

# Printed-circuit board connector - MC 1,5/ 6-STF-3,81CN6BD:1,X6,6 - 1715140

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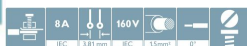
PCB connector, nominal current: 8 A, rated voltage (III/2): 160 V, nominal cross section: 1.5 mm<sup>2</sup>, number of positions: 6, pitch: 3.81 mm, connection method: Screw connection with tension sleeve, color: green, contact surface: Tin




The figure shows a 10-position version of the product

## Your advantages

- Well-known connection principle allows worldwide use
- Low temperature rise, thanks to maximum contact force
- Allows connection of two conductors
- Screwable flange for superior mechanical stability



## Key Commercial Data

Packing unit	50 pc
Minimum order quantity	50 pc
GTIN	 4 055626 571225
GTIN	4055626571225

## Technical data

### Item properties

Brief article description	Printed-circuit board connector
Plug-in system	MINI COMBICON
Type of contact	Female connector
Range of articles	MC 1,5/...STF
Pitch	3.81 mm
Number of positions	6
Connection method	Screw connection with tension sleeve
Drive form screw head	Slotted (L)
Number of levels	1

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## Technical data

### Item properties

Number of connections	6
Number of potentials	6

### Electrical parameters

Nominal current	8 A
Nom. voltage	160 V
Rated voltage	160 V
Rated voltage (III/2)	160 V
Rated voltage (II/2)	320 V
Rated surge voltage (III/3)	2.5 kV
Rated surge voltage (III/2)	2.5 kV
Rated surge voltage (II/2)	2.5 kV

### Connection capacity

Connection method	Screw connection with tension sleeve
pluggable	Yes
Conductor cross section solid	0.14 mm <sup>2</sup> ... 1.5 mm <sup>2</sup>
Conductor cross section flexible	0.14 mm <sup>2</sup> ... 1.5 mm <sup>2</sup>
Conductor cross section AWG / kcmil	28 ... 16
Conductor cross section flexible, with ferrule without plastic sleeve	0.25 mm <sup>2</sup> ... 1.5 mm <sup>2</sup>
Conductor cross section, flexible, with ferrule, with plastic sleeve	0.25 mm <sup>2</sup> ... 0.5 mm <sup>2</sup>
2 conductors with same cross section, solid	0.08 mm <sup>2</sup> ... 0.5 mm <sup>2</sup>
2 conductors with same cross section, flexible	0.08 mm <sup>2</sup> ... 0.75 mm <sup>2</sup>
2 conductors with same cross section, flexible, with ferrule without plastic sleeve	0.25 mm <sup>2</sup> ... 0.34 mm <sup>2</sup>
2 conductors with the same cross section, flexible, with TWIN ferrule with plastic sleeve	0.5 mm <sup>2</sup> ... 0.5 mm <sup>2</sup>
Cylindrical gauge a x b / diameter	2.4 mm x 1.5 mm / 1.6 mm
Stripping length	7 mm
Torque	0.22 Nm ... 0.25 Nm

### Flange specifications

Type of locking	Screw locking
Mounting flange	Screw flange
Torque	0.3 Nm

### 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)

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## Technical data

### 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
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 for the product

Length [ l ]	16.1 mm
Width [ w ]	33.25 mm
Height [ h ]	11.1 mm
Pitch	3.81 mm
Height (without solder pin)	11.1 mm

### Packaging information

Type of packaging	packed in cardboard
Pieces per package	50
Denomination packing units	Pcs.

### Ambient conditions

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

### Termination and connection method

Test for conductor damage and slackening	IEC 60999-1:1999-11
	Test passed

### Pull-out test

Pull-out test	IEC 60999-1:1999-11
	Test passed
Conductor cross section / conductor type / tensile force	0.14 mm <sup>2</sup> / solid / > 7 N
	0.14 mm <sup>2</sup> / flexible / > 7 N
	1.5 mm <sup>2</sup> / solid / > 40 N
	1.5 mm <sup>2</sup> / flexible / > 40 N

### Mechanical tests according to standard

Test specification	IEC 61984
Visual inspection	IEC 60512-1-1:2002-02
Dimension check	IEC 60512-1-2:2002-02
Resistance of inscriptions	IEC 60068-2-70:1995-12

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## Technical data

### Mechanical tests according to standard

Insertion and withdrawal force	IEC 60512-13-2:2006-02
No. of cycles	25
Insertion strength per pos. approx.	6 N
Withdraw strength per pos. approx.	4 N
Polarization and coding	IEC 60512-13-5:2006-02
Contact holder in insert	IEC 60512-15-1:2008-05
Test force per pos.	21 N

### Air clearances and creepage distances

Clearances and creepage distances	IEC 60664-1:2007-04
Specification	IEC 60664-1:2007-04
Minimum clearance - inhomogeneous field (III/3)	1.5 mm
Minimum clearance - inhomogeneous field (III/2)	1.5 mm
Minimum clearance - inhomogeneous field (II/2)	1.5 mm
Minimum creepage distance value (III/3)	2 mm
Minimum creepage distance value (III/2)	1.5 mm
Minimum creepage distance value (II/2)	1.6 mm
Note on connection cross section	With connected conductor 1.5 mm <sup>2</sup> (solid).

### Current carrying capacity / derating curves

Caption	Type: MC 1,5/...-STF-3,81 with MC 1,5/...-GF-3,81
Specification	IEC 61984:2008-10
Reduction factor	0.8
Note	Representation based on IEC 60512-5-2:2002-02
	For number of positions, see diagram

### Mechanical tests (A)

Test specification	IEC 61984
Insertion strength per pos. approx.	6 N
Withdraw strength per pos. approx.	4 N
Polarization when inserted requirement >20 N	Test passed
Contact holder in insert requirements >20 N	Test passed

### Durability tests (B)

Specification	IEC 60512-9-1:2010-03
Contact resistance R <sub>1</sub>	1.3 mΩ
Insertion/withdrawal cycles	25
Contact resistance R <sub>2</sub>	1.5 mΩ
Impulse withstand voltage at sea level	2.95 kV
Power-frequency withstand voltage	1.39 kV
Insulation resistance, neighboring positions	15 TΩ

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## Technical data

### Thermal tests (C)

Specification	IEC 60512-5-1:2002-02
Number of positions	20
Conductor cross section	1.5 mm <sup>2</sup>
Test current	8 A DC
Upper limiting temperature requirements <100 °C	Test passed

### Climatic tests (D)

Specification	ISO 6988:1985-02
Cold stress	-40 °C/2 h
Thermal stress	100 °C/168 h
Corrosive stress	0.2 dm <sup>3</sup> SO <sub>2</sub> on 300 dm <sup>3</sup> /40 °C/1 cycle
Impulse withstand voltage at sea level	2.95 kV
Power-frequency withstand voltage	1.39 kV

### Environmental and durability tests (E)

Specification	IEC 61984:2008-10
Result, degree of protection, IP code	Finger safety with IP20 test finger

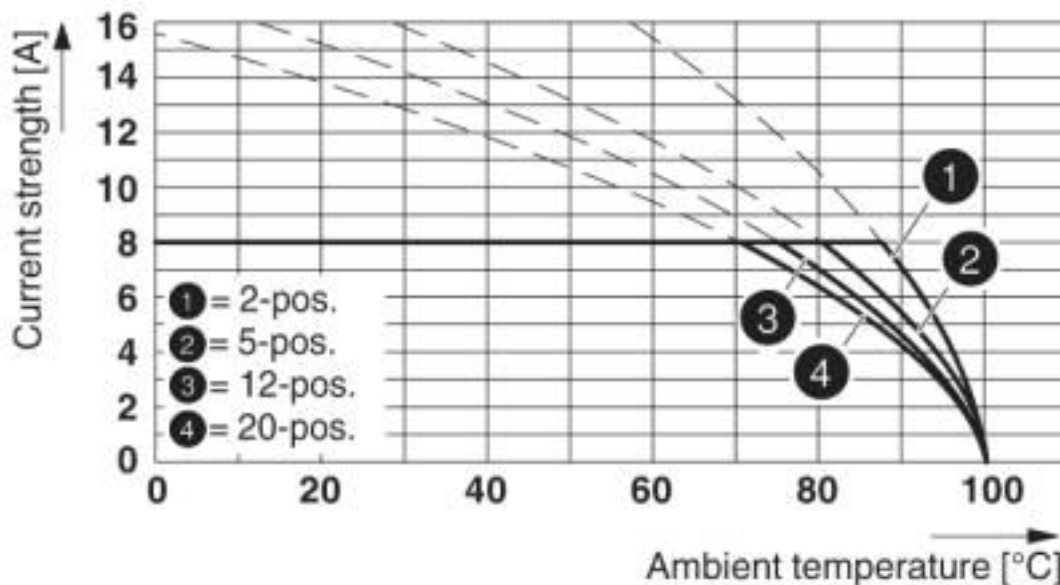
### Environmental Product Compliance

REACH SVHC	Lead 7439-92-1
China RoHS	Environmentally Friendly Use Period = 50 years
	For details about hazardous substances go to tab "Downloads", Category "Manufacturer's declaration"

## Drawings

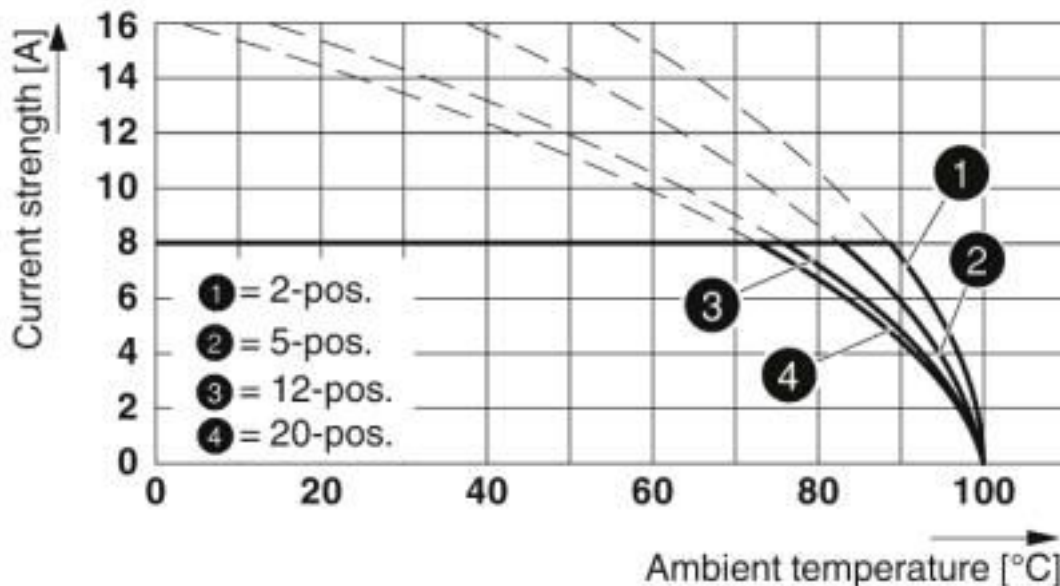
# Printed-circuit board connector - MC 1,5/ 6-STF-3,81CN6BD:1,X6,6 - 1715140

Diagram



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

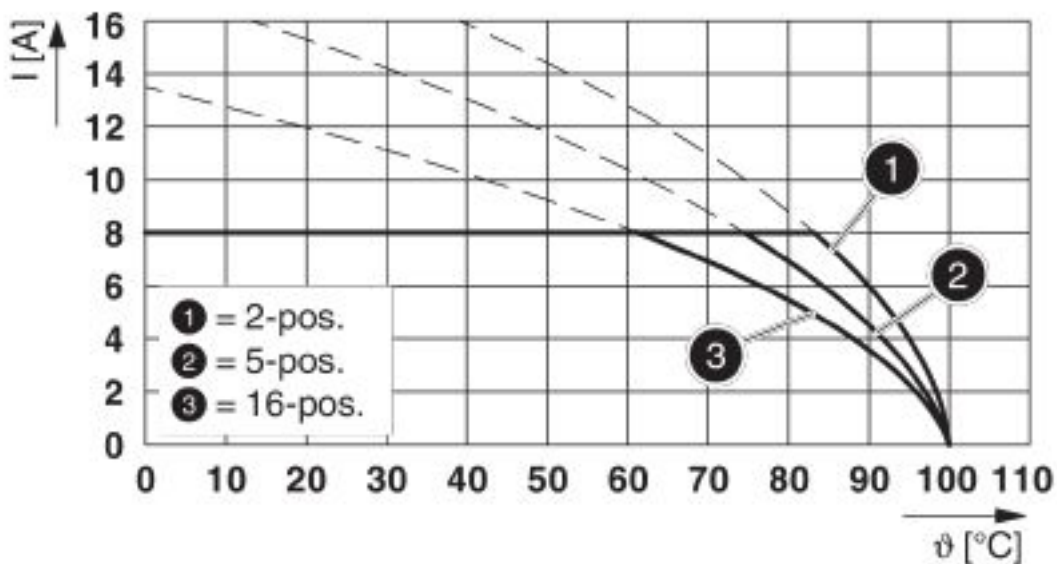
Diagram



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

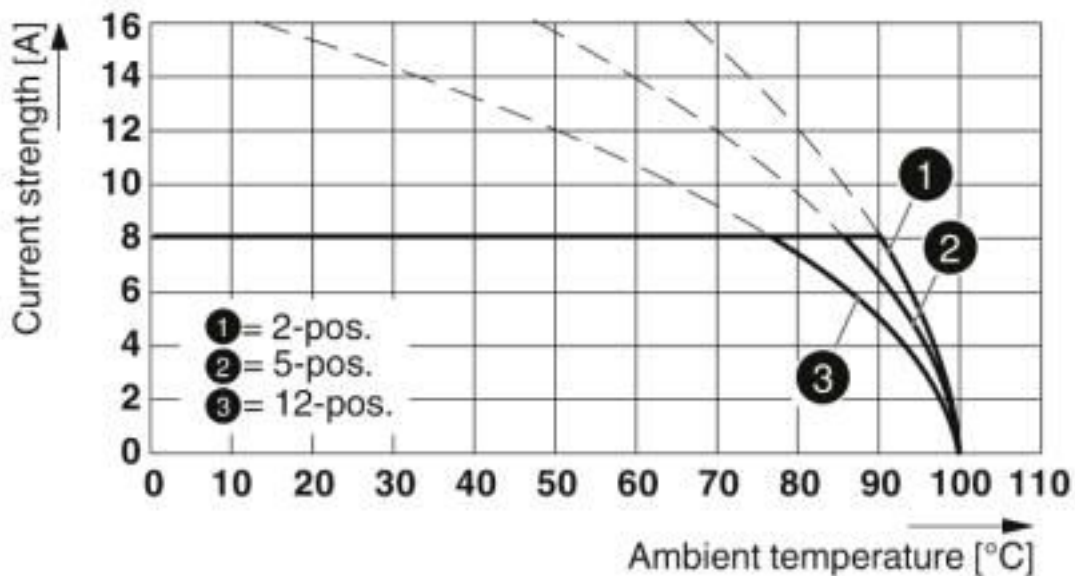
# Printed-circuit board connector - MC 1,5/ 6-STF-3,81CN6BD:1,X6,6 - 1715140

Diagram



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

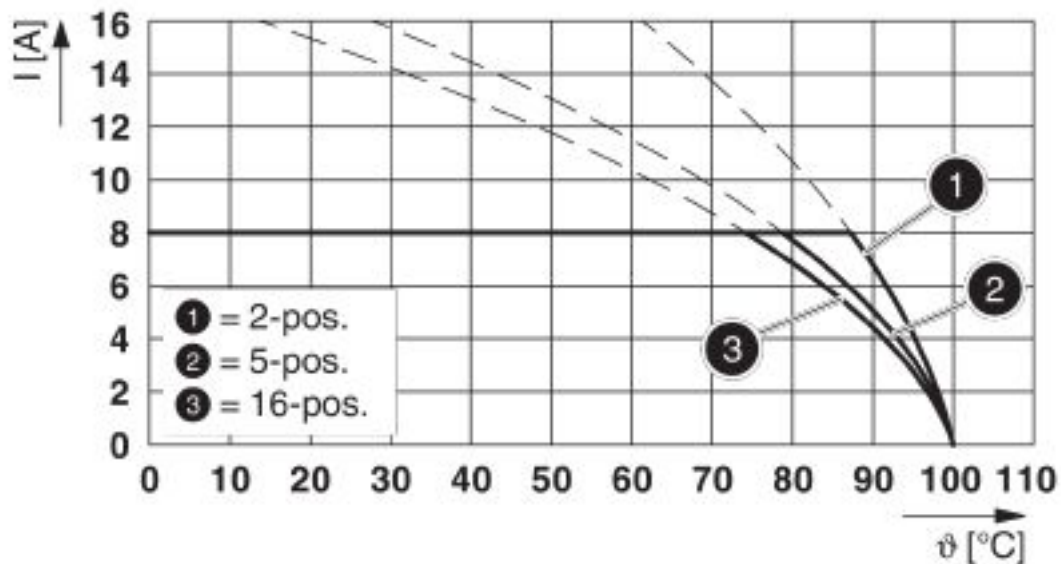
Diagram



Type: MC 1,5/...-STF-3,81 with MCV 1,5/...-GF-3,81 P26 THR

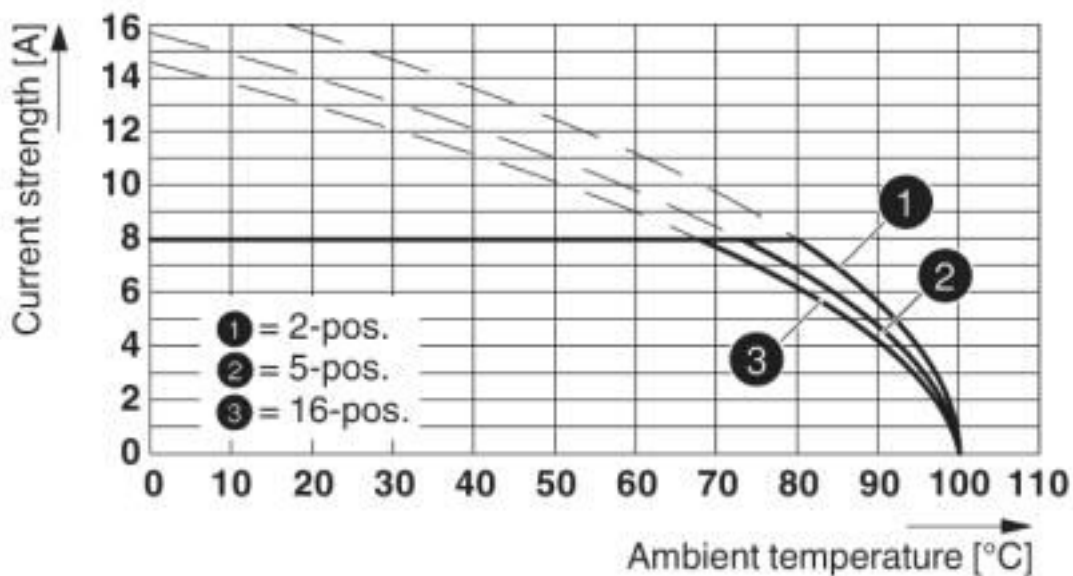
# Printed-circuit board connector - MC 1,5/ 6-STF-3,81CN6BD:1,X6,6 - 1715140

Diagram



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

Diagram

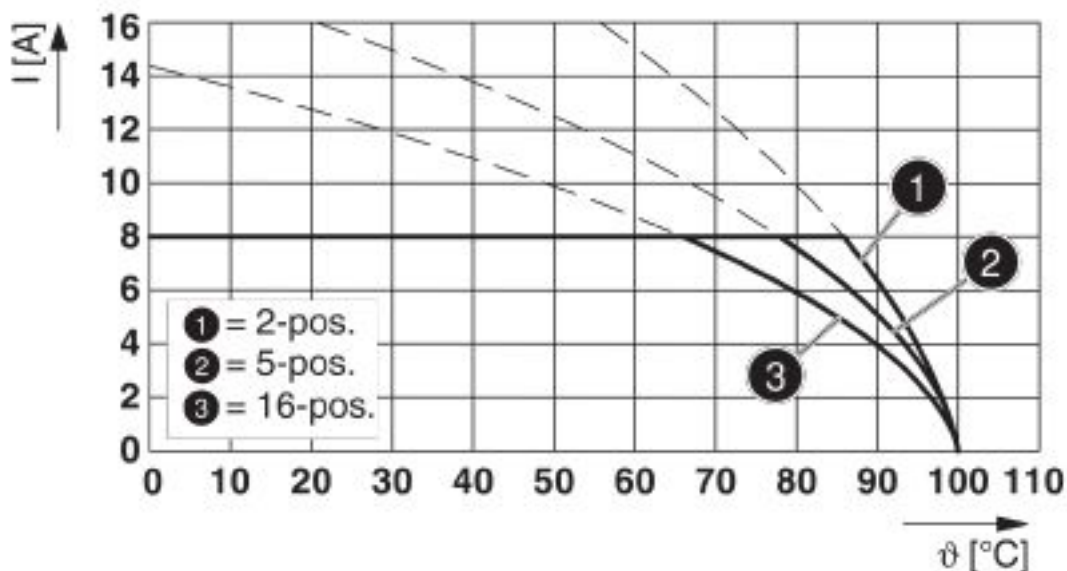


Type: MC 1,5/...-STF-3,81 with DFK-MC 1,5/...-GF-3,81 (with flat plug)



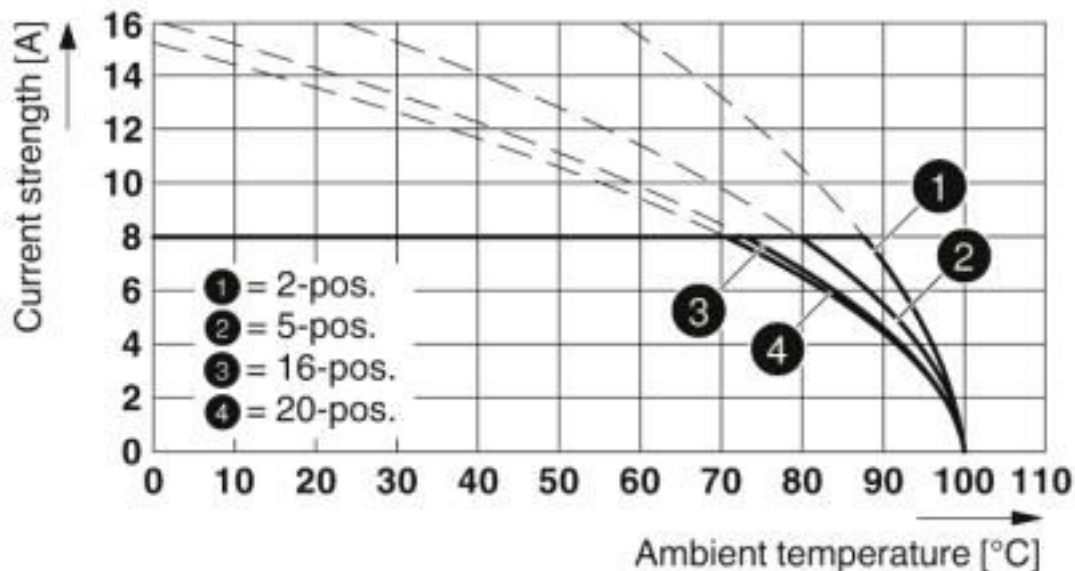
# Printed-circuit board connector - MC 1,5/ 6-STF-3,81CN6BD:1,X6,6 - 1715140

Diagram



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

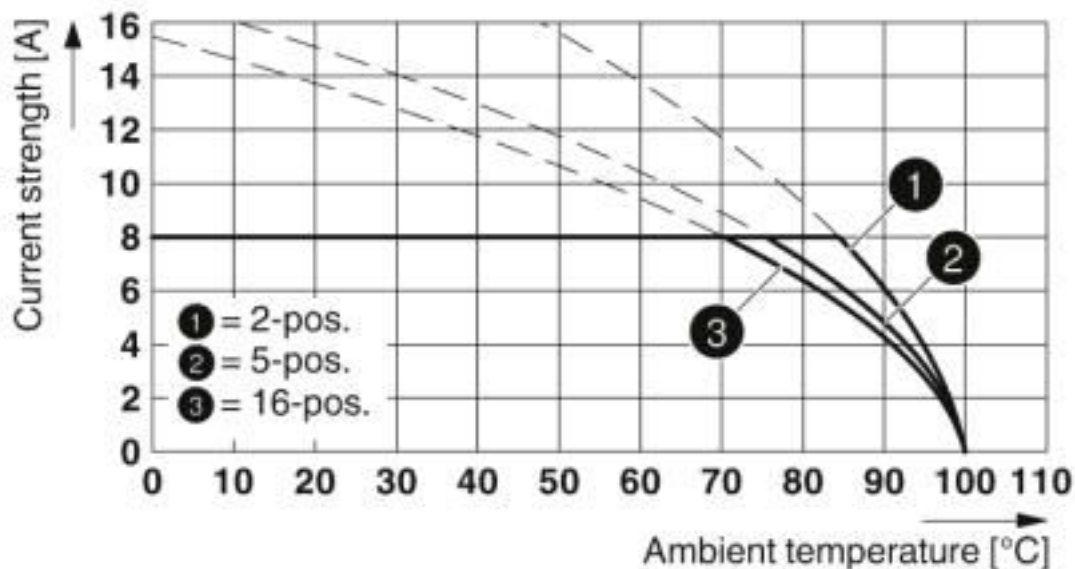
Diagram



Type: MC 1,5/...-STF-3,81 with MC 1,5/...-GF-3,81 P26THR

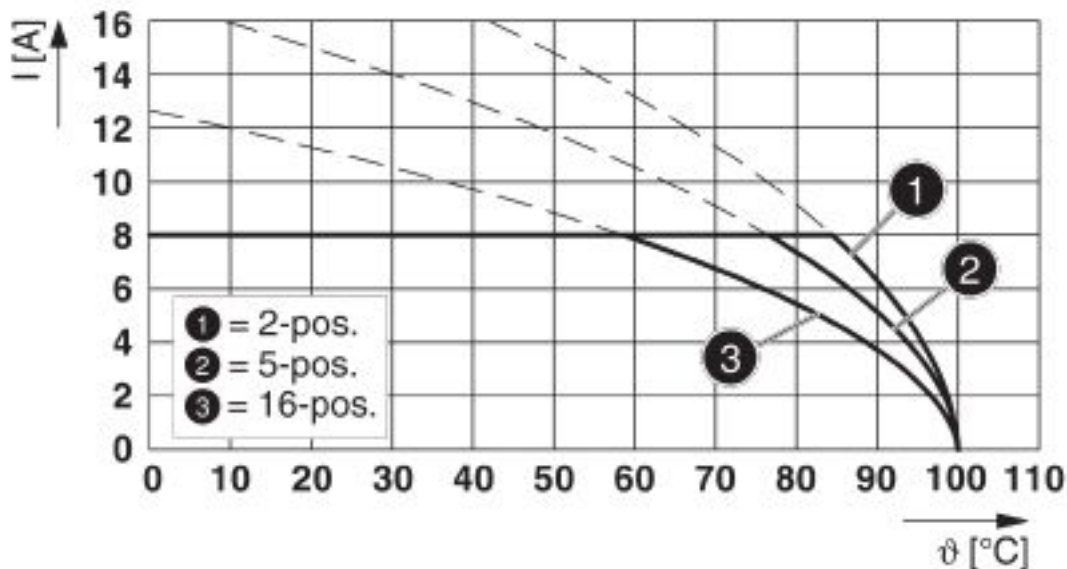
# Printed-circuit board connector - MC 1,5/ 6-STF-3,81CN6BD:1,X6,6 - 1715140

Diagram



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

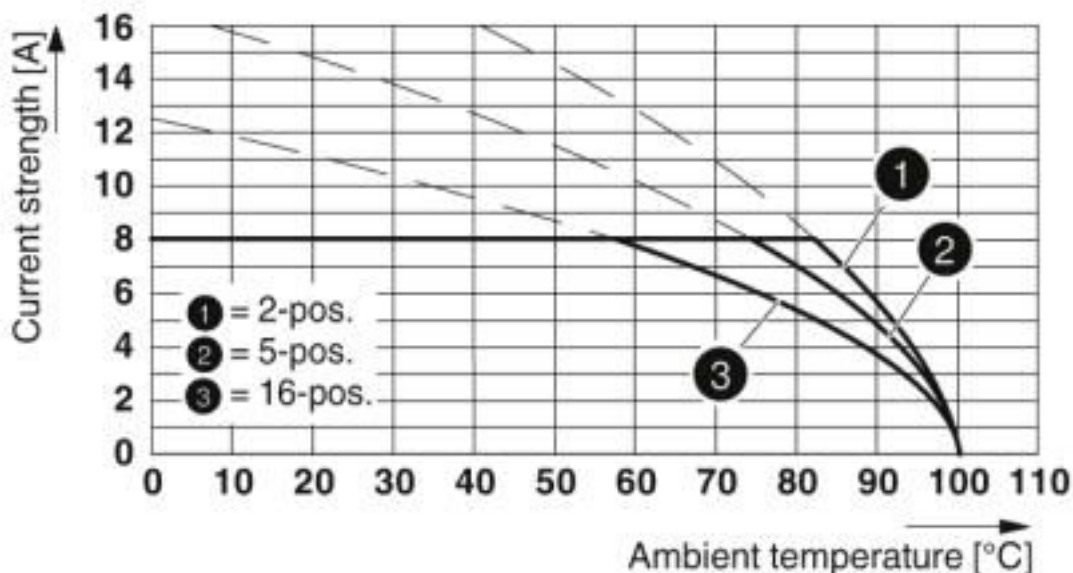
Diagram



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

# Printed-circuit board connector - MC 1,5/ 6-STF-3,81CN6BD:1,X6,6 - 1715140

Diagram



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

## Classifications

eCl@ss

eCl@ss 10.0.1	27440309
eCl@ss 4.0	27260700
eCl@ss 4.1	27260700
eCl@ss 5.0	27260700
eCl@ss 5.1	27260700
eCl@ss 6.0	27260700
eCl@ss 7.0	27440309
eCl@ss 8.0	27440309
eCl@ss 9.0	27440309

ETIM

ETIM 5.0	EC002638
ETIM 6.0	EC002638
ETIM 7.0	EC002638

## Approvals

Approvals

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# Printed-circuit board connector - MC 1,5/ 6-STF-3,81CN6BD:1,X6,6 - 1715140

## Approvals

Approvals


EAC

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Ex Approvals

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## Approval details

EAC		B.01742
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