

MCV 1,5/ 4-GF-3,81-LR - PCB header



1818203

<https://www.phoenixcontact.com/us/products/1818203>

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 documentation. Our general terms of use for downloads are valid.



PCB headers, nominal cross section: 1.5 mm², color: green, nominal current: 8 A, rated voltage (III/2): 160 V, contact surface: Tin, contact connection type: Pin, number of potentials: 4, number of rows: 1, number of positions: 4, number of connections: 4, product range: MCV 1,5/..-GF-LR, pitch: 3.81 mm, mounting: Wave soldering, pin layout: Linear pinning, solder pin [P]: 3.4 mm, number of solder pins per potential: 1, plug-in system: COMBICON MC 1,5, Pin connector pattern alignment: Standard, locking: Snap-in locking, mounting: Lock & release threaded flange, type of packaging: packed in cardboard

Your advantages

- Well-known mounting principle allows worldwide use
- Screwable flange for superior mechanical stability
- Automatic locking and intuitive release through Lock and Release operating lever in contrasting color
- 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

Commercial data

Item number	1818203
Packing unit	1 pc
Minimum order quantity	50 pc
Sales key	AA02
Product key	AABSBG
Catalog page	Page 227 (C-1-2013)
GTIN	4046356755184
Weight per piece (including packing)	2.385 g
Weight per piece (excluding packing)	2.385 g
Customs tariff number	85366930
Country of origin	DE

MCV 1,5/ 4-GF-3,81-LR - PCB header



1818203

<https://www.phoenixcontact.com/us/products/1818203>

Technical data

Product properties

Type	Standard
Product line	COMBICON Connectors S
Product type	PCB headers
Product family	MCV 1,5/...-GF-LR
Number of positions	4
Pitch	3.81 mm
Number of connections	4
Number of rows	1
Mounting flange	Lock & release threaded flange
Number of potentials	4
Pin layout	Linear pinning
Solder pins per potential	1

Electrical properties

Nominal current I_N	8 A
Nominal voltage U_N	160 V
Degree of pollution	3
Contact resistance	1.2 m Ω
Rated voltage (III/3)	160 V
Rated surge voltage (III/3)	2.5 kV
Rated voltage (III/2)	160 V
Rated surge voltage (III/2)	2.5 kV
Rated voltage (II/2)	250 V
Rated surge voltage (II/2)	2.5 kV

Mounting

Mounting type	Wave soldering
Pin layout	Linear pinning

Material specifications

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

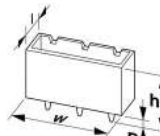
MCV 1,5/ 4-GF-3,81-LR - PCB header

1818203

<https://www.phoenixcontact.com/us/products/1818203>

Color (Housing)	green (6021)
Insulating material	PBT
Insulating material group	IIIa
CTI according to IEC 60112	225
Flammability rating according to UL 94	V0

Dimensions

Dimensional drawing	
Pitch	3.81 mm
Width [w]	25.63 mm
Height [h]	12.6 mm
Length [l]	7.25 mm
Installed height	9.2 mm
Solder pin length [P]	3.4 mm
Pin dimensions	0.8 x 0.8 mm

Mechanical tests

Visual inspection

Specification	IEC 60512-1-1:2002-02
Result	Test passed

Dimension check

Specification	IEC 60512-1-2:2002-02
Result	Test passed

Resistance of inscriptions

Specification	IEC 60068-2-70:1995-12
Result	Test passed

Polarization and coding

Specification	IEC 60512-13-5:2006-02
Result	Test passed

Contact holder in insert

Specification	IEC 60512-15-1:2008-05
Contact holder in insert Requirements >20 N	Test passed

Insertion and withdrawal forces

Result	Test passed
No. of cycles	25
Insertion strength per pos. approx.	8 N

MCV 1,5/ 4-GF-3,81-LR - PCB header



1818203

<https://www.phoenixcontact.com/us/products/1818203>

Withdraw strength per pos. approx.	6 N
------------------------------------	-----

Electrical tests

Thermal test | Test group C

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

Insulation resistance

Specification	IEC 60512-3-1:2002-02
Insulation resistance, neighboring positions	> 5 MΩ

Air clearances and creepage distances |

Specification	IEC 60664-1:2007-04
Insulating material group	IIIa
Comparative tracking index (IEC 60112)	CTI 225
Rated insulation voltage (III/3)	160 V
Rated surge voltage (III/3)	2.5 kV
minimum clearance value - non-homogenous field (III/3)	1.5 mm
minimum creepage distance (III/3)	2.5 mm
Rated insulation voltage (III/2)	160 V
Rated surge voltage (III/2)	2.5 kV
minimum clearance value - non-homogenous field (III/2)	1.5 mm
minimum creepage distance (III/2)	1.6 mm
Rated insulation voltage (II/2)	250 V
Rated surge voltage (II/2)	2.5 kV
minimum clearance value - non-homogenous field (II/2)	1.5 mm
minimum creepage distance (II/2)	2.5 mm

Environmental and real-life conditions

Vibration test

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

Durability test

Specification	IEC 60512-9-1:2010-03
Impulse withstand voltage at sea level	2.95 kV
Contact resistance R ₁	1.2 mΩ
Contact resistance R ₂	1.2 mΩ
Insertion/withdrawal cycles	25
Insulation resistance, neighboring positions	> 5 MΩ

MCV 1,5/ 4-GF-3,81-LR - PCB header



1818203

<https://www.phoenixcontact.com/us/products/1818203>

Climatic test

Specification	ISO 6988:1985-02
Corrosive stress	0.2 dm ³ SO ₂ on 300 dm ³ /40 °C/1 cycle
Thermal stress	100 °C/168 h
Power-frequency withstand voltage	1.39 kV

Ambient conditions

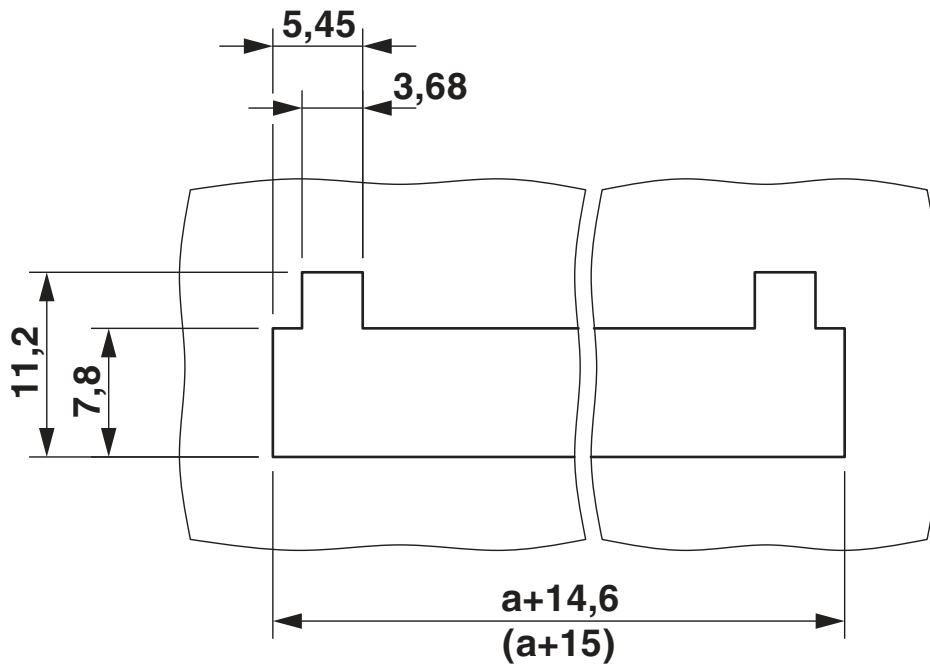
Ambient temperature (operation)	-40 °C ... 100 °C (dependent on the derating curve)
Ambient temperature (storage/transport)	-40 °C ... 70 °C
Relative humidity (storage/transport)	30 % ... 70 %
Ambient temperature (assembly)	-5 °C ... 100 °C

Packaging specifications

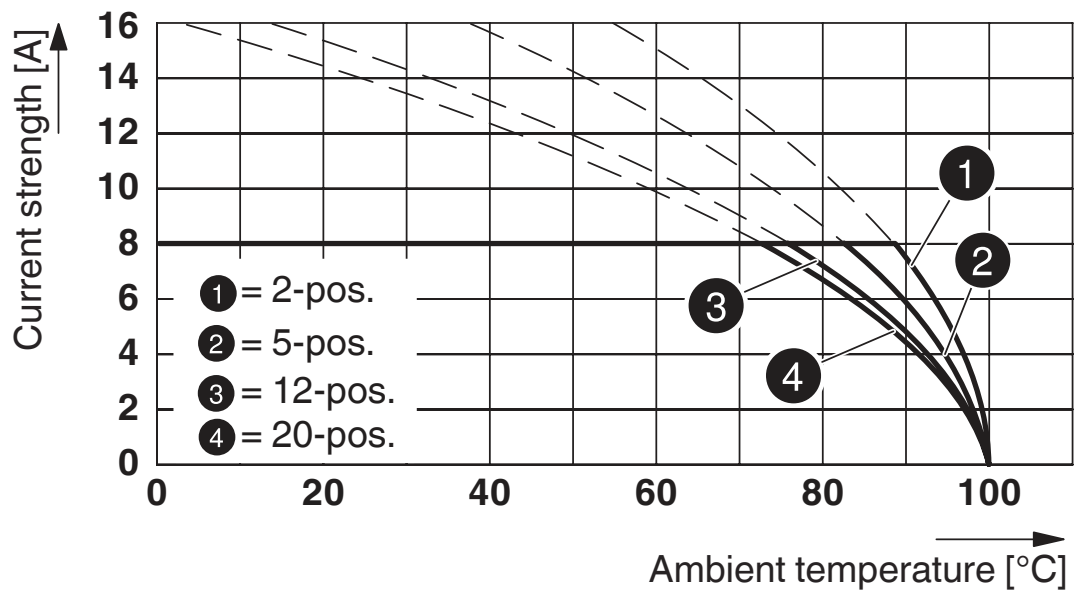
Type of packaging	packed in cardboard
-------------------	---------------------

Drawings

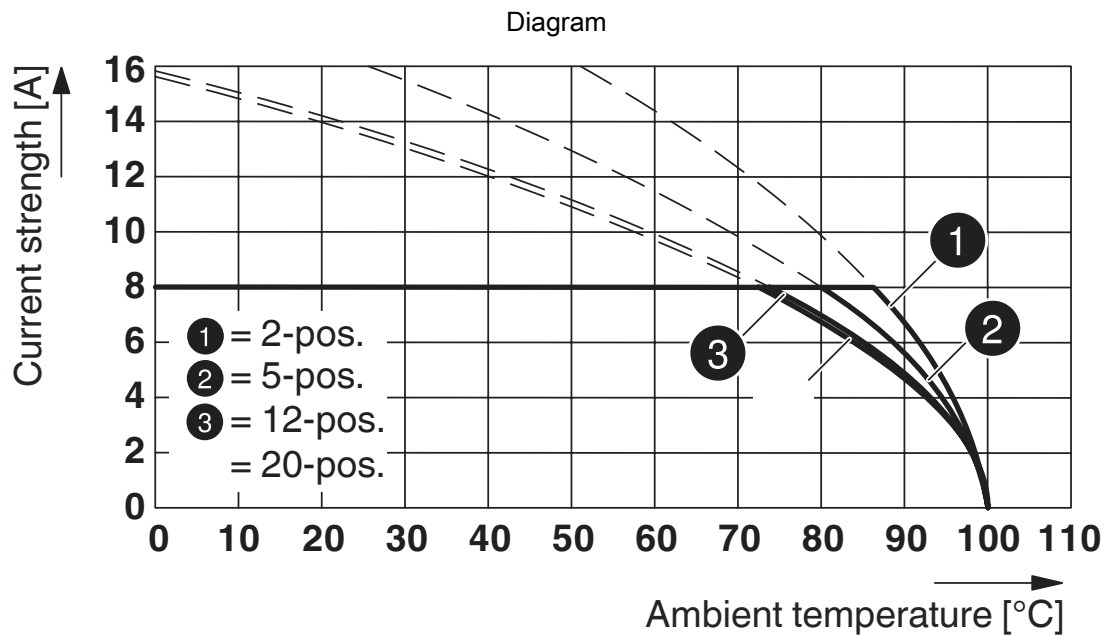
Dimensional drawing



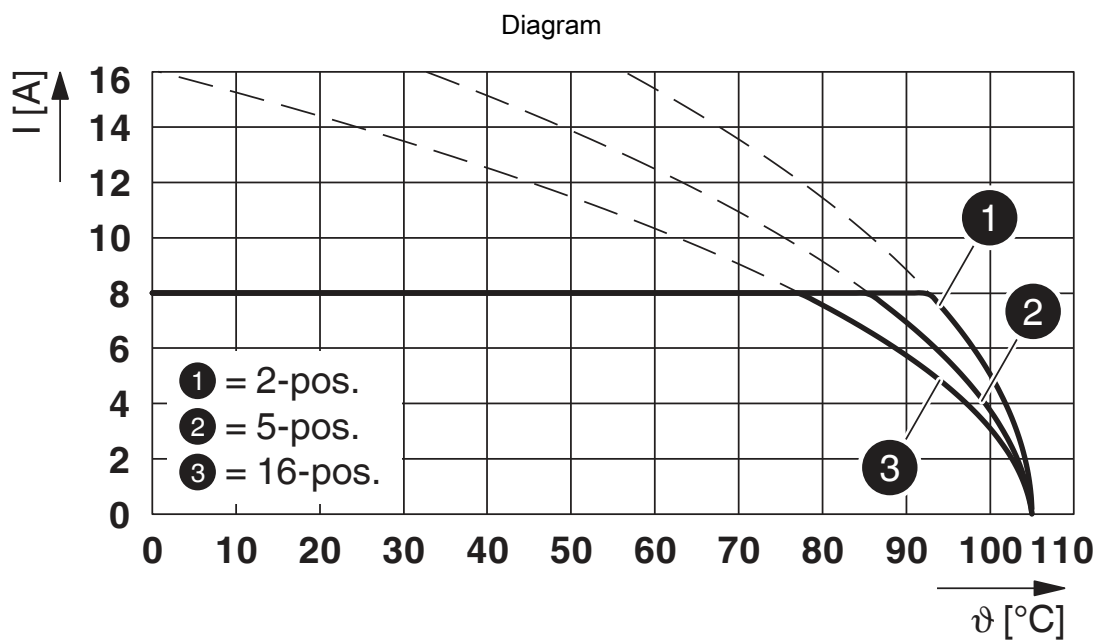
Diagram



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



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



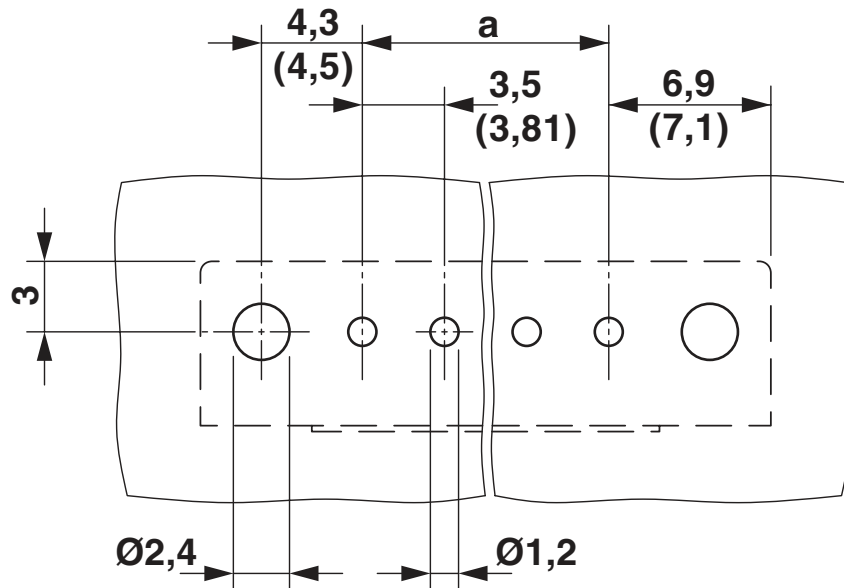
Type: LPC 1,5/...-ST-3,81-LR with MCV 1,5/...-GF-3,81-LR

MCV 1,5/ 4-GF-3,81-LR - PCB header

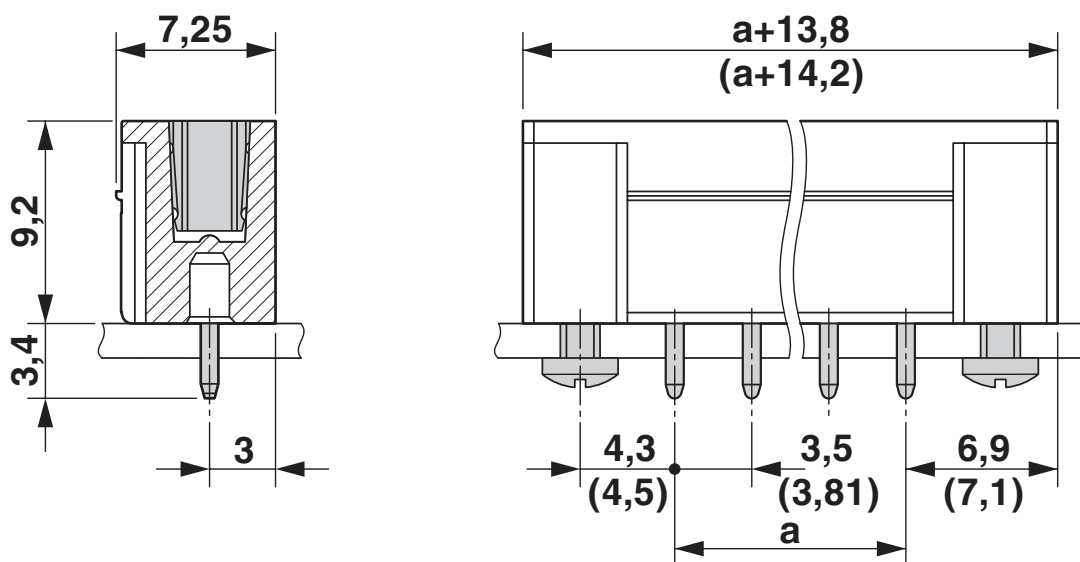
1818203

<https://www.phoenixcontact.com/us/products/1818203>

Drilling plan/solder pad geometry



Dimensional drawing



MCV 1,5/ 4-GF-3,81-LR - PCB header



1818203

<https://www.phoenixcontact.com/us/products/1818203>

Approvals

To download certificates, visit the product detail page: <https://www.phoenixcontact.com/us/products/1818203>



EAC

Approval ID: B.01687



cULus Recognized

Approval ID: E60425-20110128

	Nominal voltage U_N	Nominal current I_N	Cross section AWG	Cross section mm^2
Use group B	300 V	8 A	-	-
Use group D	300 V	8 A	-	-



VDE Zeichengenehmigung

Approval ID: 40011723

	Nominal voltage U_N	Nominal current I_N	Cross section AWG	Cross section mm^2
	160 V	8 A	-	-

MCV 1,5/ 4-GF-3,81-LR - PCB header



1818203

<https://www.phoenixcontact.com/us/products/1818203>

Classifications

ECLASS

ECLASS-11.0	27460201
ECLASS-12.0	27460201
ECLASS-13.0	27460201

ETIM

ETIM 8.0	EC002637
----------	----------

UNSPSC

UNSPSC 21.0	39121400
-------------	----------

MCV 1,5/ 4-GF-3,81-LR - PCB header



1818203

<https://www.phoenixcontact.com/us/products/1818203>

Environmental product compliance

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

MCV 1,5/ 4-GF-3,81-LR - PCB header

1818203

<https://www.phoenixcontact.com/us/products/1818203>



Accessories

SK 3,81/2,8:FORTL.ZAHLEN - Marker card

0804109

<https://www.phoenixcontact.com/us/products/0804109>



Marker 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

CP-MSTB - Coding profile

1734634

<https://www.phoenixcontact.com/us/products/1734634>

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



MCV 1,5/ 4-GF-3,81-LR - PCB header

1818203

<https://www.phoenixcontact.com/us/products/1818203>

MC 1,5/ 4-ST-3,81-LR - PCB connector

1817068

<https://www.phoenixcontact.com/us/products/1817068>



PCB connector, nominal cross section: 1.5 mm², color: green, nominal current: 8 A, rated voltage (III/2): 160 V, contact surface: Tin, contact connection type: Socket, number of potentials: 4, number of rows: 1, number of positions: 4, number of connections: 4, product range: MC 1,5/...-ST-LR, pitch: 3.81 mm, connection method: Screw connection with tension sleeve, screw head form: L Slotted, conductor/PCB connection direction: 0 °, plug-in system: COMBICON MC 1,5, locking: Snap-in locking, mounting: Lock & Release ejector lever, type of packaging: packed in cardboard

FK-MCP 1,5/ 4-ST-3,81-LR - PCB connector

1817440

<https://www.phoenixcontact.com/us/products/1817440>



PCB connector, nominal cross section: 1.5 mm², color: green, nominal current: 8 A, rated voltage (III/2): 160 V, contact surface: Tin, contact connection type: Socket, number of potentials: 4, number of rows: 1, number of positions: 4, number of connections: 4, product range: FK-MCP 1,5/...-ST-LR, pitch: 3.81 mm, connection method: Push-in spring connection, conductor/PCB connection direction: 0 °, plug-in system: COMBICON MC 1,5, locking: Snap-in locking, mounting: Lock & Release ejector lever, type of packaging: packed in cardboard

Phoenix Contact 2023 © - all rights reserved
<https://www.phoenixcontact.com>

Phoenix Contact USA
586 Fulling Mill Road
Middletown, PA 17057, United States
(+717) 944-1300
info@phoenixcon.com