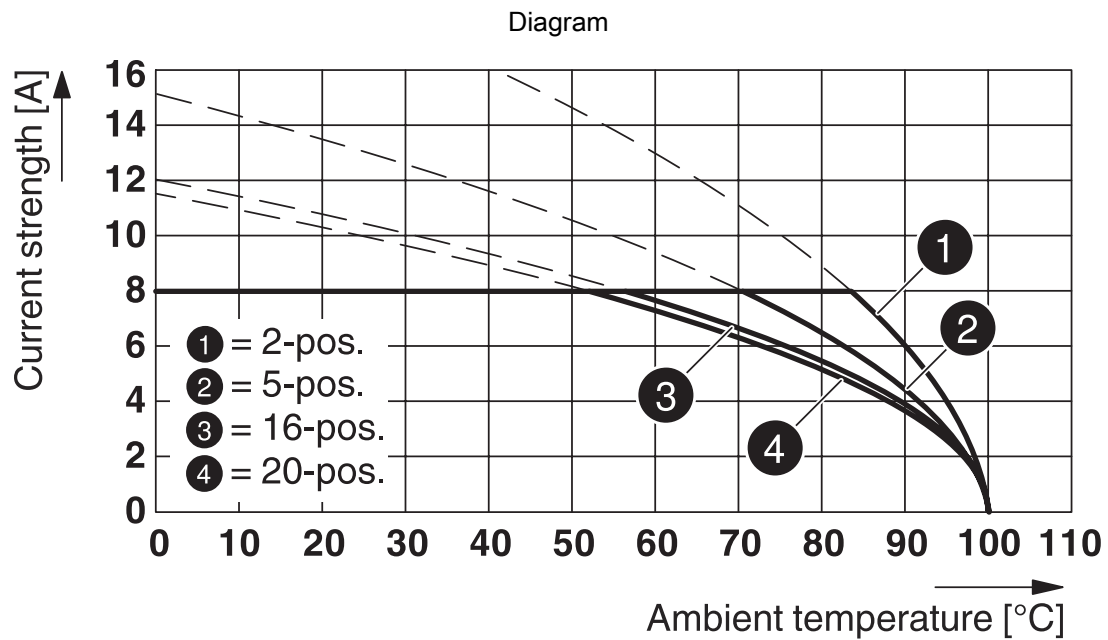
Diagram



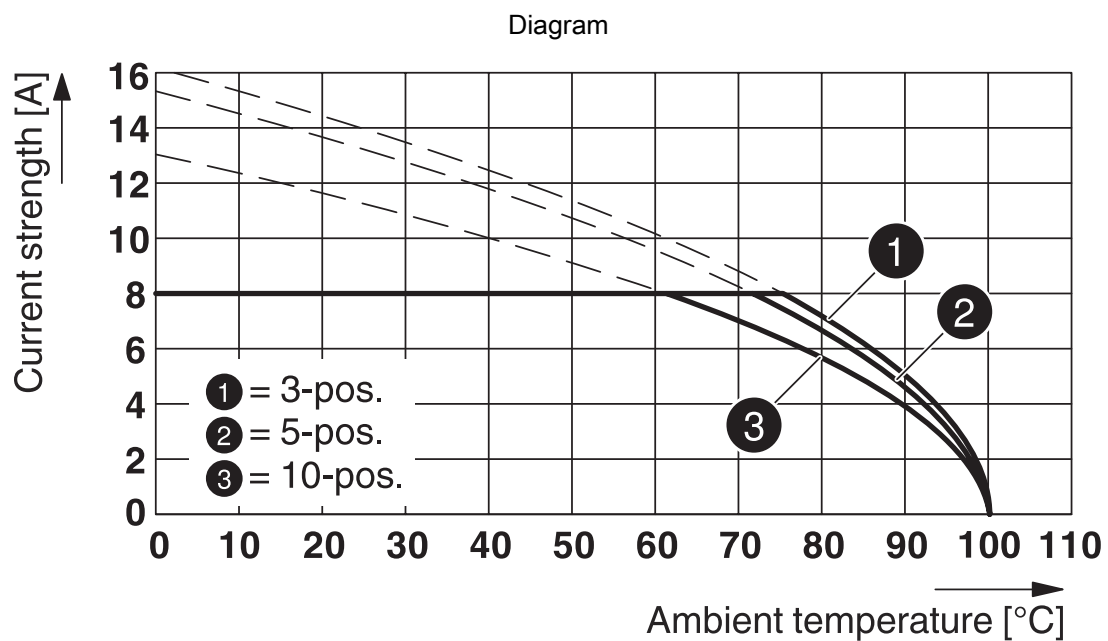
Type: FMC 1,5/...-ST-3,81 with MCDN 1,5/...-G1-3,81 P...THR

1748053

<https://www.phoenixcontact.com/us/products/1748053>



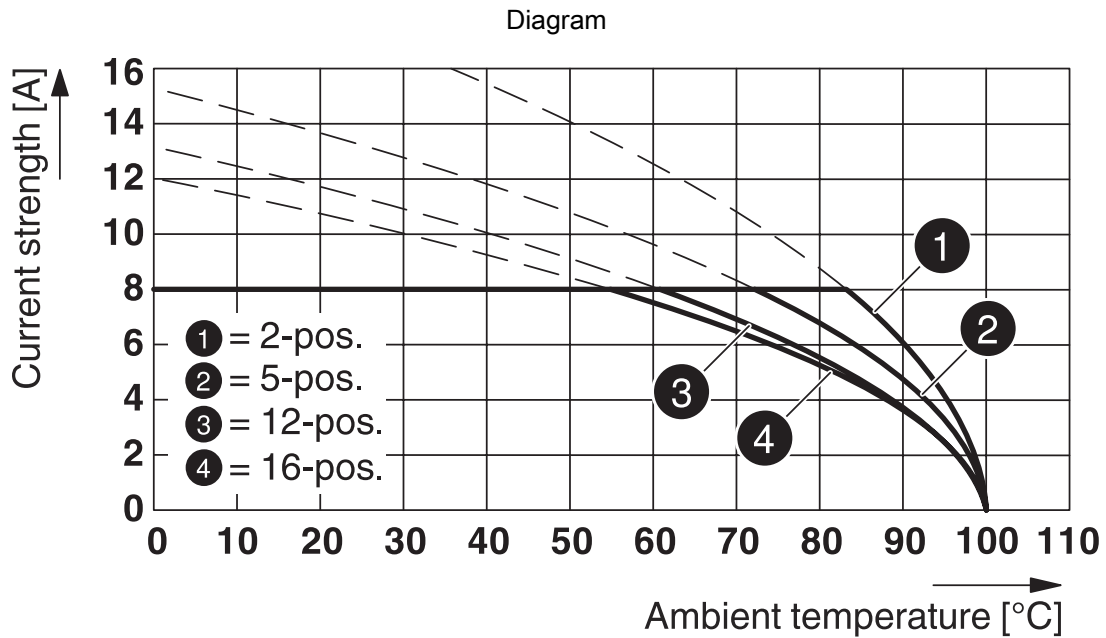
Type: FMC 1,5/...-ST-3,81 with MCDNV 1,5/...-G1-3,81 P...THR



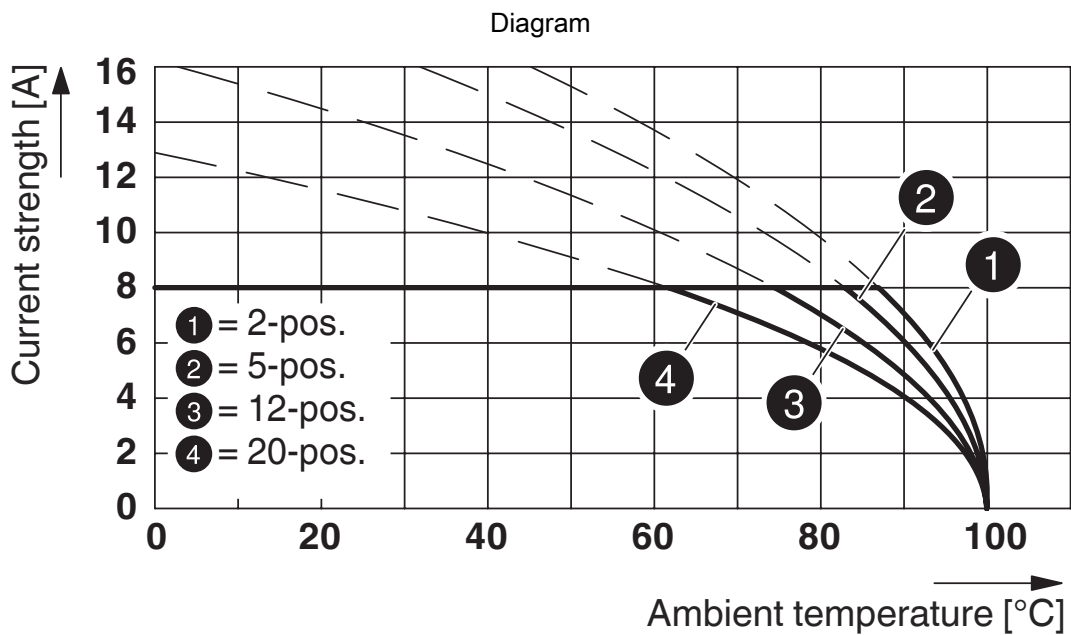
Type: FMC 1,5/...-ST-3,81 with MCO 1,5/...-GR-3,81

1748053

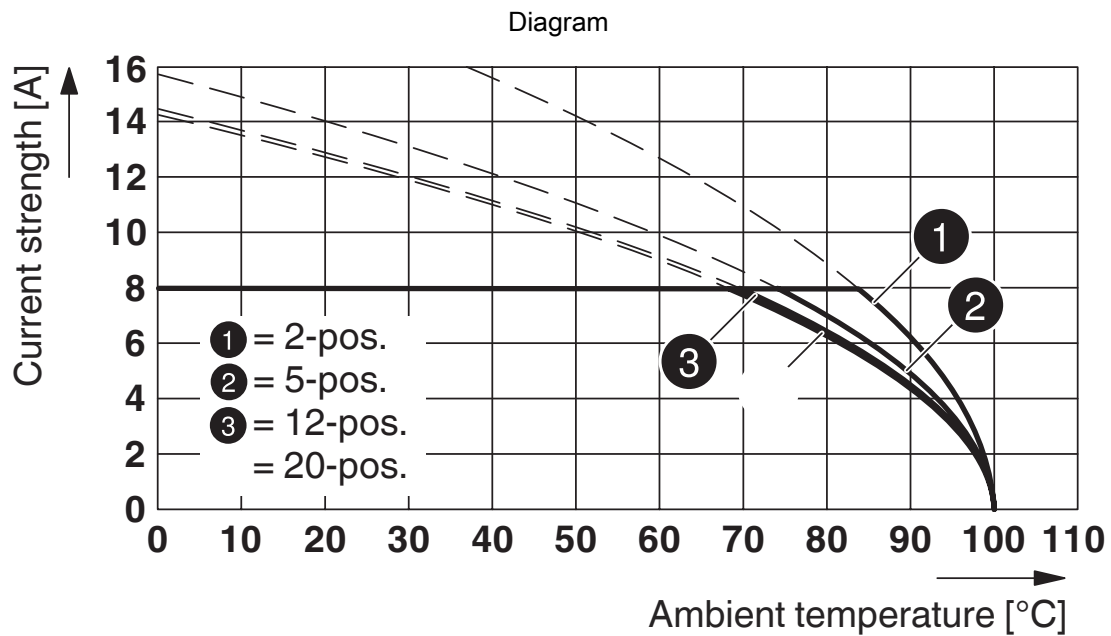
<https://www.phoenixcontact.com/us/products/1748053>



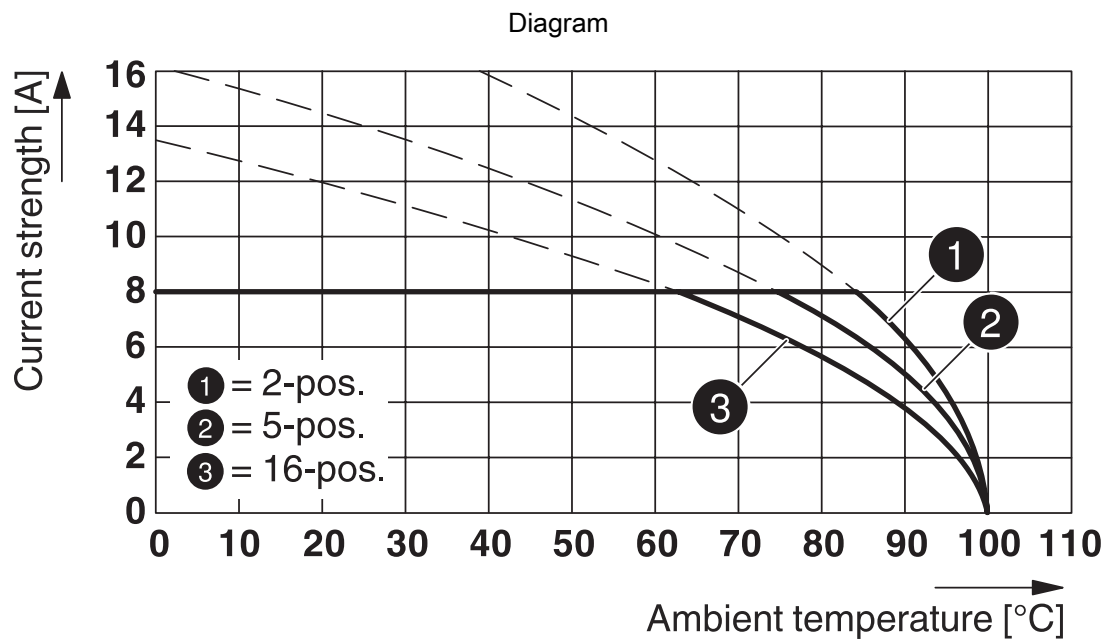
Type: FMC 1,5/...-ST-3,81 with MCDV 1,5/...-G1-3,81



Type: FMC 1,5/...-ST-3,81 with MCV 1,5/...-G-3,81 P.. THR



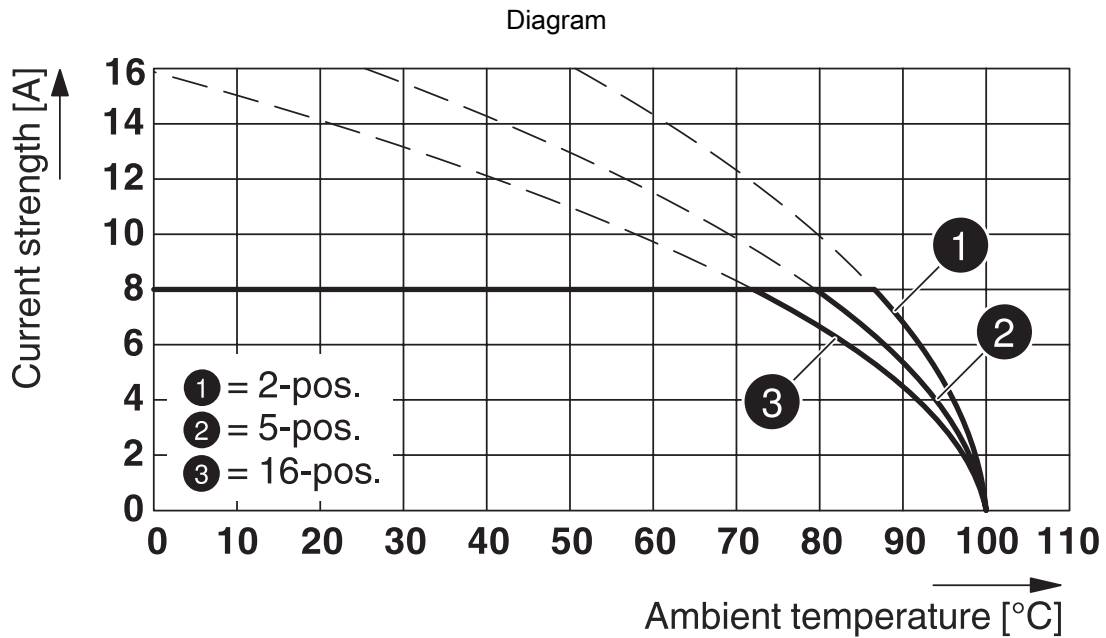
Type: FMC 1,5/...-ST-3,81 with MC 1,5/...-G-3,81



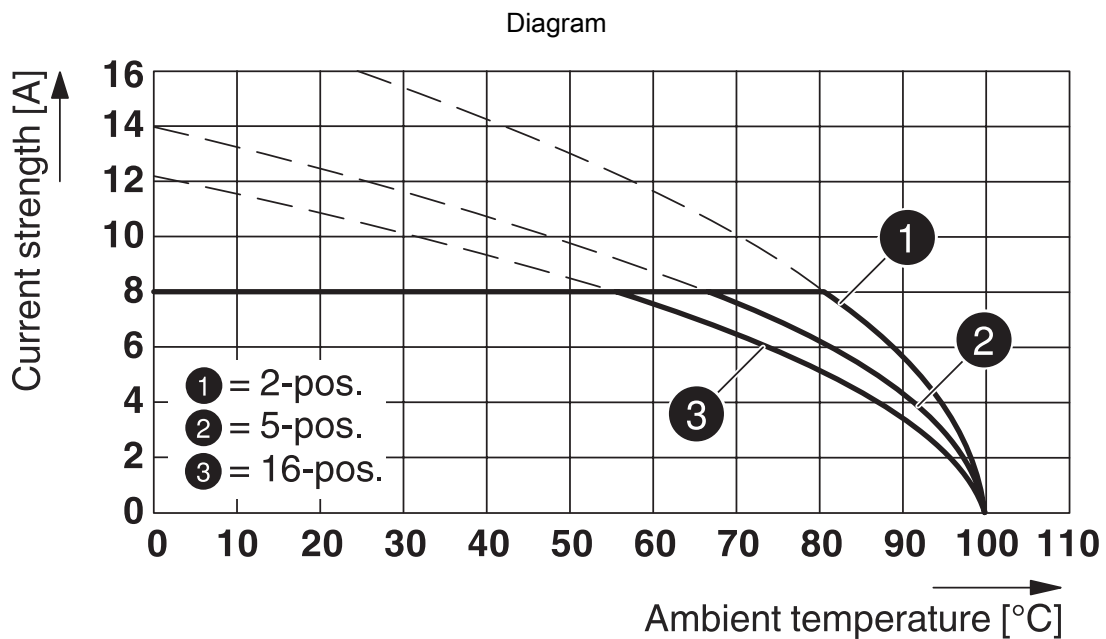
Type: FMC 1,5/...-ST-3,81 with MCDV 1,5/...-G-3,81

1748053

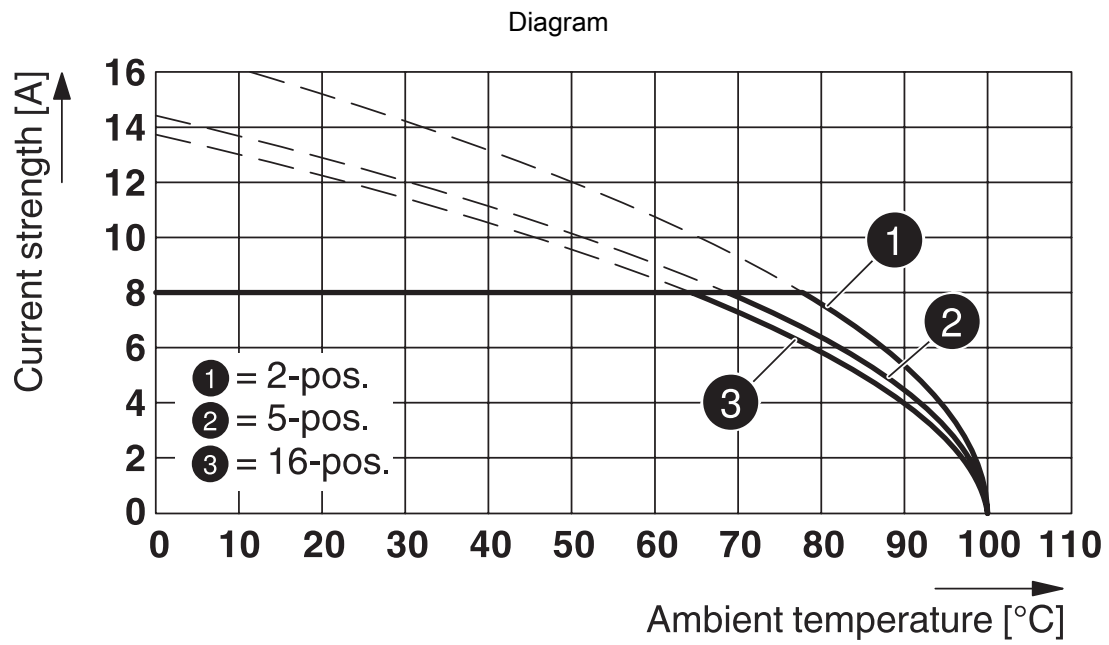
<https://www.phoenixcontact.com/us/products/1748053>



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



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



Type: FMC 1,5/...-ST-3,81 with MCVU 1,5/...-GFD-3,81

FMC 1,5/10-ST-3,81 - Printed-circuit board connector





1748053

<https://www.phoenixcontact.com/us/products/1748053>

Approvals

To download certificates, visit the product detail page: <https://www.phoenixcontact.com/us/products/1748053>

 cULus Recognized Approval ID: E60425-19920306				
	Nominal voltage U_N	Nominal current I_N	Cross section AWG	Cross section mm^2
Use group B				
Field wiring	300 V	8 A	24 - 16	-
Use group C				
Factory wiring	50 V	8 A	24 - 16	-

 VDE Zeichengenehmigung Approval ID: 40011723				
	Nominal voltage U_N	Nominal current I_N	Cross section AWG	Cross section mm^2
	160 V	8 A	-	0.2 - 1.5

FMC 1,5/10-ST-3,81 - Printed-circuit board connector



1748053

<https://www.phoenixcontact.com/us/products/1748053>

Classifications

ECLASS

ECLASS-11.0	27460202
ECLASS-12.0	27460202
ECLASS-13.0	27460202

ETIM

ETIM 8.0	EC002638
----------	----------

UNSPSC

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

FMC 1,5/10-ST-3,81 - Printed-circuit board connector



1748053

<https://www.phoenixcontact.com/us/products/1748053>

Environmental product compliance

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

FMC 1,5/10-ST-3,81 - Printed-circuit board connector



1748053

<https://www.phoenixcontact.com/us/products/1748053>

Accessories

SZS 0,4X2,5 VDE - Screwdriver

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

CRIMPFOX 6 - Crimping pliers

1212034

<https://www.phoenixcontact.com/us/products/1212034>



Crimping pliers, for ferrules without insulating collar according to DIN 46228 Part 1 and ferrules with insulating collar according to DIN 46228 Part 4, 0.25 mm² ... 6.0 mm², lateral entry, trapezoidal crimp

FMC 1,5/10-ST-3,81 - Printed-circuit board connector



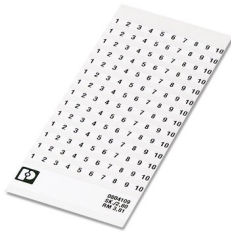
1748053

<https://www.phoenixcontact.com/us/products/1748053>

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

0804109

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

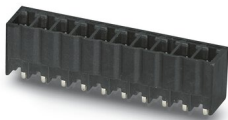


Marker card, white, labeled, horizontal: consecutive numbers 1 ... 10, 11 ... 20, etc. up to 91 ... (99)100, mounting type: adhesive, for terminal block width: 3.81 mm, lettering field size: 3.81 x 2.8 mm

MCV 1,5/10-G-3,81 P14 THR - PCB header

1707081

<https://www.phoenixcontact.com/us/products/1707081>



PCB headers, nominal cross section: 1.5 mm², color: black, nominal current: 8 A, rated voltage (III/2): 160 V, contact surface: Tin, contact connection type: Pin, number of potentials: 10, number of rows: 1, number of positions: 10, number of connections: 10, product range: MCV 1,5/...-G-THR, pitch: 3.81 mm, mounting: THR soldering, pin layout: Linear pinning, solder pin [P]: 1.4 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, For user information and design recommendations for through-hole reflow technology, go to: Downloads

FMC 1,5/10-ST-3,81 - Printed-circuit board connector



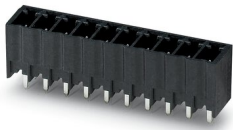
1748053

<https://www.phoenixcontact.com/us/products/1748053>

MCV 1,5/10-G-3,81 P26 THR - PCB header

1707502

<https://www.phoenixcontact.com/us/products/1707502>



PCB headers, nominal cross section: 1.5 mm², color: black, nominal current: 8 A, rated voltage (III/2): 160 V, contact surface: Tin, contact connection type: Pin, number of potentials: 10, number of rows: 1, number of positions: 10, number of connections: 10, product range: MCV 1,5/..-G-THR, pitch: 3.81 mm, mounting: THR soldering, pin layout: Linear pinning, solder pin [P]: 2.6 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, For user information and design recommendations for through-hole reflow technology, go to: Downloads

MCDV 1,5/10-G-3,81 - PCB header

1830486

<https://www.phoenixcontact.com/us/products/1830486>



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: 20, number of rows: 2, number of positions: 10, number of connections: 20, product range: MCDV 1,5/..-G, 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: 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.

FMC 1,5/10-ST-3,81 - Printed-circuit board connector



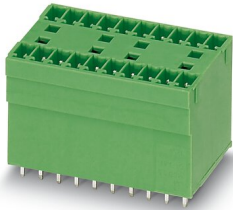
1748053

<https://www.phoenixcontact.com/us/products/1748053>

MCDV 1,5/10-G1-3,81 - PCB header

1847819

<https://www.phoenixcontact.com/us/products/1847819>



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: 20, number of rows: 2, number of positions: 10, number of connections: 20, product range: MCDV 1,5/...-G1, 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: 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.

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

单击下面可查看定价，库存，交付和生命周期等信息

[>>Phoenix Contact\(菲尼克斯\)](#)