

Printed-circuit board connector - FK-MC 0,5/ 9-ST-2,5 BK - 1701061

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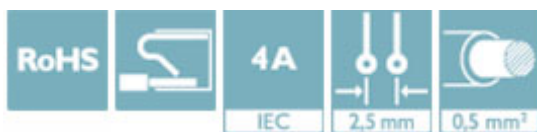
PCB connector, nominal current: 4 A, number of positions: 9, pitch: 2.5 mm, connection method: Push-in spring connection, color: black, contact surface: Tin



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	50 pc
GTIN	 4 046356 514019
GTIN	4046356514019

Technical data

Item properties

Brief article description	Printed-circuit board connector
Plug-in system	MICRO COMBICON - FK-MC 0,5
Type of contact	Female connector
Range of articles	FK-MC 0,5/...-ST
Pitch	2.5 mm
Number of positions	9
Connection method	Push-in spring connection
Locking	without
Number of levels	1

Electrical parameters

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Electrical parameters

Rated current	4 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 ... 0.5 mm ²
Conductor cross section flexible	0.14 mm ² ... 0.5 mm ²
Conductor cross section AWG / kcmil	26 ... 20
Conductor cross section flexible, with ferrule without plastic sleeve	0.25 mm ² ... 0.5 mm ²
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
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
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

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]	23.1 mm
Height [h]	11.75 mm
Pitch	2.5 mm
Height (without solder pin)	11.75 mm
Dimension a	20 mm

Packaging information

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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

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	0.2 mm ² / solid / > 10 N
	0.2 mm ² / flexible / > 10 N
	0.5 mm ² / solid / > 20 N
	0.5 mm ² / flexible / > 20 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
Withdraw strength per pos. approx.	6 N
Polarization and coding	Test passed IEC 60512-13-5:2006-02
Result	Test passed

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Mechanical tests according to standard

Specification	IEC 60512-15-1:2008-05
Test force per pos.	24 N

Air clearances and creepage distances

Specification	IEC 60664-1:1992-10 + A1:2000-02 + A2:2002-05
Insulating material group	I
Voltage	100 V
Rated insulation voltage (III/3)	100 V
Rated insulation voltage (III/2)	160 V
Rated insulation 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

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)

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_1	2 mΩ
Insertion/withdrawal cycles	25
Contact resistance R_2	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

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Climatic tests (D)

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)

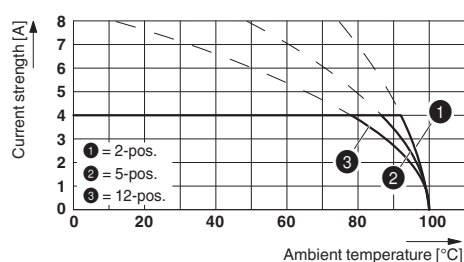
Specification	IEC 61984:2008-10
Result, degree of protection, IP code	Finger safety with IP20 test finger

Environmental Product Compliance

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

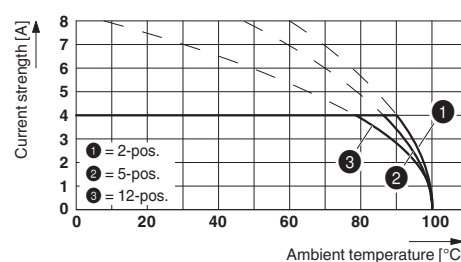
Drawings

Diagram



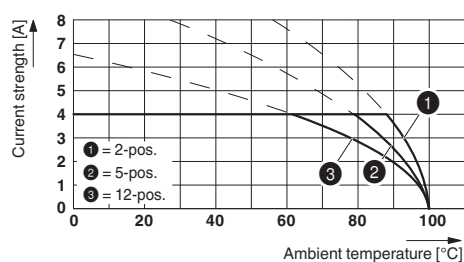
Type: FK-MC 0,5/...-ST-2,5 with MCV 0,5/...-G-2,5 THT

Diagram



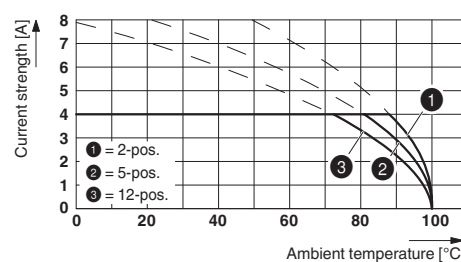
Type: FK-MC 0,5/...-ST-2,5 with MC 0,5/...-G-2,5 THT

Diagram



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

Diagram



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

Approvals

Approvals

Approvals

CCA / IECCE CB Scheme / VDE Gutachten mit Fertigungsüberwachung / EAC / cULus Recognized

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Approvals

Ex Approvals

Approval details

CCA	CCA/ DE1 34250
Nominal voltage UN	100 V
Nominal current IN	4 A
mm ² /AWG/kcmil	0.2-.5

IECEE CB Scheme			http://www.iecee.org/	DE1-56068-B1B2
Nominal voltage UN		100 V		
Nominal current IN		4 A		
mm²/AWG/kcmil		0.2-5		

VDE Gutachten mit Fertigungsüberwachung		http://www2.vde.com/de/Institut/Online-Service/ VDE-gepruefteProdukte/Seiten/Online-Suche.aspx	40013394
Nominal voltage UN	100 V		
Nominal current IN	4 A		
mm²/AWG/kcmil	0.2-.5		

EAC		B.01742
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cULus Recognized			http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm	E60425-19930913
			B	
Nominal voltage UN			125 V	
Nominal current IN			4 A	
mm²/AWG/kcmil			28-20	

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