

SACC-E-MS-5CON-M16/2,0 SCO - Device connector front mounting



1416285

<https://www.phoenixcontact.com/us/products/1416285>

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Device connector front mounting, Universal, 5-position, Pin, straight, M12-SPEEDCON, A-coding, on free cable end, Individual wires, cable length: 2 m, 0.34 mm², TPE litz wire, potted

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	1416285
Packing unit	1 pc
Minimum order quantity	1 pc
Sales key	AB24
Product key	ABQCEB
GTIN	4055626069678
Weight per piece (including packing)	63.7 g
Weight per piece (excluding packing)	50.68 g
Customs tariff number	85444290
Country of origin	DE

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Technical data

Notes

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">• 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.
	<ul style="list-style-type: none">• 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.
	<ul style="list-style-type: none">• The products are suitable for applications in plant, controller, and electrical device engineering.
	<ul style="list-style-type: none">• When operating the connectors in outdoor applications, they must be separately protected against environmental influences.
	<ul style="list-style-type: none">• Assembled products may not be manipulated or improperly opened.
	<ul style="list-style-type: none">• 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 phoenixcontact.com/products).
	<ul style="list-style-type: none">• When using the product in direct connection with third-party manufacturers, the user is responsible.
	<ul style="list-style-type: none">• For operating voltages > 50 V AC, conductive connector housings must be grounded
	<ul style="list-style-type: none">• Ensure that when laying the cable, the tensile load on the connectors does not exceed the upper limit specified in the standards.
	<ul style="list-style-type: none">• Observe the corresponding technical data. You will find information:<ul style="list-style-type: none">o On the producto On the packing labelo In the supplied documentationo Online at phoenixcontact.com/products under the product
	<ul style="list-style-type: none">• Only use tools recommended by Phoenix Contact
	<ul style="list-style-type: none">• Use a protective cap to protect connectors that are not in use. The suitable accessories are available online in the accessory section of the product at phoenixcontact.com/products
	<ul style="list-style-type: none">• Ensure that the protective or functional ground has been properly connected.
<ul style="list-style-type: none">• 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	
<ul style="list-style-type: none">• The connector warms up in normal operation. Depending on the	

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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)
Tightening torque	3 Nm ... 4 Nm (Installation-side)

Product properties

Product type	Circular connectors (device side)
Application	Signal
Number of positions	5
No. of cable outlets	1
Shielded	no
Coding	A
Thread type	M12

Insulation characteristics

Overvoltage category	III
Degree of pollution	3

Material specifications

Material Molding compound	PUR (potted)
Flammability rating according to UL 94	V0
Seal material	FKM
Material wire insulation	TPE
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	1.5 kV AC
Contact resistance	$\leq 3 \text{ m}\Omega$
Insulation resistance	$\geq 100 \text{ M}\Omega$
Nominal voltage U_N	60 V
Nominal current I_N	4 A
Max. conductor resistance	57.6 m Ω /m

Connection data

Conductor connection

Connection method	Individual wires
Contact connection type	Pin

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Conductor cross-section	0.34 mm ²
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	Pin
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	2 m
Cable type	TPE litz wire
Signal type/category	Universal
Wire diameter incl. insulation	1.2 mm ±0.07 mm
Single wire, color	black, brown, blue, white, gray
Cable cross section	0.34 mm ²
Conductor material	Tin-plated Cu litz wires
Conductor structure signal line	7x 0.25 mm
AWG signal line	22
Material wire insulation	TPE
Thickness, insulation	0.21 mm
Nominal voltage, cable	300 V
Test voltage, cable	2000 V AC
Cable resistance	≤ 57.6 mΩ/m
Cable insulation resistance	≥ 20 MΩ*km

Environmental and real-life conditions

Ambient conditions

Degree of protection	IP67
Ambient temperature (operation)	-25 °C ... 85 °C (Plug / socket)
	-25 °C ... 85 °C (Cable, flexible installation)
	-40 °C ... 85 °C (cable, fixed installation)
UL Type Rating	Type 4 (indoor use only)

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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, 5-pos., A-coded, male side

Diagram



I = current strength, T = ambient temperature

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Circuit diagram



Contact assignment of the M12 connector

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Approvals

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 UL Recognized Approval ID: E118976-20100522				
	Nominal voltage U_N	Nominal current I_N	Cross section AWG	Cross section mm^2
keine				
	60 V	4 A	22	-

 cULus Recognized Approval ID: E221474-20140616				
	Nominal voltage U_N	Nominal current I_N	Cross section AWG	Cross section mm^2
keine				
	60 V	4 A	22 - 20	-

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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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