

# SACC-E-FS-12CON-M16/3,0 SCO - Device connector front mounting



1413119

<https://www.phoenixcontact.com/us/products/1413119>

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Device connector front mounting, Universal, 12-position, Socket, straight, M12-SPEEDCON, coding: A, on free cable end, Front mounting, M16 x 1.5, Individual wires, cable length: 3 m, 0.14 mm<sup>2</sup>, TPE litz wire, Alternative product in accordance with RoHS II without Exemption 6c (Pb < 0.1 %) item no.: 1239010

## Your advantages

- Preassembled with litz wires for immediate use
- Customer-specific assemblies and litz wire lengths available
- Sealed on the litz wire side for optimum leak-tightness
- All standard pin assignments and codings for signal, data, and power transmission with a uniform design-in design
- For high transmission safety: shield connection to the housing with optional EMC nut
- SPEEDCON fast locking system reduces cabling times

## Commercial data

Item number	1413119
Packing unit	1 pc
Minimum order quantity	1 pc
Sales key	AB24
Product key	ABQCFB
GTIN	4046356988285
Weight per piece (including packing)	97.1 g
Weight per piece (excluding packing)	97.1 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.
General	Contact connection method: Crimp connection

### Mounting

Mounting type	Front mounting M16 x 1.5
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### Product properties

Product type	Circular connectors (device side)
Application	Signal
Sensor type	Universal
Number of positions	12
No. of cable outlets	1
Shielded	no
Coding	A
Thread type	M12

### Data management status

Article revision	07
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### Insulation characteristics

Overvoltage category	II
Degree of pollution	3

### Material specifications

Flammability rating according to UL 94	V0
Seal material	FKM
Material of grip body	Zinc die-cast, nickel-plated
Contact material	CuZn
Contact surface material	Ni/Au
Contact carrier material	PA 6.6
Material for screw connection	Zinc die-cast, nickel-plated
Conductor material	Tin-plated Cu litz wires

### Electrical properties

Rated surge voltage	0.8 kV
Contact resistance	≤ 3 mΩ
Insulation resistance	≥ 100 MΩ

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Nominal voltage $U_N$	30 V (AC)
	30 V (DC)
Nominal current $I_N$	1.5 A
Max. conductor resistance	57.6 mΩ/m

## Connection data

### Conductor connection

Connection method	Individual wires
Contact connection type	Socket
Conductor cross section	0.14 mm <sup>2</sup>
Tightening torque	3 Nm ... 4 Nm (Installation-side)

## Mechanical properties

### Mechanical data

Insertion/withdrawal cycles	> 100
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## Connector

### Connection 1

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

### Connection 2

Head design	free cable end
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## Cable/line

Cable length	3 m
Cable type	TPE litz wire
Signal type/category	Universal
Wire diameter incl. insulation	1.1 mm ±0.05 mm
Single wire, color	brown, blue, white, green, pink, yellow, black, gray, red, violet, gray/pink, red/blue
Cable cross section	0.14 mm <sup>2</sup>
Conductor material	Tin-plated Cu litz wires
Conductor structure signal line	7x 0.16 mm
AWG signal line	26
Material wire insulation	TPE
Thickness, insulation	0.21 mm (Core insulation)
Nominal voltage, cable	300 V
Test voltage, cable	2000 V AC

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Cable resistance	$\leq 57.6 \text{ m}\Omega/\text{m}$
Cable insulation resistance	$\geq 20 \text{ M}\Omega \cdot \text{km}$
Ambient temperature (operation)	-40 °C ... 85 °C (cable, fixed installation)
	-25 °C ... 85 °C (Cable, flexible installation)

## 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)
	-25 °C ... 85 °C (Cable, flexible installation)
	-40 °C ... 85 °C (cable, fixed installation)

## Standards and regulations

### M12

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

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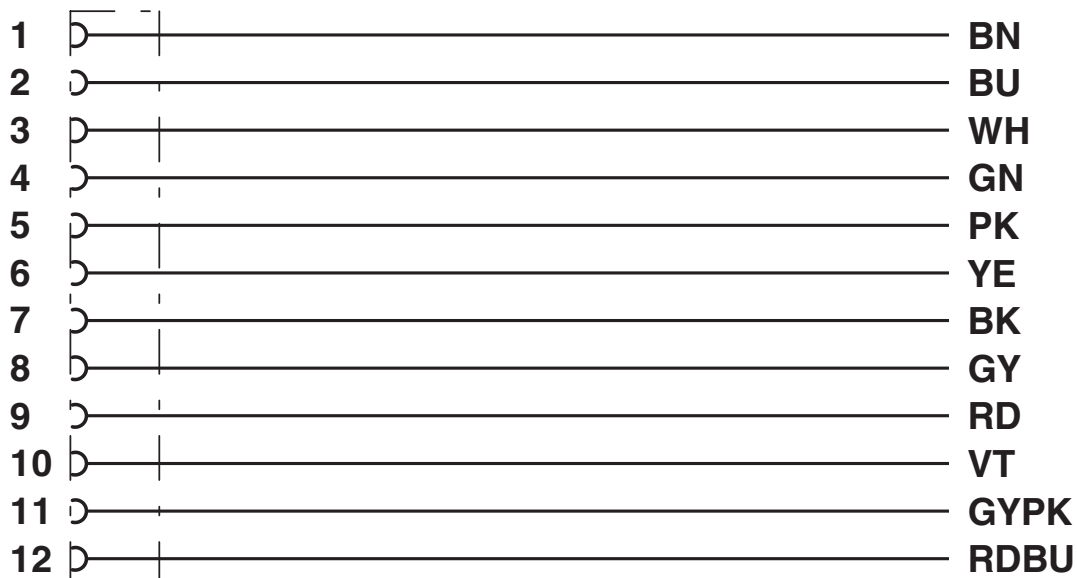


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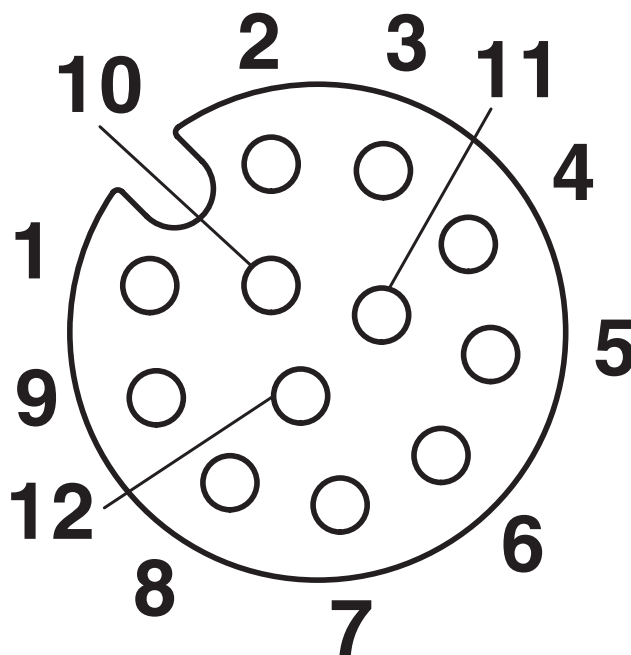
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## Drawings

Circuit diagram



Schematic diagram



Pin assignment M12, 12-pos., female side view

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## Approvals

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	<b>UL Recognized</b>			
	Approval ID: E118976-20100522			
		Nominal voltage $U_N$	Nominal current $I_N$	Cross section AWG
		30 V	1.5 A	26 - 26
				Cross section $\text{mm}^2$
				-

	<b>cULus Recognized</b>			
	Approval ID: E221474-20140616			
		Nominal voltage $U_N$	Nominal current $I_N$	Cross section AWG
		30 V	1.5 A	26 - 26
				Cross section $\text{mm}^2$
				-

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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	baa9c977-89b8-453f-af62-4e4906146f59

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## Accessories

### SACC-E-MU-M16 - Flat nut

1504097

<https://www.phoenixcontact.com/us/products/1504097>

Flat nut, Screw mounting, M16 x 1.5, Alternative product in accordance with RoHS II without Exemption 6c (Pb < 0.1 %) item no.: 1239863



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### SACC-M16-SEAL CLM - Flat gasket

1430394

<https://www.phoenixcontact.com/us/products/1430394>

M16 flat gasket for M12 flush-type connectors with M16 fastening thread



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## PROT-M12 - Screw plug

1680539

<https://www.phoenixcontact.com/us/products/1680539>



An M12 screw plug for the unoccupied M12 sockets of the sensor/actuator cable, boxes and flush-type connectors

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## PROT-M12 SH - Screw plug

1503302

<https://www.phoenixcontact.com/us/products/1503302>



An M12 screw plug for the unoccupied M12 sockets of the shielded sensor/actuator cable, boxes and flush-type connectors

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## PROT-M12 FB - Screw plug

1555538

<https://www.phoenixcontact.com/us/products/1555538>



M12 high-grade steel screw plug, for unoccupied M12 sockets of the sensor/actuator cables, boxes and flush-type connectors for the food industry

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