

# Data connector - SACC-MSD-4QO SH PN SCO



1411068

<https://www.phoenixcontact.com/pc/products/1411068>

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Data connector, PROFINET CAT5 (100 Mbps), 4-position, halogen-free, shielded, Plug straight M12 SPEEDCON, Coding: D, Insulation displacement connection, knurl material: Zinc die-cast, nickel-plated, external cable diameter 5 mm ... 9.7 mm

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## Your advantages

- Safe use in the field, thanks to a high degree of protection
- Save time, thanks to installation with SPEEDCON fast locking system
- Insulation displacement connection: innovative and time-saving assembly without stripping the single wire
- Reliable signal transmission - 360° shielding in environments with electromagnetic interference

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## Commercial Data

Item number	1411068
Packing unit	1 pc
Minimum order quantity	1 pc
Product Key	BF2CDN
Catalog Page	Page 201 (C-6-2019)
GTIN	4046356921794
Weight per Piece (including packing)	39.5 g
Weight per Piece (excluding packing)	39.5 g
Customs tariff number	85366990
Country of origin	DE

## Technical Data

### Notes

General	This product corresponds to the PROFINET Cabling and Interconnection Technology Guideline for PROFINET regulations, version 2.00, order no: 2.252, Chapter 8.2 Connectors for Outside Environment (Balanced cabling)
Assembly instruction:	<b>NOTE:</b> Observe the permissible bending radii when laying conductors, since the degree of protection may be put in jeopardy if the bending forces are too high. Alleviate mechanical loads upstream of the connector, e.g. by using cable ties.

### Product properties

Product type	Circular connector (cable-side)
Number of positions	4
No. of cable outlets	1
Shielded	yes
Coding	D - data
Cable outlet	straight

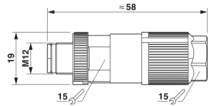
### Insulation characteristics

Overvoltage category	II
Degree of pollution	3

### Ambient conditions

Degree of protection	IP65 IP67
Ambient temperature (operation)	-40 °C ... 85 °C (Plug / socket)
Ambient temperature (assembly)	-5 °C ... 50 °C

### Dimensions

Dimensional drawing	
Length	58 mm

### External dimensions

Outside diameter	5 mm ... 9.7 mm
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### Housing

Diameter housing	19 mm
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### Connector

Insertion/withdrawal cycles	≥ 100
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## Header 1

Head design	Plug
Head cable outlet	straight
Head thread type	M12
Head locking type	SPEEDCON
Coding	D-coded
Number of positions	4
Coding	D - data
Insertion/withdrawal cycles	≥ 100
Connection method	Insulation displacement connection
Contact material	CuSn
Contact surface material	Ni/Au
Number of positions	4
Coding	D - data
Insertion/withdrawal cycles	≥ 100
Connection method	Insulation displacement connection
Contact material	CuSn
Contact surface material	Ni/Au

## Electrical properties

Rated surge voltage	0.8 kV
Insulation resistance	≥ 100 MΩ
Nominal voltage $U_N$	48 V AC
	60 V DC
Nominal current $I_N$	4 A

## Material specifications

Flammability rating according to UL 94	V0
Sealing material	NBR
Material of grip body	Zinc die-cast, nickel-plated
Contact material	CuSn
Contact surface material	Ni/Au
Contact carrier material	PA 6.6
Cable gland material	Zinc die-cast, nickel-plated
Standards/regulations	PA 6.6: Fire protection in rail vehicles - requirement sets R22, R23, R24, and R26 acc. to DIN EN 45545-2 (Risk level HL1 - HL3)
Wire insulation material	PVC / PE / PP / rubber

## Connection data

### Conductor connection

Connection method	Insulation displacement connection
Conductor cross section flexible	0.25 mm <sup>2</sup> ... 0.5 mm <sup>2</sup>
Cross section AWG	24 ... 20

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## Pin assignment

Contact   Color (signal designation)   Contact (optional)	
	1 (Plug) = YE (TD+)
	2 (Plug) = WH (RD+)
	3 (Plug) = OG (TD-)
	4 (Plug) = BU (RD-)

## Standards and regulations

### Testing

Standards/regulations	
	PA 6.6: Fire protection in rail vehicles - requirement sets R22, R23, R24, and R26 acc. to DIN EN 45545-2 (Risk level HL1 - HL3)

### M12

Standards/specifications	
	according to IEC 61076-2-101

### M12

Standards/specifications	
	EN 50155:2001

## Cable / line

### Cable structure

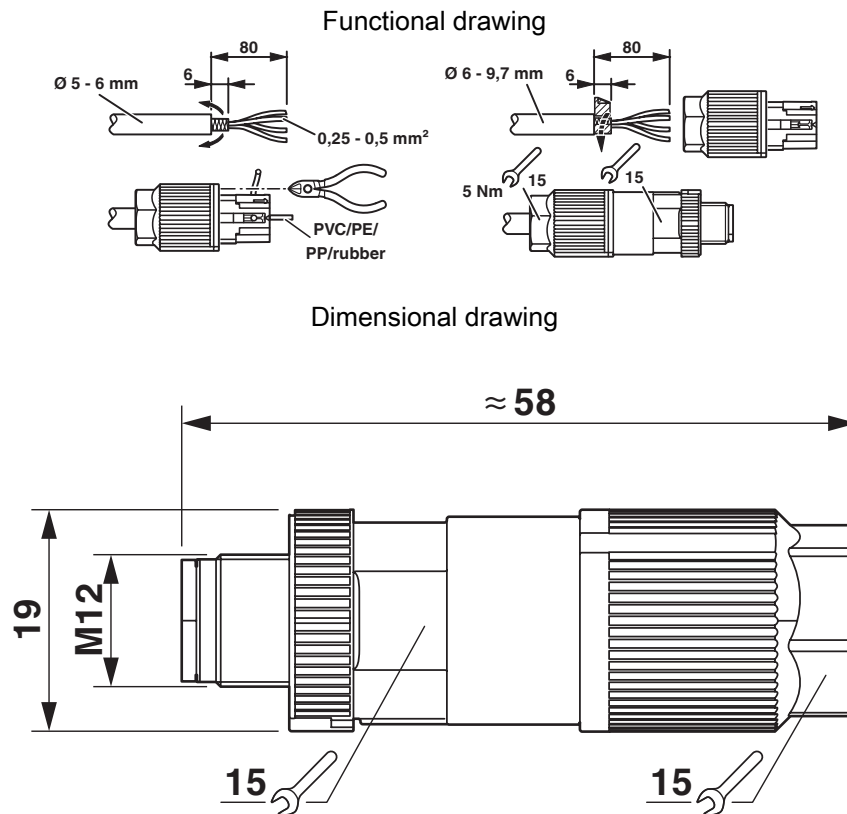
Signal type/category	
	PROFINET CAT5 (on the basis of IEC 11801), 100 Mbps

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## Drawings



Plug, M12 x 1, straight, shielded

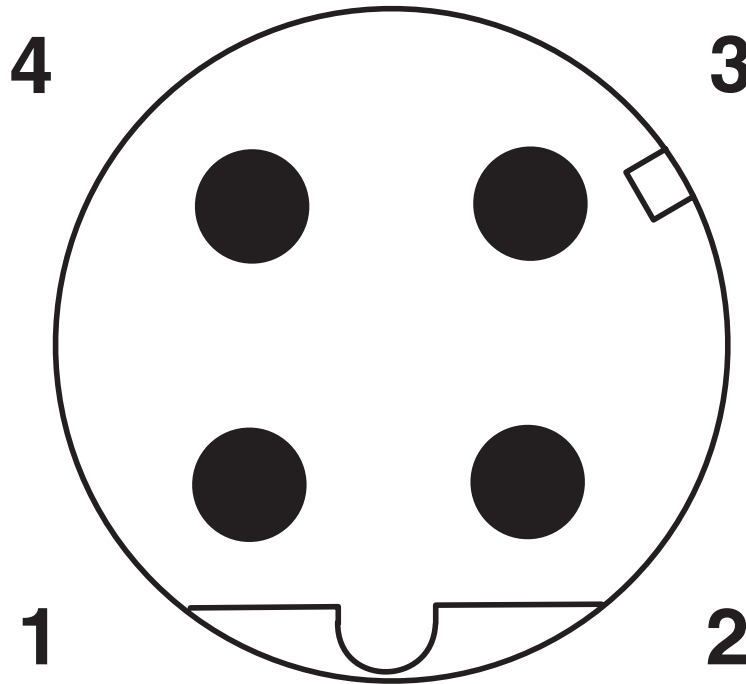
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Schematic diagram



Pin assignment M12 male connector, 4-pos., D-coded, male side

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## Approvals



**EAC**

Approval ID: RU C-DE.BL08.B.00511



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## Classifications

### ECLASS

ECLASS-9.0	27440102
ECLASS-10.0.1	27440102
ECLASS-11.0	27440102

### ETIM

ETIM 8.0	EC002635
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### UNSPSC

UNSPSC 21.0	39121400
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## Environmental Product Compliance

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

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## Accessories

### Shielding foil

Shielding foil - VS-08-RJ45-FOLIEN-SET - 1417184

<https://www.phoenixcontact.com/pc/products/1417184>

Shielding foil set, 25 pieces, replacement for RJ45 and M12 Quickon connector



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## Network cable

Network cable - VS-OE-OE-93B/... - 1417362

<https://www.phoenixcontact.com/pc/products/1417362>

Network cable, PROFINET CAT5 (100 Mbps), 4-position, shielded, free cable end, on free cable end, cable length: Free entry (0.5 ... 400 m)



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## Diagonal cutter

Diagonal cutter - MICROFOX-SB - 1212489

<https://www.phoenixcontact.com/pc/products/1212489>



Electronic diagonal cutter, round head, without chamfer, with opening spring, mirror-polished and oiled, 2-component grip, cutting capacity: soft 0.2 - 2.0 mm; medium hard 1.2 mm; hard 0.5 mm diameter

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## Stripping tool

Stripping tool - WIREFOX-D 40 - 1212161

<https://www.phoenixcontact.com/pc/products/1212161>



Stripping tool, for stripping cables of 4.5 mm - 40 mm-Ø, insulation thickness of up to 4.5 mm, pivoting blade for round, lengthwise, and spiral cuts

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## Stripping tool

Stripping tool - VS-CABLE-STRIP-VARIO - 1657407

<https://www.phoenixcontact.com/pc/products/1657407>

Stripping tool, for the multi-level stripping of shielded cables



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## Torque screwdriver

Torque screwdriver - TSD 04 SAC - 1208429

<https://www.phoenixcontact.com/pc/products/1208429>

Torque screwdriver, with preset torque of 0.4 Nm and 4 mm hexagonal drive for M12 connectors



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## Torque screwdriver

Torque screwdriver - TSD-M 1,2NM - 1212224

<https://www.phoenixcontact.com/pc/products/1212224>



Torque screw driver, accuracy as per EN ISO 6789 standard, adjustable from 0.3 - 1.2 Nm

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## Adapter insert

Adapter insert - TSD-M SAC-BIT ADAPTER - 1212600

<https://www.phoenixcontact.com/pc/products/1212600>



Adapter bit for TSD-M...torque tools, E6.3-1/4" drive with 4 mm hexagon to accommodate SAC bits

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## Sealing cap

Sealing cap - PROT-M12 FS-PA-CHAIN - 1430873

<https://www.phoenixcontact.com/pc/products/1430873>

M12 sealing cap made of plastic with fixing band, for sensor cables, for free M12 plugs



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## Tool

Tool - SACC BIT M12-D20 - 1208445

<https://www.phoenixcontact.com/pc/products/1208445>

Nut for assembling M12 connectors for assembly with a knurl diameter of 20 mm, for 4 mm hexagonal drive



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