

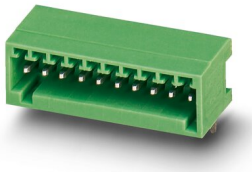
PCB header - MC 0,5/ 4-G-2,5



1881464

<https://www.phoenixcontact.com/us/products/1881464>

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PCB headers, nominal cross section: 0.5 mm², color: green, nominal current: 4 A, rated voltage (III/2): 160 V, contact surface: Tin, type of contact: Male connector, number of potentials: 4, number of rows: 1, number of positions: 4, number of connections: 4, product range: MC 0,5/..-G, pitch: 2.5 mm, mounting: Wave soldering, conductor/PCB connection direction: 0 °, pin layout: Linear pinning, solder pin [P]: 3.8 mm, number of solder pins per potential: 1, plug-in system: COMBICON FK-MC 0,5, Pin connector pattern alignment: Standard, locking: without, mounting: without, type of packaging: packed in cardboard

Your advantages

- Well-known mounting principle allows worldwide use

Commercial Data

Item number	1881464
Packing unit	1 pc
Minimum order quantity	50 pc
Sales Key	A01
Product Key	AAASAA
Catalog Page	Page 172 (C-1-2013)
GTIN	4017918156701
Weight per Piece (including packing)	1.077 g
Weight per Piece (excluding packing)	0.9 g
Customs tariff number	85366930
Country of origin	DE

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Technical Data

Product properties

Type	Standard
Product line	COMBICON Connectors XS
Product type	PCB headers
Number of positions	4
Pitch	2.5 mm
Number of connections	4
Number of rows	1
Mounting flange	without
Number of potentials	4
Pin layout	Linear pinning
Solder pins per potential	1

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)	80 V
Rated surge voltage (III/3)	1.5 kV
Rated voltage (III/2)	160 V
Rated surge voltage (III/2)	2.5 kV

Mounting

Mounting type	Wave soldering
Pin layout	Linear pinning

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	Tin-plated
Metal surface contact area (top layer)	Tin (3 - 5 μm Sn)
Metal surface contact area (middle layer)	Nickel (1 - 3 μm Ni)
Metal surface soldering area (top layer)	Tin (3 - 5 μm Sn)
Metal surface soldering area (middle layer)	Nickel (1 - 3 μm Ni)

Material data - housing

Housing color	green (6021)
Insulating material	PA
Insulating material group	I

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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

Dimensions

Dimensional drawing	
Pitch	2.5 mm
Width [w]	11.9 mm
Height [h]	11.9 mm
Length [l]	10.1 mm
Installed height	8.1 mm
Solder pin length [P]	3.8 mm

Mechanical tests

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

Contact holder in insert

Specification	IEC 60512-15-1:2008-05
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Contact holder in insert Requirements >20 N	Test passed
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
Dimension check	
Specification	IEC 60512-1-2:2002-02
Result	Test passed

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 MΩ

Temperature cycles

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

Air clearances and creepage distances |

Specification	IEC 60664-1:2007-04
Insulating material group	I
Comparative tracking index (IEC 60112)	CTI 600
Rated insulation voltage (III/3)	80 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)	1.7 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

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minimum creepage distance (II/2)	1.6 mm
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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 - 60.1 Hz)
Sweep speed	5g (60.1 - 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

Packaging specifications

Type of packaging	packed in cardboard
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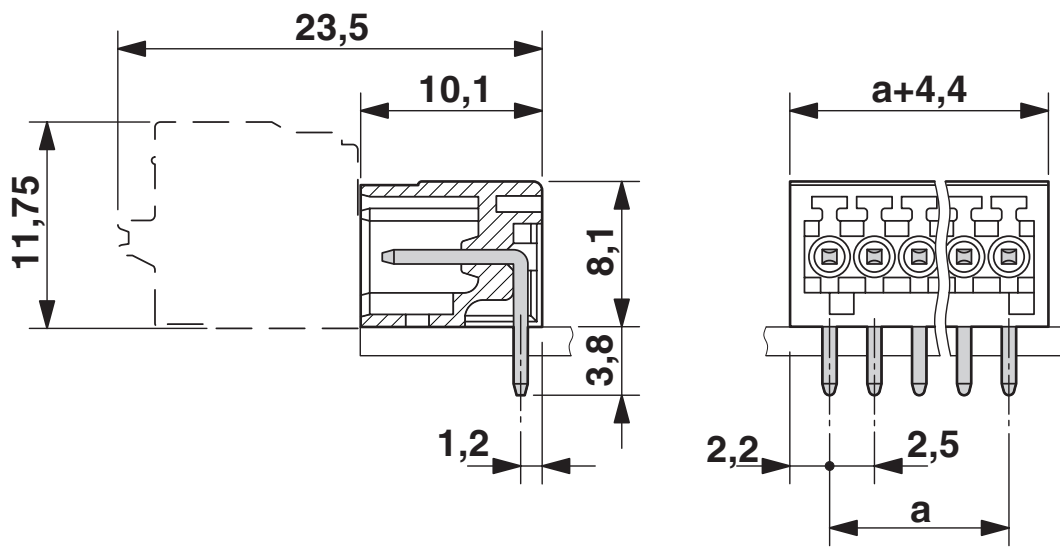
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Drawings

Dimensional drawing



Diagram



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

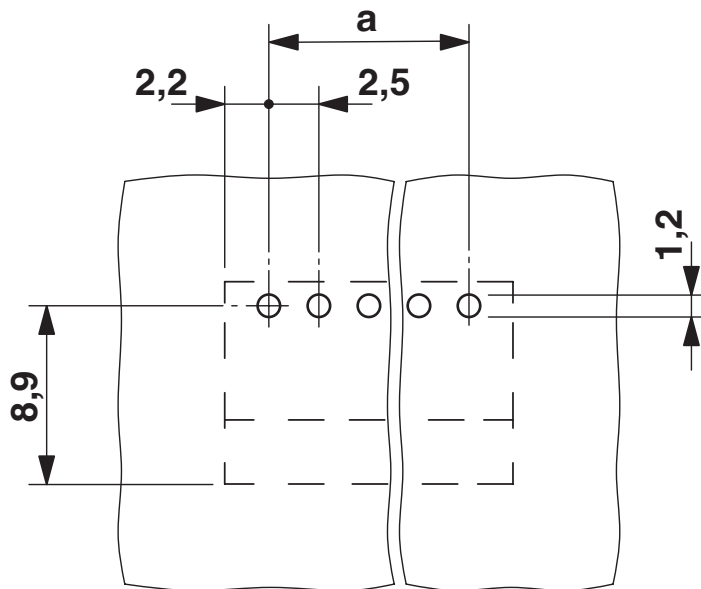
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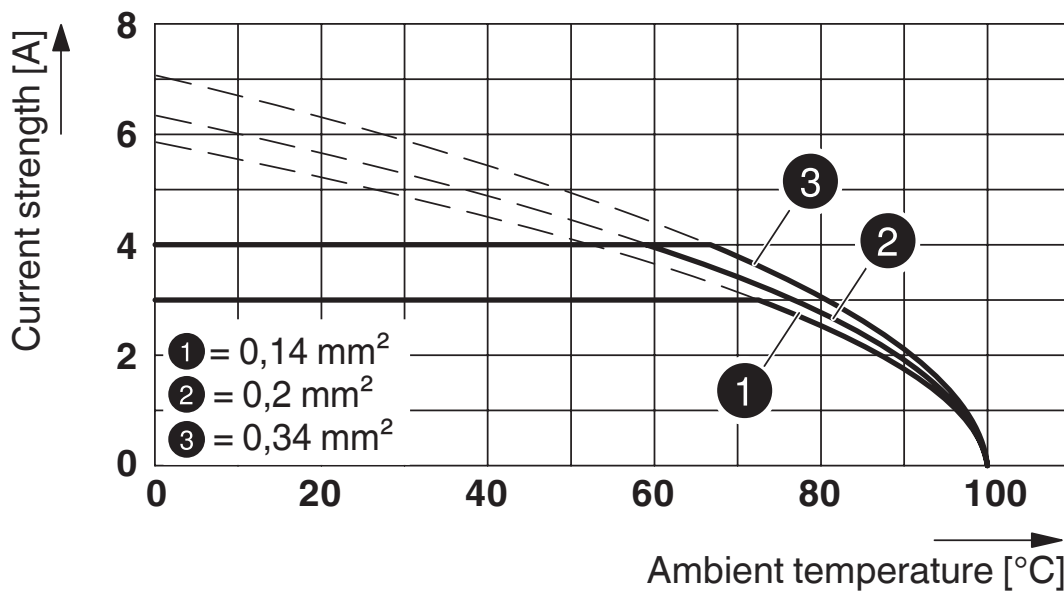
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Drilling plan/solder pad geometry



Diagram



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

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Approvals

 IECEE CB Scheme Approval ID: DE1-56068-B1B2				
	Nominal Voltage U_N	Nominal Current I_N	Cross Section AWG	Cross Section mm^2
	80 V	4 A	-	-

 EAC Approval ID: B.01687				
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 cULus Recognized Approval ID: E60425-19930913				
	Nominal Voltage U_N	Nominal Current I_N	Cross Section AWG	Cross Section mm^2
Use group B	125 V	4 A	-	-

CCA Approval ID: CCA/ DE1 34250				
	Nominal Voltage U_N	Nominal Current I_N	Cross Section AWG	Cross Section mm^2
	80 V	4 A	-	-

 VDE report with production monitoring Approval ID: 40013394				
	Nominal Voltage U_N	Nominal Current I_N	Cross Section AWG	Cross Section mm^2
	80 V	4 A	-	-

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Classifications

ECLASS

ECLASS-9.0	27440402
ECLASS-10.0.1	27440402
ECLASS-11.0	27460201

ETIM

ETIM 8.0	EC002637
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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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Accessories

Coding profile

Coding profile - CP-MC 0,5 - 1881435

<https://www.phoenixcontact.com/us/products/1881435>

Coding profile, is inserted into the groove in the header, red insulating material

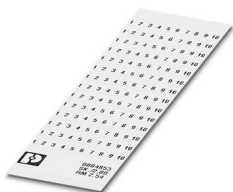


Marker card

Marker card - SK 2,54/2,8:FORTL.ZAHLEN - 0804853

<https://www.phoenixcontact.com/us/products/0804853>

Marker card, white, labeled, horizontal: consecutive numbers 1 ... 10, 11 ... 20, etc. up to 91 ... 99, mounting type: adhesive, for terminal block width: 2.54 mm, lettering field size: 2.54 x 2.8 mm



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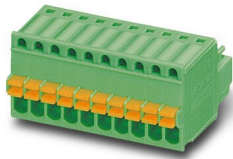
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PCB connector

PCB connector - FK-MC 0,5/ 4-ST-2,5 - 1881341

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

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Phoenix Contact USA
586 Fulling Mill Road
Middletown, PA 17057, United States
(+717) 944-1300
info@phoenixcon.com