

Printed-circuit board connector - IMC 1,5/ 2-ST-3,81



1857883

<https://www.phoenixcontact.com/us/products/1857883>

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, type of contact: Male connector, number of potentials: 2, number of rows: 1, number of positions: 2, number of connections: 2, product range: IMC 1,5/-ST, 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: without, mounting: without, type of packaging: packed in cardboard

Your advantages

- Well-known connection principle allows worldwide use
- Low temperature rise, thanks to maximum contact force
- Inverted connector with pin contacts for touch-proof device outputs or free-hanging cable/cable connections
- Allows connection of two conductors

Commercial Data

Item number	1857883
Packing unit	1 pc
Minimum order quantity	50 pc
Sales Key	A01
Product Key	AABAHA
Catalog Page	Page 196 (C-1-2013)
GTIN	4017918144128
Weight per Piece (including packing)	1.973 g
Weight per Piece (excluding packing)	1.7 g
Customs tariff number	85366990
Country of origin	PL

Technical Data

Product properties

Type	Inverted
Product line	COMBICON Connectors S
Product type	PCB plug
	IMC 1,5/...-ST
Number of positions	2
Pitch	3.81 mm
Number of connections	2
Number of rows	1
Mounting flange	without
Number of potentials	2
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 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

Connection data

Connection technology

Type	Inverted
Connector system	COMBICON MC 1,5
Nominal cross section	1.5 mm²
Type of contact	Male connector

Interlock

Locking type	without
Mounting flange	without

Conductor connection

Connection method	Screw connection with tension sleeve
Conductor/PCB connection direction	0 °
Conductor cross section solid	0.14 mm² ... 1.5 mm²
Conductor cross section flexible	0.14 mm² ... 1.5 mm²
Conductor cross section AWG	28 ... 16
Conductor cross section flexible, with ferrule without plastic sleeve	0.25 mm² ... 1.5 mm²

Printed-circuit board connector - IMC 1,5/ 2-ST-3,81



1857883

<https://www.phoenixcontact.com/us/products/1857883>

Conductor cross section, flexible, with ferrule, with plastic sleeve	0.25 mm ² ... 0.5 mm ²
2 conductors with same cross section, solid	0.08 mm ² ... 0.5 mm ²
2 conductors with same cross section, flexible	0.08 mm ² ... 0.75 mm ²
2 conductors with same cross section, flexible, with ferrule without plastic sleeve	0.2 mm ² ... 0.34 mm ²
2 conductors with the same cross section, flexible, with TWIN ferrule with plastic sleeve	0.5 mm ² ... 0.5 mm ²
Cylindrical gauge a x b / diameter	2.4 mm x 1.5 mm / 1.6 mm
Stripping length	7 mm
Tightening torque	0.22 Nm ... 0.25 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 terminal point (top layer)	Tin (5 - 7 µm Sn)
Metal surface terminal point (middle layer)	Nickel (2 - 3 µm Ni)
Metal surface contact area (top layer)	Tin (5 - 7 µm Sn)
Metal surface contact area (middle layer)	Nickel (2 - 3 µm Ni)

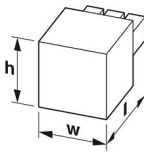
Material data - housing

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

Material data – actuating element

Color ()	()
----------	----

Dimensions

Dimensional drawing	
Pitch	3.81 mm
Width [w]	8.41 mm

Printed-circuit board connector - IMC 1,5/ 2-ST-3,81



1857883

<https://www.phoenixcontact.com/us/products/1857883>

Height [h]	11.1 mm
Length [l]	18.45 mm

Mounting

Drive form screw head	Slotted (L)
Drive form screw head	Slotted (L)

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 mm ² / solid / > 7 N
	0.14 mm ² / flexible / > 7 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.	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

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	2 mΩ
Contact resistance R_2	2.1 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

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

Printed-circuit board connector - IMC 1,5/ 2-ST-3,81



1857883

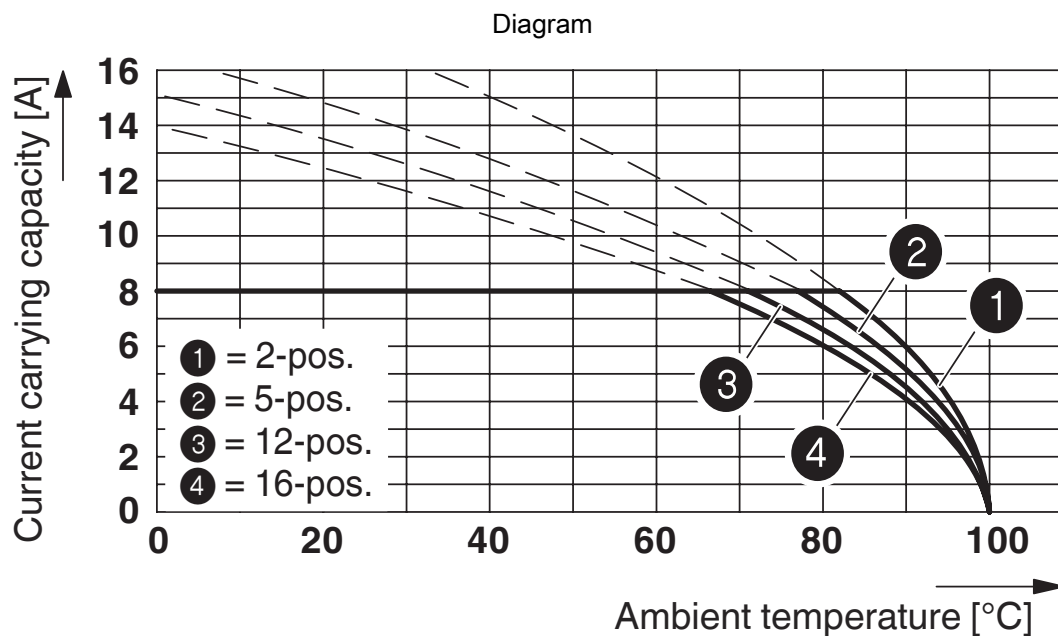
<https://www.phoenixcontact.com/us/products/1857883>

minimum creepage distance (III/3)	2 mm
Note on connection cross section	With connected conductor 1.5 mm ² .
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

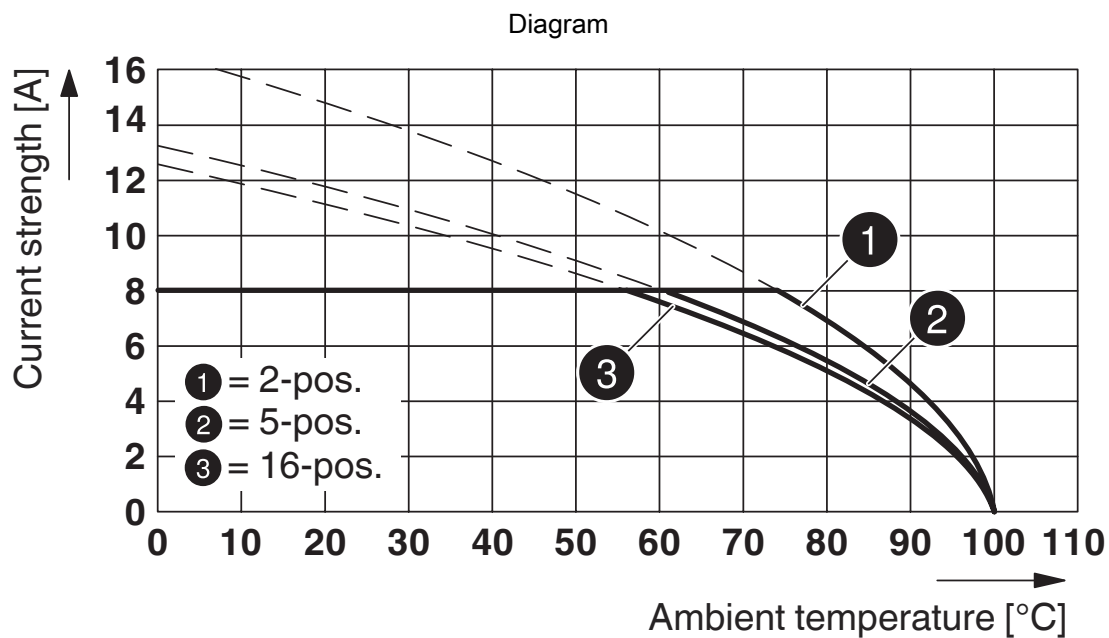
Packaging specifications

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

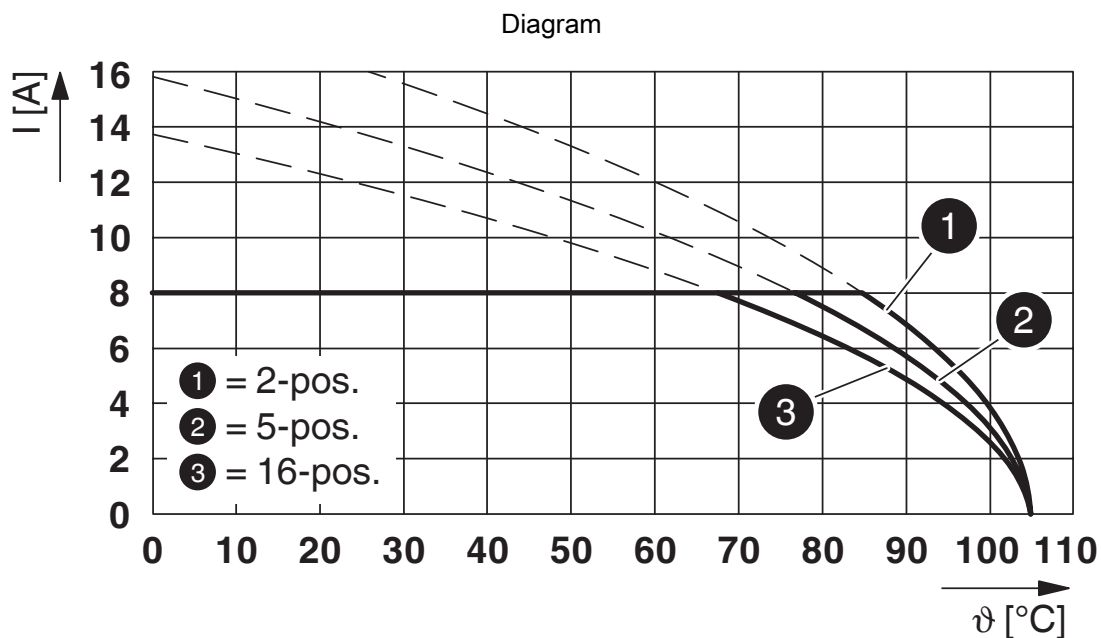
Drawings



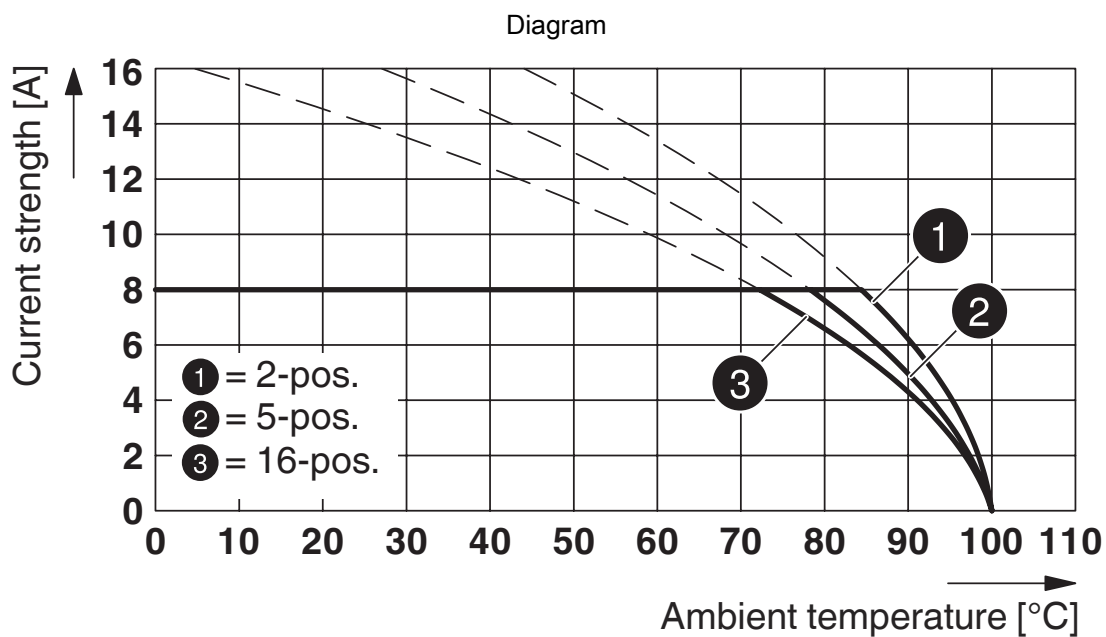
Type: IMC 1,5/...-ST-3,81 with IMC 1,5/...-G-3,81



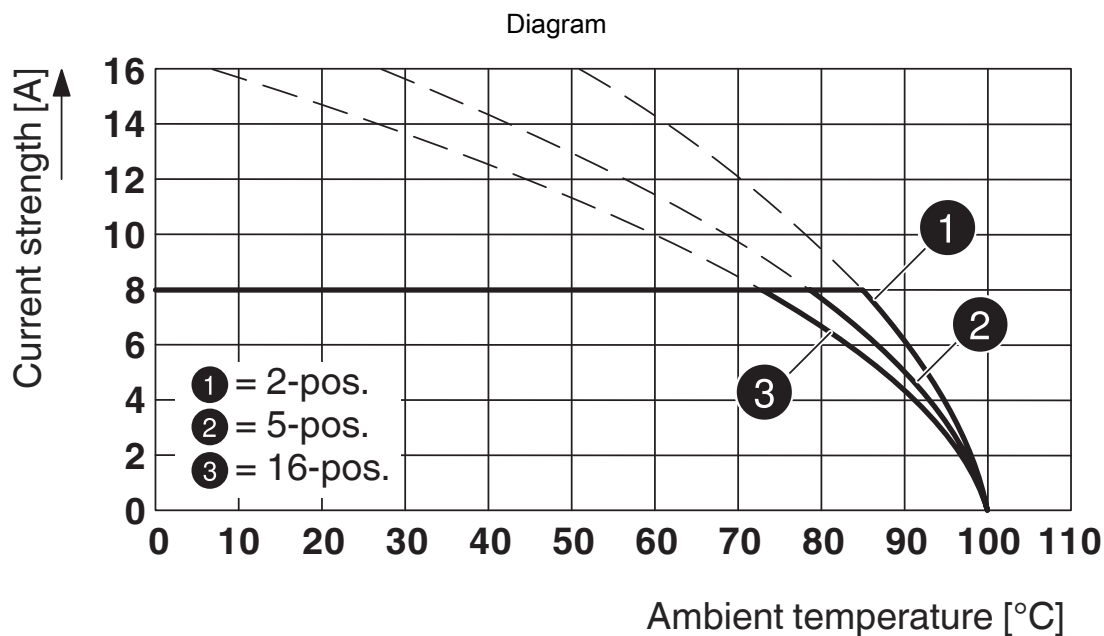
Type: MCV(W/R) 1,5/...-STF-3,81 with IMC 1,5/...-ST-3,81



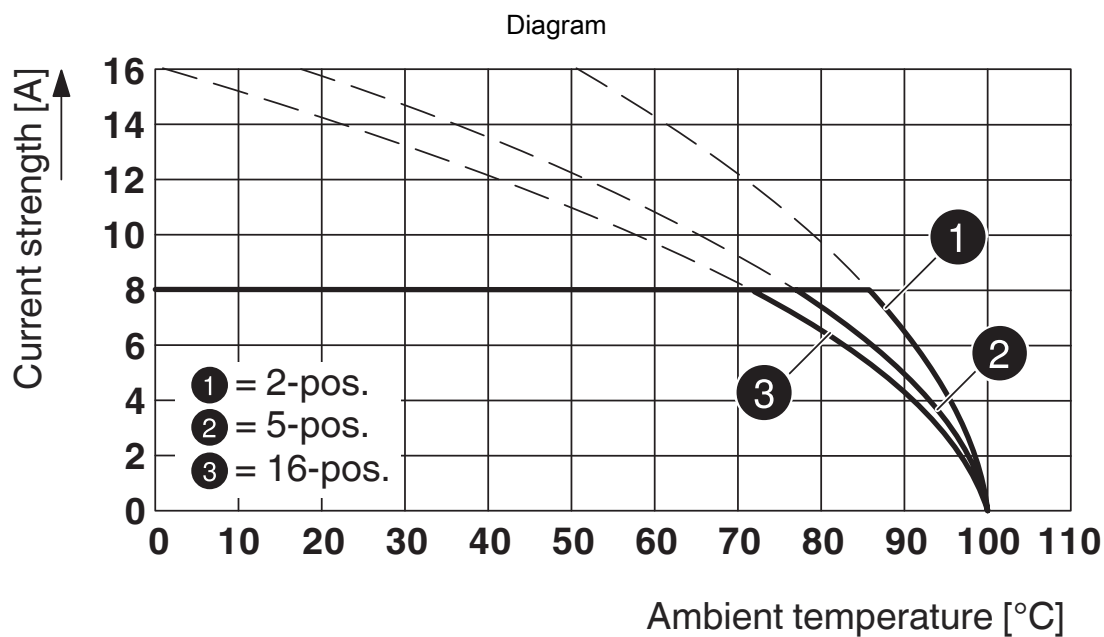
Type: IMC 1,5/...-ST-3,81 with IMCV 1,5/...-G-3,81



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



Type: FRONT-MC 1,5/...-ST-3,81 with IMC 1,5/...-ST-3,81



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


Printed-circuit board connector - IMC 1,5/ 2-ST-3,81





1857883


<https://www.phoenixcontact.com/us/products/1857883>

Approvals

	IECEE CB Scheme			
	Approval ID: DE1-60987-B1B2			
		Nominal Voltage U_N	Nominal Current I_N	Cross Section AWG
		160 V	8 A	-
				Cross Section mm ²
				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
Use group B				Cross Section mm ²
		300 V	8 A	30 - 14
				-
Use group D				
		300 V	8 A	30 - 14
				-

	VDE Zeichengenehmigung			
	Approval ID: 40011723			
		Nominal Voltage U_N	Nominal Current I_N	Cross Section AWG
		160 V	8 A	-
				Cross Section mm ²
				-

Printed-circuit board connector - IMC 1,5/ 2-ST-3,81



1857883

<https://www.phoenixcontact.com/us/products/1857883>

Classifications

ECLASS

ECLASS-9.0	27440309
ECLASS-10.0.1	27440309
ECLASS-11.0	27460202

ETIM

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

UNSPSC

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

Printed-circuit board connector - IMC 1,5/ 2-ST-3,81



1857883

<https://www.phoenixcontact.com/us/products/1857883>

Environmental Product Compliance

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

Printed-circuit board connector - IMC 1,5/ 2-ST-3,81



1857883

<https://www.phoenixcontact.com/us/products/1857883>

Accessories

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



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



Printed-circuit board connector - IMC 1,5/ 2-ST-3,81



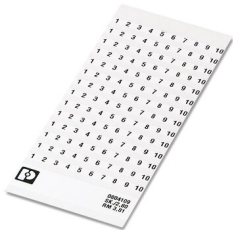
1857883

<https://www.phoenixcontact.com/us/products/1857883>

Marker card

Marker card - SK 3,81/2,8:FORTL.ZAHLEN - 0804109

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

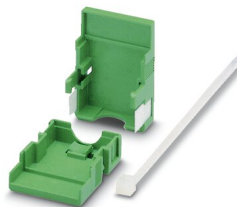


Marker card, white, labeled, horizontal: consecutive numbers 1 ... 10, 11 ... 20, etc. up to 91 ... (99)100, mounting type: adhesive, for terminal block width: 3.81 mm, lettering field size: 3.81 x 2.8 mm

Cable housing

Cable housing - KGG-MC 1,5/ 2 - 1834343

<https://www.phoenixcontact.com/us/products/1834343>



Cable housing, pitch: 3.81 mm, number of positions: 2, dimension a: 10.01 mm, color: green

Printed-circuit board connector - IMC 1,5/ 2-ST-3,81



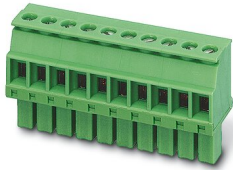
1857883

<https://www.phoenixcontact.com/us/products/1857883>

PCB connector

PCB connector - MCVW 1,5/ 2-ST-3,81 - 1826979

<https://www.phoenixcontact.com/us/products/1826979>

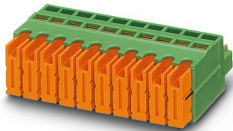


PCB connector, nominal cross section: 1.5 mm², color: green, nominal current: 8 A, rated voltage (III/2): 160 V, contact surface: Tin, type of contact: Female connector, number of potentials: 2, number of rows: 1, number of positions: 2, number of connections: 2, product range: MCVW 1,5/...-ST, pitch: 3.81 mm, connection method: Screw connection with tension sleeve, screw head form: L Slotted, conductor/PCB connection direction: -90 °, number of solder pins per potential: 1, plug-in system: COMBICON MC 1,5, locking: without, mounting: without, type of packaging: packed in cardboard

Printed-circuit board connector

Printed-circuit board connector - QC 0,5/ 2-ST-3,81 - 1897393

<https://www.phoenixcontact.com/us/products/1897393>



PCB connector, nominal cross section: 0.5 mm², color: green, nominal current: 6 A, rated voltage (III/2): 200 V, contact surface: Tin, type of contact: Female connector, number of potentials: 2, number of rows: 1, number of positions: 2, number of connections: 2, product range: QC 0,5/...-ST, 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: without, mounting: without, type of packaging: packed in cardboard

Printed-circuit board connector - IMC 1,5/ 2-ST-3,81



1857883

<https://www.phoenixcontact.com/us/products/1857883>

PCB header

PCB header - IMC 1,5/ 2-G-3,81 - 1862577

<https://www.phoenixcontact.com/us/products/1862577>

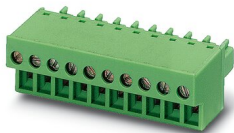


PCB headers, nominal cross section: 1.5 mm², color: green, nominal current: 8 A, rated voltage (III/2): 160 V, contact surface: Tin, type of contact: Female connector, number of potentials: 2, number of rows: 1, number of positions: 2, number of connections: 2, product range: IMC 1,5/..-G, pitch: 3.81 mm, mounting: Wave soldering, pin layout: Linear pinning, solder pin [P]: 3.4 mm, number of solder pins per potential: 2, plug-in system: COMBICON MC 1,5, Pin connector pattern alignment: Standard, locking: without, mounting: without, type of packaging: packed in cardboard

Printed-circuit board connector

Printed-circuit board connector - FRONT-MC 1,5/ 2-ST-3,81 - 1850660

<https://www.phoenixcontact.com/us/products/1850660>



PCB connector, nominal cross section: 1.5 mm², color: green, nominal current: 8 A, rated voltage (III/2): 160 V, contact surface: Tin, type of contact: Female connector, number of potentials: 2, number of rows: 1, number of positions: 2, number of connections: 2, 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 °, number of solder pins per potential: 1, plug-in system: COMBICON MC 1,5, locking: without, mounting: without, type of packaging: packed in cardboard

Printed-circuit board connector - IMC 1,5/ 2-ST-3,81



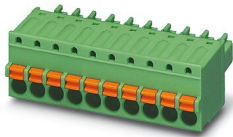
1857883

<https://www.phoenixcontact.com/us/products/1857883>

PCB connector

PCB connector - FK-MCP 1,5/ 2-ST-3,81 - 1851041

<https://www.phoenixcontact.com/us/products/1851041>

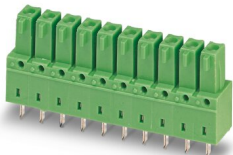


PCB connector, nominal cross section: 1.5 mm², color: green, nominal current: 8 A, rated voltage (III/2): 160 V, contact surface: Tin, type of contact: Female connector, number of potentials: 2, number of rows: 1, number of positions: 2, number of connections: 2, product range: FK-MCP 1,5/...-ST, pitch: 3.81 mm, connection method: Push-in spring connection, conductor/PCB connection direction: 0 °, number of solder pins per potential: 1, plug-in system: COMBICON MC 1,5, locking: without, mounting: without, type of packaging: packed in cardboard

PCB header

PCB header - IMCV 1,5/ 2-G-3,81 - 1875425

<https://www.phoenixcontact.com/us/products/1875425>



PCB headers, nominal cross section: 1.5 mm², color: green, nominal current: 8 A, rated voltage (III/2): 160 V, contact surface: Tin, type of contact: Female connector, number of potentials: 2, number of rows: 1, number of positions: 2, number of connections: 2, product range: IMCV 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: 2, plug-in system: COMBICON MC 1,5, Pin connector pattern alignment: Standard, locking: without, mounting: without, type of packaging: packed in cardboard

Printed-circuit board connector - IMC 1,5/ 2-ST-3,81



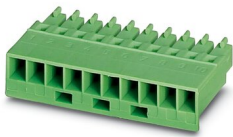
1857883

<https://www.phoenixcontact.com/us/products/1857883>

PCB connector

PCB connector - MCC 1/ 2-STZ-3,81 - 1852176

<https://www.phoenixcontact.com/us/products/1852176>

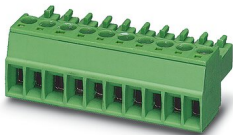


PCB connector, nominal cross section: 1 mm², color: green, nominal current: 8 A, rated voltage (III/2): 160 V, type of contact: Female connector, number of potentials: 2, number of rows: 1, number of positions: 2, number of connections: 2, product range: MCC 1/...-STZ, pitch: 3.81 mm, connection method: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

PCB connector

PCB connector - MC 1,5/ 2-ST-3,81 - 1803578

<https://www.phoenixcontact.com/us/products/1803578>



PCB connector, nominal cross section: 1.5 mm², color: green, nominal current: 8 A, rated voltage (III/2): 160 V, contact surface: Tin, type of contact: Female connector, number of potentials: 2, number of rows: 1, number of positions: 2, number of connections: 2, 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 °, number of solder pins per potential: 1, plug-in system: COMBICON MC 1,5, locking: without, mounting: without, type of packaging: packed in cardboard