

# SACC-E-M12MS-12P-M16XL/0,5 - Device connector front mounting



1411582

<https://www.phoenixcontact.com/us/products/1411582>

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Device connector front mounting, Universal, 12-position, Pin, straight, M12-Standard, A-coding, on free cable end, Individual wires, cable length: 0.5 m, 0.14 mm<sup>2</sup>, TPE litz wire, potted, this item is expected to be lead-free from Q2 2026 in accordance with RoHS II without exception 6c (Pb < 0.1%), a lead-free alternative is possible on request in advance

## Your advantages

- Easy-to-install, optimized XL housing contour with wrench size 19
- Mechanical tightening limitation for long-term-stable gasket
- 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

## Commercial data

Item number	1411582
Packing unit	1 pc
Minimum order quantity	1 pc
Sales key	AB24
Product key	ABQCEB
GTIN	4046356936101
Weight per piece (including packing)	28 g
Weight per piece (excluding packing)	26.17 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, XL variant, tightening limitation)
Tightening torque	1.5 Nm ... 2 Nm (Installation-side)

### Product properties

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

### Insulation characteristics

Overvoltage category	II
Degree of pollution	3

### Material specifications

Material Molding compound	PUR (potted)
Flammability rating according to UL 94	V0
Seal material	FKM
Contact material	CuZn
Contact surface material	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
Nominal voltage U <sub>N</sub>	30 V (AC) 30 V (DC)

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Nominal current $I_N$	1.5 A
Max. conductor resistance	57.6 m $\Omega$ /m

## Connection data

### Conductor connection

Connection method	Individual wires
Contact connection type	Pin
Conductor cross-section	0.14 mm <sup>2</sup>
Tightening torque	1.5 Nm ... 2 Nm (Installation-side)

## Mechanical properties

### Mechanical data

Insertion/withdrawal cycles	> 100
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## Connector

### Connection 1

Head design	Pin
Head cable outlet	straight
Head thread type	M12
Head locking type	Standard
Coding	A

### Connection 2

Head design	free cable end
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## Cable/line

Cable length	0.5 m
Cable type	TPE litz wire
Signal type/category	Universal
Wire diameter incl. insulation	1.1 mm $\pm$ 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
Cable resistance	$\leq$ 57.6 m $\Omega$ /m
Cable insulation resistance	$\geq$ 20 M $\Omega$ *km

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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	IP65
	IP67
Ambient temperature (operation) (male connector/female connector)	-25 °C ... 85 °C (Plug / socket)
	-40 °C ... 85 °C (without mechanical actuation)
Ambient temperature (operation) (Cable, flexible installation)	-25 °C ... 85 °C (Cable, flexible installation)
Ambient temperature (operation) (Cable, fixed installation)	-40 °C ... 85 °C (cable, fixed installation)
UL Type Rating	Type 4 (indoor use only)

## Standards and regulations

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

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## Drawings

Schematic diagram



Pin assignment M12 male connector, 12-pos., male side view

Circuit diagram



Contact assignment of the M12 plug

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## Approvals

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

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## Classifications

### ECLASS

ECLASS-13.0	27440103
ECLASS-15.0	27440103

### ETIM

ETIM 10.0	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, No exemptions
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### China RoHS

Environment friendly use period (EFUP)	EFUP-E
	No hazardous substances above the limits

### EU REACH SVHC

REACH candidate substance (CAS No.)	No substance above 0.1 wt%
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