

## Printed-circuit board connector - FK-MC 0,5/12-STZ3-2,5 - 1786390

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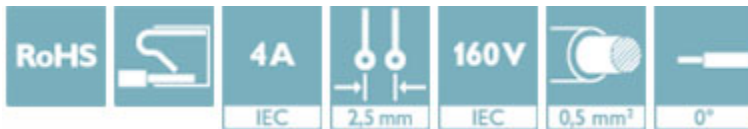
PCB connector, nominal current: 4 A, rated voltage (III/2): 160 V, nominal cross section: 0.5 mm<sup>2</sup>, number of positions: 12, pitch: 2.5 mm, connection method: Push-in spring connection, color: green, contact surface: Tin




The figure shows a 10-position version of the product

### 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
- ✓ Quick and convenient testing using integrated test option



### Key Commercial Data

Packing unit	1 pc
Minimum order quantity	50 pc
GTIN	 4 046356 609432
GTIN	4046356609432
Weight per Piece (excluding packing)	8.400 g
Custom tariff number	85366990
Country of origin	Germany

### Technical data

#### Item properties

Brief article description	PCB connector
Plug-in system	MICRO COMBICON - FK-MC 0,5
Type of contact	Female connector

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## Technical data

### Item properties

Range of articles	FK-MC 0,5/...-ST
Pitch	2.5 mm
Number of positions	12
Connection method	Push-in spring connection
Locking	without
Number of levels	1
Number of connections	12
Number of potentials	12

### Electrical parameters

Nominal current	4 A
Nom. voltage	160 V
Rated voltage	100 V
Rated voltage (III/2)	160 V
Rated voltage (II/2)	320 V
Rated surge voltage (III/3)	1.5 kV
Rated surge voltage (III/2)	2.5 kV
Rated surge voltage (II/2)	2.5 kV

### Connection capacity

Connection method	Push-in spring connection
pluggable	Yes
Conductor cross section solid	0.14 mm <sup>2</sup> ... 0.5 mm <sup>2</sup>
Conductor cross section flexible	0.14 mm <sup>2</sup> ... 0.5 mm <sup>2</sup>
Conductor cross section AWG / kcmil	26 ... 20
Conductor cross section flexible, with ferrule without plastic sleeve	0.25 mm <sup>2</sup> ... 0.5 mm <sup>2</sup>
Cylindrical gauge a x b / diameter	- / 1.4 mm
Stripping length	8 mm

### 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

### Material data - housing

Insulating material	PA
Insulating material group	I
CTI according to IEC 60112	600
Flammability rating according to UL 94	V0

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## Technical data

### Material data - housing

Glow wire flammability index GWF1 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	POM
CTI according to IEC 60112	600
Flammability rating according to UL 94	HB

### Dimensions for the product

Caption	Schematic representation – for additional information, see product range drawing in the Download Center
Length [ l ]	19.05 mm
Width [ w ]	30.6 mm
Height [ h ]	11.75 mm
Pitch	2.5 mm
Height (without solder pin)	11.75 mm

### Packaging information

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

### General product information

Type of note	Notes on operation
Note	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.

### 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

Conductor connection test	The stripped-off ends of the largest conductor can be completely inserted in the opening of the terminal point without using excessive force.
Test result	Test passed
Test – repeated connection and release	IEC 60999-1:1999-11
	Test passed
Test for conductor damage and slackening	IEC 60999-1:1999-11
	Test passed

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## Technical data

### Pull-out test

Pull-out test	IEC 60999-1:1999-11
	Test passed

### Mechanical tests according to standard

Test specification	IEC 61984
Visual examination	Test passed IEC 60512-1-1:2002-02
Dimensional test	Test passed IEC 60512-1-2:2002-02
Resistance of marking	Test passed IEC 60068-2-70:1995-12
Result	Test passed
Specification	IEC 60512-13-2:2006-02
No. of cycles	25
Insertion strength per pos. approx.	8 N
Withdraw strength per pos. approx.	6 N
Polarization and coding	Test passed IEC 60512-13-5:2006-02
Result	Test passed
Specification	IEC 60512-15-1:2008-05
Test force per pos.	24 N

### Air clearances and creepage distances

Clearances and creepage distances	IEC 60664-1:1992-10 + A1:2000-02 + A2:2002-05
Specification	IEC 60664-1:1992-10 + A1:2000-02 + A2:2002-05
Minimum clearance - inhomogeneous field (III/3)	0.8 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)	1.8 mm
Minimum creepage distance value (III/2)	0.8 mm
Minimum creepage distance value (II/2)	1.6 mm

### Electrical tests - Function

Specification	IEC 60999-1:1999-11
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### Temperature cycles

Specification	IEC 60999-1:1999-11
Test current (minimum cross section)	4 A
Test current (maximum cross section)	6 A
Temperature cycles	192

### Current carrying capacity / derating curves

Specification	IEC 61984
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### Mechanical tests (A)

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## Technical data

### Mechanical tests (A)

Test specification	IEC 61984
Insertion strength per pos. approx.	8 N
Withdraw strength per pos. approx.	6 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>	2 mΩ
Insertion/withdrawal cycles	25
Contact resistance R <sub>2</sub>	2.2 mΩ
Impulse withstand voltage at sea level	2.95 kV
Power-frequency withstand voltage	1.39 kV
Insulation resistance, neighboring positions	80 GΩ

### 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

### Standards and Regulations

Connection in acc. with standard	EN-VDE
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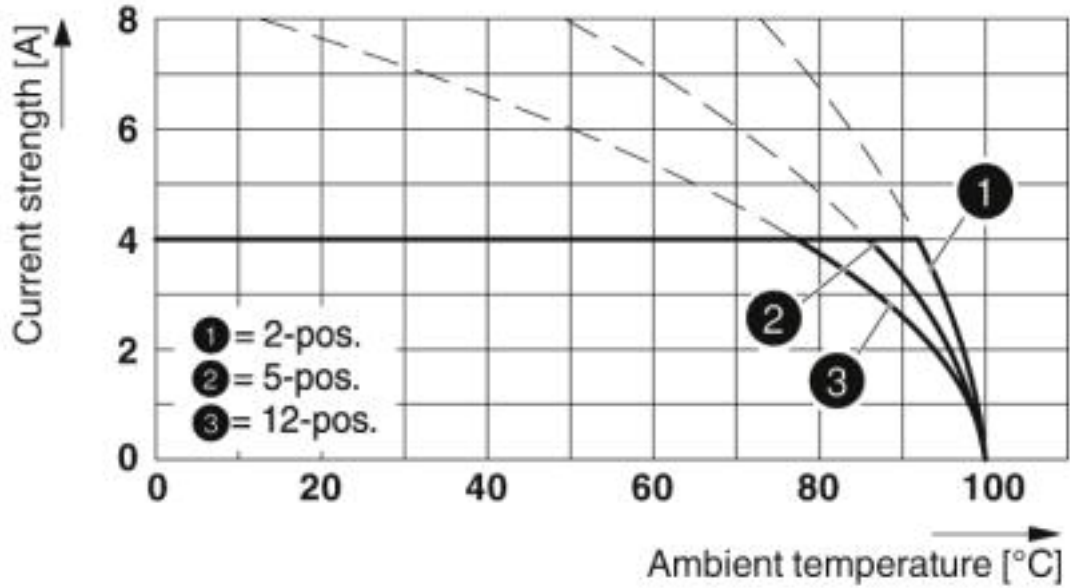
### Environmental Product Compliance

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

## Drawings

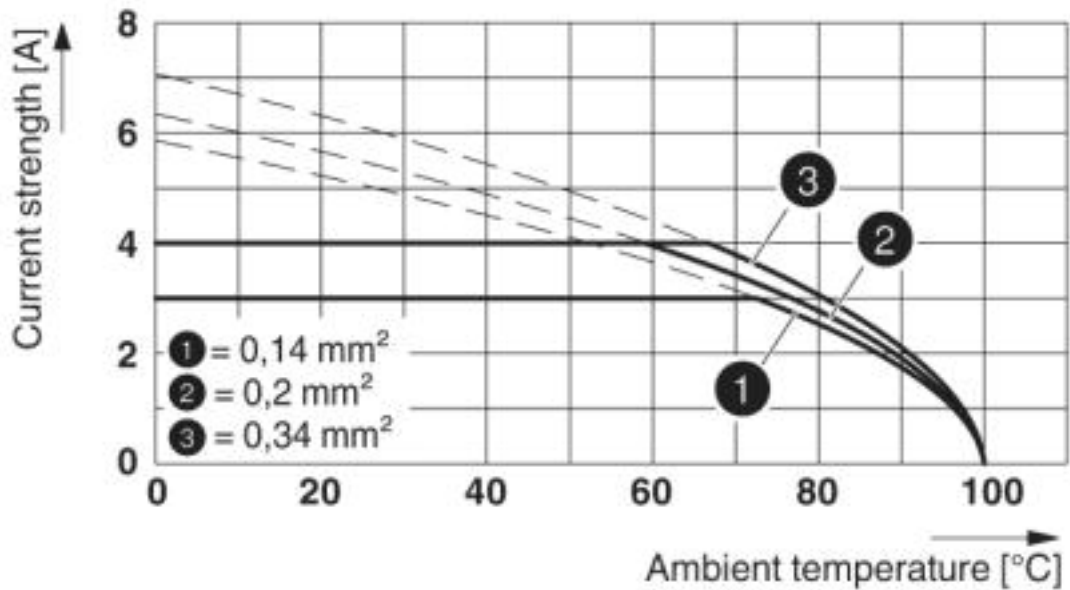
# Printed-circuit board connector - FK-MC 0,5/12-STZ3-2,5 - 1786390

Diagram



Type: FK-MC 0,5/...-ST-2,5 with MC 0,5/...-G-2,5

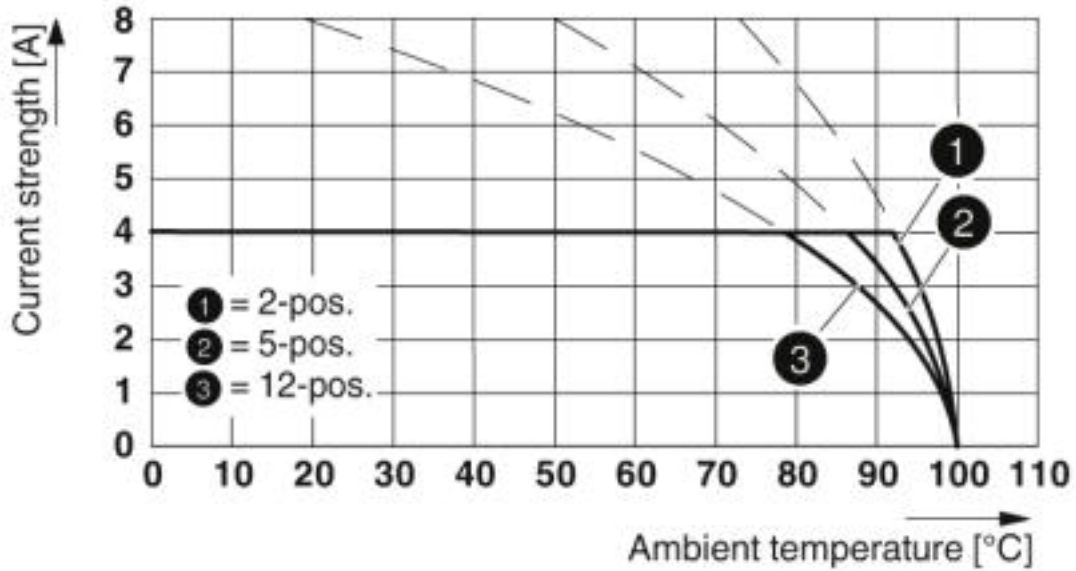
Diagram



Type: FK-MC 0,5/...-ST-2,5 with MC 0,5/...-G-2,5

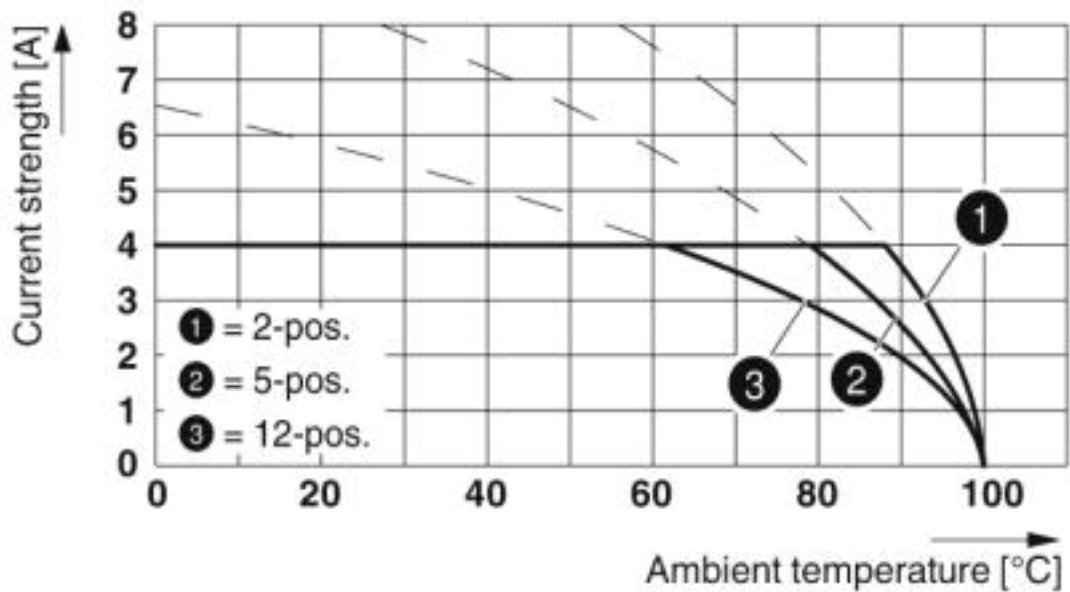
# Printed-circuit board connector - FK-MC 0,5/12-STZ3-2,5 - 1786390

Diagram



Type: FK-MC 0,5/...-ST-2,5 with MCV 0,5/...-G-2,5

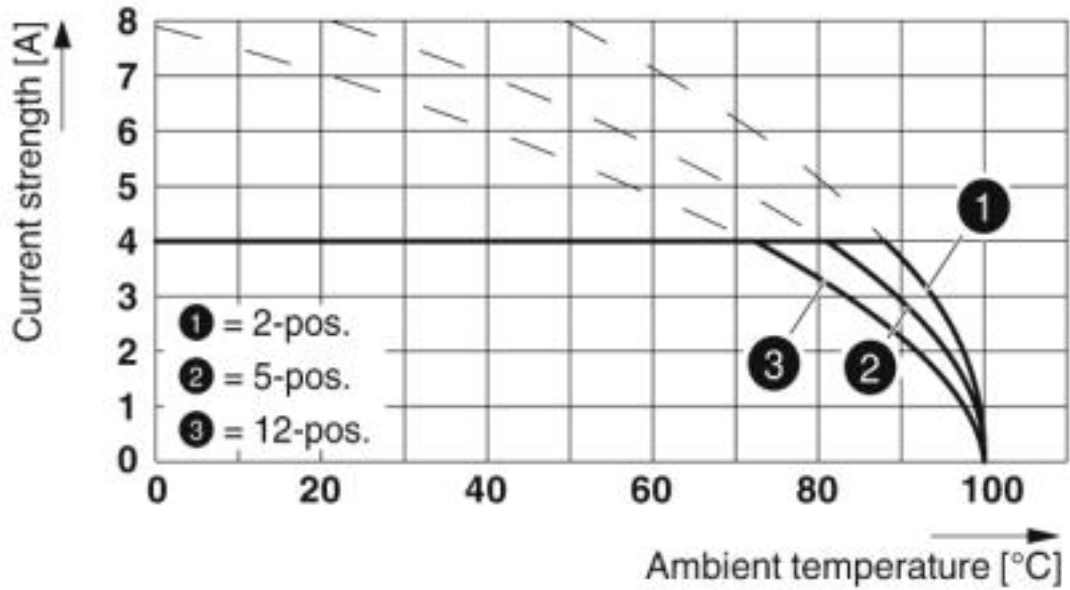
Diagram



Type: FK-MC 0,5/...-ST-2,5 with MCD 0,5/...-G1-2,5

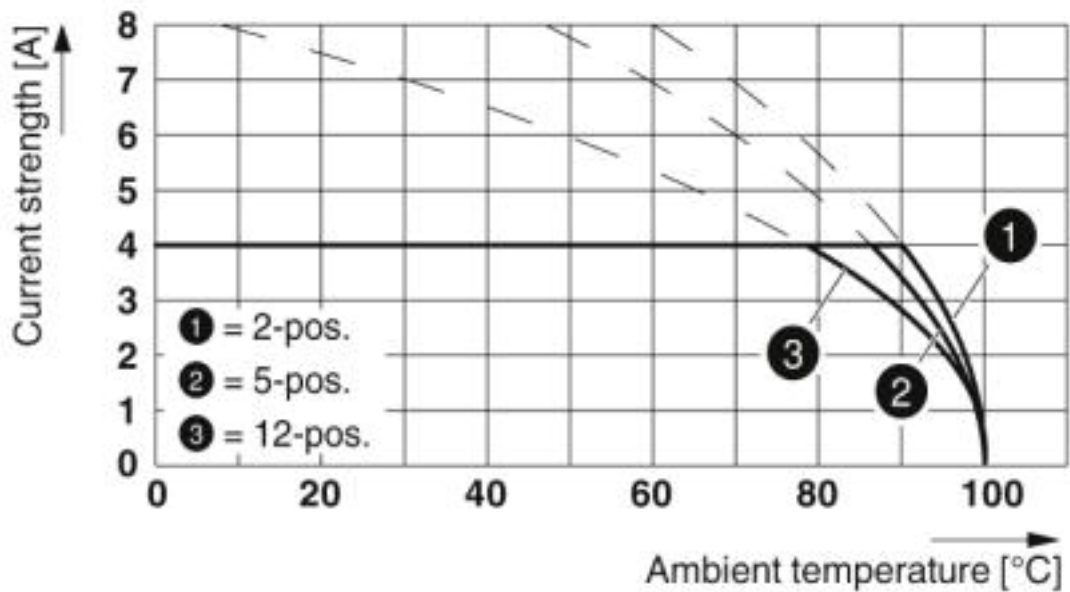
# Printed-circuit board connector - FK-MC 0,5/12-STZ3-2,5 - 1786390

Diagram



Type: FK-MC 0,5/...-ST-2,5 with MCDV 0,5/...-G1-2,5

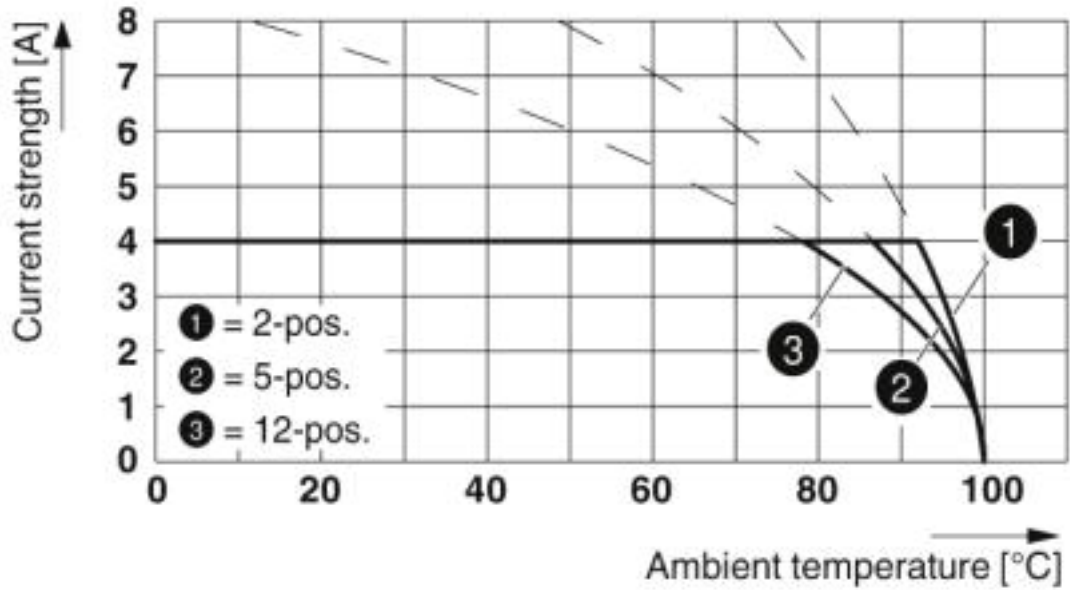
Diagram



Type: FK-MC 0,5/...-ST-2,5 with MC 0,5/...-G-2,5 THT

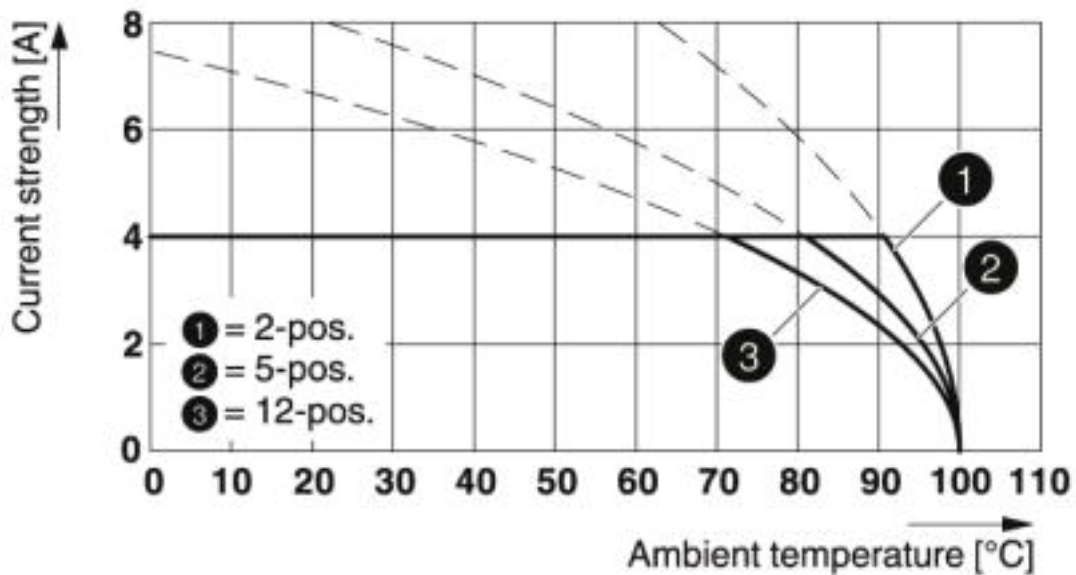
# Printed-circuit board connector - FK-MC 0,5/12-STZ3-2,5 - 1786390

Diagram



Type: FK-MC 0,5/...-ST-2,5 with MCV 0,5/...-G-2,5 THT

Diagram



Type: FK-MC 0,5/...-ST-2,5 with MCD 0,5/...-G1-2,5 HT BK

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## Classifications

### eCl@ss

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 3.0	EC001121
ETIM 4.0	EC002643
ETIM 5.0	EC002637
ETIM 6.0	EC002638
ETIM 7.0	EC002638

### UNSPSC

UNSPSC 6.01	30211801
UNSPSC 7.0901	39121432
UNSPSC 11	39121432
UNSPSC 12.01	39121432
UNSPSC 13.2	39121409
UNSPSC 18.0	39121409
UNSPSC 19.0	39121409
UNSPSC 20.0	39121409
UNSPSC 21.0	39121409

## Approvals

### Approvals

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Approvals

EAC

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Ex Approvals

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## Printed-circuit board connector - FK-MC 0,5/12-STZ3-2,5 - 1786390

### Approvals

#### Approval details

EAC		B.01742
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