

1528497

https://www.phoenixcontact.com/us/products/1528497

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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: 1 m, Ethernet flexible CAT5, 2-pair, Alternative product in accordance with RoHS II without Exemption 6c (Pb < 0.1 %) item no.: 1239910

## 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	1528497
Packing unit	1 pc
Minimum order quantity	1 pc
Sales key	AB25
Product key	ABQDEI
Catalog page	Page 182 (PC-2007)
GTIN	4046356023429
Weight per piece (including packing)	67.6 g
Weight per piece (excluding packing)	67.6 g
Customs tariff number	85444290
Country of origin	DE



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## Technical data

### Notes

otes	
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	WARNING: The connectors may not be plugged in or disconnected under load. Ignoring the warning or improper use may damage persons and/or property.
	<ul> <li>WARNING: Commission properly functioning products only.</li> <li>The products must be regularly inspected for damage.</li> <li>Decommission defective products immediately. Replace damaged products. Repairs are not possible.</li> </ul>
	<ul> <li>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.</li> </ul>
	<ul> <li>The products are suitable for applications in plant, controller, and electrical device engineering.</li> </ul>
	<ul> <li>When operating the connectors in outdoor applications, they must be separately protected against environmental influences.</li> </ul>
	<ul> <li>Assembled products may not be manipulated or improperly opened.</li> </ul>
	<ul> <li>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).</li> </ul>
	<ul> <li>When using the product in direct connection with third-party manufacturers, the user is responsible.</li> </ul>
	<ul> <li>For operating voltages &gt; 50 V AC, conductive connector housings must be grounded</li> </ul>
	<ul> <li>Ensure that when laying the cable, the tensile load on the connectors does not exceed the upper limit specified in the standards.</li> </ul>
	Observe the corresponding technical data. You will find information: On the product On the packing label In the supplied documentation Online at phoenixcontact.com/products under the product
	Only use tools recommended by Phoenix Contact
	<ul> <li>Use a protective cap to protect connectors that are not in use.</li> </ul>

The suitable accessories are available online in the accessory



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	coation of the conduct at the conjugate to the desired
	section of the product at phoenixcontact.com/products     Ensure that the protective or functional ground has been
	properly connected.
	<ul> <li>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</li> </ul>
	<ul> <li>The connector warms up in normal operation. Depending on th 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).</li> </ul>
ounting	
Mounting type	Front mounting
oduct properties	
Product type	Circular connectors (device side)
Application	Data
	Signal
Sensor type	Ethernet
Number of positions	4
No. of cable outlets	1
Shielded	yes
Coding	D
Thread type	M12
Insulation characteristics	
Overvoltage category	II II
Degree of pollution	3
aterial 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
ectrical properties	
Contact resistance	≤ 3 mΩ
Insulation resistance	≥ 100 MΩ
Nominal voltage U <sub>N</sub>	48 V AC
- IV	60 V DC
Nominal current I <sub>N</sub>	4 A (Plug/socket in accordance with IEC 61076-2-101, cable
	technical data is to be observed)



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Transmission medium	Copper
Transmission characteristics (category)	CAT5 (IEC 11801:2002)

## 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

## Cable/line

Cable length	1 m

## Ethernet flexible CAT5, 2-pair [93E]

Dimensional drawing



Cable weight  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
Wiring standards/regulations  Electrical requirements EN 50288-2-2  Number of positions  4  Shielded  yes  Cable type  Ethernet flexible CAT5, 2-pair [93E]
Number of positions 4 Shielded yes Cable type Ethernet flexible CAT5, 2-pair [93E]
Shielded yes  Cable type Ethernet flexible CAT5, 2-pair [93E]
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 mm <sup>2</sup>
Wire diameter incl. insulation 0.98 mm
External cable diameter 6.40 mm ±0.2 mm



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Outer sheath, material	PUR
External sheath, color	water blue RAL 5021
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	≥ 500 MΩ*km
Coupling resistance	≤ 100.00 mΩ/m (at 10 MHz)
Loop resistance	≤ 290.00 Ω/km
Wave impedance	100 $\Omega$ ±5 $\Omega$ (at 100 MHz)
Cable capacity	approx. 45 nF/km (at 1 kHz)
Nominal voltage, cable	≤ 100 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	≤ 80 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)



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	25 dB (at 16 MHz)
	25 dB (at 20 MHz)
	23.6 dB (at 31.25 MHz)
	21.5 dB (at 62.5 MHz)
	20.1 dB (at 100 MHz)
Shield attenuation	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

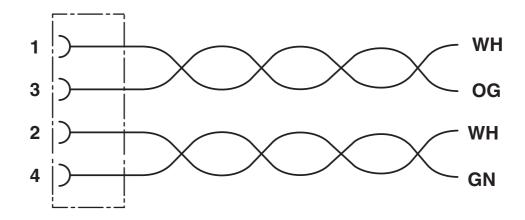


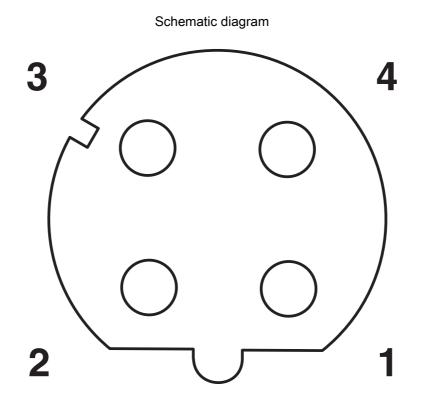
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## Drawings

## Circuit diagram





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



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## Approvals

To download certificates, visit the product detail page: https://www.phoenixcontact.com/us/products/1528497

.71	cUL Recognized Approval ID: E221474-20220907			
	Nominal voltage $U_N$	Nominal current I <sub>N</sub>	Cross section AWG	Cross section mm <sup>2</sup>
	30 V	1.5 A	-	-

<b>71</b>	UL Recognized Approval ID: E221474-20220907				
		Nominal voltage $U_N$	Nominal current I <sub>N</sub>	Cross section AWG	Cross section mm <sup>2</sup>
		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
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	b1946ddc-d837-4291-a52d-403ae6e897c1



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## Accessories

## SACC-M16-SEALING PLUG SET - Screw plug

1453368

https://www.phoenixcontact.com/us/products/1453368



Screw plug, Rear mounting, M16 x 1.5, Alternative product in accordance with RoHS II without Exemption 6c (Pb < 0.1 %) item no.: 1239800

## 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

## 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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## 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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