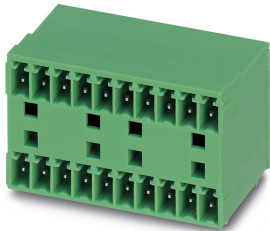


# Printed-circuit board connector - MCD 1,5/ 6-G1-3,81 OG - 1702367

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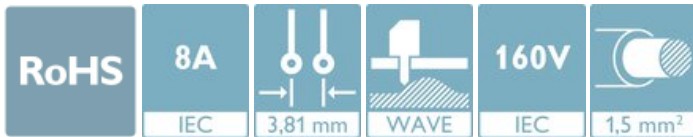


PCB header, nominal cross section: 1.5 mm<sup>2</sup>, color: orange, nominal current: 8 A, rated voltage (III/2): 160 V, contact surface: Tin, type of contact: Male connector, number of potentials: 12, Number of rows: 2, Number of positions per row: 6, number of connections: 12, product range: MCD 1,5/..-G1, pitch: 3.81 mm, mounting: Wave soldering, pin layout: Linear pinning, solder pin [P]: 3.5 mm, plug-in system: MINI COMBICON, Pin connector pattern alignment: Standard, Locking: without, mounting: without, type of packaging: packed in cardboard

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

## Your advantages

- Well-known mounting principle allows worldwide use
- Conductor connection on several levels enables higher contact density
- Maximum flexibility when it comes to device design – one header for connectors with different connection technologies



## Key Commercial Data

Packing unit	1 pc
Minimum order quantity	50 pc
GTIN	
GTIN	4046356584869
Weight per Piece (excluding packing)	7.600 g
Custom tariff number	85366930
Country of origin	Germany

## Technical data

### Item properties

Brief article description	Feed-through header
Connector system	MINI COMBICON
Type of contact	Male connector
Range of articles	MCD 1,5/..-G1

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## Technical data

### Item properties

Pitch	3.81 mm
Number of positions	6
Mounting type	Wave soldering
Pin layout	Linear pinning
Locking	without
Number of levels	2
Number of connections	12
Number of potentials	12
Pin connector pattern alignment	Standard

### 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

### 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	orange (2003)
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

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## Technical data

### Flange specifications

Type of locking	without
Mounting flange	without

### Dimensions for the product

Caption	Schematische Abbildung - weitere Details siehe Produktfamilienzeichnung im Download Center
Length [ l ]	21.9 mm
Width [ w ]	24.25 mm
Height [ h ]	26.5 mm
Pitch	3.81 mm
Height (without solder pin)	23 mm
Solder pin [P]	3.5 mm
Pin dimensions	0.8 x 0.8 mm

### Dimensions for PCB design

Hole diameter	1.2 mm
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### 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)

### 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)	1.5 mm
Minimum creepage distance value (II/2)	1.6 mm

### Mechanical tests (A)

Test specification	IEC 61984
Insertion strength per pos. approx.	8 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 <sub>1</sub>	1.2 mΩ
Insertion/withdrawal cycles	25
Contact resistance R <sub>2</sub>	1.3 mΩ
Contact resistance R <sub>2</sub> 2nd level	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	16
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 <sup>3</sup> SO <sub>2</sub> on 300 dm <sup>3</sup> /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

### 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
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### Environmental Product Compliance

China RoHS	Environmentally friendly use period: unlimited = EFUP-e
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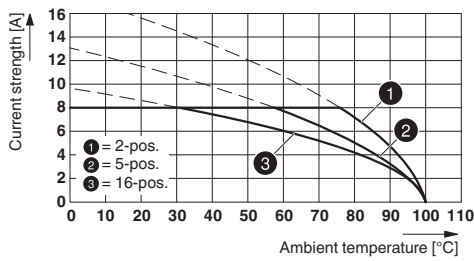
## Technical data

### Environmental Product Compliance

	No hazardous substances above threshold values
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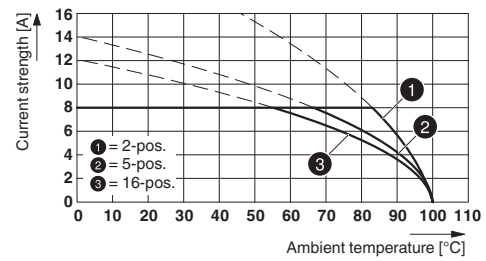
## Drawings

Diagram



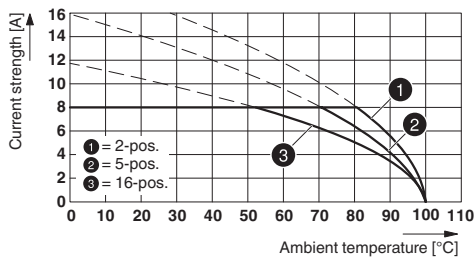
Type: MCV(W/R) 1,5/...-ST-3,81 with MCD 1,5/...-G1-3,81

Diagram



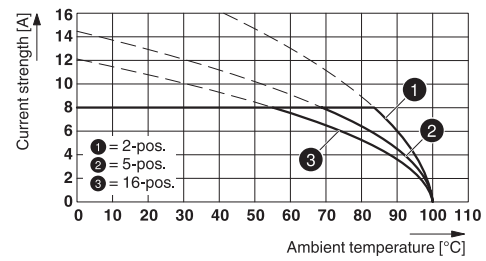
Type: FRONT-MC 1,5/...-ST-3,81 with MCD 1,5/...-G1-3,81

Diagram



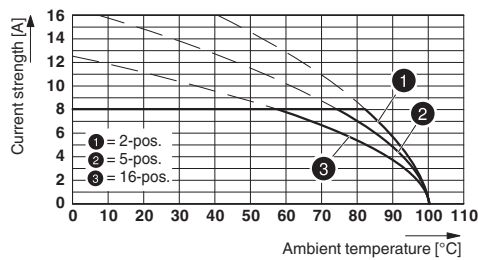
Type: FK-MCP 1,5/...-ST-3,81 with MCD 1,5/...-G1-3,81

Diagram



Type: FMC 1,5/...-ST-3,81 with MCD 1,5/...-G1-3,81

Diagram



Type: MC 1,5/...-ST-3,81 with MCD 1,5/...-G1-3,81

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## 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	EC002638
ETIM 4.0	EC002643
ETIM 6.0	EC002637
ETIM 7.0	EC002637

### UNSPSC

UNSPSC 6.01	30211801
UNSPSC 7.0901	39121432
UNSPSC 11	39121432
UNSPSC 12.01	39121432
UNSPSC 13.2	39121409
UNSPSC 18.0	39121409
UNSPSC 19.0	39121409
UNSPSC 20.0	39121409
UNSPSC 21.0	39121409

## Approvals

### Approvals

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#### Approvals

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

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#### Ex Approvals


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# Printed-circuit board connector - MCD 1,5/ 6-G1-3,81 OG - 1702367


## Approvals

### Approval details

VDE Gutachten mit Fertigungsüberwachung		<a href="http://www2.vde.com/de/Institut/Online-Service/VDE-gepruefteProdukte/Seiten/Online-Suche.aspx">http://www2.vde.com/de/Institut/Online-Service/VDE-gepruefteProdukte/Seiten/Online-Suche.aspx</a>	40011723
Nominal voltage UN	160 V		
Nominal current IN	8 A		

IECEE CB Scheme		<a href="http://www.iecee.org/">http://www.iecee.org/</a>	DE1-60987-B1B2
Nominal voltage UN	160 V		
Nominal current IN	8 A		

EAC			B.01687
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cULus Recognized		<a href="http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm">http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm</a>	E60425-20110128
	B	D	
Nominal voltage UN	300 V	300 V	
Nominal current IN	8 A	8 A	