

Feed-through header - MCD 1,5/10-G-3,81 - 1830033

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PCB headers, nominal current: 8 A, rated voltage (III/2): 160 V, nominal cross section: 1.5 mm², number of positions: 10, pitch: 3.81 mm, color: green, contact surface: Tin, mounting: Wave soldering, pin layout: Linear pinning, solder pin [P]: 3.5 mm, In combination with MCV plug components, both an MCVW and an MCVR plug must be used.

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	50 pc
GTIN	
GTIN	4017918113735

Technical data

Item properties

Brief article description	Feed-through header
Plug-in system	MINI COMBICON
Type of contact	Male connector
Range of articles	MCD 1,5/...-G
Pitch	3.81 mm
Number of positions	10
Mounting type	Wave soldering
Pin layout	Linear pinning
Locking	without
Number of levels	2
Number of connections	20
Number of potentials	20

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Technical data

Electrical parameters

Nominal current	8 A
Nom. voltage	160 V
Rated voltage	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

Dimensions for the product

Length [l]	21.9 mm
Width [w]	39.49 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

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Technical data

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.	7 N
Withdraw strength per pos. approx.	4 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	4.1 mΩ
Insertion/withdrawal cycles	25
Contact resistance R ₂	4.1 mΩ
Impulse withstand voltage at sea level	2.95 kV
Power-frequency withstand voltage	1.39 kV
Insulation resistance, neighboring positions	> 1 TΩ

Thermal tests (C)

Specification	IEC 60512-5-1:2002-02
Number of positions	16
Conductor cross section	1.5 mm ²
Test current	8 A
Upper limiting temperature requirements <100 °C	Test passed

Climatic tests (D)

Specification	ISO 6988:1985-02
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Climatic tests (D)

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
Result	Test passed
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
	CSA
Flammability rating according to UL 94	V0

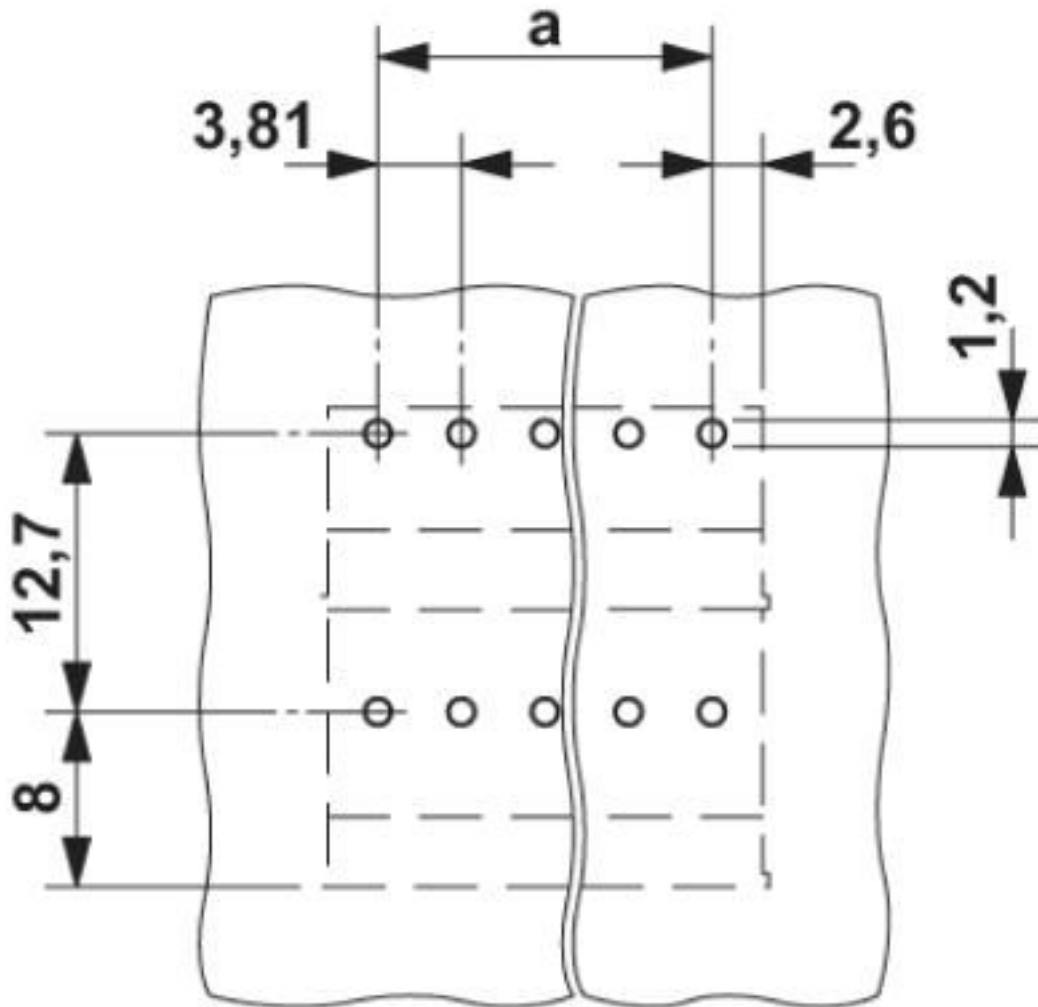
Environmental Product Compliance

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

Drawings

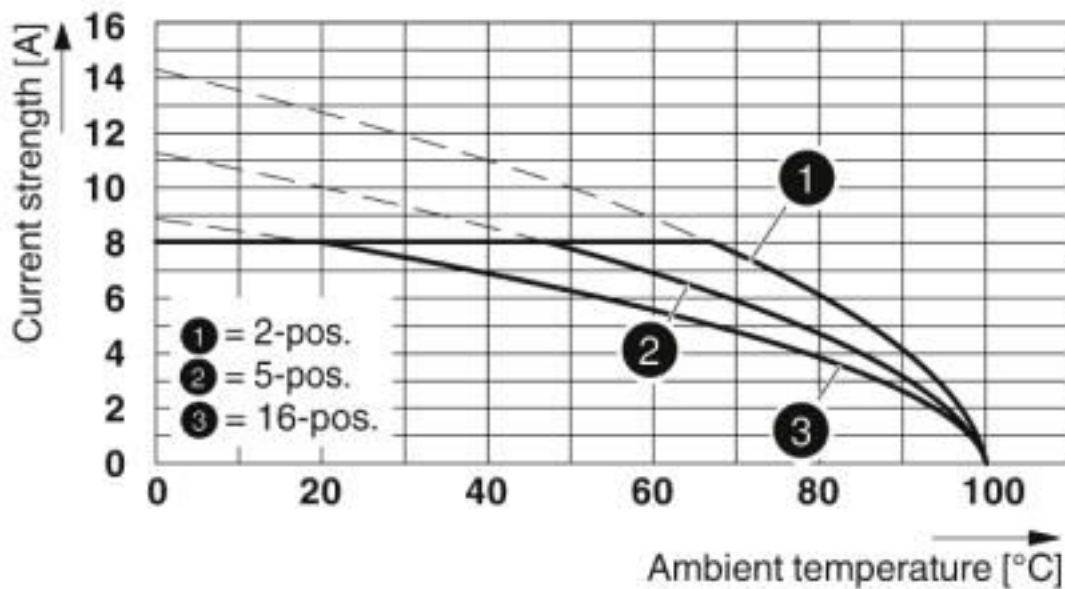
Feed-through header - MCD 1,5/10-G-3,81 - 1830033

Drilling diagram



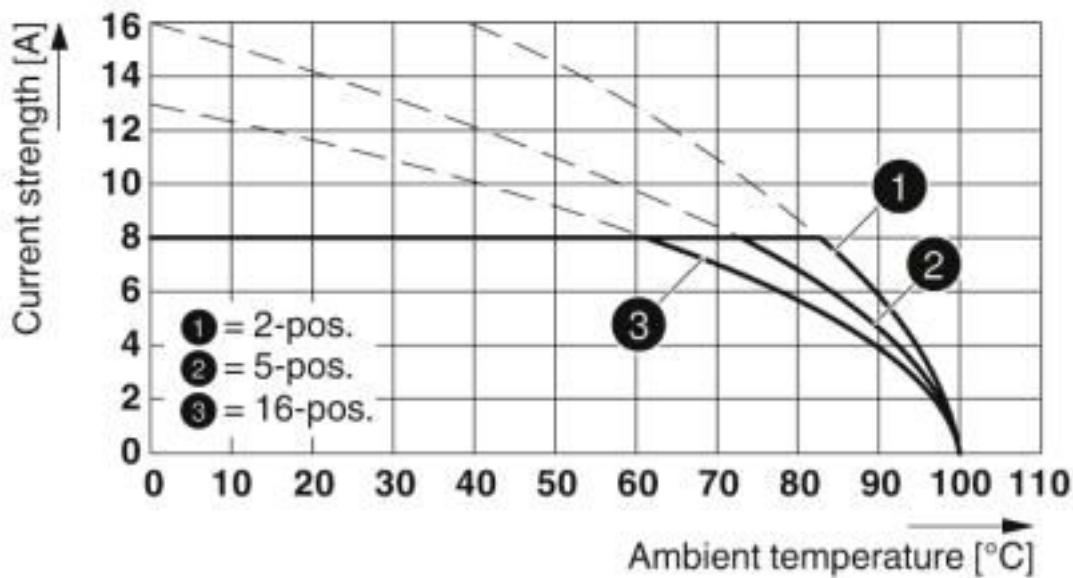
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Diagram



Type: MCVR 1,5/...-ST-3,81 with MCD 1,5/...-G-3,81

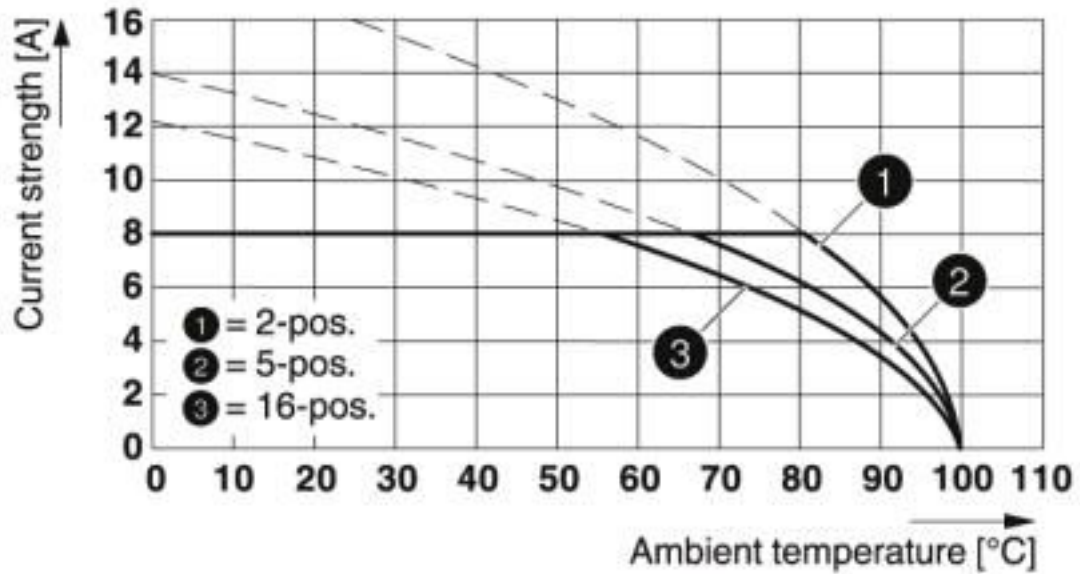
Diagram



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

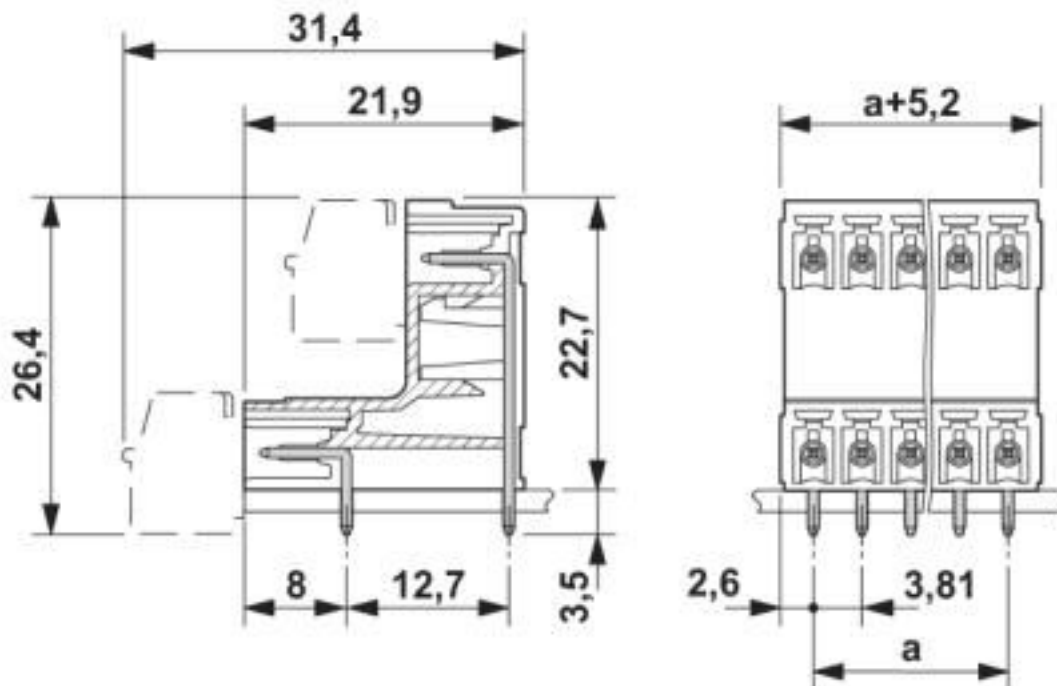
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Diagram



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

Dimensional drawing



Classifications

eCl@ss

eCl@ss 10.0.1	27440402
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Classifications

eCl@ss

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 8.0	27440402
eCl@ss 9.0	27440402

ETIM

ETIM 3.0	EC001121
ETIM 4.0	EC002637
ETIM 5.0	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

Approvals

CSA / IECCEB Scheme / VDE Gutachten mit Fertigungsüberwachung / EAC / cULus Recognized

Ex Approvals

Approval details

Feed-through header - MCD 1,5/10-G-3,81 - 1830033

Approvals

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	

IECEE CB Scheme		http://www.iecee.org/	DE1-60987-B1B2
Nominal voltage UN	160 V		
Nominal current IN	8 A		

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		

EAC			B.01687
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cULus Recognized		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



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Accessories

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

Additional products

Printed-circuit board connector - FMC 1,5/10-ST-3,81 - 1748053



PCB connector, nominal current: 8 A, rated voltage (III/2): 160 V, nominal cross section: 1.5 mm², number of positions: 10, pitch: 3.81 mm, connection method: Push-in spring connection, color: green, contact surface: Tin

Printed-circuit board connector - MC 1,5/10-ST-3,81 - 1803659



PCB connector, nominal current: 8 A, rated voltage (III/2): 160 V, nominal cross section: 1.5 mm², number of positions: 10, pitch: 3.81 mm, connection method: Screw connection with tension sleeve, color: green, contact surface: Tin

Printed-circuit board connector - MCVW 1,5/10-ST-3,81 - 1827059



PCB connector, nominal current: 8 A, rated voltage (III/2): 160 V, nominal cross section: 1.5 mm², number of positions: 10, pitch: 3.81 mm, connection method: Screw connection with tension sleeve, color: green, contact surface: Tin

Printed-circuit board connector - MCVR 1,5/10-ST-3,81 - 1827208



PCB connector, nominal current: 8 A, rated voltage (III/2): 160 V, nominal cross section: 1.5 mm², number of positions: 10, pitch: 3.81 mm, connection method: Screw connection with tension sleeve, color: green, contact surface: Tin

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Accessories

Printed-circuit board connector - FRONT-MC 1,5/10-ST-3,81 - 1850741



PCB connector, nominal current: 8 A, rated voltage (III/2): 160 V, nominal cross section: 1.5 mm², number of positions: 10, pitch: 3.81 mm, connection method: Front screw connection, color: green, contact surface: Tin

Printed-circuit board connector - FK-MCP 1,5/10-ST-3,81 - 1851122



PCB connector, nominal current: 8 A, rated voltage (III/2): 160 V, nominal cross section: 1.5 mm², number of positions: 10, pitch: 3.81 mm, connection method: Push-in spring connection, color: green, contact surface: Tin

Printed-circuit board connector - MCC 1/10-STZ-3,81 - 1852257



PCB connector, nominal current: 8 A, rated voltage (III/2): 160 V, nominal cross section: 1 mm², number of positions: 10, pitch: 3.81 mm, connection method: Crimp connection, color: green, 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 0,5/10-ST-3,81 - 1897474



PCB connector, nominal current: 6 A, rated voltage (III/2): 200 V, nominal cross section: 0.5 mm², number of positions: 10, pitch: 3.81 mm, connection method: Displacement connection, color: green, contact surface: Tin

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