

Printed-circuit board connector - FK-MCP 1,5/ 2-STF-3,81 - 1851232

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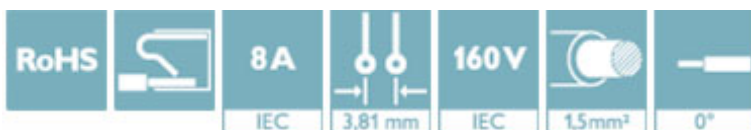
PCB connector, nominal current: 8 A, rated voltage (III/2): 160 V, number of positions: 2, pitch: 3.81 mm, connection method: Push-in spring connection, color: green, contact surface: Tin



The figure shows a 10-position version of the product

Why buy this product

- 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
- Screwable flange for superior mechanical stability
- Quick and convenient testing using integrated test option



Key Commercial Data

Packing unit	50 pc
GTIN	
GTIN	4017918110307

Technical data

Item properties

Brief article description	Printed-circuit board connector
Plug-in system	MINI COMBICON
Type of contact	Female connector
Range of articles	FK-MCP 1,5/...-STF
Pitch	3.81 mm
Number of positions	2
Connection method	Push-in spring connection
Locking	Screw flange
Number of levels	1

Electrical parameters

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Electrical parameters

Rated current	8 A
Rated insulation voltage (III/2)	160 V
Rated surge voltage (III/2)	2.5 kV

Connection capacity

Conductor cross section solid	0.14 mm ² ... 1.5 mm ²
Conductor cross section flexible	0.14 mm ² ... 1.5 mm ²
Conductor cross section AWG / kcmil	26 ... 16
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 ... 0.75 mm ²
Cylindrical gauge a x b / diameter	2.4 mm x 1.5 mm / -
Stripping length	9 mm

Specifications for ferrules

Recommended crimping pliers	1212034 CRIMPFOX 6
Ferrules without insulating collar, according to DIN 46228-1	Cross section: 0.25 mm ² ; Length: 7 mm ... 9 mm
	Cross section: 0.34 mm ² ; Length: 7 mm ... 9 mm
	Cross section: 0.5 mm ² ; Length: 8 mm ... 9 mm
	Cross section: 0.75 mm ² ; Length: 8 mm ... 9 mm
	Cross section: 1 mm ² ; Length: 8 mm ... 9 mm
Ferrules with insulating collar, according to DIN 46228-4	Cross section: 1.5 mm ² ; Length: 8 mm ... 9 mm
	Cross section: 0.34 mm ² ; Length: 8 mm ... 9 mm
Recommended crimping pliers	1212034 CRIMPFOX 6
Ferrules with insulating collar, according to DIN 46228-4	Cross section: 0.34 mm ² ; Length: 8 mm ... 9 mm
	Cross section: 0.5 mm ² ; Length: 8 mm ... 9 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
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

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

Material data – actuating element

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

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Technical data

Dimensions for the product

Length [l]	20.8 mm
Width [w]	18.01 mm
Height [h]	12.4 mm
Pitch	3.81 mm
Height (without solder pin)	12.4 mm
Dimension a	3.81 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

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

Pull-out test

Pull-out test	IEC 60999-1:1999-11
	Test passed
Conductor cross section / conductor type / tensile force	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

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

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Technical data

Mechanical tests according to standard

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.	25 N

Air clearances and creepage distances

Insulating material group	I
Comparative tracking index (IEC 60112:2003-01)	CTI 600
Voltage	160 V
Rated insulation voltage (III/3)	160 V
Rated insulation voltage (III/2)	160 V
Rated insulation 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
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

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 DC
Test current (maximum cross section)	8 A DC
Temperature cycles	192

Current carrying capacity / derating curves

Specification	IEC 61984
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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
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Technical data

Durability tests (B)

Contact resistance R ₁	1.4 mΩ
Insertion/withdrawal cycles	25
Contact resistance R ₂	1.5 mΩ
Impulse withstand voltage at sea level	2.95 kV
Power-frequency withstand voltage	1.39 kV
Insulation resistance, neighboring positions	> 5 TΩ

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 ³ SO ₂ on 300 dm ³ /40 °C/1 cycle
Impulse withstand voltage at sea level	2.95 kV
Power-frequency withstand voltage	1.39 kV

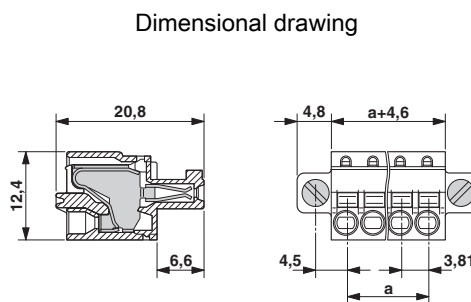
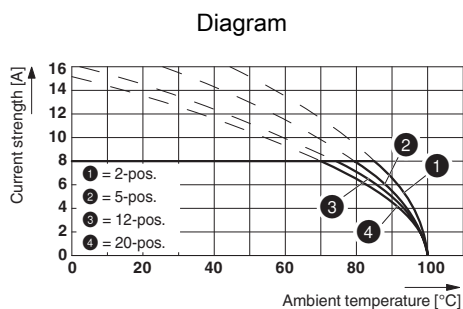
Environmental and durability tests (E)

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

Environmental Product Compliance

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

Drawings



Type: FK-MCP 1,5/...-ST(F)-3,81 with MC 1,5/...-G(F)-3,81 P.. THR(R...)

Approvals

Approvals

Approvals

CSA / VDE Gutachten mit Fertigungsüberwachung / IECEE CB Scheme / cULus Recognized / EAC

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Approvals

Ex Approvals

Approval details

CSA		http://www.csagroup.org/services-industries/product-listing/	13631
		B	
Nominal voltage UN	300 V		
Nominal current IN	8 A		
mm ² /AWG/kcmil	28-16		

VDE Gutachten mit Fertigungsüberwachung		http://www2.vde.com/de/Institut/Online-Service/VDE-gepruefteProdukte/Seiten/Online-Suche.aspx	40011723
		B	
Nominal voltage UN	160 V		
Nominal current IN	8 A		
mm ² /AWG/kcmil	0.2-1.5		

IECEE CB Scheme		http://www.iecee.org/	DE1-60604-B1B2
		B	
Nominal voltage UN	160 V		
Nominal current IN	8 A		
mm ² /AWG/kcmil	0.2-1.5		

cULus Recognized		http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm	E60425-19920306
		B	
Nominal voltage UN	300 V		
Nominal current IN	8 A		
mm ² /AWG/kcmil	28-16		

EAC			B.01742
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