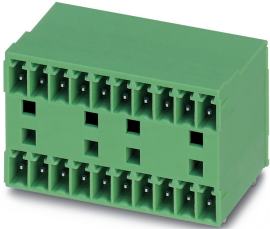


Printed-circuit board connector - MCD 1,5/ 3-G1-3,81 - 1843088

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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	 4 017918 112271
GTIN	4017918112271
Weight per Piece (excluding packing)	4.270 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	3
Mounting type	Wave soldering
Pin layout	Linear pinning
Locking	without
Number of levels	2
Number of connections	6
Number of potentials	6
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	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

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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]	12.82 mm
Height [h]	26.2 mm
Pitch	3.81 mm
Height (without solder pin)	22.7 mm
Solder pin [P]	3.5 mm
Pin spacing	12.70 mm
Pin dimensions	0.8 x 0.8 mm

Dimensions for PCB design

Hole diameter	1.2 mm
Pin spacing	12.70 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)

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
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Technical data

Mechanical tests (A)

Insertion strength per pos. approx.	8 N
Withdraw strength per pos. approx.	5 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	1.2 mΩ
Insertion/withdrawal cycles	25
Contact resistance R ₂	1.3 mΩ
Contact resistance R ₂ 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 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

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	5 g (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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Technical data

Standards and Regulations

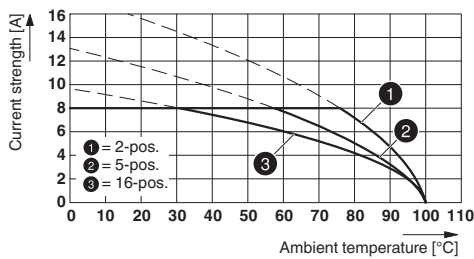
	CSA
Flammability rating according to UL 94	V0

Environmental Product Compliance

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

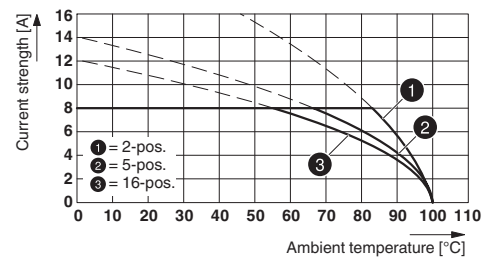
Drawings

Diagram



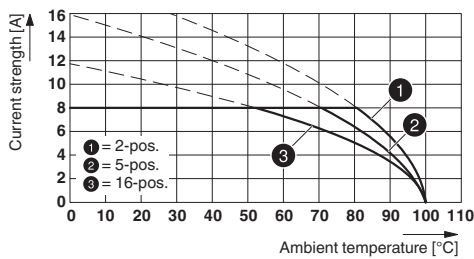
Type: MCV(W/R) 1,5/...-ST-3,81 with MCD 1,5/...-G1-3,81

Diagram



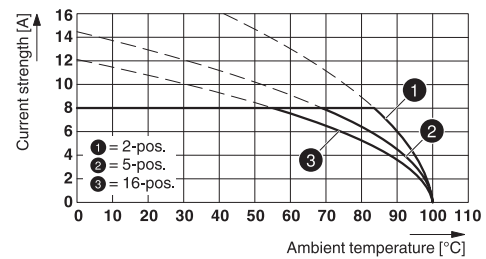
Type: FRONT-MC 1,5/...-ST-3,81 with MCD 1,5/...-G1-3,81

Diagram



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

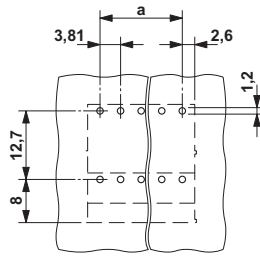
Diagram



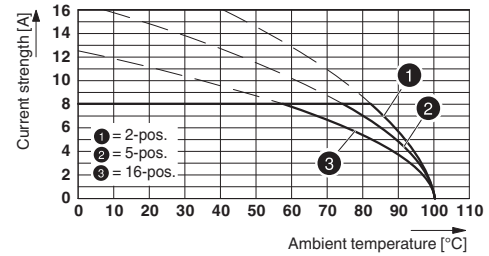
Type: FMC 1,5/...-ST-3,81 with MCD 1,5/...-G1-3,81

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Drilling diagram

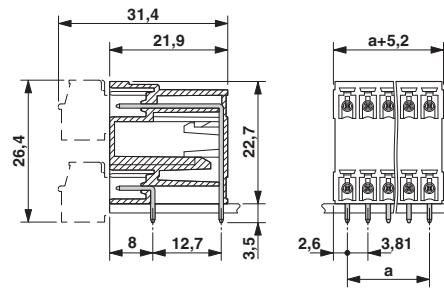


Diagram



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

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

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Classifications

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 / CSA / IECCE CB Scheme / EAC / cULus Recognized

Ex Approvals

Approval details

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		

CSA		http://www.csagroup.org/services-industries/product-listing/	13631
	B	D	
Nominal voltage UN	300 V	300 V	
Nominal current IN	8 A	8 A	

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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	

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

Accessories

Accessories

Coding element

Coding profile - CP-MSTB - 1734634

Coding profile, is inserted into the slot on the plug or inverted header, red insulating material



Labeled terminal marker

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

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Accessories

Additional products

Printed-circuit board connector - FMC 1,5/ 3-ST-3,81 - 1745904

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: 3, Number of rows: 1, Number of positions per row: 3, number of connections: 3, product range: FMC 1,5/...-ST, pitch: 3.81 mm, connection method: Push-in spring connection, conductor/PCB connection direction: 0 °, plug-in system: MINI COMBICON, Locking: without, Assembly: without, type of packaging: packed in cardboard



Printed-circuit board connector - MC 1,5/ 3-ST-3,81 - 1803581

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: 3, Number of rows: 1, Number of positions per row: 3, number of connections: 3, product range: MC 1,5/...-ST, pitch: 3.81 mm, connection method: Screw connection with tension sleeve, Screw head form: L Slotted, conductor/PCB connection direction: 0 °, plug-in system: MINI COMBICON, Locking: without, Assembly: without, type of packaging: packed in cardboard



Printed-circuit board connector - MCVW 1,5/ 3-ST-3,81 - 1826982

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: 3, Number of rows: 1, Number of positions per row: 3, number of connections: 3, product range: MCVW 1,5/...-ST, pitch: 3.81 mm, connection method: Screw connection with tension sleeve, Screw head form: L Slotted, conductor/PCB connection direction: -90 °, plug-in system: MINI COMBICON, Locking: without, Assembly: without, type of packaging: packed in cardboard



Printed-circuit board connector - MCVR 1,5/ 3-ST-3,81 - 1827130

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: 3, Number of rows: 1, Number of positions per row: 3, number of connections: 3, product range: MCVR 1,5/...-ST, pitch: 3.81 mm, connection method: Screw connection with tension sleeve, Screw head form: L Slotted, conductor/PCB connection direction: 90 °, plug-in system: MINI COMBICON, Locking: without, Assembly: without, type of packaging: packed in cardboard



Printed-circuit board connector - FRONT-MC 1,5/ 3-ST-3,81 - 1850673

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: 3, Number of rows: 1, Number of positions per row: 3, number of connections: 3, product range: FRONT-MC 1,5/...-ST, pitch: 3.81 mm, connection method: Front screw connection, conductor/PCB connection direction: 0 °, plug-in system: MINI COMBICON, Locking: without, Assembly: without, type of packaging: packed in cardboard



Printed-circuit board connector - MCD 1,5/ 3-G1-3,81 - 1843088

Accessories

Printed-circuit board connector - FK-MCP 1,5/ 3-ST-3,81 - 1851054



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: 3, Number of rows: 1, Number of positions per row: 3, number of connections: 3, product range: FK-MCP 1,5/...-ST, pitch: 3.81 mm, connection method: Push-in spring connection, conductor/PCB connection direction: 0 °, plug-in system: MINI COMBICON, Locking: without, Assembly: without, type of packaging: packed in cardboard

Printed-circuit board connector - MCC 1/ 3-STZ-3,81 - 1852189



PCB connector, nominal cross section: 1 mm², color: green, nominal current: 8 A, rated voltage (III/2): 160 V, type of contact: Female connector, Number of potentials: 3, Number of rows: 1, Number of positions per row: 3, number of connections: 3, product range: MCC 1/...-STZ, pitch: 3.81 mm, connection method: Crimp connection, conductor/PCB connection direction: 0 °, plug-in system: MINI COMBICON, Locking: without, Assembly: without, type of packaging: packed in cardboard, Corresponding female crimp contacts with current [A] and conductor cross section range [mm²] data: 5A/MCC-MT 0,2-0,35 (1859988); 8A/MCC-MT 0,5-1,0 (1859991)

Printed-circuit board connector - QC 0,5/ 3-ST-3,81 - 1897403



PCB connector, nominal cross section: 0.5 mm², color: green, nominal current: 6 A, rated voltage (III/2): 200 V, contact surface: Tin, type of contact: Female connector, Number of potentials: 3, Number of rows: 1, Number of positions per row: 3, number of connections: 3, product range: QC 0,5/...-ST, pitch: 3.81 mm, connection method: Displacement connection, conductor/PCB connection direction: 0 °, plug-in system: MINI COMBICON, Locking: without, Assembly: without, type of packaging: packed in cardboard