Printed-circuit board connector - FK-MCP 1,5/ 2-ST-3,81 - 1851041

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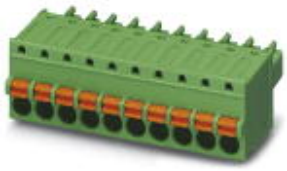
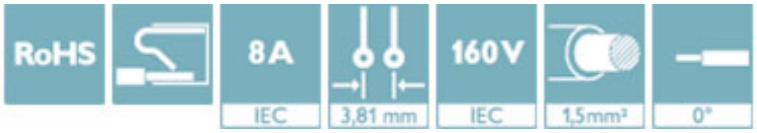
PCB connector, nominal current: 8 A, rated voltage (III/2): 160 V, number of positions: 2, pitch: 3.81 mm, connection method: Push-in spring connection, color: green, contact surface: Tin



The figure shows a 10-position version of the product

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
Minimum order quantity	50 pc
GTIN	4 017918 109967
GTIN	4017918109967
Weight per Piece (excluding packing)	0.002 kg
Custom tariff number	85366990
Country of origin	Germany

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/..-ST
Pitch	3.81 mm
Number of positions	2

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Technical data

Item properties

Connection method	Push-in spring connection
Locking	without
Number of levels	1

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 mm² ... 1.5 mm²
Conductor cross section flexible	0.14 mm² ... 1.5 mm²
Conductor cross section AWG / kcmil	26 ... 16
Conductor cross section flexible, with ferrule without plastic sleeve	0.25 mm² ... 1.5 mm²
Conductor cross section, flexible, with ferrule, with plastic sleeve	0.25 mm² ... 0.75 mm²
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 mm²; Length: 7 mm ... 9 mm
	Cross section: 0.34 mm²; Length: 7 mm ... 9 mm
	Cross section: 0.5 mm²; Length: 8 mm ... 9 mm
	Cross section: 0.75 mm²; Length: 8 mm ... 9 mm
	Cross section: 1 mm²; Length: 8 mm ... 9 mm
	Cross section: 1.5 mm²; Length: 8 mm ... 9 mm
Recommended crimping pliers	1212034 CRIMPFOX 6
Ferrules with insulating collar, according to DIN 46228-4	Cross section: 0.34 mm²; Length: 8 mm ... 9 mm
	Cross section: 0.5 mm²; 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
Glow wire flammability index GWFI according to EN 60695-2-12	850

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Technical data

Material data - housing

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

Length [l]	21 mm
Width [w]	8.41 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 mm² / solid / > 10 N
	0.14 mm² / flexible / > 10 N
	1.5 mm² / solid / > 40 N
	1.5 mm² / flexible / > 40 N

Mechanical tests according to standard

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Technical data

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.	9 N
Withdraw strength per pos. approx.	7 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.	31 N

Air clearances and creepage distances

Insulating material group	I
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

Electrical tests - Function

Specification	IEC 60999-1:1999-11

Temperature cycles

Specification	IEC 60999-1:1999-11
Temperature cycles	192

Current carrying capacity / derating curves

Specification	IEC 61984

Mechanical tests (A)

Test specification	IEC 61984
Insertion strength per pos. approx.	9 N
Withdraw strength per pos. approx.	7 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	1.6 mΩ

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Technical data

Durability tests (B)

Insertion/withdrawal cycles	25
Contact resistance R_2	1.6 mΩ
Impulse withstand voltage at sea level	2.95 kV
Power-frequency withstand voltage	1.39 kV
Insulation resistance, neighboring positions	> 50 GΩ

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)

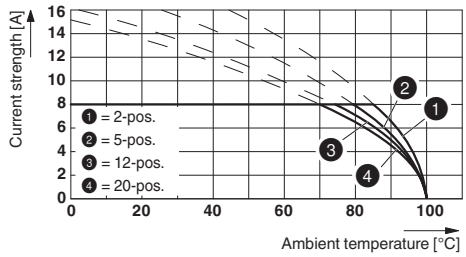
Specification	IEC 61984:2008-10
Result, degree of protection, IP code	Finger safety with IP20 test finger

Environmental Product Compliance

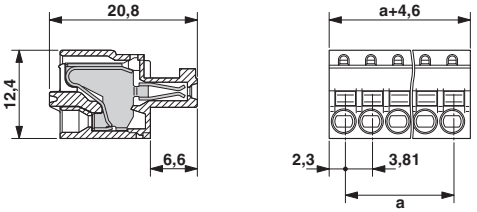
China RoHS	Environmentally friendly use period: unlimited = EFUP-e
	No hazardous substances above threshold values

Drawings

Diagram



Dimensional drawing



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

Classifications

eCl@ss

eCl@ss 4.0	272607xx
eCl@ss 4.1	27260701
eCl@ss 5.0	27260701
eCl@ss 5.1	27260700
eCl@ss 6.0	27260700

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Classifications

eCl@ss

eCl@ss 7.0	27440309
eCl@ss 8.0	27440309
eCl@ss 9.0	27440309

ETIM

ETIM 3.0	EC001121
ETIM 4.0	EC002638
ETIM 5.0	EC002638
ETIM 6.0	EC002638

UNSPSC

UNSPSC 6.01	30211810
UNSPSC 7.0901	39121409
UNSPSC 11	39121409
UNSPSC 12.01	39121409
UNSPSC 13.2	39121409

Approvals

Approvals

Approvals

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

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
mm²/AWG/kcmil	28-16

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Approvals

IECEE CB Scheme	CB scheme	http://www.iecee.org/	DE1-60987-B1B2

Nominal voltage UN	160 V
Nominal current IN	8 A
mm²/AWG/kcmil	0.2-1.5

VDE Gutachten mit Fertigungsüberwachung	VDE	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
mm²/AWG/kcmil	0.2-1.5

EAC	EAC	B.01742

cULus Recognized	cULus	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
mm²/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 3,81/2,8:FORTL.ZAHLEN - 0804109

Marker card, Card, white, labeled, Horizontal: consecutive numbers 1 ... 10, 11 ... 20, etc. up to 91 ... (99)100, mounting type: adhesive, for terminal block width: 3.81 mm, lettering field size: 3.81 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

Test plug terminal block

Test plugs - MPS-MT 1-S - 1944372

Test plug, consisting of 1.0 mm Ø test pin and 2.0 mm Ø socket

Additional products

Feed-through header - MCV 1,5/ 2-G-3,81 P14 THR - 1707007

PCB headers, nominal current: 8 A, rated voltage (III/2): 160 V, number of positions: 2, pitch: 3.81 mm, color: black, contact surface: Tin, mounting: THR soldering, User information and design recommendations for through hole reflow technology can be found under “Downloads”

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Accessories

Feed-through header - MCV 1,5/ 2-G-3,81 P26 THR - 1707421

PCB headers, nominal current: 8 A, rated voltage (III/2): 160 V, number of positions: 2, pitch: 3.81 mm, color: black, contact surface: Tin, mounting: THR soldering, User information and design recommendations for through hole reflow technology can be found under “Downloads”

Header - MCV 1,5/ 2-G-3,81 P26 THRR32 - 1713554

PCB headers, nominal current: 8 A, rated voltage (III/2): 160 V, number of positions: 2, pitch: 3.81 mm, color: black, contact surface: Tin, mounting: THR soldering, User information and design recommendations for through hole reflow technology can be found under “Downloads”

Printed-circuit board connector - MC 1,5/ 2-G-3,81 P20 THRR32 - 1782572

PCB headers, nominal current: 8 A, rated voltage (III/2): 160 V, number of positions: 2, pitch: 3.81 mm, color: black, contact surface: Tin, mounting: THR soldering, User information and design recommendations for through hole reflow technology can be found under “Downloads”

Printed-circuit board connector - MC 1,5/ 2-G-3,81 - 1803277

PCB headers, nominal current: 8 A, rated voltage (III/2): 160 V, number of positions: 2, pitch: 3.81 mm, color: green, contact surface: Tin, mounting: Wave soldering

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Printed-circuit board connector - MCV 1,5/ 2-G-3,81 - 1803426

PCB headers, nominal current: 8 A, rated voltage (III/2): 160 V, number of positions: 2, pitch: 3.81 mm, color: green, contact surface: Tin, mounting: Wave soldering

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Accessories

Printed-circuit board connector - SMC 1,5/ 2-G-3,81 - 1827279

PCB headers, nominal current: 8 A, rated voltage (III/2): 160 V, number of positions: 2, pitch: 3.81 mm, color: green, contact surface: Tin, mounting: Wave soldering

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Feed-through header - MCD 1,5/ 2-G-3,81 - 1829950

PCB headers, nominal current: 8 A, rated voltage (III/2): 160 V, number of positions: 2, pitch: 3.81 mm, color: green, contact surface: Tin, mounting: Wave soldering, In combination with MCV plug components, both an MCVW and an MCVR plug must be used.

Feed-through header - MCDV 1,5/ 2-G-3,81 - 1830402

PCB headers, nominal current: 8 A, rated voltage (III/2): 160 V, number of positions: 2, pitch: 3.81 mm, color: green, contact surface: Tin, mounting: Wave soldering, In combination with MCV plug components, both an MCVW and an MCVR plug must be used.

Feed-through header - MCVDU 1,5/ 2-G-3,81 - 1837450

PCB headers, nominal current: 8 A, rated voltage (III/2): 160 V, number of positions: 2, pitch: 3.81 mm, color: green, contact surface: Tin, mounting: Wave soldering

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Printed-circuit board connector - MCD 1,5/ 2-G1-3,81 - 1843075

PCB headers, nominal current: 8 A, rated voltage (III/2): 160 V, number of positions: 2, pitch: 3.81 mm, color: green, contact surface: Tin, mounting: Wave soldering, In combination with MCV plug components, both an MCVW and an MCVR plug must be used.

Printed-circuit board connector - FK-MCP 1,5/ 2-ST-3,81 - 1851041

Accessories

Feed-through header - MCDV 1,5/ 2-G1-3,81 - 1847725

PCB headers, nominal current: 8 A, rated voltage (III/2): 160 V, number of positions: 2, pitch: 3.81 mm, color: green, contact surface: Tin, mounting: Wave soldering, In combination with MCV plug components, both an MCVW and an MCVR plug must be used.

Feed-through header - EMCV 1,5/ 2-G-3,81 - 1860647

PCB headers, nominal current: 8 A, rated voltage (III/2): 160 V, number of positions: 2, pitch: 3.81 mm, color: green, contact surface: Tin, mounting: Press-in technology

Feed-through header - EMC 1,5/ 2-G-3,81 - 1897801

PCB headers, nominal current: 8 A, rated voltage (III/2): 160 V, number of positions: 2, pitch: 3.81 mm, color: green, contact surface: Tin, mounting: Press-in technology

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