

FK-MC 0,5/ 3-ST-2,5 BK - PCB connector



1799060

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PCB connector, nominal cross section: 0.5 mm², color: black, nominal current: 4 A, rated voltage (III/2): 160 V, contact surface: Tin, contact connection type: Socket, number of potentials: 3, number of rows: 1, number of positions: 3, number of connections: 3, product range: FK-MC 0,5/.-ST, pitch: 2.5 mm, connection method: Push-in spring connection, conductor/PCB connection direction: 0 °, plug-in system: COMBICON FK-MC 0,5, locking: without, mounting: without, 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 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

Commercial data

Item number	1799060
Packing unit	1 pc
Minimum order quantity	50 pc
Sales key	AA01
Product key	AAAFCA
GTIN	4055626076423
Weight per piece (including packing)	2.12 g
Weight per piece (excluding packing)	1.82 g
Customs tariff number	85366990
Country of origin	DE

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Technical data

Product properties

Product line	COMBICON Connectors XS
Product type	PCB connector
Product family	FK-MC 0,5/...-ST
Number of positions	3
Pitch	2.5 mm
Number of connections	3
Number of rows	1
Mounting flange	without
Number of potentials	3

Electrical properties

Nominal current I_N	4 A
Nominal voltage U_N	160 V
Degree of pollution	3
Contact resistance	2 m Ω
Rated voltage (III/3)	100 V
Rated surge voltage (III/3)	1.5 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 FK-MC 0,5
Nominal cross section	0.5 mm ²
Contact connection type	Socket

Interlock

Locking type	without
Mounting flange	without

Conductor connection

Connection method	Push-in spring connection
Conductor/PCB connection direction	0 °
Conductor cross section rigid	0.14 mm ² ... 0.5 mm ²
Conductor cross section flexible	0.14 mm ² ... 0.5 mm ²
Conductor cross section AWG	26 ... 20
Conductor cross section flexible, with ferrule without plastic sleeve	0.25 mm ² ... 0.5 mm ²

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Cylindrical gauge a x b / diameter	- / 1.4 mm
Stripping length	8 mm

Specifications for ferrules without insulating collar

recommended crimping tool	1201882 CRIMPFOX ZA 3
ferrules without insulating collar, according to DIN 46228-1	Cross section: 0.25 mm ² ; Length: 7 mm ... 8 mm
	Cross section: 0.34 mm ² ; Length: 7 mm ... 8 mm
	Cross section: 0.5 mm ² ; Length: 8 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)

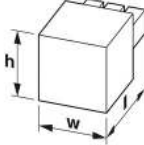
Material data - housing

Color (Housing)	black (9005)
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	PBT
Insulating material group	I
CTI according to IEC 60112	600
Flammability rating according to UL 94	V0

Dimensions

Dimensional drawing	
Pitch	2.5 mm
Width [w]	8.1 mm
Height [h]	11.75 mm

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Length [l]	19.05 mm
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Mounting

Connection method	Push-in spring connection
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Notes

Notes on operation	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.
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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	0.2 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

Insertion and withdrawal forces

Result	Test passed
No. of cycles	25
Insertion strength per pos. approx.	8 N
Withdraw strength per pos. approx.	6 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

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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)
Sweep speed	5g (60.1 Hz ... 150 Hz)
Test duration per axis	2.5 h

Durability test

Specification	IEC 60512-9-1:2010-03
Impulse withstand voltage at sea level	2.95 kV
Contact resistance R_1	2 m Ω
Contact resistance R_2	2.2 m Ω
Insertion/withdrawal cycles	25
Insulation resistance, neighboring positions	> 5 M Ω

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

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	12

Insulation resistance

Specification	IEC 60512-3-1:2002-02
Insulation resistance, neighboring positions	> 5 M Ω

Temperature cycles

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

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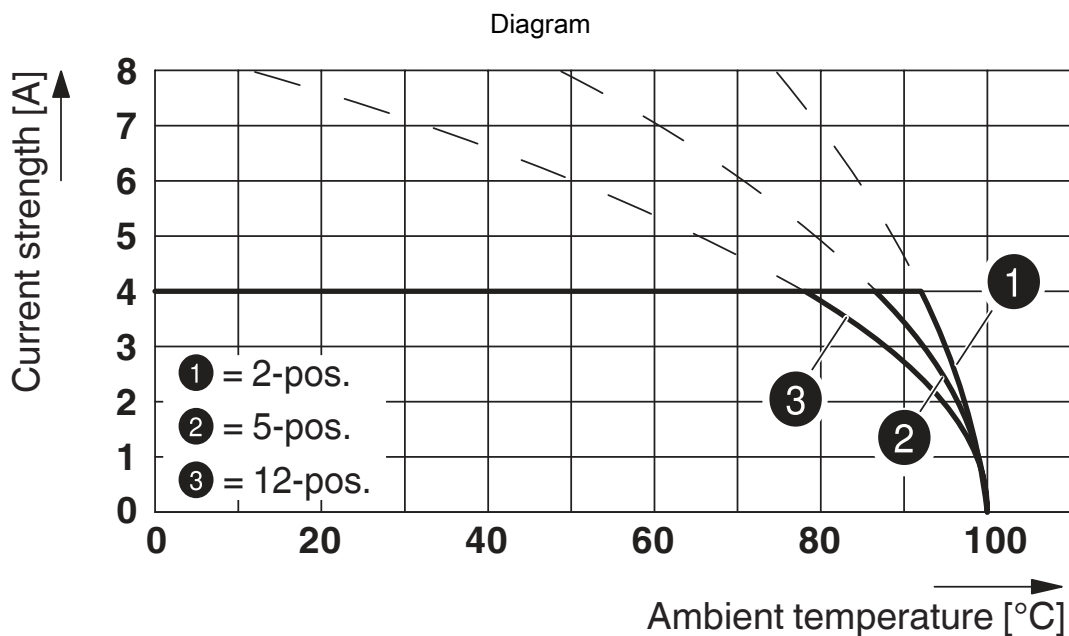
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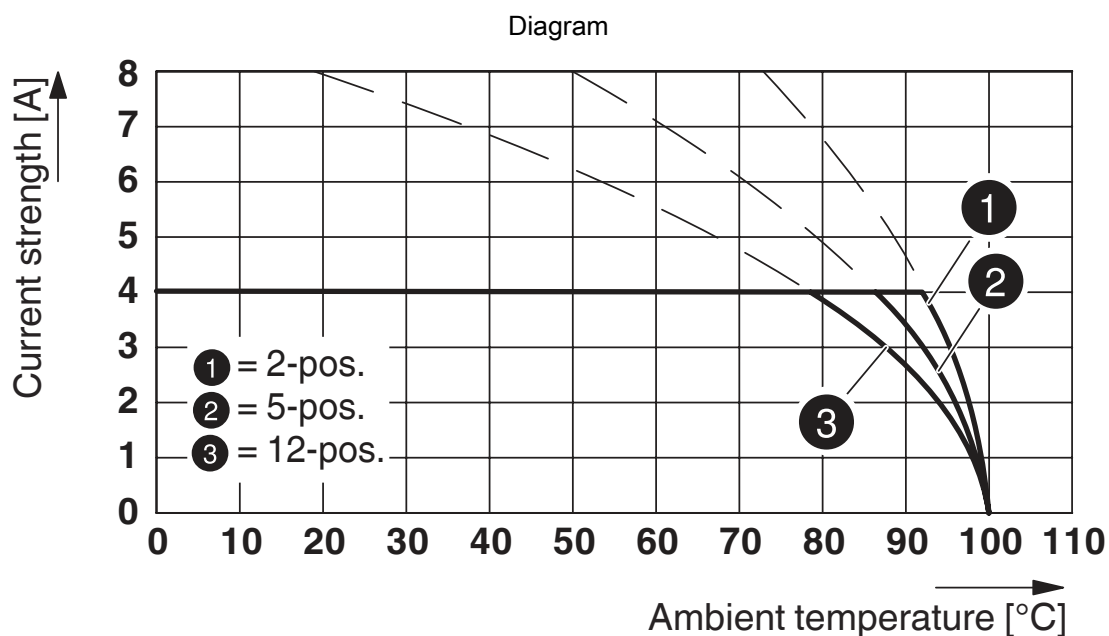
Air clearances and creepage distances |

Specification	IEC 60664-1:1992-10 + A1:2000-02 + A2:2002-05
Insulating material group	I
Comparative tracking index (IEC 60112)	CTI 600
Rated insulation voltage (III/3)	100 V
Rated surge voltage (III/3)	1.5 kV
minimum clearance value - non-homogenous field (III/3)	0.8 mm
minimum creepage distance (III/3)	1.8 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

Drawings



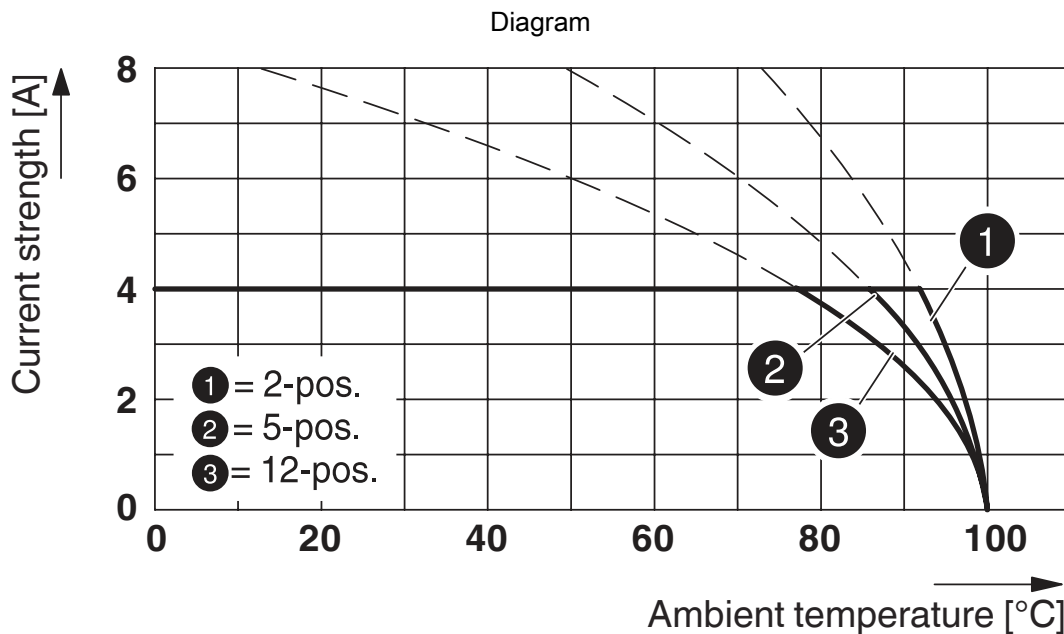
Type: FK-MC 0,5/...-ST-2,5 with MCV 0,5/...-G-2,5 THT



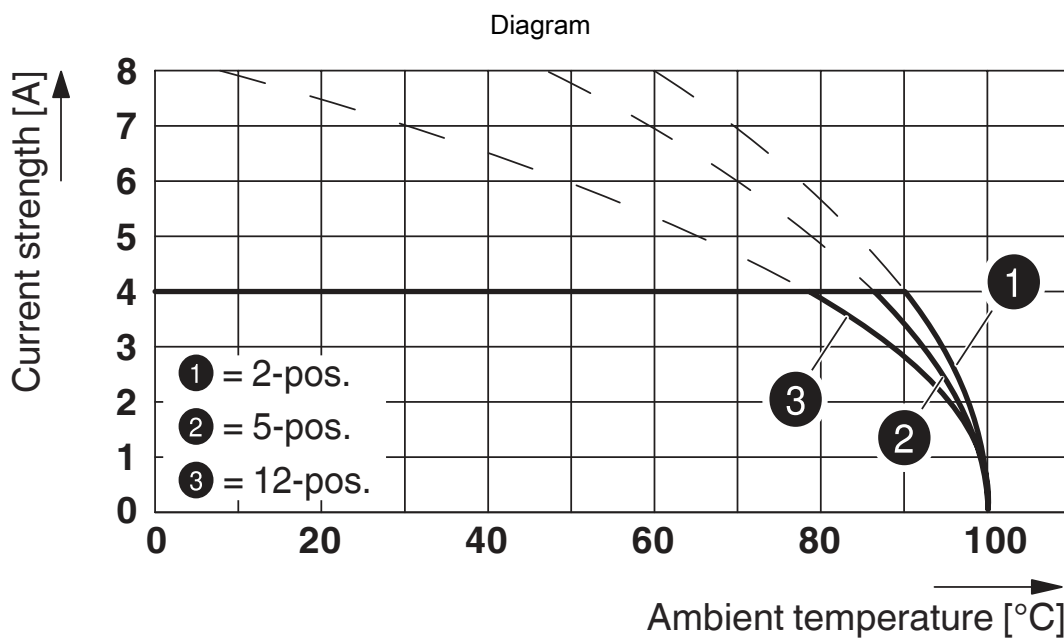
Type: FK-MC 0,5/...-ST-2,5 with MCV 0,5/...-G-2,5

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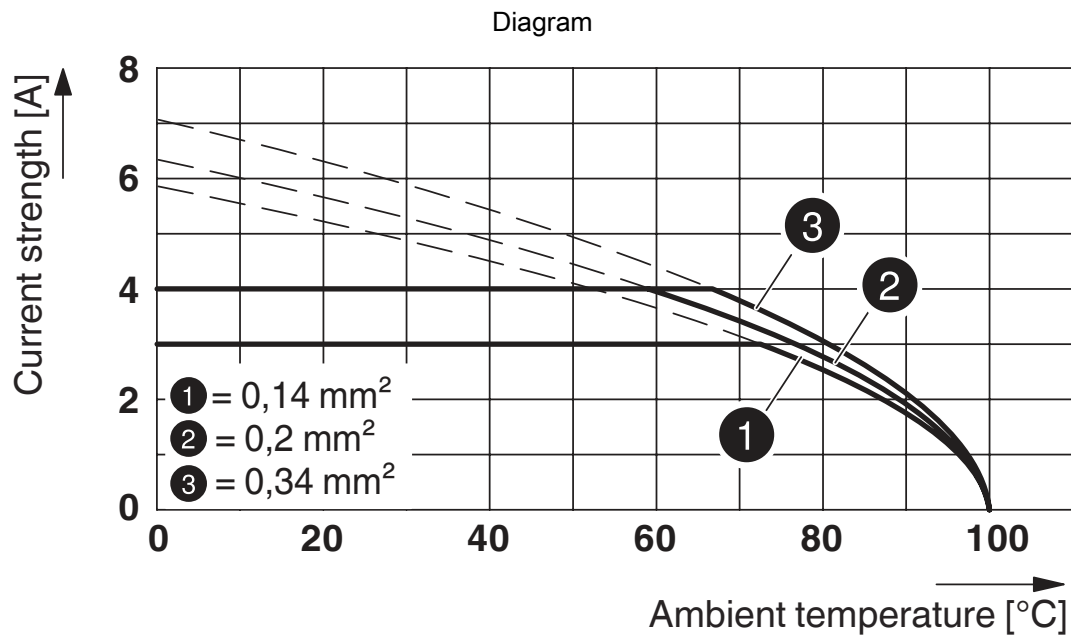
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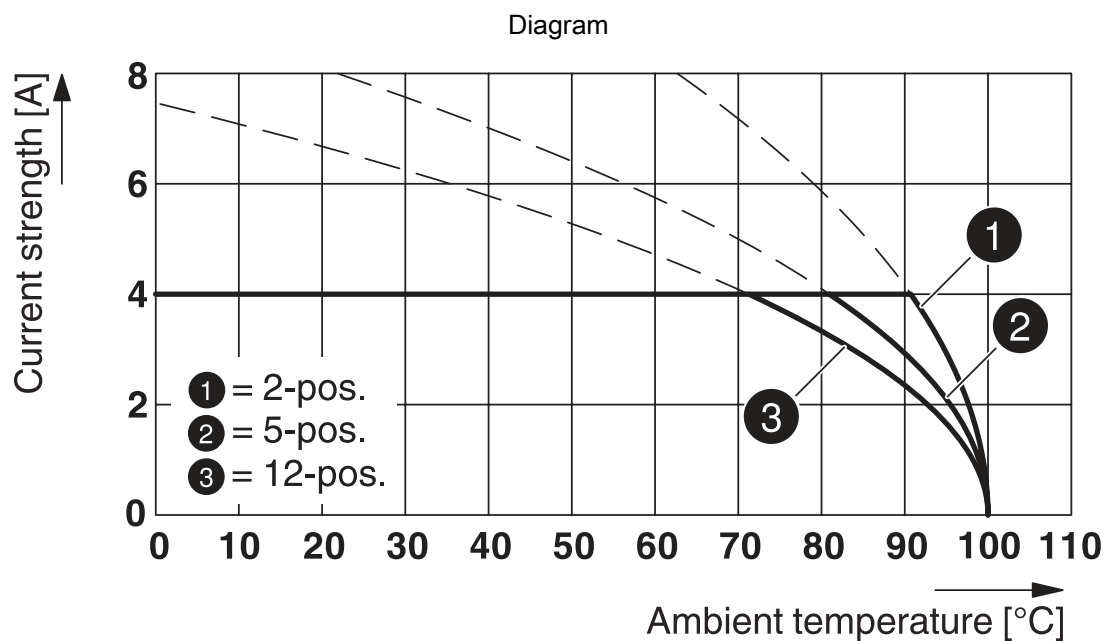
Type: FK-MC 0,5/...-ST-2,5 with MC 0,5/...-G-2,5 THT

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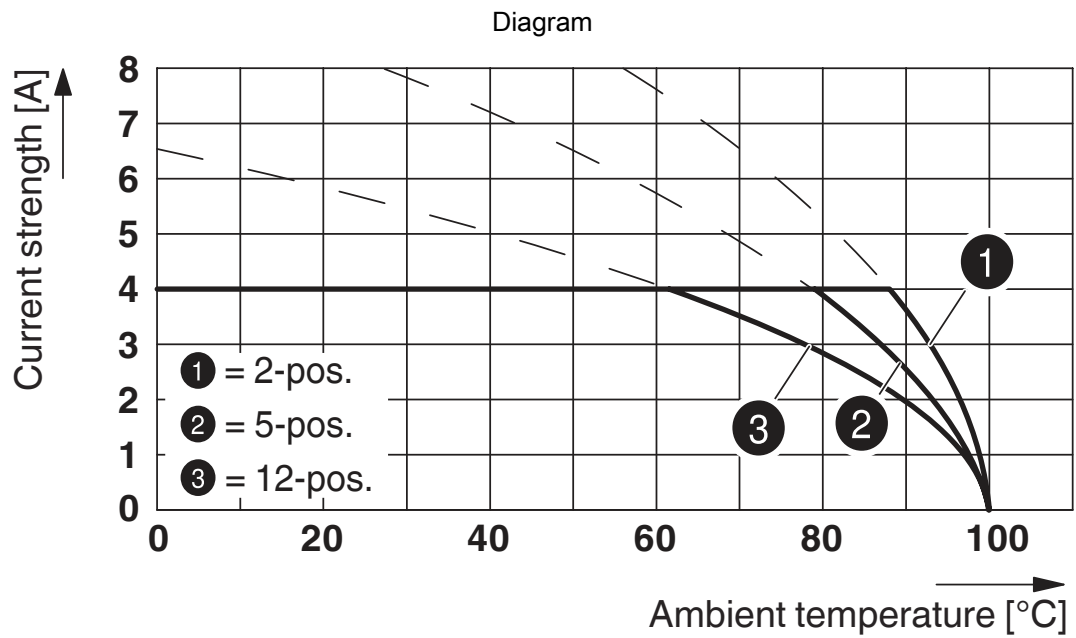
Type: FK-MC 0,5/...-ST-2,5 with MC 0,5/...-G-2,5



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

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

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Approvals

To download certificates, visit the product detail page: <https://www.phoenixcontact.com/us/products/1799060>

 IECEE CB Scheme Approval ID: DE1-56068-B1B2				
	Nominal voltage U_N	Nominal current I_N	Cross section AWG	Cross section mm^2
	100 V	4 A	-	0.2 - 0.5

 EAC Approval ID: B.01687				
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 cULus Recognized Approval ID: E60425-19990913				
	Nominal voltage U_N	Nominal current I_N	Cross section AWG	Cross section mm^2
Use group B				
	125 V	4 A	28 - 20	-

 VDE Gutachten mit Fertigungsüberwachung Approval ID: 40013394				
	Nominal voltage U_N	Nominal current I_N	Cross section AWG	Cross section mm^2
	100 V	4 A	-	0.2 - 0.5

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Classifications

ECLASS

ECLASS-11.0	27460202
ECLASS-12.0	27460202
ECLASS-13.0	27460202

ETIM

ETIM 8.0	EC002638
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UNSPSC

UNSPSC 21.0	39121400
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Environmental product compliance

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

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