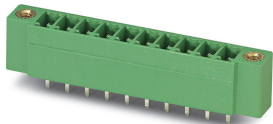


Feed-through header - MCV 1,5/13-GF-3,81 BK - 1031463

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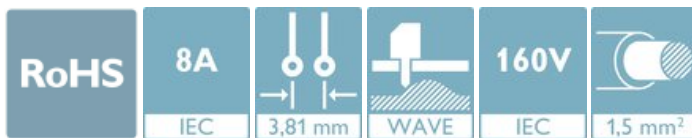


The figure shows a 10-position version of the product


PCB header, nominal cross section: 1.5 mm², color: black, nominal current: 8 A, rated voltage (III/2): 160 V, contact surface: Tin, type of contact: Male connector, number of potentials: 13, Number of rows: 1, Number of positions per row: 13, number of connections: 13, product range: MCV 1,5/..-GF, pitch: 3.81 mm, mounting: Wave soldering, pin layout: Linear pinning, solder pin [P]: 3.4 mm, plug-in system: MINI COMBICON, Pin connector pattern alignment: Standard, Locking: Screw locking, mounting: Threaded flange, type of packaging: packed in cardboard

Your advantages

- Well-known mounting principle allows worldwide use
- Screwable flange for superior mechanical stability
- Vertical connection enables multi-row arrangement on the PCB
- 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 055626 535401
GTIN	4055626535401
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	MCV 1,5/..-GF

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Technical data

Item properties

Pitch	3.81 mm
Number of positions	13
Mounting type	Wave soldering
Pin layout	Linear pinning
Number of levels	1
Number of connections	13
Number of potentials	13
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)	250 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	black (9005)
Insulating material	PBT
Insulating material group	IIIa
CTI according to IEC 60112	225
Flammability rating according to UL 94	V0

Flange specifications

Type of locking	Screw locking
Mounting flange	Threaded flange
Torque	0.3 Nm

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Technical data

Dimensions for the product

Caption	Schematische Abbildung - weitere Details siehe Produktfamilienzeichnung im Download Center
Length [l]	7.25 mm
Width [w]	59.92 mm
Height [h]	12.6 mm
Pitch	3.81 mm
Height (without solder pin)	9.2 mm
Solder pin [P]	3.4 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)	2.5 mm
Minimum creepage distance value (III/2)	1.6 mm
Minimum creepage distance value (II/2)	2.5 mm

Mechanical tests (A)

Test specification	IEC 61984
Insertion strength per pos. approx.	7 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)

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Technical data

Durability tests (B)

Specification	IEC 60512-9-1:2010-03
Contact resistance R ₁	1.6 mΩ
Insertion/withdrawal cycles	25
Contact resistance R ₂	1.7 mΩ
Impulse withstand voltage at sea level	2.95 kV

Thermal tests (C)

Specification	IEC 60512-5-1:2002-02
Number of positions	20
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

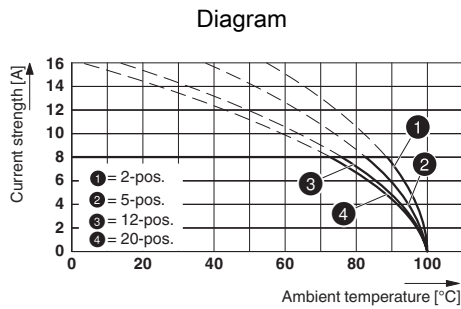
Specification	IEC 60068-2-6:2007-12
Frequency	10 - 150 - 10 Hz
Sweep speed	1 octave/min
Amplitude	0.35 mm (10 - 60.1 Hz)
Acceleration	5g (60.1 - 150 Hz)
Test duration per axis	2.5 h

Environmental Product Compliance

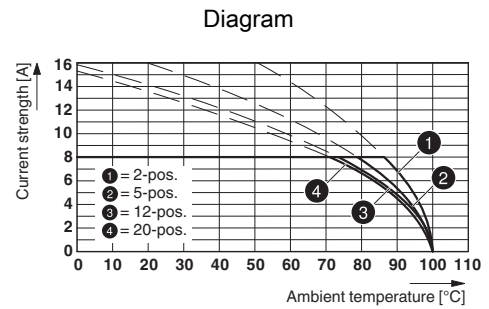
China RoHS	Environmentally Friendly Use Period = 50 years
	For details about hazardous substances go to tab "Downloads", Category "Manufacturer's declaration"

Drawings

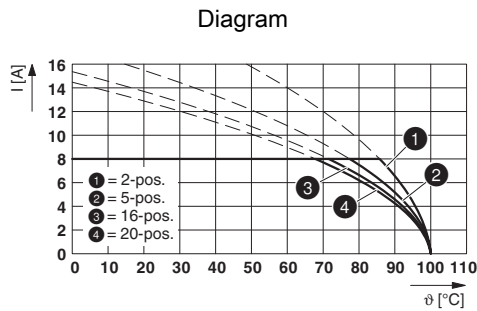
Feed-through header - MCV 1,5/13-GF-3,81 BK - 1031463



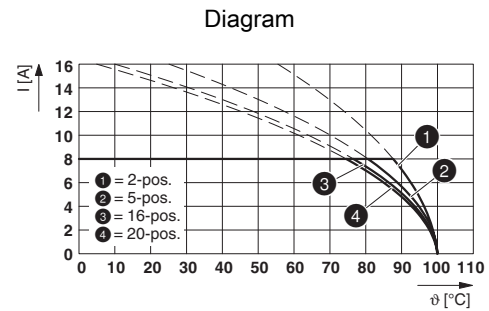
Type: MC 1,5/...-STF-3,81 with MCV 1,5/...-GF-3,81



Type: FRONT-MC 1,5/...-STF-3,81 with MCV 1,5/...-GF-3,81



Type: FMC 1,5/...-STF-3,81 with MCV 1,5/...-GF-3,81



Type: FK-MCP 1,5/...-STF-3,81 with MCV 1,5/...-GF-3,81

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 6.0	EC002637
ETIM 7.0	EC002637

Approvals

Approvals

Feed-through header - MCV 1,5/13-GF-3,81 BK - 1031463


Approvals


Approvals

VDE Gutachten mit Fertigungsüberwachung / IECEE 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	

IECEE CB Scheme		http://www.iecee.org/	DE1-60987-B1B2
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