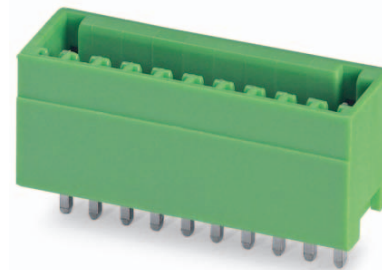


# Data sheet

**Order No.: 1881574**

**Type: MCV 0,5/ 4-G-2,5**

**Header**



The figure shows a 10-position version of the product

## 1 Main features



- |                         |                     |                        |                     |
|-------------------------|---------------------|------------------------|---------------------|
| • No. of pos.           | 4                   | • Nominal current      | 4 A                 |
| • Nominal cross section | 0.5 mm <sup>2</sup> | • Nominal voltage      | 160 V               |
| • Color                 | green               | • Connection direction | 90 °                |
| • Pitch                 | 2.5 mm              | • Type of packaging    | packed in cardboard |
| • Mounting type         | Wave soldering      |                        |                     |

## 2 Your advantages

- ✓ Well-known mounting principle allows worldwide use
- ✓ Vertical connection enables multi-row arrangement on the PCB



Make sure you always use the latest documentation.

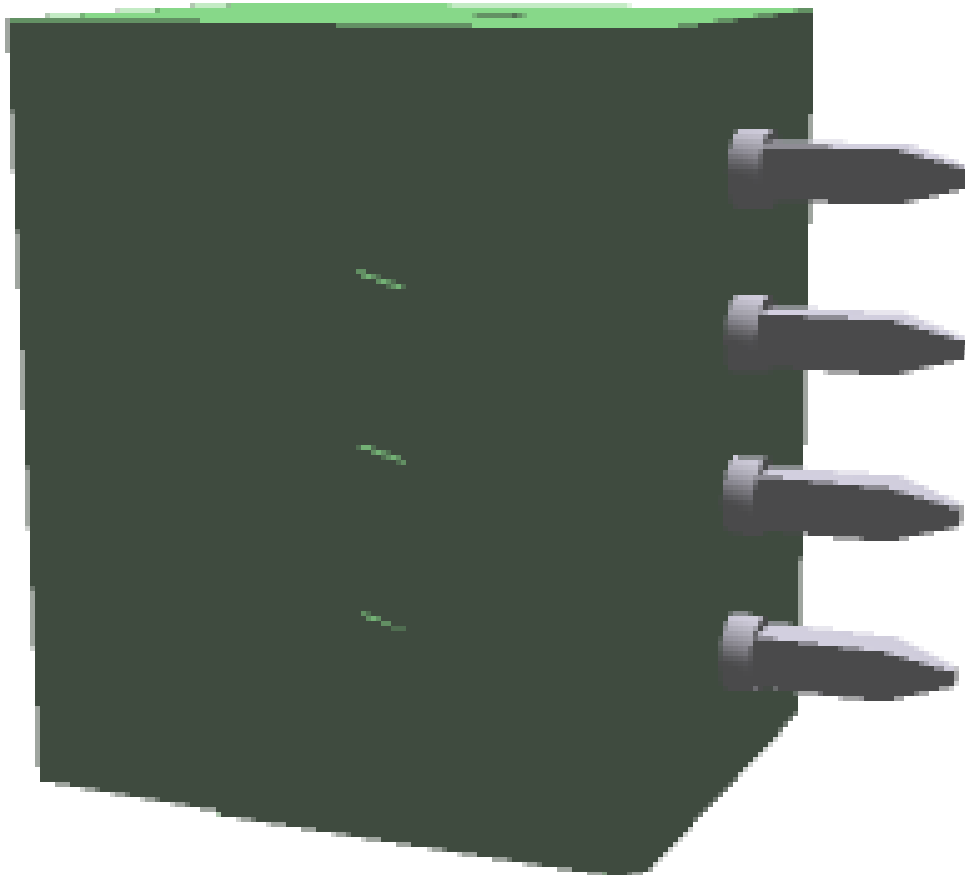
It can be downloaded at: [phoenixcontact.net/product/1881574](https://phoenixcontact.net/product/1881574)

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1881574 MCV 0,5/ 4-G-2,5

4 3D model in PDF can be activated (Acrobat Reader only)



**1881574 MCV 0,5/ 4-G-2,5****5 item properties**

Order No.	1881574
Type	MCV 0,5/ 4-G-2,5
Type of contact	Male connector
Range of articles	MCV 0,5/...-G
Pitch	2.5 mm
Number of positions	4
Locking	without
Mounting type	Wave soldering
Pin layout	Linear pinning

**5.1 Material data**

<b>Material of metal parts</b>		
Note	WEEE/RoHS-compliant, whisker-free acc. to IEC 60068-2-82/JEDEC JESD 201	
Contact material	Cu alloy	
Surface contact area	Ni 1 µm ... 3 µm , Sn 3 µm ... 5 µm	
Soldering area surface	Ni 1 µm ... 3 µm , Sn 3 µm ... 5 µm	
Surface characteristics	Tin-plated	
<b>Insulating material data</b>	<b>Housing</b>	<b>Housing</b>
Insulating material	PA	
CTI according to IEC 60112	600	
Flammability rating according to UL 94	V0	
Color	green (6021)	

**6 Dimensions****6.1 Dimensions for the product**

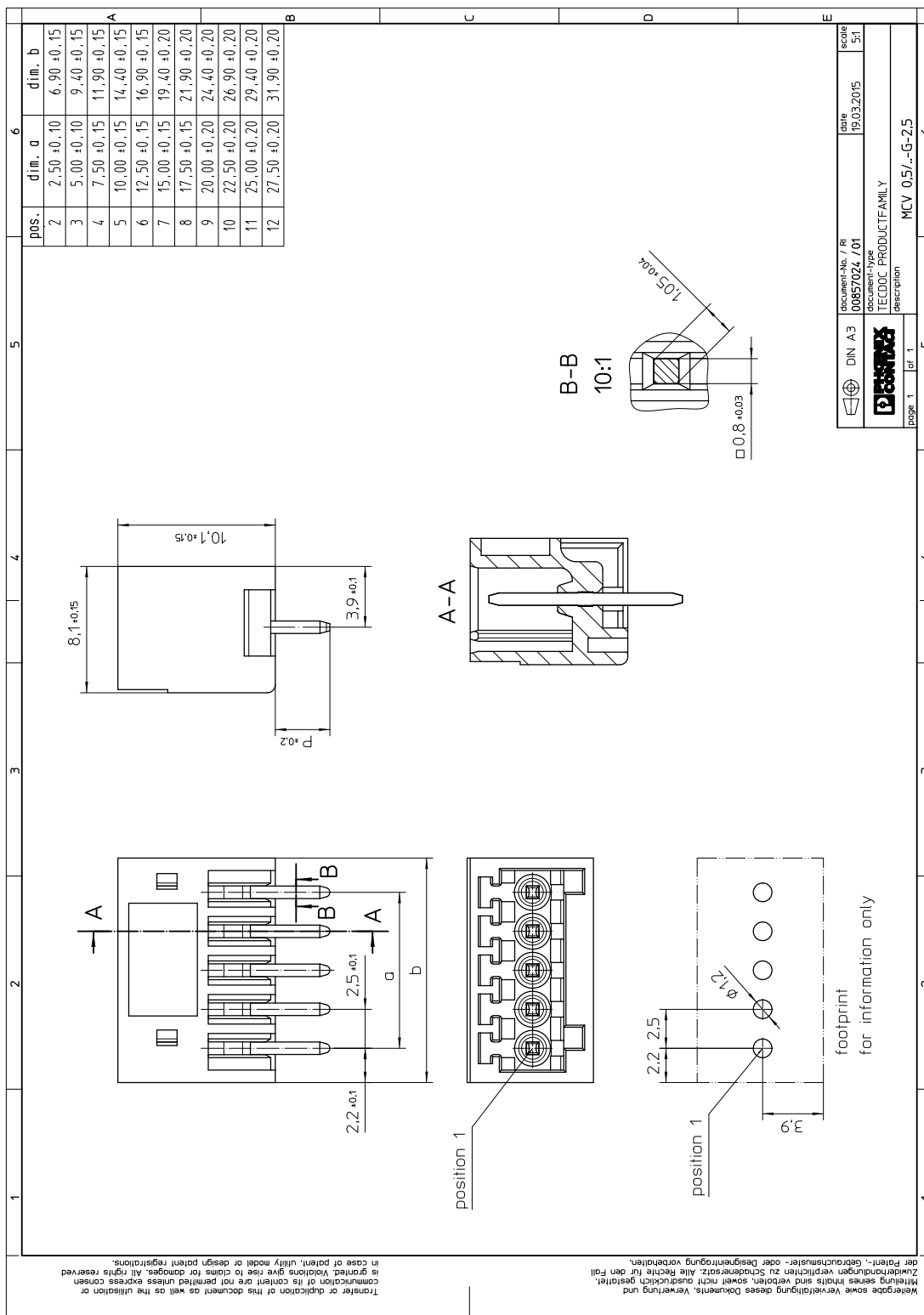
Length	8.1 mm
Width	12.2 mm
Height (without solder pin)	10.1 mm
Total height	13.6 mm
Solder pin [P]	3.5 mm
Dimension a	7.5 mm

**6.2 Dimensions for PCB design**

Hole diameter	1.2 mm
Pin dimensions	0,8 x 0,8

1881574 MCV 0,5/ 4-G-2,5

7 Series drawing



**1881574 MCV 0,5/ 4-G-2,5****8 Packaging information**

Type of packaging	packed in cardboard
Pieces per package	50

**9 Application****9.1 Temperature limit values**

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

**1881574 MCV 0,5/ 4-G-2,5****10 Mechanical tests**

Mechanical test group A	
Specification	IEC 61984:2008-10
Visual examination	Test passed
Specification	IEC 60512-1-1:2002-02
Dimensional test	Test passed
Specification	IEC 60512-1-2:2002-02
Resistance of marking	Test passed
Specification	IEC 60068-2-70:1995-12
Insertion and withdrawal force	Test passed
Specification	IEC 60512-13-2:2006-02
No. of cycles	25
Insertion strength per pos. approx.	7 N
Withdraw strength per pos. approx.	6 N
Polarization and coding	Test passed
Specification	IEC 60512-13-5:2006-02
Test force	20 N
Contact retention in insert	Test passed
Specification	IEC 60512-15-1:2008-05
Test force per pos.	26 N

**1881574 MCV 0,5/ 4-G-2,5****11 Electrical tests****11.1 Electrical data**

Rated current / conductor cross section	4 A / 0.5 mm <sup>2</sup>
Rated insulation voltage (III/2)	160 V
Rated surge voltage (III/2)	2.5 kV
Contact resistance	2 mΩ
Degree of pollution	2

**11.2 Air and creepage distances**

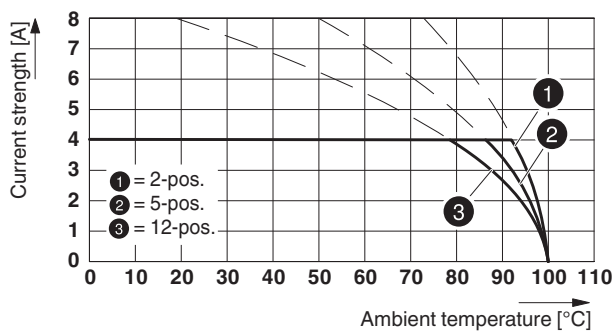
Component	Header		
Specification	IEC 60664-1:2007-04		
Mains type	unearthed mains		
Insulating material group	I		
Comparative tracking index (IEC 60112:2003-01)	CTI 600		
Rated insulation voltage	80 V	160 V	320 V
Rated surge voltage	1.5 kV	2.5 kV	2.5 kV
Degree of pollution	3	2	2
Overvoltage category	III	III	II
Minimum clearance case A (inhomogeneous field)	0.8 mm	1.5 mm	1.5 mm
Minimum value of the creepage path requirement in acc. with table	1.7 mm	0.8 mm	1.6 mm

**1881574 MCV 0,5/ 4-G-2,5**

**12 Current carrying capacity/derating curves**

Specification	IEC 61984:2008-10
Note	Representation based on IEC 60512-5-2:2002-02
Reduction factor	0.8
Number of positions	See diagram
Conductor cross section	0.5 mm <sup>2</sup>
Note	

**Type: FK-MC 0,5/...-ST-2,5 with MCV 0,5/...-G-2,5**



**1881574 MCV 0,5/ 4-G-2,5****13 Environmental and durability tests****13.1 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
Test directions	X-, Y- and Z-axis

**14 Classification for connectors**

Specification	IEC 61984:2008-10
Main features	Connectors without switching capacity (COC)
Construction form	Fixed connectors
Strain relief elements	without strain relief
Protection against electric shock	Not encapsulated - touch-proof when inserted
Protection class	
Protective conductor	without PE
Lock	no

**15 Approvals****VDE Gutachten mit Fertigungsüberwachung **

mm <sup>2</sup> /AWG/kcmil				
Voltage	80 V			
Current	4 A			

**IECEE CB Scheme **

mm <sup>2</sup> /AWG/kcmil				
Voltage	80 V			
Current	4 A			

**CCA**

mm <sup>2</sup> /AWG/kcmil				
Voltage	80 V			
Current	4 A			

**EAC ****cULus Recognized **

Use group	B			
mm <sup>2</sup> /AWG/kcmil				
Voltage	125 V			
Current	4 A			

**1881574 MCV 0,5/ 4-G-2,5****16 Commercial Data**

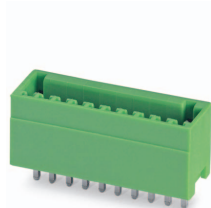
Order No.	1881574
Type	MCV 0,5/ 4-G-2,5
Pieces per package	50
Net weight	0.839 g
GTIN	4017918156817
	Information that applies locally, see link on page 1
Country of origin	Information that applies locally, see link on page 1

**17 corresponding plugs**

Order No.	Type
1881341	FK-MC 0,5/ 4-ST-2,5

**18 Accessories**

Description	Order No.	Type
Coding profile, is inserted into the groove in the header, red insulating material	1881435	CP-MC 0,5
	0804853	SK 2,54/2,8:FORTL.ZAHLEN

**1881574 MCV 0,5/ 4-G-2,5****19 Combination tests****MCV 0,5/..-G**

Specification

**Mechanical tests (A)**

Insertion/withdrawal force per position

Polarization when inserted  
Requirement >20 NContact holder in insert  
Requirements >20 N**Durability tests (B)**Contact resistance  $R_1$ 

Insertion/withdrawal cycles

Contact resistance  $R_2$ Rated impulse voltage at sea level  
Voltage waveform  $\geq (1.2/50 \mu s)$ Power-frequency withstand voltage  
Voltage waveform  $\geq (50/60 \text{ Hz})$ Insulation resistance  
Requirements > 5 M $\Omega$ **Thermal tests (C)**

Tested number of positions

Tested conductor cross section

Test current

Upper limiting temperature  
Requirements < 100°C**Climatic tests (D)**

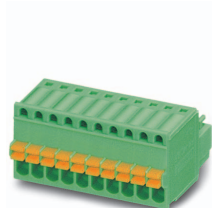
Test sequence 1: low temperature storage

Test sequence 2: heat storage

Test sequence 3: noxious gas storage  
(ISO 6988)Rated impulse voltage at sea level  
Voltage waveform  $\geq (1.2/50 \mu s)$ Power-frequency withstand voltage  
Voltage waveform  $\geq (50/60 \text{ Hz})$ **Environmental and endurance tests (E)**

Specification

Degree of protection

**FK-MC 0,5/..-ST**

IEC 61984

approx. 7 N / 6 N

Test passed

Test passed

2 m $\Omega$ 

25

2.2 m $\Omega$ 

2.95 kV

1.39 kV

0.1 T $\Omega$ 

12

0.5 mm<sup>2</sup>

4 A DC

Test passed

-40 °C/2 h

100 °C/168 h

0.2 dm<sup>3</sup> SO<sub>2</sub> on 300 dm<sup>3</sup>/  
40 °C/1 cycle

2.95 kV

1.39 kV

IEC 61984:2008-10

Finger safety with IP20  
test finger



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