2018-10-18
Product version 00
Document revision 00

Data sheet

Order No.: 1012282

Type: MCC 0,5/16-ST-2,54

PCB connector, Crimp connection

1 Main features

- No. of pos. 16
- Conductor cross section 0.75 mm²
- Color black
- Pitch 2.54 mm
- Connection method Crimp connection
- Nominal current 6 A
- Nominal voltage 160 V
- Connection direction 0 °
- Type of packaging packed in cardboard

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/1012282

3 Table of contents

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

5 item properties

Order No.	1012282
Type	MCC 0,5/16-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	16
Connection method	Crimp connection
Type of locking	without
	without
Number of levels	1
Number of contacts / solder pins per potential	1

5.1 Connection capacity

Conductor cross section, flexible	0.14 mm^2 ... 0.75 mm^2 (Maximum external diameter of the insulation 1.9 mm)
Stripping length	4.1 mm ... 4.5 mm
Tightening torque	

5.2 Connection capacity AWG

Conductor cross section AWG	26 ... 18 (Maximum external diameter of the insulation 1.9 mm)

Insulating material data	Housing
Insulating material	PA
Insulating material group	I
CTI according to IEC 60112	600
Flammability rating according to UL 94	V0
Color	black (9005)
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

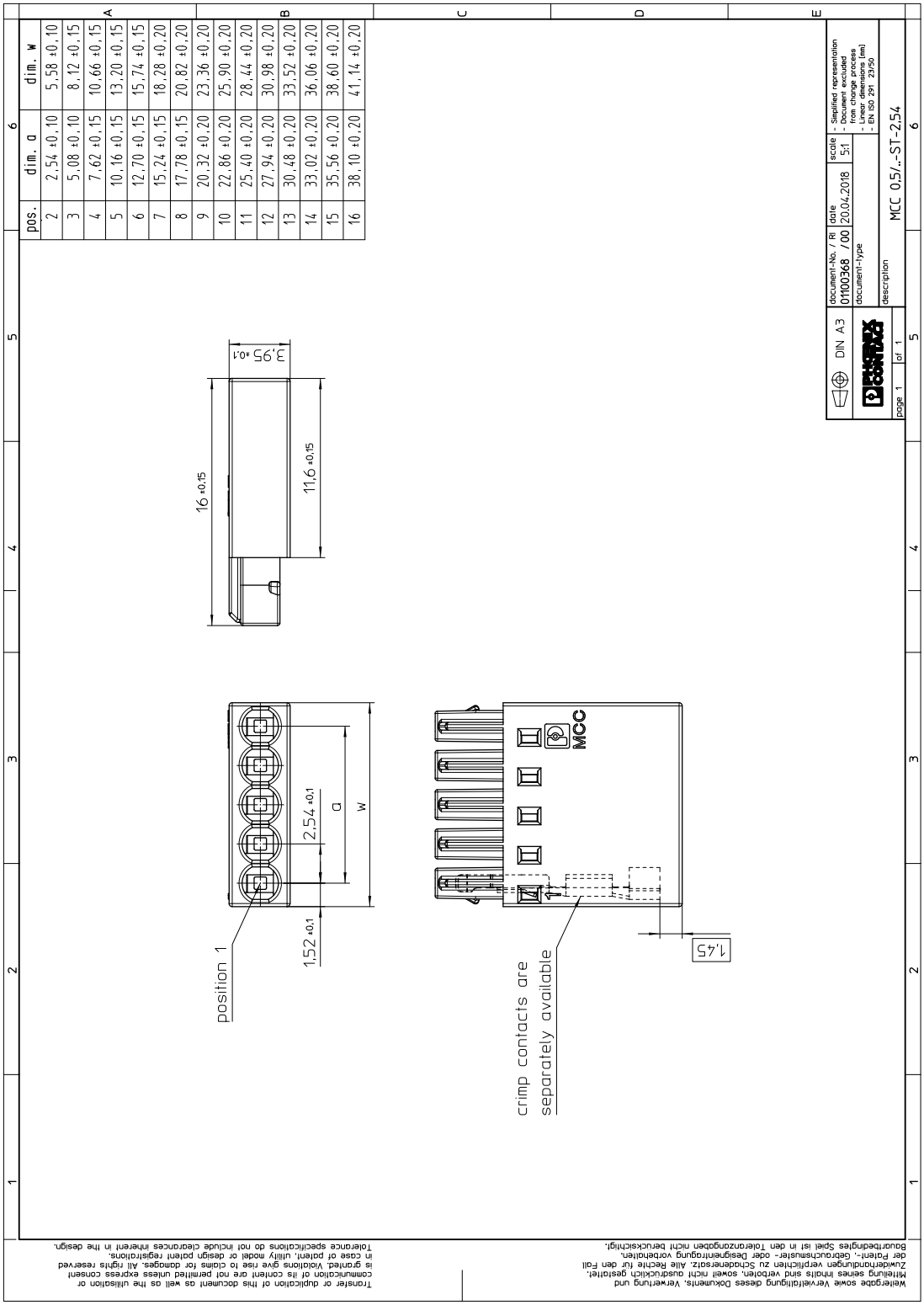
6 Dimensions

6.1 Dimensions for the product

Length	16 mm
Width	41.14 mm
Total height	3.95 mm
Dimension a	38.1 mm
Coplanarity	

1012282 MCC 0,5/16-ST-2,54

7 Series drawing



8 Packaging information

Type of packaging	packed in cardboard
Pieces per package	100

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)

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	100
Insertion strength per pos. approx.	2 N
Withdraw strength per pos. approx.	3 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.	20 N

10.1 Termination and connection method

11 Electrical tests

11.1 Electrical data

Rated current / conductor cross section	6 A / 0.75 mm²
Rated insulation voltage (III/2)	160 V
Rated surge voltage (III/2)	2.5 kV
Contact resistance	2.1 mΩ
Degree of pollution	2

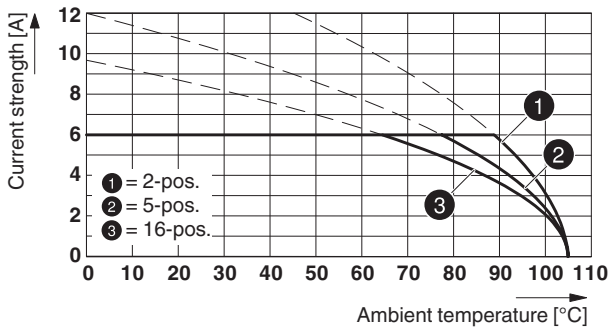
11.2 Air and creepage distances

Component	Plug component		
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

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	

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



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

13 Environmental and durability tests

13.1 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.

14 Approvals

cULus Recognized				
Use group	B	D		
mm^2/AWG/kcmil	26-18	26-18		
Voltage	150 V	150 V		
Current	6 A	6 A		

15 Commercial Data

Order No.	1012282
Type	MCC 0,5/16-ST-2,54
Pieces per package	100
Net weight	1.91 g
GTIN	4055626488929
	Information that applies locally, see link on page 1
Country of origin	Information that applies locally, see link on page 1

16 corresponding headers

Order No.	Type
1821384	MC 0,5/16-G-2,54 P20 THR R56
1821533	MCV 0,5/16-G-2,54 P20 THR R72
1821834	MC 0,5/16-G-2,54 SMD R72
1821685	MCV 0,5/16-G-2,54 SMD R72

17 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^2. Unlockable pressure lock, precise parallel crimping, front entry, B crimp, incl. 2 positioning aids	1064998	CRIMPFOX-P CC 0.75 L

18 Combination tests

MCC 0,5/..-ST	**MC 0,5/..-G-THR**
IEC 61984	IEC 61984
Mechanical tests (A)	
Insertion/withdrawal force per position	approx. 2 N / 3 N
Polarization when inserted Requirement >20 N	Test passed
Contact holder in insert Requirements >20 N	Test passed
Durability tests (B)	
Contact resistance R_1	2.1 mΩ
Insertion/withdrawal cycles	100
Contact resistance R_2	2.1 mΩ
Rated impulse voltage at sea level Voltage waveform ≥ (1.2/50 µs)	2.95 kV
Power-frequency withstand voltage Voltage waveform ≥ (50/60 Hz)	1.39 kV
Thermal tests (C)	
Tested number of positions	16
Tested conductor cross section	0.75 mm^2
Test current	6 A
Upper limiting temperature Requirements < 100°C	Test passed
Climatic tests (D)	
Test sequence 1: low temperature storage	-55 °C/2 h
Test sequence 2: heat storage	105 °C/168 h
Test sequence 3: noxious gas storage (ISO 6988)	1.0 dm^3 SO_2 on 300 dm^3/ 40 °C/1 cycle
Rated impulse voltage at sea level Voltage waveform ≥ (1.2/50 µs)	2.95 kV
Power-frequency withstand voltage Voltage waveform ≥ (50/60 Hz)	1.39 kV
Environmental and endurance tests (E)	
Specification	IEC 61984:2008-10
Degree of protection	Back of hand safety with IP10 access probe