

1437685

https://www.phoenixcontact.com/us/products/1437685

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Device connector rear mounting, Ethernet CAT5 (100 Mbps), Ethernet, 4-position, Socket, straight, M12-SPEEDCON, D-coding, on free cable end, Cable connection, cable length: 0.5 m, this item is expected to be lead-free from Q1 2027 in accordance with RoHS II without exception 6c (Pb < 0.1%), a lead-free alternative is possible on request in advance

### Commercial data

Item number	1437685
Packing unit	1 pc
Minimum order quantity	1 pc
Sales key	AB25
Product key	ABQDGJ
GTIN	4046356458429
Weight per piece (including packing)	45.3 g
Weight per piece (excluding packing)	38.907 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.         The products must be regularly inspected for damage.         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:     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



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	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.</li> <li>are applicable when combining several circuits in a cable and/c connector</li> </ul>
	<ul> <li>The connector warms up in normal operation. Depending on tambient conditions, the surface of the connector can continue twarm 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	Rear mounting (Pg9)
roduct properties	
	Circular connectors (device side)
Product type Application	Data
Application	Signal
Sensor type	Ethernet
Number of positions	4
No. of cable outlets	1
Coding	D
Thread type	M12
Till Cad type	IVITZ
Insulation characteristics	
Overvoltage category	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
lectrical properties	
Nominal voltage $U_N$	48 V AC
ar voltago o <sub>N</sub>	60 V DC
Nominal current I <sub>N</sub>	1.5 A (Plug/socket in accordance with IEC 61076-2-101, cable technical data is to be observed)
Transmission medium	Copper
Transmission speed	100 Mbps
Transmission characteristics (category)	CAT5 (IEC 11801:2002)

### Connection data



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#### Conductor connection

Connection method	Cable connection
Contact connection type	Socket

#### Connector

#### Connection 1

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

#### Connection 2

Head design	free cable end

#### Cable/line

Cable length	0.5 m
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### Ethernet flexible CAT5, 2-pair [93E]

Dimensional drawing



UL AWM Style	21238 (80 °C / 600 V)	
Number of positions	4	
Shielded	yes	
Cable type	Ethernet flexible CAT5, 2-pair [93E]	
Conductor structure	2x2xAWG26/7, SF/UTP	
AWG signal line	26	
Conductor cross section	2x 2x 0.14 mm²	
Wire diameter incl. insulation	0.95 mm ±0.05 mm	
External cable diameter	6.40 mm ±0.2 mm	
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	
Twisted pairs	2 cores to the pair	



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Overall twist	Two pairs with two fillers to the core
Optical shield covering	70 %
Insulation resistance	≥ 5 GΩ*km
Loop resistance	≤ 280.00 Ω/km
Wave impedance	100 $\Omega$ ±5 $\Omega$ (at 100 MHz)
Nominal voltage, cable	≤ 100 V
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
Smallest bending radius, fixed installation	26 mm
Smallest bending radius, movable installation	51 mm
Halogen-free	according to IEC 60754-1
Flame resistance	according to IEC 60332-1-2
	in accordance with UN ECE-R 118.03
	UL 1581, Section 1060 and UL 2556, Section 9.3 (FT1)
	UL 1581, Section 1100 and UL 2556, Section 9.1 (HFT/FT2)
Resistance to oil	in accordance with IEC 60811-404
Ambient temperature (operation)	-40 °C 80 °C (cable, fixed installation)
	-30 °C 70 °C (Cable, flexible installation)

### Environmental and real-life conditions

#### Ambient conditions

Degree of protection	IP67 (When plugged in)	
	IP65 (When plugged in)	
	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

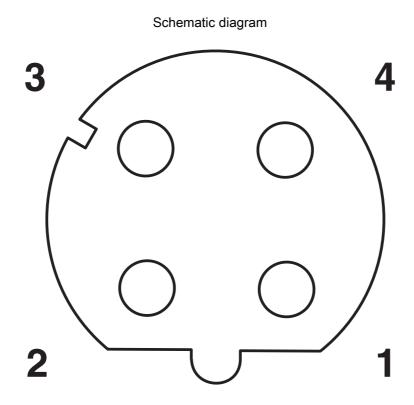
Standard designation	M12 circular connector	
Standards/specifications	according to IEC 61076-2-101	



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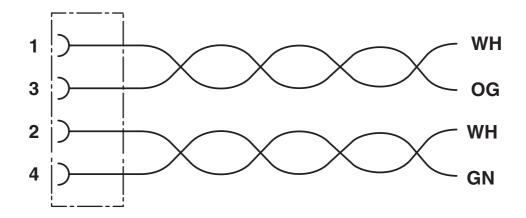
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## Drawings



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/us/products/1437685

UL Recognized Approval ID: E221474-20220907					
		Nominal voltage U <sub>N</sub>	Nominal current I <sub>N</sub>	Cross section AWG	Cross section mm <sup>2</sup>
keine					
		30 V	1.5 A	-	-

<b>.71</b>	<b>cUL Recognized</b> Approval ID: E221474-2	20220907	70		
		Nominal voltage U <sub>N</sub>	Nominal current I <sub>N</sub>	Cross section AWG	Cross section mm <sup>2</sup>
keine					
		30 V	1.5 A	-	-



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### Classifications

### **ECLASS**

	ECLASS-13.0	27440103			
	ECLASS-15.0	27440103			
ETIM					
	ETIM 9.0	EC003570			
U	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	b9369152-e660-47e3-8b34-955706eccc97

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