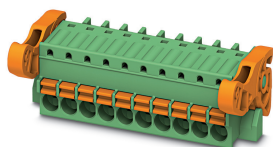


Printed-circuit board connector - FK-MCP 1,5/ 9-ST-3,5-LR - 1817301

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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: Tin, type of contact: Female connector, number of potentials: 9, Number of rows: 1, Number of positions per row: 9, number of connections: 9, product range: FK-MCP 1,5/...-ST-LR, pitch: 3.5 mm, connection method: Push-in spring connection, conductor/PCB connection direction: 0 °, plug-in system: MINI COMBICON, Locking: Snap-in locking, mounting: Lock & Release ejector lever, type of packaging: packed in cardboard


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
- ✓ Automatic locking and intuitive release through Lock and Release operating lever in contrasting color
- ✓ Quick and convenient testing using integrated test option



Key Commercial Data

Packing unit	50 pc
GTIN	 4 0 4 6 3 5 6 7 5 6 6 4 8
GTIN	4046356756648

Technical data

Item properties

Brief article description	PCB connector
Connector system	MINI COMBICON
Type of contact	Female connector
Range of articles	FK-MCP 1,5/...-ST-LR
Pitch	3.5 mm
Number of positions	9
Locking	Lock & Release ejector lever
Number of levels	1
Number of connections	9
Number of potentials	9

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Technical data

Electrical parameters

Nominal current	8 A
Nom. voltage	160 V
Rated voltage (III/3)	160 V
Rated voltage (III/2)	160 V
Rated 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

Connection capacity

Connection method	Push-in spring connection
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 ... 0.5 mm ²
Cylindrical gauge a x b / diameter	2.0 mm x 1.2 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
	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
Recommended crimping pliers	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
	Cross section: 0.75 mm ² ; Length: 10 mm

Flange specifications

Type of locking	Snap-in locking
Mounting flange	Lock & Release ejector lever

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

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Technical data

Material data - contact

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

Housing color	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

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

Dimensions for the product

Caption	Schematische Abbildung - weitere Details siehe Produktfamilienzeichnung im Download Center
Length [l]	27.4 mm
Width [w]	38.54 mm
Height [h]	14.22 mm
Pitch	3.5 mm
Height (without solder pin)	14.22 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 ... 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

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Technical data

Termination and connection method

	Test passed
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Pull-out test

Pull-out test	IEC 60999-1:1999-11
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 inspection	IEC 60512-1-1:2002-02
Dimension check	IEC 60512-1-2:2002-02
Resistance of inscriptions	IEC 60068-2-70:1995-12
Insertion and withdrawal force	IEC 60512-13-2:2006-02
No. of cycles	25
Insertion strength per pos. approx.	7 N
Withdraw strength per pos. approx.	5 N
Polarization and coding	IEC 60512-13-5:2006-02
Contact holder in insert	IEC 60512-15-1:2008-05
Test force per pos.	26 N

Air clearances and creepage distances

Clearances and creepage distances	IEC 60664-1:2007-04
Specification	IEC 60664-1:2007-04
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)	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
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Current carrying capacity / derating curves

Caption	Type: FK-MCP 1,5/...-ST-3,5-LR with MC 1,5/...-GF-3,5-LR
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Mechanical tests (A)

Test specification	IEC 61984
Insertion strength per pos. approx.	7 N
Withdraw strength per pos. approx.	5 N

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Technical data

Mechanical tests (A)

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

Thermal tests (C)

Specification	IEC 60512-5-1:2002-02
Number of positions	20
Upper limiting temperature requirements <100 °C	Test passed

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)

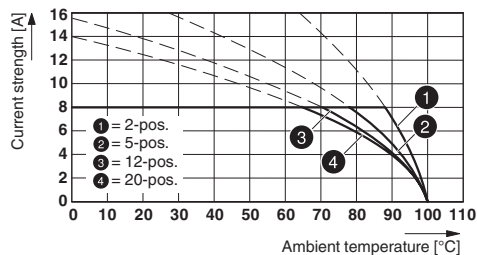
Specification	IEC 61984:2008-10
Result, degree of protection, IP code	Finger safety with IP20 test finger

Environmental Product Compliance

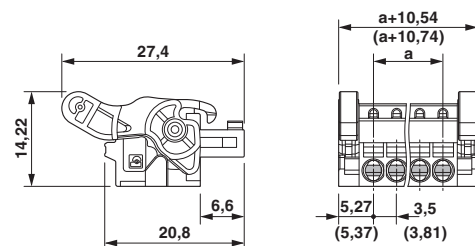
China RoHS	Environmentally friendly use period: unlimited = EFUP-e
	No hazardous substances above threshold values

Drawings

Diagram



Dimensional drawing



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

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Classifications

eCl@ss

eCl@ss 10.0.1	27440309
eCl@ss 11.0	27460202
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 9.0	27440309

ETIM

ETIM 3.0	EC001121
ETIM 4.0	EC002638
ETIM 6.0	EC002638
ETIM 7.0	EC002638

UNSPSC

UNSPSC 6.01	30211810
UNSPSC 7.0901	39121409
UNSPSC 11	39121409
UNSPSC 12.01	39121409
UNSPSC 13.2	39121409
UNSPSC 18.0	39121409
UNSPSC 19.0	39121409
UNSPSC 20.0	39121409
UNSPSC 21.0	39121409

Approvals

Approvals

Approvals

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

Ex Approvals

Approval details

Printed-circuit board connector - FK-MCP 1,5/ 9-ST-3,5-LR - 1817301

Approvals

VDE Gutachten mit Fertigungsüberwachung		http://www2.vde.com/de/Institut/Online-Service/ VDE-gepruefteProdukte/Seiten/Online-Suche.aspx	40011723
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/	DE1-60987-B1B2
Nominal voltage UN		160 V	
Nominal current IN		8 A	
mm ² /AWG/kcmil		0.2-1.5	

EAC		B.01687
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cULus Recognized		http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm	E60425-19920306
Nominal voltage UN		300 V	
Nominal current IN		8 A	
mm ² /AWG/kcmil		28-16	

Accessories

Accessories

Crimping tool

Crimping pliers - CRIMPFOX 6 - 1212034



Crimping pliers, for ferrules without insulating collar according to DIN 46228 Part 1 and ferrules with insulating collar according to DIN 46228 Part 4, 0.25 mm² ... 6.0 mm², lateral entry, trapezoidal crimp

Labeled terminal marker

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Accessories

Marker card - SK 3,5/2,8:FORTL.ZAHLEN - 0804073



Marker card, Card, white, labeled, horizontal: consecutive numbers 1 ... 10, 11 ... 20, etc. up to 91 ... 99, mounting type: adhesive, for terminal block width: 3.5 mm, lettering field size: 3.5 x 2.8 mm

Screwdriver tools

Screwdriver - SZS 0,4X2,5 VDE - 1205037



Screwdriver, slot-headed, VDE insulated, size: 0.4 x 2.5 x 80 mm, 2-component grip, with non-slip grip

Terminal marking

Marker card - SK U/2,8 WH:UNBEDRUCKT - 0803883



Marker card, Sheet, white, unlabeled, can be labeled with: PLOTMARK, CMS-P1-PLOTTER, Office printing systems, mounting type: adhesive, for terminal block width: 210 mm, lettering field size: 186 x 2.8 mm, Number of individual labels: 3600

Additional products

Printed-circuit board connector - MC 1,5/ 9-GF-3,5-LR - 1817686



PCB header, nominal cross section: 1.5 mm², color: green, nominal current: 8 A, rated voltage (III/2): 160 V, contact surface: Tin, type of contact: Male connector, number of potentials: 9, Number of rows: 1, Number of positions per row: 9, number of connections: 9, product range: MC 1,5/..-GF-LR, pitch: 3.5 mm, mounting: Wave soldering, pin layout: Linear pinning, solder pin [P]: 3.4 mm, plug-in system: MINI COMBICON, Pin connector pattern alignment: Standard, Locking: Snap-in locking, mounting: Lock & release threaded flange, type of packaging: packed in cardboard

Feed-through header - MCV 1,5/ 9-GF-3,5-LR - 1818067



PCB header, nominal cross section: 1.5 mm², color: green, nominal current: 8 A, rated voltage (III/2): 160 V, contact surface: Tin, type of contact: Male connector, number of potentials: 9, Number of rows: 1, Number of positions per row: 9, number of connections: 9, product range: MCV 1,5/..-GF-LR, pitch: 3.5 mm, mounting: Wave soldering, pin layout: Linear pinning, solder pin [P]: 3.4 mm, plug-in system: MINI COMBICON, Pin connector pattern alignment: Standard, Locking: Snap-in locking, mounting: Lock & release threaded flange, type of packaging: packed in cardboard

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