

Order No.: 1012266

Type: MCC 0,5/ 2-ST-2,54

PCB connector, Crimp connection



## 1 Main features



- |                           |                      |                        |                     |
|---------------------------|----------------------|------------------------|---------------------|
| • No. of pos.             | 2                    | • Nominal current      | 6 A                 |
| • Conductor cross section | 0.75 mm <sup>2</sup> | • Nominal voltage      | 160 V               |
| • Color                   | black (9005)         | • Connection direction | 0 °                 |
| • Pitch                   | 2.54 mm              | • Type of packaging    | packed in cardboard |
| • Connection method       | Crimp connection     |                        |                     |

## 2 Your advantages

- ✓ Cost-effective connection of crimped conductors in large quantities
- ✓ Gold-plated contacts ensure transfer quality remains stable over the long term
- ✓ Small component size for applications where space is at a premium
- ✓ Tools for manual and automatic crimping available as an option



Make sure you always use the latest documentation.  
It can be downloaded at: [phoenixcontact.net/product/1012266](https://phoenixcontact.net/product/1012266)

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



**1012266 MCC 0,5/ 2-ST-2,54****5 General Technical Data****5.1 item properties**

Order No.	1012266
Type	MCC 0,5/ 2-ST-2,54
Plug-in system	MICRO COMBICON - FMC 0,5
Product type	PCB connector
Type of contact	Female connector
Range of articles	MCC 0,5/..-ST
Pitch	2.54 mm
Number of positions	2
Number of levels	1
Number of connections	2
Number of potentials	2
Connection method	Crimp connection
Connection direction of the conductor to plug-in direction	0 °
Type	Standard

**1012266 MCC 0,5/ 2-ST-2,54****6 Mounting****6.1 Flange fixing**

Type of locking	without
Mounting flange	without

**6.2 Connection capacity**

Nominal cross section	0.75 mm <sup>2</sup>
Conductor cross section, flexible	0.14 mm <sup>2</sup> ... 0.75 mm <sup>2</sup> (Maximum external diameter of the insulation 1.9 mm)
Stripping length	4.1 mm ... 4.5 mm

**6.3 Connection capacity AWG**

Conductor cross section AWG	26 ... 18 (Maximum external diameter of the insulation 1.9 mm)
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**1012266 MCC 0,5/ 2-ST-2,54****7 Material properties****7.1 Material of plastic parts**

	Housing
Color	black (9005)
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

**1012266 MCC 0,5/ 2-ST-2,54**

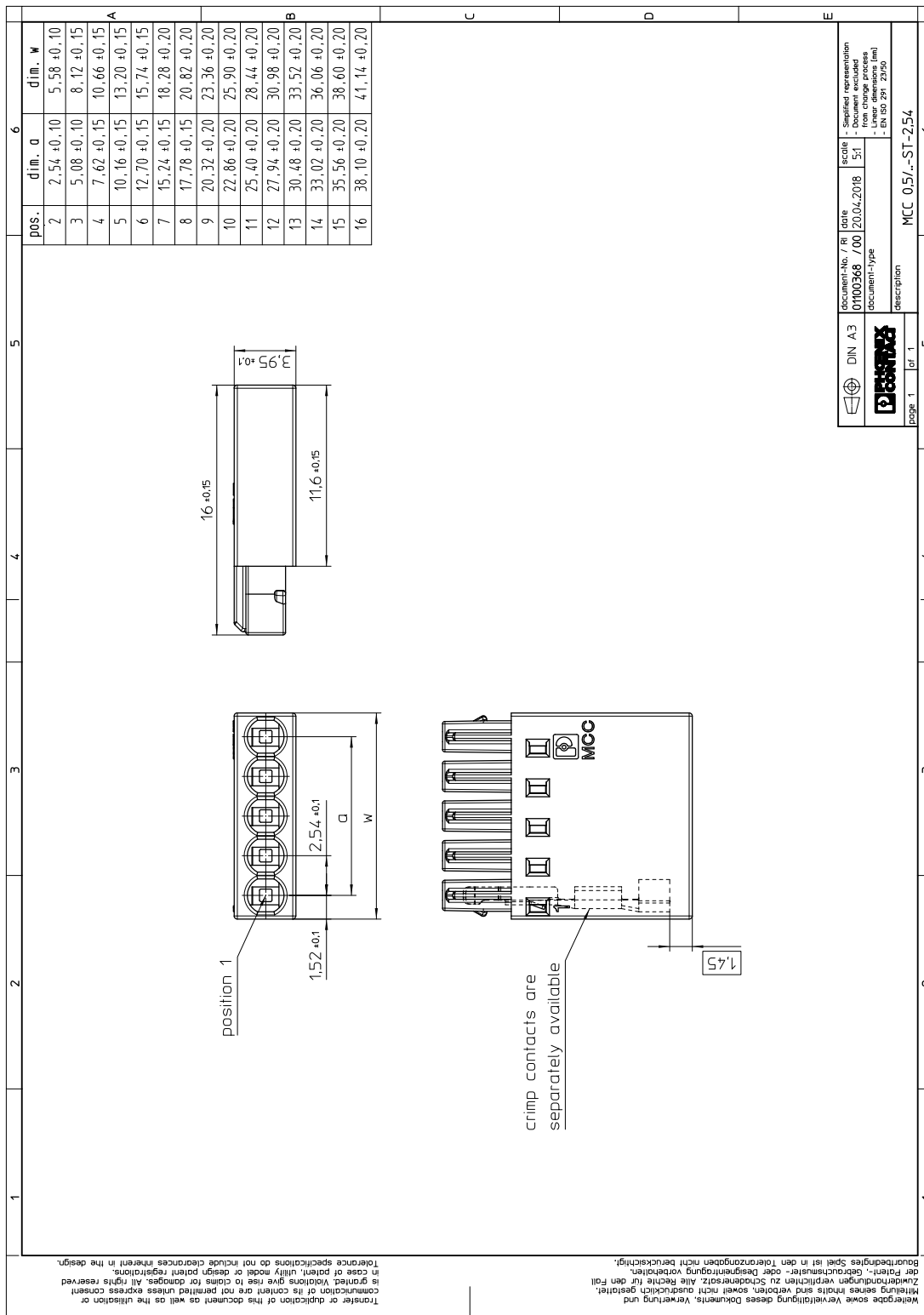
## 8 Dimensions

### 8.1 Dimensions for the product

Length	16 mm
Width	5.58 mm
Installed height	3.95 mm
Total height	3.95 mm

1012266 MCC 0,5/ 2-ST-2,54

9 Series drawing



DIN A3	document-No. / Ri / date	scale	Simplified representation
	01100368 / 700 / 20.04.2018	5:1	- according to standards
	document-type		- from crimp process
			- Linear dimensions (mm)
			- EN ISO 291 / 2950
page 1	of 1	MCC 0,5/ 2-ST-2,54	

**1012266 MCC 0,5/ 2-ST-2,54****10 Product notes****10.1 General information**

Note on the contact	The information on the basic material and the finish properties of the crimp contacts is to be found in the E-Shop in the technical data for the respective crimp contact.
Note on application	All laboratory tests are performed in combination with the crimp contacts specified as accessories.
Note on application	The current depends on the crimp contact and conductor cross section used.
Note on application	The corresponding crimp contacts are to be found in the "Accessories" tab.
Note on application	The crimp contacts may only be processed with approved crimping tools.

**11 Packaging information**

Type of packaging	packed in cardboard
Pieces per package	250

**12 Application****12.1 Temperature limit values**

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)

**1012266 MCC 0,5/ 2-ST-2,54****13 General tests****13.1 Specification**

Specification	IEC 61984
Specification	IEC 60352-2
Brief description	Printed-circuit board connector

**14 Mechanical tests****14.1 Tensile strength of crimped connections**

Result	Test passed
Specification	IEC 60512-16-4:2008-06
Conductor cross section/conductor type/tractive force setpoint/actual value	0.14 mm <sup>2</sup> / flexible / > 18 N 0.75 mm <sup>2</sup> / flexible / > 85 N

**14.2 Visual examination**

Specification	IEC 61984:2008-10
Visual examination	Test passed
Specification	IEC 60512-1-1:2002-02

**14.3 Dimensional test**

Dimensional test	Test passed
Specification	IEC 60512-1-2:2002-02

**14.4 Resistance of marking**

Resistance of marking	Test passed
Specification	IEC 60068-2-70:1995-12

**14.5 Polarization and coding**

Polarization and coding	Test passed
Specification	IEC 60512-13-5:2006-02
Test force	20 N

**14.6 Contact retention in insert**

Contact retention in insert	Test passed
Specification	IEC 60512-15-1:2008-05
Test force per pos.	20 N

**1012266 MCC 0,5/ 2-ST-2,54****15 Insertion and withdrawal forces**

Insertion and withdrawal force	
Specification	Test passed
No. of cycles	100
Insertion strength per pos. approx.	2 N
Withdraw strength per pos. approx.	3 N

**1012266 MCC 0,5/ 2-ST-2,54****16 Electrical tests****16.1 Electrical data**

Rated current / conductor cross section	6 A / 0.75 mm <sup>2</sup>
Rated insulation voltage (III/2)	160 V
Rated surge voltage (III/2)	2.5 kV
Contact resistance	2.1 mΩ
Degree of pollution	2

**16.2 Air and creepage distances**

Component	PCB connector		
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	160 V	160 V	320 V
Rated surge voltage	2.5 kV	2.5 kV	2.5 kV
Degree of pollution	3	2	2
Overvoltage category	III	III	II
Minimum clearance case A (inhomogeneous field)	1.5 mm	1.5 mm	1.5 mm
Minimum value of the creepage path requirement in acc. with table	2 mm	0.8 mm	1.6 mm

**16.3 Insulation resistance**

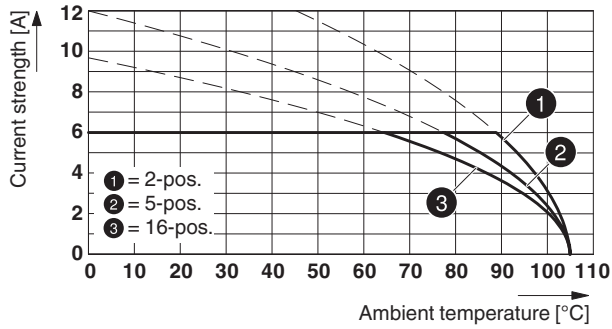
Specification	IEC 60512-3-1:2002-02
Result	Test passed
Insulation resistance, neighboring positions	> 12 TΩ

## 1012266 MCC 0,5/ 2-ST-2,54

## 17 Current carrying capacity/derating curves

Specification	IEC 61984:2008-10
Note	Representation based on IEC 60512-5-2:2002-02
Note	For number of positions, see diagram
Reduction factor	0.8
Conductor cross section	0.75 mm <sup>2</sup>

Type: MCC 0,5/...-ST-2,54 with MC 0,5/...-G-2,54 P20 THR R...



**1012266 MCC 0,5/ 2-ST-2,54****18 Environmental and durability tests****18.1 Vibration test**

Specification	IEC 60068-2-6:2007-12
Result	Test passed
Frequency	10 - 500 - 10 Hz
Sweep speed	1 octave/min
Amplitude	0.35 mm (10 - 60.1 Hz)
Acceleration	5g (60.1 - 500 Hz)
Test duration per axis	2 h
Test directions	X-, Y- and Z-axis
Note	The connected conductor loops were guided to the test sample at a distance of approx. 10 cm.

**18.2 Railway application, vibration test**

Specification	IEC 61373:2010-05
Result	Test passed
Testing	Vibration, broadband noise
Frequency	5 - 150 Hz
Test directions	X-, Y- and Z-axis (pos. and neg.)
Spectrum	Service life test category 1, class B, body mounted




**1012266 MCC 0,5/ 2-ST-2,54****19 Type approval and special tests****19.1 Insulation resistance**

Specification	IEC 60512-3-1:2002-02
Result	Test passed
Insulation resistance, neighboring positions	> 12 TΩ

**20 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
Connection method	Cannot be reconnected
Protection against electric shock	not encapsulated - back of hand safety when plugged in
Protective conductor	without PE
Lock	no
Connection method	Crimp connections

**1012266 MCC 0,5/ 2-ST-2,54****21 Approvals / Certificates**

EAC ENEC				
cULus Recognized 				
	Voltage [V]	Current [A]	Cross section [AWG]	Cross section [mm <sup>2</sup> ]
<b>Usegroup B</b>				
	150 V	6 A	26 - 18	-
<b>Usegroup D</b>				
	150 V	6 A	26 - 18	-
IECEE CB Scheme 				
	Voltage [V]	Current [A]	Cross section [AWG]	Cross section [mm <sup>2</sup> ]
	160 V	6 A	-	0.14 - 0.75
VDE Gutachten mit Fertigungsüberwachung 				
	Voltage [V]	Current [A]	Cross section [AWG]	Cross section [mm <sup>2</sup> ]
	160 V	6 A	-	0.14 - 0.75

**1012266 MCC 0,5/ 2-ST-2,54****22 Commercial Data**

Order No.	1012266
Type	MCC 0,5/ 2-ST-2,54
Pieces per package	250
Net weight	0.289 g
GTIN	4055626487977
	Information that applies locally, see link on page 1
Country of origin	Information that applies locally, see link on page 1

**23 corresponding headers**

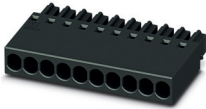
Order No.	Type
1821245	MC 0,5/ 2-G-2,54 P20 THR R24
1821397	MCV 0,5/ 2-G-2,54 P20 THR R24
1821546	MCV 0,5/ 2-G-2,54 SMD R24
1821698	MC 0,5/ 2-G-2,54 SMD R24

**24 Accessories**

Description	Order No.	Type
	1013425	MCC 0,5-MP AU 0,14-0,5
	1013420	MCC 0,5-MP AU 0,14-0,5 R
	1013419	MCC 0,5-MP AU 0,34-0,75
	1013418	MCC 0,5-MP AU 0,34-0,75 R
Crimping pliers, for COMBICON crimp connectors with cross section: 0.14 ... 0.75 mm <sup>2</sup> . Unlockable pressure lock, precise parallel crimping, front entry, B crimp, incl. 2 positioning aids	1064998	CRIMPFOX-P CC 0.75 L

## 1012266 MCC 0,5/ 2-ST-2,54

## 25 Combination tests

**MCC 0,5/..-ST**

IEC 61984

**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  $\geq (1.2/50 \mu\text{s})$ Power-frequency withstand voltage  
Voltage waveform  $\geq (50/60 \text{ Hz})$ **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  $\geq (1.2/50 \mu\text{s})$ Power-frequency withstand voltage  
Voltage waveform  $\geq (50/60 \text{ Hz})$ **Environmental and endurance tests (E)**

Specification

Degree of protection

**MC 0,5/..-G-THR**

IEC 61984

approx. 2 N / 3 N

Test passed

Test passed

2.1 m $\Omega$ 

100

2.1 m $\Omega$ 

2.95 kV

1.39 kV

16

0.75 mm<sup>2</sup>

6 A

Test passed

-55 °C/2 h

105 °C/168 h

1.0 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

Back of hand safety with  
IP10 access probe