PCB header - MCD 0,5/12-G1-2,5 - 1894901

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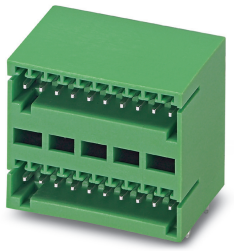
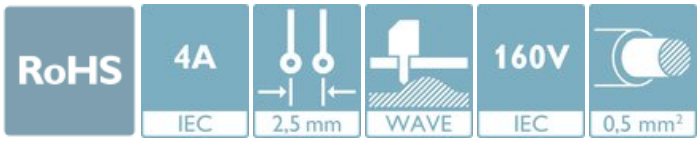


The figure shows a 10-pos. version with 20 contacts

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: 24, number of rows: 2, number of positions: 12, number of connections: 24, product range: MCD 0,5/..-G1, pitch: 2.5 mm, mounting: Wave soldering, pin layout: Linear pinning, solder pin [P]: 3.8 mm, number of solder pins per potential: 1, plug-in system: MICRO 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
- Conductor connection on several levels enables higher contact density



Key Commercial Data

Packing unit	50 pc
GTIN	4 017918 162177
GTIN	4017918162177

Technical data

Item properties

Brief article description	PCB header
Connector system	MICRO COMBICON - FK-MC 0,5
Type of contact	Male connector
Range of articles	MCD 0,5/..-G1
Pitch	2.5 mm
Number of positions	12
Mounting type	Wave soldering
Pin layout	Linear pinning
Locking	without
Number of rows	2
Number of connections	24
Number of potentials	24

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Technical data

Item properties

Pin connector pattern alignment	Standard

Electrical parameters

Nominal current	4 A
Nom. voltage	160 V
Rated voltage (III/3)	80 V
Rated voltage (III/2)	160 V
Rated 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

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
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

Flange specifications

Type of locking	without

Dimensions for the product

Caption	Schematische Abbildung - weitere Details siehe Produktfamilienzeichnung im Download Center
Length [l]	17.5 mm
Width [w]	31.9 mm
Height [h]	25.7 mm
Pitch	2.5 mm
Height (without solder pin)	21.9 mm
Solder pin [P]	3.8 mm

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Technical data

Dimensions for the product

Pin dimensions	0.8 x 0.8 mm

Dimensions for PCB design

Hole diameter	1.2 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
Relative humidity (storage/transport)	30 % ... 70 %
Ambient temperature (assembly)	-5 °C ... 100 °C
Ambient temperature (operation)	-40 °C ... 100 °C (dependent on the derating curve)

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)	0.8 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)	1.7 mm
Minimum creepage distance value (III/2)	0.8 mm
Minimum creepage distance value (II/2)	1.6 mm

Mechanical tests (A)

Test specification	IEC 61984
Insertion strength per pos. approx.	7 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	3 mΩ
Insertion/withdrawal cycles	25
Contact resistance R_2	4 mΩ
Impulse withstand voltage at sea level	1.75 kV
Insulation resistance, neighboring positions	10^{12} Ω

Thermal tests (C)

Specification	IEC 60512-5-1:2002-02
Number of positions	12

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Technical data

Thermal tests (C)

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	1.75 kV
Power-frequency withstand voltage	0.84 kV

Environmental and durability tests (E)

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

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)
Acceleration	5g (60.1 - 150 Hz)
Test duration per axis	2.5 h

Standards and Regulations

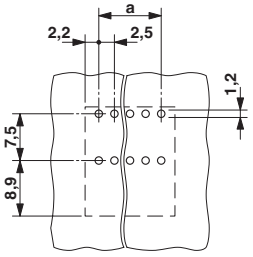
Connection in acc. with standard	EN-VDE

Environmental Product Compliance

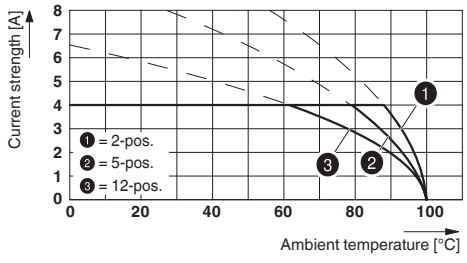
China RoHS	Environmentally friendly use period: unlimited = EFUP-e
	No hazardous substances above threshold values

Drawings

Drilling diagram



Diagram



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

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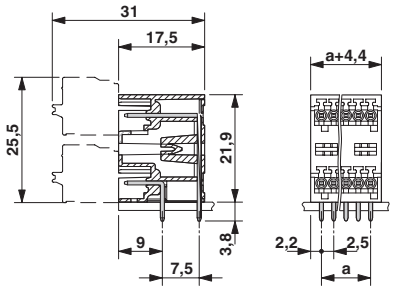
Dimensional drawing



Classifications

eCl@ss

eCl@ss 10.0.1	27440402
eCl@ss 11.0	27460201
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	27440402
eCl@ss 9.0	27440402

ETIM

ETIM 3.0	EC001121
ETIM 4.0	EC002637
ETIM 6.0	EC002637
ETIM 7.0	EC002637

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

PCB header - MCD 0,5/12-G1-2,5 - 1894901

Approvals

Approvals

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

Ex Approvals

Approval details

VDE Gutachten mit Fertigungsüberwachung	VDE	http://www2.vde.com/de/Institut/Online-Service/VDE-gepruefteProdukte/Seiten/Online-Suche.aspx	40013394

Nominal voltage UN	80 V
Nominal current IN	4 A

CCA	CCA/ DE1 34250
Nominal voltage UN	80 V
Nominal current IN	4 A

IECEE CB Scheme	CB scheme	http://www.iecee.org/	DE1-56068-B1B2

Nominal voltage UN	80 V
Nominal current IN	4 A

EAC	EAC	B.01687

cULus Recognized	c UL us	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

Accessories

Accessories

Coding element

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Accessories

Coding profile - CP-MC 0,5 - 1881435



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

Labeled terminal marker

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



Marker card, 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

Additional products

Printed-circuit board connector - FK-MC 0,5/12-ST-2,5 - 1881422



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: 12, number of rows: 1, number of positions: 12, number of connections: 12, 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: MICRO COMBICON - FK-MC 0,5, Locking: without, mounting: without, type of packaging: packed in cardboard

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