

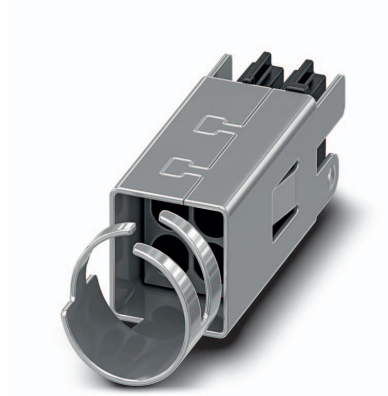
# Data sheet

2020-02-11  
Product version 00  
Document revision 01

Order No.: 1128660

Type: DMCC 0,5/ 2-ST-SH 7,0-2,54

PCB connector, Crimp connection



## 1 Main features



- |                           |                      |                        |                     |
|---------------------------|----------------------|------------------------|---------------------|
| • No. of pos.             | 2                    | • Nominal current      | 5 A                 |
| • Conductor cross section | 0.34 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

- ✓ Contacts arranged in a double row enable high packing density in a compact area
- ✓ Gold-plated contacts ensure transfer quality remains stable over the long term
- ✓ Tools for manual and automatic crimping available as an option



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1128660 DMCC 0,5/ 2-ST-SH 7,0-2,54

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



**1128660 DMCC 0,5/ 2-ST-SH 7,0-2,54****5 General Technical Data****5.1 item properties**

Order No.	1128660
Type	DMCC 0,5/ 2-ST-SH 7,0-2,54
Plug-in system	MICRO COMBICON - DFMC 0,5 shielded
Product type	PCB connector
Type of contact	Female connector
Range of articles	DMCC 0,5/...-ST-SH
Pitch	
Range of positions	...
Number of positions	2
Connection method	Crimp connection
Connection direction of the conductor to the PCB	0 °

**5.2 Mounting**

Type of locking	shielded connection
	without

**5.3 Connection capacity AWG**

Conductor cross section AWG	22
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**1128660 DMCC 0,5/ 2-ST-SH 7,0-2,54****6 Material properties****6.1 Material of metal parts**

Note	WEEE/RoHS-compliant, whisker-free acc. to IEC 60068-2-82/JEDEC JESD 201
Contact material	Cu alloy
Terminal point surface	Tin (4 - 8 µm Sn)
Surface contact area	Nickel (2 - 4 µm Ni) , Gold (0.25
Surface characteristics	Selective coating

**6.2 Material of plastic parts**

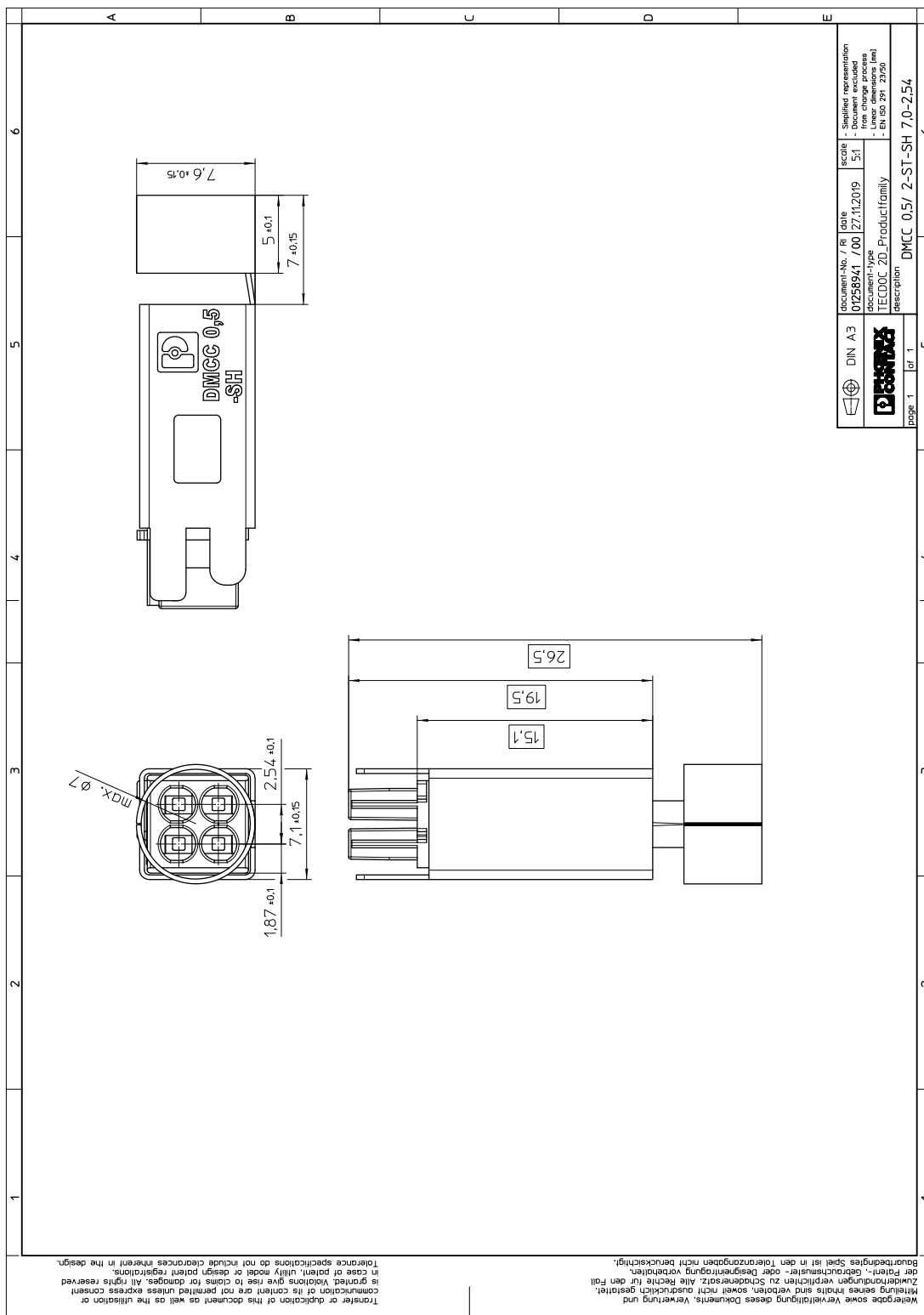
	Housing
Color	black (9005)
Insulating material	PA
Insulating material group	I
CTI according to IEC 60112	600
Flammability rating according to UL 94	V0
Glow wire flammability index GWFI according to EN 60695-2-12	850
Glow wire ignition temperature GWIT according to EN 60695-2-13	775
Temperature for the ball pressure test according to EN 60695-10-2	125 °C

**1128660 DMCC 0,5/ 2-ST-SH 7,0-2,54****7 Dimensions****7.1 Dimensions for the product**

Length	26.5 mm
Width	7.1 mm
Total height	7.4 mm
Dimension a	2.54 mm

1128660 DMCC 0,5/ 2-ST-SH 7,0-2,54

8 Series drawing



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**1128660 DMCC 0,5/ 2-ST-SH 7,0-2,54****9 Packaging information**

Type of packaging	packed in cardboard
Pieces per package	100

**10 Application****10.1 General information**

Notes on operation	In accordance with IEC 61984, COMBICON connectors have no switching power (COC). During designated use, they must not be plugged in or disconnected when carrying voltage or under load.
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**10.2 Temperature limit values**

Ambient temperature (storage/transport)	-30 °C ... 70 °C
Ambient temperature (assembly)	-5 °C ... 80 °C
Ambient temperature (installation)	-40 °C ... 80 °C (dependent on the derating curve)
Ambient temperature (mobile installation)	-30 °C 80 °C dependent on the derating curve



**1128660 DMCC 0,5/ 2-ST-SH 7,0-2,54****11 General tests****11.1 Specification**

Specification	IEC 61984
Specification	IEC 60352-2

**12 Mechanical tests****12.1 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	/ flexible / > 40 N

**12.2 Insulating grip effectiveness (crimped connections)**

Result	Test passed
Specification	IEC 60512-16-8:2008-05

**12.3 Visual examination**

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

**12.4 Dimensional test**

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

**12.5 Resistance of marking**

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

**12.6 Polarization and coding**

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

**12.7 Contact retention in insert**

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

**1128660 DMCC 0,5/ 2-ST-SH 7,0-2,54****13 Insertion and withdrawal forces**

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

**1128660 DMCC 0,5/ 2-ST-SH 7,0-2,54****14 Electrical tests****14.1 Electrical data**

Rated current / conductor cross section	5 A / 0.34 mm <sup>2</sup>
Rated insulation voltage (III/2)	160 V
Rated surge voltage (III/2)	2.5 kV
Contact resistance	4.8 mΩ
Degree of pollution	2

**14.2 Air and creepage distances**

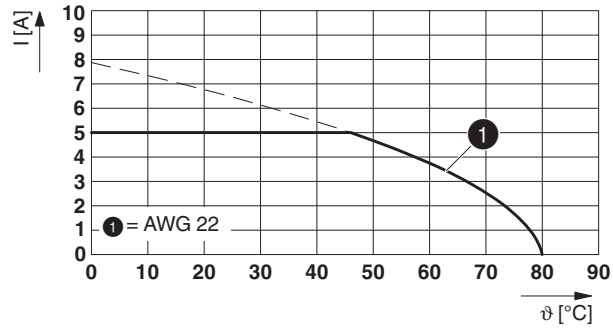
Component	PCB connector		
Specification	IEC 60664-1:2007-04		
Mains type	unearthed mains		
Insulating material group	I		
Comparative tracking index (IEC 60112:2003-01)	CTI 600		
Rated insulation voltage	50 V	160 V	250 V
Rated surge voltage	2.5 kV	2.5 kV	2.5 kV
Degree of pollution	3	2	2
Overvoltage category	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	1.5 mm	1.5 mm	1.25 mm

## 1128660 DMCC 0,5/ 2-ST-SH 7,0-2,54

## 15 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	0.34 mm <sup>2</sup>

Type: DMCC 0,5/...-ST-SH-2,54 with DMC 0,5/...-G1-SH-2,54P...THRR...



**1128660 DMCC 0,5/ 2-ST-SH 7,0-2,54****16 Environmental and durability tests****16.1 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	50 m/s <sup>2</sup> (60.1 - 150 Hz)
Test duration per axis	2.5 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.

**16.2 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

**16.3 Shock test**

Specification	IEC 60068-2-27:2008-02
Result	Test passed
Pulse shape	Semi-sinusoidal
Peak acceleration	350 m/s <sup>2</sup>
Shock duration	11 ms
Number of shocks per direction	1000
Test directions	X-, Y- and Z-axis (pos. and neg.)

**17 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 - touch-proof when inserted
Protective conductor	without PE
Lock	no
Connection method	Crimp connections

1128660 DMCC 0,5/ 2-ST-SH 7,0-2,54

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## 18 Approvals / Certificates

**1128660 DMCC 0,5/ 2-ST-SH 7,0-2,54****19 Commercial Data**

Order No.	1128660
Type	DMCC 0,5/ 2-ST-SH 7,0-2,54
Pieces per package	100
Net weight	2.22 g
GTIN	4063151057138
	Information that applies locally, see link on page 1
Country of origin	Information that applies locally, see link on page 1

**20 corresponding headers**

Order No.	Type
1097546	DMC 0,5/ 2-G1SH-2,54P20THR24
1097555	DMCC 0,5/ 2-SHIELD 7,0-2,54
1097476	DMCC 0,5/ 2-ST-WOSH1-2,54

**21 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
	1097546	DMC 0,5/ 2-G1SH-2,54P20THR24
	1097555	DMCC 0,5/ 2-SHIELD 7,0-2,54
	1097476	DMCC 0,5/ 2-ST-WOSH1-2,54

## 1128660 DMCC 0,5/ 2-ST-SH 7,0-2,54

## 22 Combination tests



## DMCC 0,5/...-ST-SH

## DMC 0,5/...-G1-SH-THR

IEC 61984

IEC 61984

## Mechanical tests (A)

Insertion/withdrawal force per position

approx. 3 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  $R_1$ 4.8 m $\Omega$ 

Insertion/withdrawal cycles

100

Contact resistance  $R_2$ 4.9 m $\Omega$ Rated impulse voltage at sea level  
Voltage waveform  $\geq (1.2/50 \mu\text{s})$ 

2.95 kV

Power-frequency withstand voltage  
Voltage waveform  $\geq (50/60 \text{ Hz})$ 

1.39 kV

## Thermal tests (C)

Tested number of positions

2

Test current

5 A

Upper limiting temperature  
Requirements < 100°C

Test passed

## Climatic tests (D)

Test sequence 1: low temperature storage

-40 °C/2 h

Test sequence 2: heat storage

80 °C/168 h

Test sequence 3: noxious gas storage  
(ISO 6988)0.2 dm<sup>3</sup> SO<sub>2</sub> on 300 dm<sup>3</sup>/  
40 °C/1 cycleRated impulse voltage at sea level  
Voltage waveform  $\geq (1.2/50 \mu\text{s})$ 

2.95 kV

Power-frequency withstand voltage  
Voltage waveform  $\geq (50/60 \text{ Hz})$ 

1.39 kV

## Environmental and endurance tests (E)

Specification

IEC 61984:2008-10

Degree of protection

Finger safety with IP20  
test finger