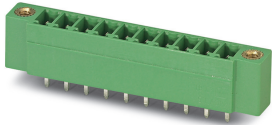


## Feed-through header - MCV 1,5/12-GF-3,81 - 1830693

Please be informed that the data shown in this PDF Document is generated from our Online Catalog. Please find the complete data in the user's documentation. Our General Terms of Use for Downloads are valid (<http://phoenixcontact.com/download>)

PCB headers, nominal cross section: 1.5 mm<sup>2</sup>, color: green, 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: 1, Number of positions per row: 12, number of connections: 12, product range: MCV 1,5/..-GF, pitch: 3.81 mm, mounting: Wave soldering, pin layout: Linear pinning, solder pin [P]: 3.4 mm, Stecksystem: MINI COMBICON, Locking: Screw locking, type of packaging: packed in cardboard




The figure shows a 10-position version of the product

### 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 017918 051341
GTIN	4017918051341
Weight per Piece (excluding packing)	4.360 g
Custom tariff number	85366930
Country of origin	Germany

### Technical data

#### Item properties

Brief article description	Feed-through header
Plug-in system	MINI COMBICON
Type of contact	Male connector

## Feed-through header - MCV 1,5/12-GF-3,81 - 1830693

### Technical data

#### Item properties

Range of articles	MCV 1,5/...-GF
Pitch	3.81 mm
Number of positions	12
Mounting type	Wave soldering
Pin layout	Linear pinning
Locking	Threaded flange
Number of levels	1
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)	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	green (6021)
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
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# Feed-through header - MCV 1,5/12-GF-3,81 - 1830693

## Technical data

### Flange specifications

Mounting flange	Threaded flange
Torque	0.3 Nm

### Dimensions for the product

Caption	Schematische Abbildung - weitere Details siehe Produktfamilienzeichnung im Download Center
Length [ l ]	7.25 mm
Width [ w ]	56.11 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

## Feed-through header - MCV 1,5/12-GF-3,81 - 1830693

### 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>	1.6 mΩ
Insertion/withdrawal cycles	25
Contact resistance R <sub>2</sub>	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 <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	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

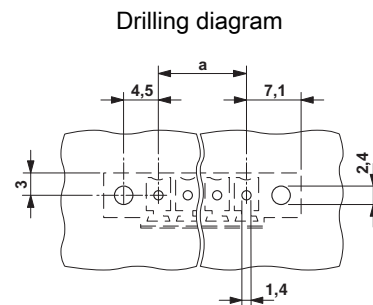
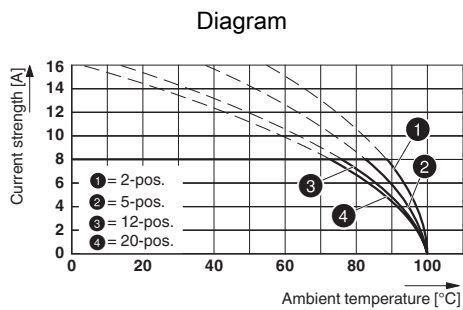
# Feed-through header - MCV 1,5/12-GF-3,81 - 1830693

## Technical data

### Environmental Product Compliance

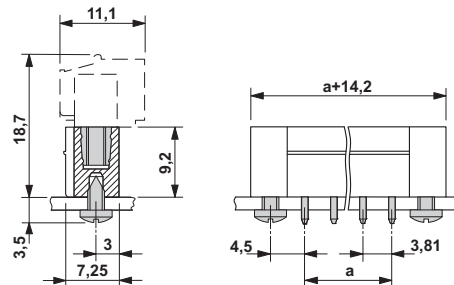
China RoHS	Environmentally Friendly Use Period = 50 years
	For details about hazardous substances go to tab "Downloads", Category "Manufacturer's declaration"

## Drawings



Type: MC 1,5/...-STF-3,81 with MCV 1,5/...-GF-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 8.0	27440402

# Feed-through header - MCV 1,5/12-GF-3,81 - 1830693

## Classifications

eCl@ss

eCl@ss 9.0	27440402
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## 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 CB Scheme / VDE Gutachten mit Fertigungsüberwachung / EAC / cULus Recognized

Ex Approvals

### Approval details

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

# Feed-through header - MCV 1,5/12-GF-3,81 - 1830693

## Approvals

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	

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	

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	

## 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

## Feed-through header - MCV 1,5/12-GF-3,81 - 1830693

### Accessories

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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### Additional products

Printed-circuit board connector - FMC 1,5/12-STF-3,81 - 1748451



PCB connector, nominal cross section: 1.5 mm<sup>2</sup>, color: green, nominal current: 8 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 per row: 12, number of connections: 12, product range: FMC 1,5/..-STF, pitch: 3.81 mm, connection method: Push-in spring connection, conductor/PCB connection direction: 0 °, Stecksystem: MINI COMBICON, Locking: Screw locking, type of packaging: packed in cardboard

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Printed-circuit board connector - MC 1,5/12-STF-3,81 - 1827800



PCB connector, nominal cross section: 1.5 mm<sup>2</sup>, color: green, nominal current: 8 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 per row: 12, number of connections: 12, product range: MC 1,5/..-STF, pitch: 3.81 mm, connection method: Screw connection with tension sleeve, conductor/PCB connection direction: 0 °, Stecksystem: MINI COMBICON, Locking: Screw locking, type of packaging: packed in cardboard

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Printed-circuit board connector - MCVR 1,5/12-STF-3,81 - 1828443



PCB connector, nominal cross section: 1.5 mm<sup>2</sup>, color: green, nominal current: 8 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 per row: 12, number of connections: 12, product range: MCVR 1,5/..-STF, pitch: 3.81 mm, connection method: Screw connection with tension sleeve, conductor/PCB connection direction: 90 °, Stecksystem: MINI COMBICON, Locking: Screw locking, type of packaging: packed in cardboard

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Printed-circuit board connector - MCVW 1,5/12-STF-3,81 - 1828595



PCB connector, nominal cross section: 1.5 mm<sup>2</sup>, color: green, nominal current: 8 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 per row: 12, number of connections: 12, product range: MCVW 1,5/..-STF, pitch: 3.81 mm, connection method: Screw connection with tension sleeve, conductor/PCB connection direction: -90 °, Stecksystem: MINI COMBICON, Locking: Screw locking, type of packaging: packed in cardboard



## Feed-through header - MCV 1,5/12-GF-3,81 - 1830693

### Accessories

#### Printed-circuit board connector - FRONT-MC 1,5/12-STF-3,81 - 1850958



PCB connector, nominal cross section: 1.5 mm<sup>2</sup>, color: green, nominal current: 8 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 per row: 12, number of connections: 12, product range: FRONT-MC 1,5/...-STF, pitch: 3.81 mm, connection method: Front screw connection, conductor/PCB connection direction: 0 °, Stecksystem: MINI COMBICON, Locking: Screw locking, type of packaging: packed in cardboard

#### Printed-circuit board connector - FK-MCP 1,5/12-STF-3,81 - 1851339



PCB connector, nominal cross section: 1.5 mm<sup>2</sup>, color: green, nominal current: 8 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 per row: 12, number of connections: 12, product range: FK-MCP 1,5/...-STF, pitch: 3.81 mm, connection method: Push-in spring connection, conductor/PCB connection direction: 0 °, Stecksystem: MINI COMBICON, Locking: Screw locking, type of packaging: packed in cardboard

#### Printed-circuit board connector - MCC 1/12-STZF-3,81 - 1852464



PCB connector, nominal cross section: 1 mm<sup>2</sup>, color: green, nominal current: 8 A, rated voltage (III/2): 160 V, type of contact: Female connector, Number of potentials: 12, Number of rows: 1, Number of positions per row: 12, number of connections: 12, product range: MCC 1/...-STZF, pitch: 3.81 mm, connection method: Crimp connection, conductor/PCB connection direction: 0 °, Stecksystem: MINI COMBICON, Locking: Screw locking, type of packaging: packed in cardboard, Corresponding female crimp contacts with current [A] and conductor cross section range [mm<sup>2</sup>] data: 5A/MCC-MT 0,2-0,35 (1859988); 8A/MCC-MT 0,5-1,0 (1859991)

#### Printed-circuit board connector - QC 0,5/12-STF-3,81 - 1897649



PCB connector, nominal cross section: 0.5 mm<sup>2</sup>, color: green, nominal current: 6 A, rated voltage (III/2): 200 V, contact surface: Tin, type of contact: Female connector, Number of potentials: 12, Number of rows: 1, Number of positions per row: 12, number of connections: 12, product range: QC 0,5/...-STF, pitch: 3.81 mm, connection method: Displacement connection, conductor/PCB connection direction: 0 °, Stecksystem: MINI COMBICON, Locking: Screw locking, type of packaging: packed in cardboard