

1437708

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Device connector, rear mounting, Ethernet CAT5 (100 Mbps), Ethernet, 4-position, Socket, straight, M12-SPEEDCON, coding: D , on free cable end, Rear mounting, Alternative product in accordance with RoHS II without Exemption 6c (Pb <0.1%) item no.: 1239675

#### Commercial data

Item number	1437708
Packing unit	1 pc
Minimum order quantity	1 pc
Sales key	AB25
Product key	ABQDGJ
GTIN	4046356458443
Weight per piece (including packing)	106.3 g
Weight per piece (excluding packing)	106 g
Customs tariff number	85444290
Country of origin	DE

## connector, rear mounting



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## Technical data

General	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.
afety 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 required interpreted for demoge
	The products must be regularly inspected for damage. Decommission defective products immediately. Replace
	damaged products. Repairs are not possible.
	<ul> <li>WARNING: Only electrically qualified personnel may install and operate the product. They must observe the following safety</li> </ul>
	notes. The qualified personnel must be familiar with the basics on 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> <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>
	• Only use mating connectors that are specified in the technical data of the standards listed (e.g. the ones listed in the product
	<ul> <li>accessories online at phoenixcontact.com/products).</li> <li>When using the product in direct connection with third-party</li> </ul>
	manufacturers, the user is responsible.
	<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</li> </ul>
	standards.
	<ul> <li>Observe the corresponding technical data. You will find information:</li> </ul>
	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
	<ul> <li>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</li> </ul>

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• Ensure that the protective or functional ground has been properly connected.

 $\bullet$  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

No. unting the second	
Mounting type	Rear mounting

#### Product properties

Draduct type	Circular connectors (device side)
Product type	Circular connectors (device side)
Sensor type	Ethernet
Number of positions	4
No. of cable outlets	1
Coding	D
nsulation 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

#### **Electrical properties**

Nominal voltage U <sub>N</sub>	48 V AC
	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 characteristics (category)	CAT5 (IEC 11801:2002)

#### Connector

Connection 1	
Head design	Socket
Head cable outlet	straight
Head thread type	M12

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Head locking type	SPEEDCON
Coding	D
Connection 2	

#### Cable/line

#### 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 mm <sup>2</sup>
Wire diameter incl. insulation	0.98 mm
External cable diameter	6.4 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
Thickness, outer sheath	1.2 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 Ω ±5 Ω (at 100 MHz)



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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 V (50 Hz, 1 min.)
Current carrying capacity of cable	2 A (according to DIN VDE 0891-1)
Minimum bending radius, fixed installation	4 x D
Minimum bending radius, flexible installation	8 x D
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 loss (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)
	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
	according to IEC 60332-1-2



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Flame resistance	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 (When plugged in)
	IP65 (When plugged in)
	IP65/IP67
Ambient temperature (operation)	-25 °C 85 °C (Plug / socket)
	-40 °C 85 °C (without mechanical actuation)

#### Standards and regulations

112	
Standard designation	M12 connector
Standards/specifications	IEC 61076-2-101

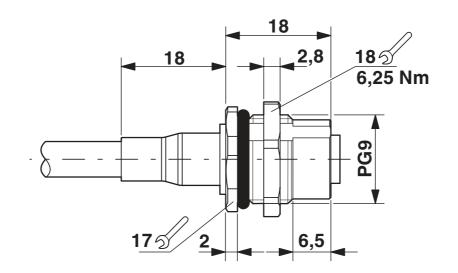


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### Drawings

Dimensional drawing



Dimensional drawing

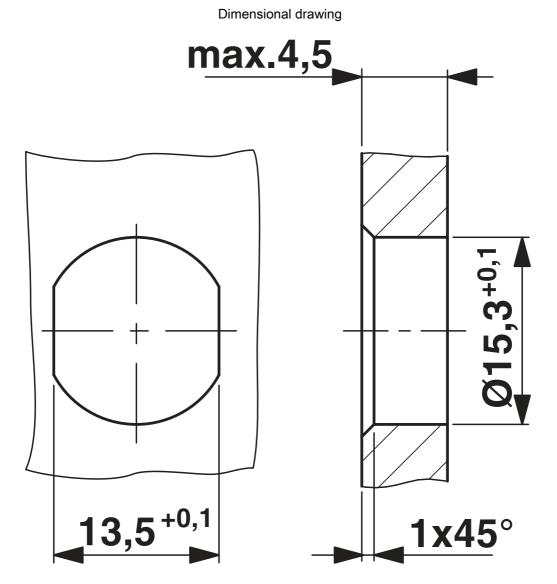
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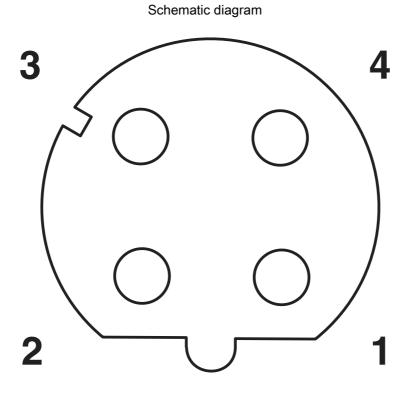


Housing cutout for Pg9 fastening thread, mounting panel with feed-through hole (alternatively with surface as protection against rotation)



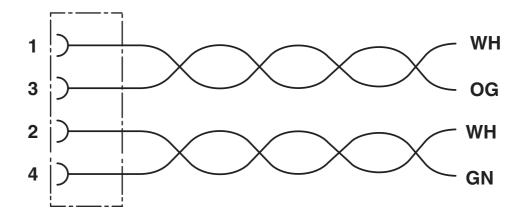
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Pin assignment M12 socket, 4-pos., D-coded, female side

Circuit diagram





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### Approvals

🌣 To download certificates, visit the product detail page: https://www.phoenixcontact.com/us/products/1437708

<b>71</b>	UL Recognized           Approval ID: E118976-20100522				
		Nominal voltage U <sub>N</sub>	Nominal current I <sub>N</sub>	Cross section AWG	Cross section mm <sup>2</sup>
		30 V	1.5 A	- 26	-

EAC Approval ID: B.01687

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### Classifications

#### ECLASS

	ECLASS-11.0	27440103	
	ECLASS-12.0	27440103	
	ECLASS-13.0	27440103	
ETIM			
	ETIM 8.0	EC003570	
UNSPSC			
	UNSPSC 21.0	39121400	

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### Environmental product compliance

REACh SVHC	Lead 7439-92-1	
China RoHS	Environmentally Friendly Use Period = 50 years	
	For information on hazardous substances, refer to the manufacturer's declaration available under "Downloads"	

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