

# SACCEC-M12FS-5CON-M16/10,0-920 - Device connector front mounting



1525717

<https://www.phoenixcontact.com/sg/products/1525717>

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Device connector front mounting, CANopen®, DeviceNet™, 5-position, PUR halogen-free, red lilac RAL 4001, shielded, Socket, straight, M12, coding: A, on free cable end, Front mounting, M16 x 1.5, Cable connection, cable length: 10 m, CANopen®/DeviceNet™, PUR, violet, Alternative product in accordance with RoHS II without Exemption 6c (Pb < 0.1 %) item no.: 1239897

## Your advantages

- Preassembled with cables in various standard lengths for immediate use
- Customer-specific assemblies and cable lengths can be supplied
- Sealed on the cable side for optimum tightness of seal
- Cable designs for all common networks and fieldbuses
- For high transmission safety: shield connection to the housing with optional EMC nut

## Commercial data

Item number	1525717
Packing unit	1 pc
Minimum order quantity	1 pc
Sales key	0212*
Product key	ABQDEG
Catalog page	Page 21 (PC-2005)
GTIN	4046356022453
Weight per piece (including packing)	620.4 g
Weight per piece (excluding packing)	620.4 g
Customs tariff number	85444290
Country of origin	DE

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## Technical data

### Notes

Notes on operation	The electrical and mechanical data specified assume that the connector pair is correctly locked and mounted. If the connector is unlocked and if there is a danger of contamination, the connector must be sealed using a protective cap > IP54. Influences arising from litz wires, cables or PCB assembly must also be taken into consideration.
Order information:	Lock nut is included in the scope of delivery

### Safety note

Safety note	<p>WARNING: The connectors may not be plugged in or disconnected under load. Ignoring the warning or improper use may damage persons and/or property.</p> <ul style="list-style-type: none"><li>• WARNING: Commission properly functioning products only. The products must be regularly inspected for damage. Decommission defective products immediately. Replace damaged products. Repairs are not possible.</li><li>• WARNING: Only electrically qualified personnel may install and operate the product. They must observe the following safety notes. The qualified personnel must be familiar with the basics of electrical engineering. They must be able to recognize and prevent danger. The relevant symbol on the packaging indicates that only personnel familiar with electrical engineering are allowed to install and operate the product.</li><li>• The products are suitable for applications in plant, controller, and electrical device engineering.</li><li>• When operating the connectors in outdoor applications, they must be separately protected against environmental influences.</li><li>• Assembled products may not be manipulated or improperly opened.</li><li>• Only use mating connectors that are specified in the technical data of the standards listed (e.g. the ones listed in the product accessories online at <a href="https://www.phoenixcontact.com/products">phoenixcontact.com/products</a>).</li><li>• When using the product in direct connection with third-party manufacturers, the user is responsible.</li><li>• For operating voltages &gt; 50 V AC, conductive connector housings must be grounded</li><li>• Ensure that when laying the cable, the tensile load on the connectors does not exceed the upper limit specified in the standards.</li><li>• Observe the corresponding technical data. You will find information:<ul style="list-style-type: none"><li>o On the product</li><li>o On the packing label</li><li>o In the supplied documentation</li><li>o Online at <a href="https://www.phoenixcontact.com/products">phoenixcontact.com/products</a> under the product</li></ul></li><li>• Only use tools recommended by Phoenix Contact</li><li>• Use a protective cap to protect connectors that are not in use. The suitable accessories are available online in the accessory</li></ul>
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	section of the product at <a href="https://www.phoenixcontact.com/products">phoenixcontact.com/products</a>
	• Ensure that the protective or functional ground has been properly connected.
	• VDE 0100/1.97 § 411.1.3.2 and DIN EN 60 204/11.98 § 14.1.3 are applicable when combining several circuits in a cable and/or connector
	• The connector warms up in normal operation. Depending on the ambient conditions, the surface of the connector can continue to warm up. In this case, the user is responsible for posting warnings (e.g. DIN EN ISO 13732-1:2008-12).

## Mounting

Mounting type	Front mounting M16 x 1.5
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## Product properties

Product type	Circular connectors (device side)
Sensor type	CANopen®
Number of positions	5
Shielded	yes
Coding	A
Thread type	M12

## Data management status

Article revision	12
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## Insulation characteristics

Overvoltage category	II
Degree of pollution	3

## Material specifications

Flammability rating according to UL 94	V0
Contact material	CuZn
Contact surface material	Ni/Au
Contact carrier material	PA 6.6
Material for screw connection	Brass, nickel-plated
Outer sheath, material	PUR

## Electrical properties

Contact resistance	≤ 3 mΩ
Insulation resistance	≥ 100 MΩ
Nominal voltage U <sub>N</sub>	48 V AC
	60 V DC
Nominal current I <sub>N</sub>	4 A (Plug/socket in accordance with IEC 61076-2-101, cable technical data is to be observed)
Test voltage	2500 V
Transmission medium	Copper

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## Connection data

### Conductor connection

Connection method	Cable connection
Contact connection type	Socket

## Connector

### Connection 1

Head design	Socket
Head cable outlet	straight
Head thread type	M12
Coding	A


### Connection 2

Head design	free cable end
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## Cable/line

Cable length	10 m
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### CANopen®/DeviceNet™, PUR, violet [920]

Dimensional drawing	
Cable weight	90 kg/km
UL AWM Style	21198 (80°C/300 V)
Number of positions	4
Shielded	yes
Cable type	CANopen®/DeviceNet™, PUR, violet [920]
Conductor structure	2xAWG24/19+2xAWG22/19
Conductor structure signal line	19x 0.13 mm
AWG signal line	24
Conductor cross section	2x 0.25 mm² (Data cable) 2x 0.34 mm² (Power supply) 1x 0.34 mm² (Drain wire)
Wire diameter incl. insulation	1.95 mm ±0.05 mm (Data cable) 1.4 mm ±0.05 mm (Power supply)
External cable diameter	6.70 mm ±0.3 mm
Outer sheath, material	PUR

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External sheath, color	red lilac RAL 4001
Conductor material	Tin-plated Cu litz wires
Material wire insulation	Foamed PE (Data cable)
	PE (Power supply)
Single wire, color	red-black, blue-white
Twisted pairs	2 cores to the pair
Type of pair shielding	Plastic-coated aluminum foil, aluminum side outside
Overall twist	2 pairs around a drain wire in the center to the core
Optical shield covering	80 %
Insulation resistance	$\geq 5 \text{ G}\Omega \cdot \text{km}$ (Data cable)
	$\geq 5 \text{ G}\Omega \cdot \text{km}$ (Power supply)
Loop resistance	$\leq 181.80 \text{ }\Omega/\text{km}$ (Data cable)
	$\leq 114.80 \text{ }\Omega/\text{km}$ (Power supply)
Wave impedance	$120 \text{ }\Omega \pm 10 \text{ }\%$ (with 1 MHz)
Cable capacity	nom. 40 nF/km (Data cable)
Nominal voltage, cable	$\leq 300 \text{ V}$ (Peak value, not for high-power applications)
Test voltage Core/Core	2000 V (50 Hz, 1 min.)
Test voltage Core/Shield	2000.00 V (50 Hz, 1 min.)
Minimum bending radius, fixed installation	5 x D
Minimum bending radius, flexible installation	10 x D
Smallest bending radius, fixed installation	34 mm
Smallest bending radius, movable installation	67 mm
Max. bending cycles	5000000
Minimum bending radius, drag chain applications	10 x D
Bending radius	70 mm
Traversing path	4.5 m
Traversing rate	3 m/s
Acceleration	3 m/s <sup>2</sup>
Shield attenuation	$\leq 22.9 \text{ dB/km}$ (with 1 MHz)
	$\leq 16.4 \text{ dB/km}$ (At 500 kHz)
	$\leq 9.5 \text{ dB/km}$ (At 125 kHz)
Halogen-free	in accordance with DIN VDE 0472 part 815
	according to IEC 60754-1
Flame resistance	UL 1581, Section 1060 and UL 2556, Section 9.3 (FT1)
	UL 1581, Section 1100 and UL 2556, Section 9.1 (HFT/FT2)
	IEC 60332-1-2
	in accordance with ISO 6722-1 5.22 (UN ECE-R 118.01)
Other resistance	Low adhesion
Ambient temperature (operation)	-40 °C ... 80 °C (cable, fixed installation)
	-30 °C ... 70 °C (Cable, flexible installation)
	-20 °C ... 60 °C (for installation)
	-20 °C ... 60 °C (cable, drag chain applications)

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## Environmental and real-life conditions

### Ambient conditions

Degree of protection	IP67
	IP65/IP67
Ambient temperature (operation)	-25 °C ... 85 °C (Plug / socket)
	-40 °C ... 85 °C (without mechanical actuation)

## Standards and regulations

### M12

Standard designation	M12 connector
Standards/specifications	IEC 61076-2-101

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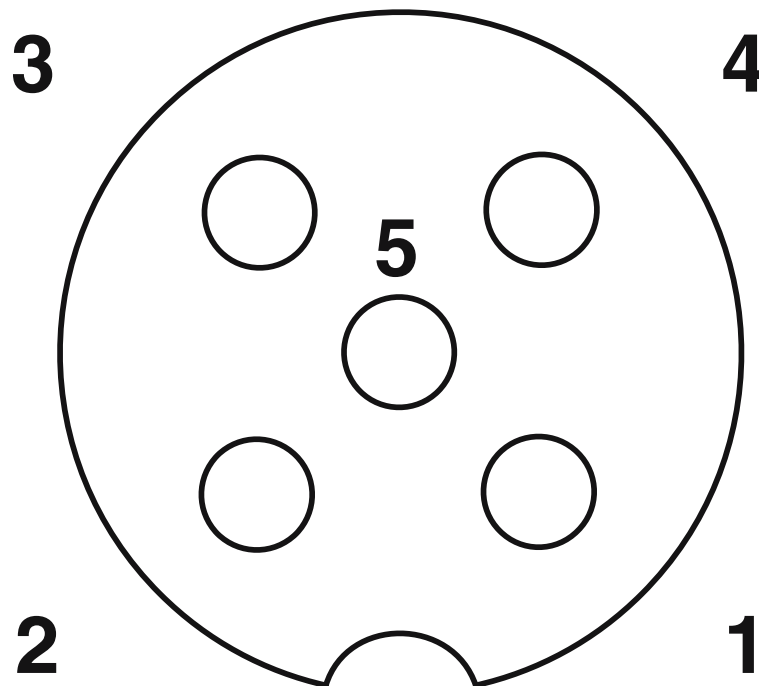


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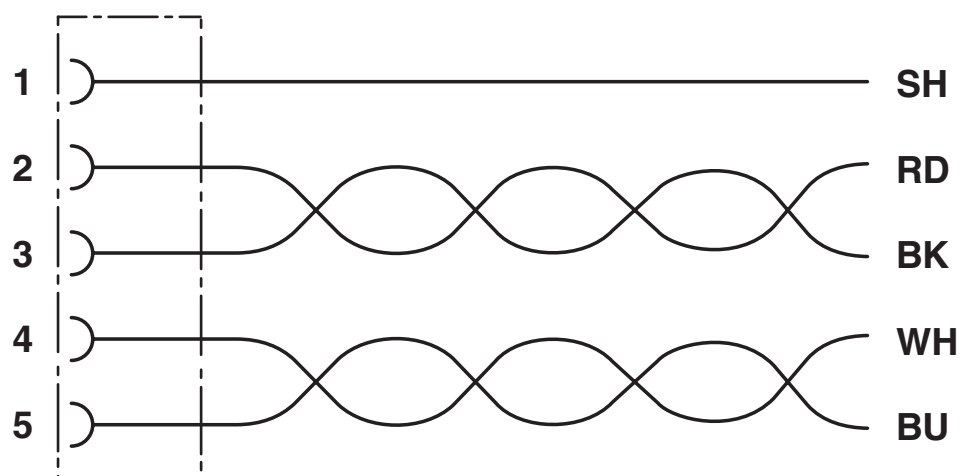
## Drawings

Schematic diagram



Pin assignment M12 socket, 5-pos., A-coded, socket side view

Circuit diagram



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## Approvals

To download certificates, visit the product detail page: <https://www.phoenixcontact.com/sg/products/1525717>

 <b>cUL Recognized</b> Approval ID: E221474-20220907				
	Nominal voltage $U_N$	Nominal current $I_N$	Cross section AWG	Cross section $\text{mm}^2$
	30 V	1.5 A	-	-

 <b>UL Recognized</b> Approval ID: E221474-20220907				
	Nominal voltage $U_N$	Nominal current $I_N$	Cross section AWG	Cross section $\text{mm}^2$
	30 V	2 A	-	-

<b>cULus Recognized</b>				
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## Classifications

### ECLASS

ECLASS-11.0	27440103
ECLASS-12.0	27440103
ECLASS-13.0	27440103

### ETIM

ETIM 9.0	EC003570
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### UNSPSC

UNSPSC 21.0	39121400
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Environmental product compliance

EU RoHS	
Fulfills EU RoHS substance requirements	Yes
Exemption	6(c)
China RoHS	
Environment friendly use period (EFUP)	EFUP-50
	An article-related China RoHS declaration table can be found in the download area for the respective article under "Manufacturer declaration". For all articles with EFUP-E, no China RoHS declaration table issued and required.
EU REACH SVHC	
REACH candidate substance (CAS No.)	Lead(CAS: 7439-92-1)
SCIP	e2547959-93f2-4a32-ac31-fe04aba73f82

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