

SACCEC-M12FSD-4CON-M16/5,0-931 - Device connector front mounting



1528549

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Device connector front mounting, Ethernet CAT5 (100 Mbps), Ethernet, 4-position, PUR, water blue RAL 5021, shielded, Socket, straight, M12, coding: D, on free cable end, Front mounting, Cable lug connection, cable length: 5 m, Ethernet flexible CAT5, 2-pair, Alternative product in accordance with RoHS II without Exemption 6c (Pb < 0.1 %) item no.: 1239912

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	1528549
Packing unit	1 pc
Minimum order quantity	1 pc
Product key	ABQDEI
Catalog page	Page 182 (PC-2007)
GTIN	4046356023450
Weight per piece (including packing)	247 g
Weight per piece (excluding packing)	247 g
Customs tariff number	85366990
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">• 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:<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• 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
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section of the product at [phoenixcontact.com/products](https://www.phoenixcontact.com/pc/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

Product properties

Product type	Circular connectors (device side)
Sensor type	Ethernet
Number of positions	4
No. of cable outlets	1
Shielded	yes
Coding	D
Thread type	M12

Insulation characteristics

Overvoltage category	II
Degree of pollution	3

Material specifications

Flammability rating according to UL 94	V0
Seal material	NBR
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	$\leq 3 \text{ m}\Omega$
Insulation resistance	$\geq 100 \text{ M}\Omega$
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
Transmission characteristics (category)	CAT5 (IEC 11801:2002)

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Connection data

Conductor connection

Connection method	Cable lug connection
Contact connection type	Socket

Connector

Connection 1

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


Connection 2

Head design	free cable end
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Cable/line

Cable length	5 m
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Ethernet flexible CAT5, 2-pair [93E]

Dimensional drawing	
Cable weight	42 kg/km
UL AWM Style	20963 (80°C/30 V)
Wiring standards/regulations	Electrical requirements EN 50288-2-2
Number of positions	4
Shielded	yes
Cable type	Ethernet flexible CAT5, 2-pair [93E]
Conductor structure	2x2xAWG26/7, SF/UTP
Signal runtime	5.3 ns/m
Conductor structure signal line	7x 0.16 mm
AWG signal line	26
Conductor cross section	2x 2x 0.14 mm²
Wire diameter incl. insulation	0.98 mm
External cable diameter	6.40 mm ±0.2 mm
Outer sheath, material	PUR
External sheath, color	water blue RAL 5021

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Conductor material	Bare Cu litz wires
Material wire insulation	Foamed PE
Single wire, color	white/orange-orange, white/green-green
Thickness, outer sheath	1.20 mm
Twisted pairs	2 cores to the pair
Overall twist	Two pairs with two fillers to the core
Optical shield covering	70 %
Insulation resistance	$\geq 500 \text{ M}\Omega \cdot \text{km}$
Coupling resistance	$\leq 100.00 \text{ m}\Omega/\text{m}$ (at 10 MHz)
Loop resistance	$\leq 290.00 \text{ }\Omega/\text{km}$
Wave impedance	$100 \text{ }\Omega \pm 5 \text{ }\Omega$ (at 100 MHz)
Cable capacity	approx. 45 nF/km (at 1 kHz)
Nominal voltage, cable	$\leq 100 \text{ V}$ (Peak value, not for high-power applications)
Test voltage Core/Core	700 V (50 Hz, 1 min.)
Test voltage Core/Shield	700.00 V (50 Hz, 1 min.)
Current carrying capacity of cable	2.00 A (according to DIN VDE 0891-1)
Minimum bending radius, fixed installation	4 x D
Minimum bending radius, flexible installation	8 x D
Smallest bending radius, fixed installation	26 mm
Smallest bending radius, movable installation	52 mm
Tensile strength	$\leq 80 \text{ N}$
Near end crosstalk attenuation (NEXT)	65.3 dB (with 1 MHz)
	56.3 dB (at 4 MHz)
	50.3 dB (at 10 MHz)
	47.2 dB (at 16 MHz)
	45.8 dB (at 20 MHz)
	42.9 dB (at 31.25 MHz)
	38.4 dB (at 62.5 MHz)
	35.3 dB (at 100 MHz)
Power-summated near end crosstalk attenuation (PSNEXT)	62.3 dB (with 1 MHz)
	53.3 dB (at 4 MHz)
	47.3 dB (at 10 MHz)
	44.2 dB (at 16 MHz)
	42.8 dB (at 20 MHz)
	39.9 dB (at 31.25 MHz)
	35.4 dB (at 62.5 MHz)
	32.3 dB (at 100 MHz)
Return attenuation (RL)	23 dB (at 4 MHz)
	24.1 dB (at 8 MHz)
	25 dB (at 10 MHz)
	25 dB (at 16 MHz)
	25 dB (at 20 MHz)

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Shield attenuation	23.6 dB (at 31.25 MHz)
	21.5 dB (at 62.5 MHz)
	20.1 dB (at 100 MHz)
	3.2 dB (with 1 MHz)
	6 dB (at 4 MHz)
	9.5 dB (at 10 MHz)
	12.1 dB (at 16 MHz)
	13.6 dB (at 20 MHz)
	17.1 dB (at 31.25 MHz)
	24.8 dB (at 62.5 MHz)
	32 dB (at 100 MHz)
Halogen-free	according to IEC 60754-1
Flame resistance	according to IEC 60332-1-2
	in acc. to UL VW1
	in accordance with UN ECE-R 118.03
Resistance to oil	in accordance with EN 60811-2-1
Ambient temperature (operation)	-40 °C ... 80 °C (cable, fixed installation)
	-20 °C ... 80 °C (Cable, flexible installation)
Ambient temperature (installation)	-20 °C ... 80 °C

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

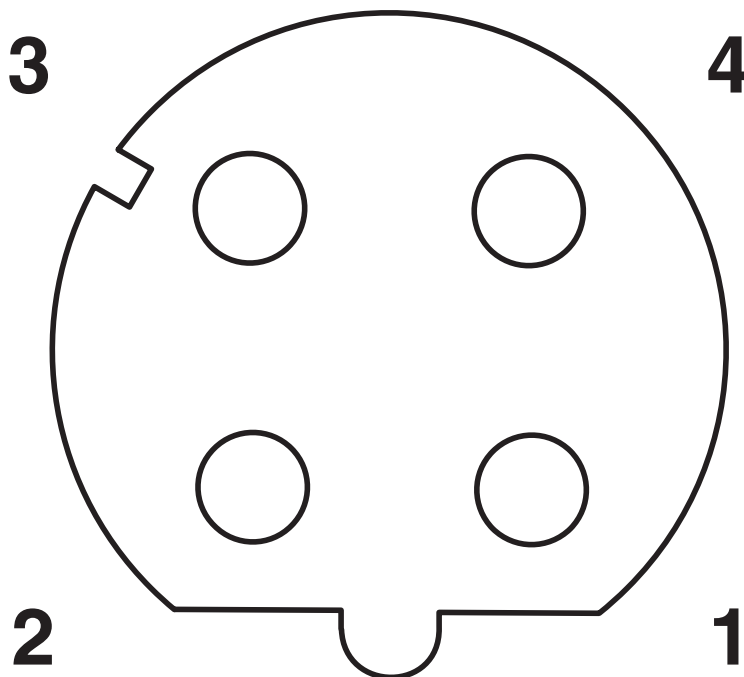
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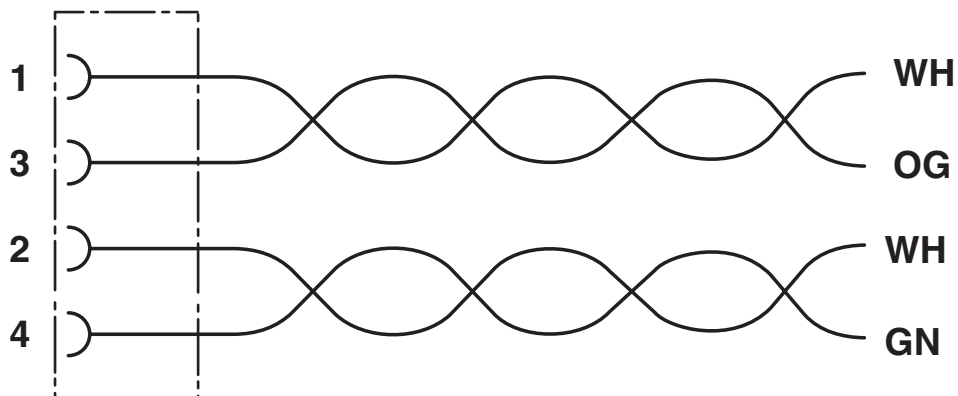
Drawings

Schematic diagram



Pin assignment M12 socket, 4-pos., D-coded, female side

Circuit diagram



Contact assignment of the M12 socket

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Approvals

To download certificates, visit the product detail page: <https://www.phoenixcontact.com/pc/products/1528549>

 cUL Recognized Approval ID: E221474-20220907				
	Nominal voltage U_N	Nominal current I_N	Cross section AWG	Cross section mm^2
	30 V	1.5 A	-	-

 UL Recognized Approval ID: E221474-20220907				
	Nominal voltage U_N	Nominal current I_N	Cross section AWG	Cross section mm^2
	30 V	1.5 A	-	-

cULus Recognized				
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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	72cb8220-2464-49d3-b9ff-879484a89d19

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