SACCEC-M12MS-5CON-M16/ 0,5-920 - Device connector front mounting

1525623

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Device connector front mounting, CANopen®, DeviceNet™, 5-position, Pin, straight, M12, A-coding, on free cable end, Cable connection, cable length: 0.5 m, Item is lead-free in accordance with RoHS II without Exemption 6c (Pb < 0.1 %)

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	1525623
Packing unit	1 pc
Minimum order quantity	1 pc
Sales key	AB25
Product key	ABQDEA
GTIN	4046356022361
Weight per piece (including packing)	54 g
Weight per piece (excluding packing)	48.776 g
Customs tariff number	85444290
Country of origin	DE

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:	Positioning nut is included in the scope of supply
General	Contact connection method: Crimp connection

Safety note

Safety note	WARNING: The connectors may not be plugged in or disconnected under load. Ignoring the warning or improper use may damage persons and/or property.
	• 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.
	• 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.
	• The products are suitable for applications in plant, controller, and electrical device engineering.
	• When operating the connectors in outdoor applications, they must be separately protected against environmental influences.
	• Assembled products may not be manipulated or improperly opened.
	• 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).
	• When using the product in direct connection with third-party manufacturers, the user is responsible.
	• For operating voltages > 50 V AC, conductive connector housings must be grounded
	• Ensure that when laying the cable, the tensile load on the connectors does not exceed the upper limit specified in the standards.
	• Observe the corresponding technical data. You will find information: o On the product o On the packing label o In the supplied documentation o Online at phoenixcontact.com/products under the product
	• Only use tools recommended by Phoenix Contact
	• 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
	• 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, mit Kontermutter)
Tightening torque	3 Nm ... 4 Nm (Installation-side)

Product properties

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

Insulation characteristics

Overvoltage category	II
Degree of pollution	3

Material specifications

Material Housing	GD-Zn
Material Housing surface	Ni
Material Contact carrier	PA 6.6
Material Contact	CuZn
Material Contact surface	Ni/Au
Material Seal	NBR
Flammability rating according to UL 94	V0
Contact carrier color	violet

Electrical properties

Rated surge voltage	1.5 kV
Contact resistance	≤ 3 mΩ
Insulation resistance	≥ 100 MΩ
Nominal voltage U_N	48 V AC
	60 V DC
Nominal current I_N	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

Connection data

Conductor connection

Connection method	Cable connection
Contact connection type	Pin
Tightening torque	3 Nm ... 4 Nm (Installation-side)

Mechanical properties

Mechanical data

Insertion/withdrawal cycles	> 100

Interfaces

Bus system	CANopen®/DeviceNet™
Signal type/category	CANopen®
	DeviceNet™

Connector

Connection 1

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

Connection 2

Head design	free cable end

Cable/line

Cable length	0.5 m

CANopen®/DeviceNet™, PUR, violet [920]

Dimensional drawing	
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
AWG signal line	24
AWG power supply	22
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
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
Overall twist	2 pairs around a drain wire in the center to the core
Optical shield covering	80 %
Insulation resistance	≥ 5 GΩ*km (Data cable)
	≥ 5 GΩ*km (Power supply)
Wave impedance	120 Ω ±10 % (with 1 MHz)
Nominal voltage, cable	≤ 300 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	4 x D
Minimum bending radius, flexible installation	8 x D
Dynamic load capacity (bending)	Max. bending cycles: 5000000, Bending radius: 70 mm, Bending radius: 15 x D, Traversing path: 4.5 m, Traversing rate: 3 m/s, Acceleration: 3 m/s², Ambient temperature: -20 °C ... 60 °C
Shield attenuation	≤ 22.9 dB/km (with 1 MHz)
	≤ 16.4 dB/km (At 500 kHz)
	≤ 9.5 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)
Special properties	Flexible cable conduit capable
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)

Environmental and real-life conditions

Ambient conditions

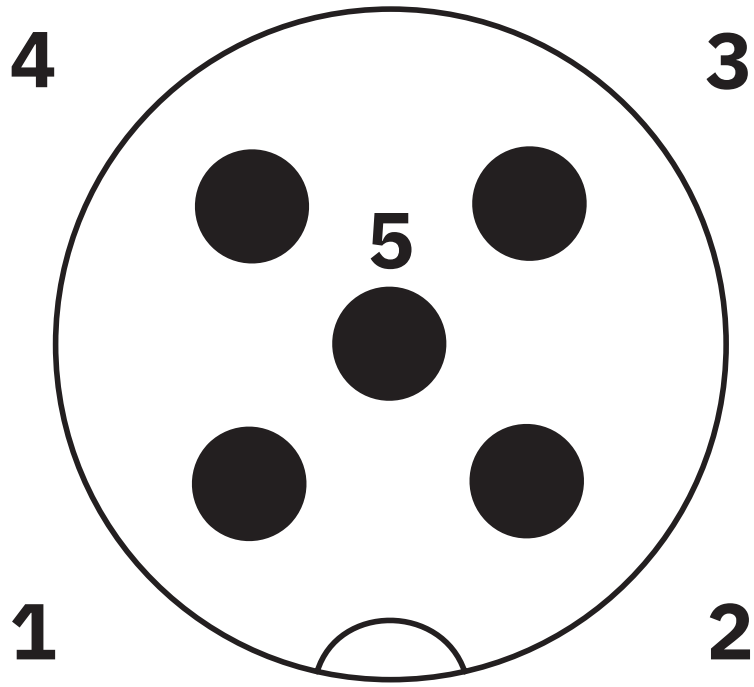
Degree of protection	IP67
	IP65/IP67
Ambient temperature (operation) (male connector/female connector)	-25 °C ... 85 °C (Plug / socket)
	-40 °C ... 85 °C (without mechanical actuation)
UL Type Rating	Type 4 (indoor use only)

Standards and regulations

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

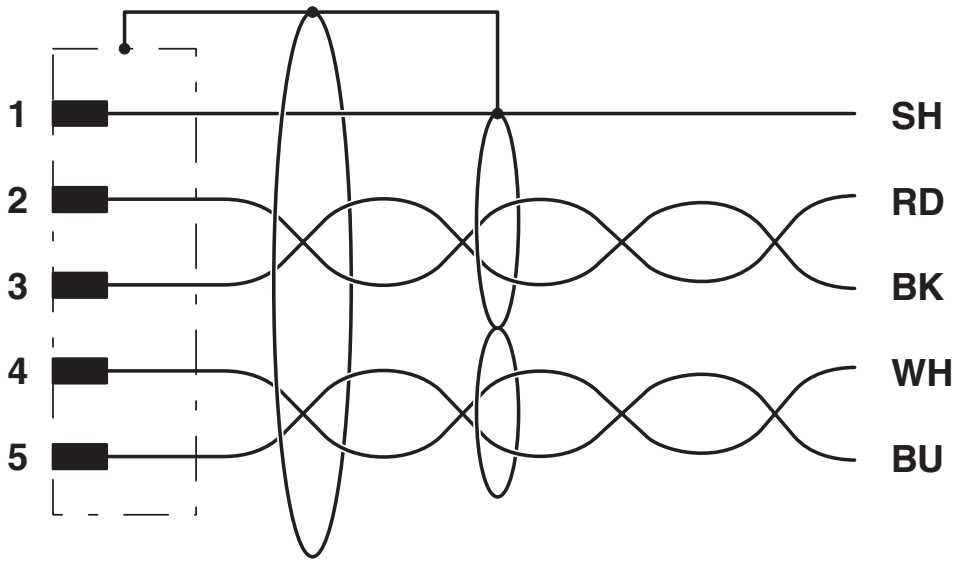
Drawings

Schematic diagram



Pin assignment M12 male connector, 5-pos., A-coded, male side

Circuit diagram



Contact assignment of the M12 plug

Approvals

To download certificates, visit the product detail page: https://www.phoenixcontact.com/us/products/1525623

UL Recognized
Approval ID: E221474-20220907

	Nominal voltage U_N	Nominal current I_N	Cross section AWG	Cross section mm^2
keine				
	30 V	2 A	-	-

cUL Recognized
Approval ID: E221474-20220907

	Nominal voltage U_N	Nominal current I_N	Cross section AWG	Cross section mm^2
keine				
	30 V	1.5 A	-	-

Classifications

ECLASS

ECLASS-13.0	27440103
ECLASS-15.0	27440103

ETIM

ETIM 10.0	EC003570

UNSPSC

UNSPSC 21.0	39121400

Environmental product compliance

EU RoHS

Fulfills EU RoHS substance requirements	Yes, No exemptions

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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