

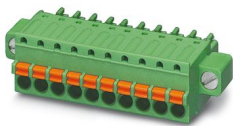
FK-MCP 1,5/12-STF-3,5 MURR - PCB connector



1738005

<https://www.phoenixcontact.com/us/products/1738005>

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PCB connector, nominal cross section: 1.5 mm², color: green, nominal current: 8 A, rated voltage (III/2): 160 V, contact surface: Sn, contact connection type: Socket, number of potentials: 12, number of rows: 1, number of positions: 12, number of connections: 12, product range: FK-MCP 1,5/..-STF, pitch: 3.5 mm, connection method: Push-in spring connection, conductor/PCB connection direction: 0 °, plug-in system: COMBICON MC 1,5, locking: Screw locking mechanism, mounting method: Screw flange, 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 operation due to color-coded actuating push button
- Screwable flange for superior mechanical stability
- Quick and convenient testing using integrated test option

Commercial data

Item number	1738005
Packing unit	50 pc
Minimum order quantity	1 pc
Note	Made to order (non-returnable)
Product key	AABFMB
GTIN	4046356282093
Weight per piece (including packing)	11.43 g
Weight per piece (excluding packing)	10.304 g
Country of origin	DE

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Technical data

Product properties

Product type	PCB connector
Product family	FK-MCP 1,5/...-STF
Product line	COMBICON Connectors S
Number of positions	12
Pitch	3.5 mm
Number of connections	12
Number of rows	1
Number of potentials	12
Mounting type	Screw flange

Electrical properties

Properties

Nominal current I_N	8 A
Nominal voltage U_N	160 V
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
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	Screw locking mechanism
Mounting type	Screw flange
Tightening torque	0.3 Nm

Conductor connection

Connection method	Push-in spring connection
Conductor/PCB connection direction	0 °
Conductor cross-section rigid	0.14 mm ² ... 1.5 mm ²
Conductor cross-section flexible	0.14 mm ² ... 1.5 mm ²
Conductor cross-section AWG	26 ... 16

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Conductor cross-section flexible, with ferrule without plastic sleeve	0.25 mm ² ... 1.5 mm ²
Conductor cross-section, flexible, with ferrule, with plastic sleeve	0.25 mm ² ... 0.5 mm ²
Cylindrical gauge a x b / diameter	2.4 mm x 1.5 mm / -
Stripping length	9 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
	Cross section: 0.34 mm ² ; Length: 8 mm
	Cross section: 0.5 mm ² ; Length: 8 mm ... 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

Color (Actuating element)	orange (2003)
Insulating material	POM

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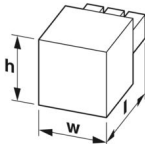


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Insulating material group	I
CTI according to IEC 60112	600
Flammability rating according to UL 94	HB

Dimensions

Dimensional drawing	
Pitch	3.5 mm
Width [w]	52.3 mm
Height [h]	12.4 mm
Length [l]	20.8 mm

Mounting

Flange

Tightening torque	0.3 Nm
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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	0.14 mm ² / solid / > 10 N
	0.14 mm ² / flexible / > 10 N
	1.5 mm ² / solid / > 40 N
	1.5 mm ² / flexible / > 40 N

Insertion and withdrawal forces

Specification	IEC 60512-13-2:2006-02
Result	Test passed
No. of cycles	25
Insertion strength per pos. approx.	7 N

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Withdraw strength per pos. approx.	5 N
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)
Acceleration	5g (60.1 Hz ... 150 Hz)
Test duration per axis	2.5 h
Test directions	X-, Y- and Z-axis

Durability test

Specification	IEC 60512-5:1992-08
Impulse withstand voltage at sea level	2.95 kV
Contact resistance R ₁	2 mΩ
Contact resistance R ₂	2.2 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

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.)

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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	20

Insulation resistance

Specification	IEC 60512-3-1:2002-02
Insulation resistance, neighboring positions	$10^{12} \Omega$

Temperature cycles

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

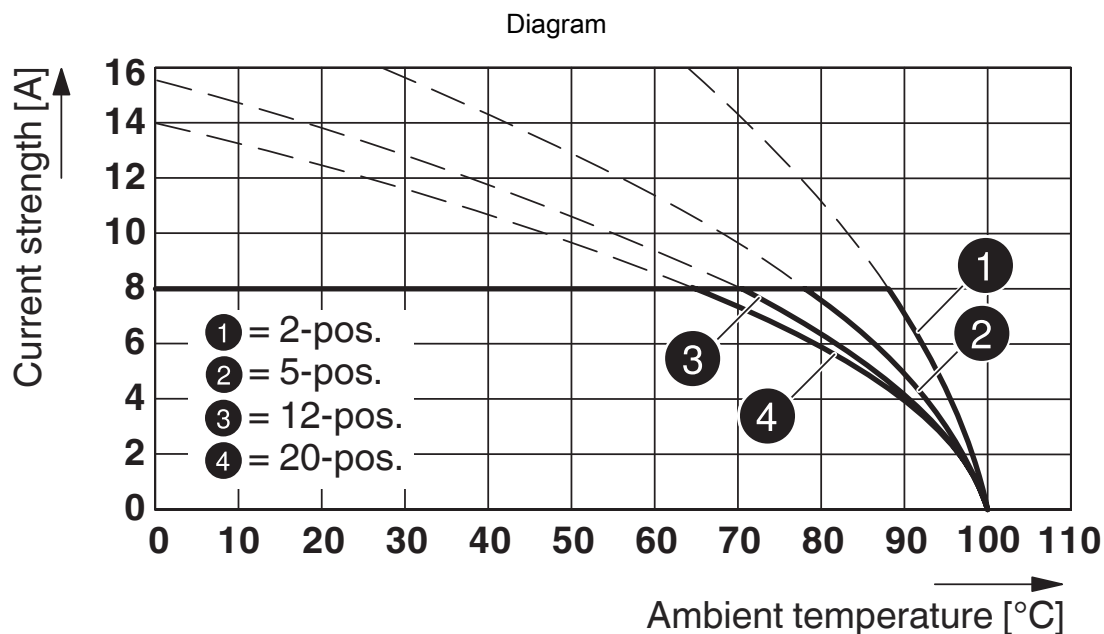
Air clearances and creepage distances |

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

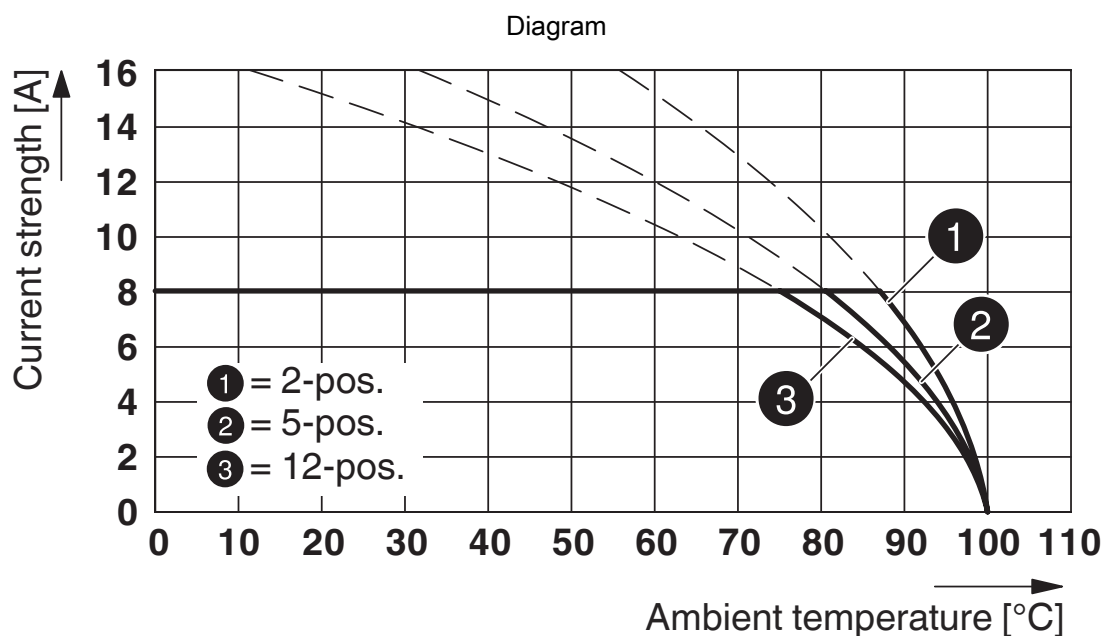
Packaging specifications

Type of packaging	packed in cardboard
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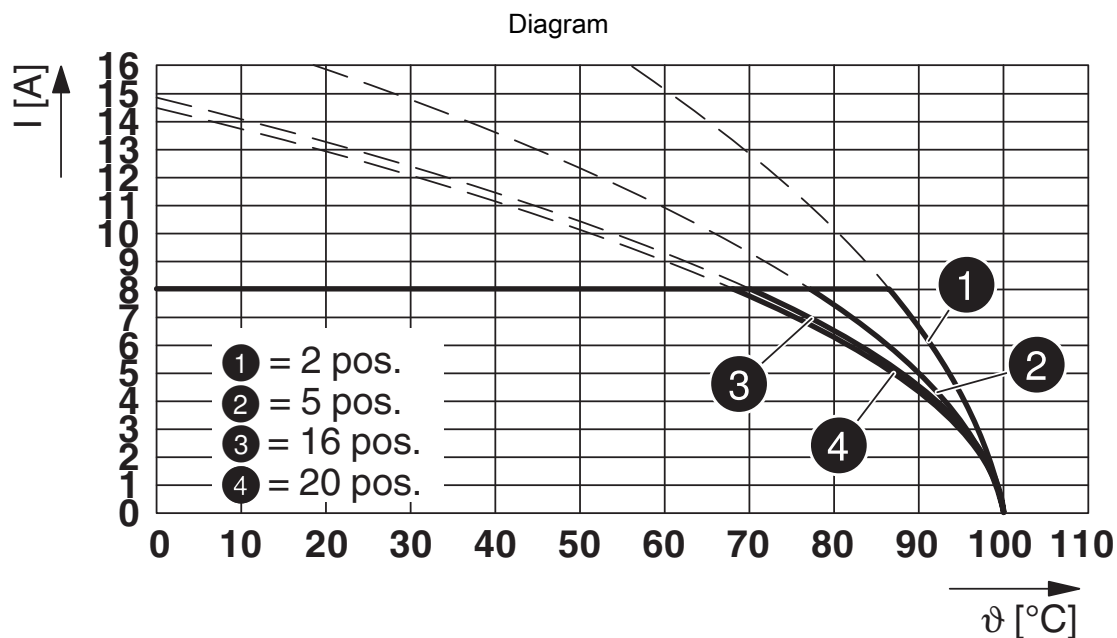
Drawings



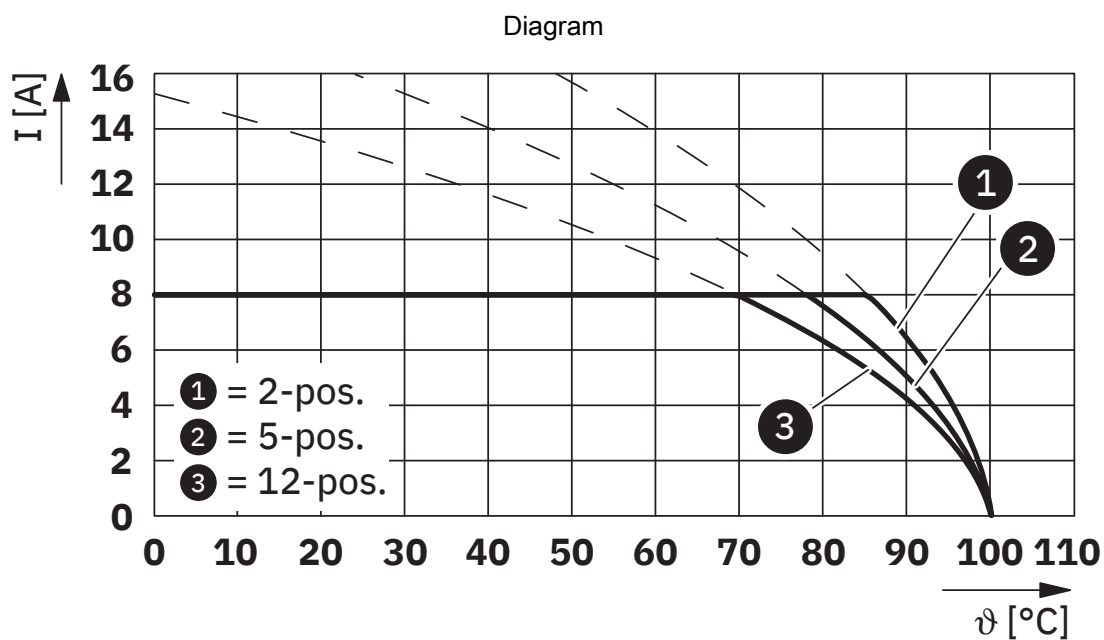
Type: FK-MCP 1,5/...-STF-3,5 with MC 1,5/...-GF-3,5



Type: FK-MCP 1,5/...-STF-3,5 with MCV 1,5/...-GF-3,5 P...THR



Type: FK-MCP 1,5/...-STF-3,5 with MCV 1,5/...-GF-3,5



Type: FK-MCP 1,5/...-STF-3,5 with MC 1,5/...-GF-3,5 P... THR

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Approvals

To download certificates, visit the product detail page: <https://www.phoenixcontact.com/us/products/1738005>

 cULus Recognized Approval ID: E60425-19920306				
	Nominal voltage U_N	Nominal current I_N	Cross section AWG	Cross section mm^2
B				
	300 V	8 A	28 - 16	-
D				
	300 V	8 A	28 - 16	-

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

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Classifications

ECLASS

ECLASS-13.0	27460202
ECLASS-15.0	27460202

ETIM

ETIM 9.0	EC002638
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UNSPSC

UNSPSC 21.0	39121400
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Environmental product compliance

EU RoHS

Fulfills EU RoHS substance requirements	Yes, No exemptions
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China RoHS

Environment friendly use period (EFUP)	EFUP-E
	No hazardous substances above the limits

EU REACH SVHC

REACH candidate substance (CAS No.)	No substance above 0.1 wt%
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