

1401814

https://www.phoenixcontact.com/us/products/1401814

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#### Your advantages

- · Preassembled with litz wires for immediate use
- · Customer-specific assemblies and litz wire lengths available
- Sealed on the litz wire side for optimum leak-tightness
- Standard pin assignments for signal and power transmission with a uniform design-in design
- · For high transmission safety: shield connection to the housing with optional EMC nut
- · SPEEDCON fast locking system reduces cabling times

#### Commercial data

Item number	1401814
Packing unit	1 pc
Minimum order quantity	1 pc
Sales key	AB24
Product key	ABQCGA
GTIN	4046356573955
Weight per piece (including packing)	38.3 g
Weight per piece (excluding packing)	25.893 g
Customs tariff number	85444290
Country of origin	DE



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#### Technical data

#### Notes

Order information:	Lock nut is included in the scope of delivery
General	Contact connection method: Crimp connection
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.
fety 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 an operate the product. They must observe the following safety notes. The qualified personnel must be familiar with the basics electrical engineering. They must be able to recognize and prevent danger. The relevant symbol on the packaging indicate that only personnel familiar with electrical engineering are allowed to install and operate the product.</li> </ul>
	• The products are suitable for applications in plant, controller, and electrical device engineering.
	<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.



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	The suitable accessories are available online in the accessory section of the product at phoenixcontact.com/products
	<ul> <li>Ensure that the protective or functional ground has been properly connected.</li> </ul>
	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
	<ul> <li>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).</li> </ul>
Mounting	
Mounting type	Rear mounting (M12 x 1, with flat nut)
Tightening torque	3 Nm 4 Nm (Installation-side)
Product properties	
· ·	Circular connectors (device cide)
Product type	Circular connectors (device side)
Application	Signal Universal
Sensor type	5
Number of positions  No. of cable outlets	1
Shielded	no
Coding	A
Thread type	M12
Till Cad type	MIZ
Insulation characteristics	
Overvoltage category	Ш
Degree of pollution	3
Material specifications	
Material Housing	GD-Zn
Material Housing surface	Ni
Material Molding compound	PUR (potted)
Flammability rating according to UL 94	V0
Seal material	NBR
Contact material	CuZn
Contact surface material	Au
Contact carrier material	PA 6.6
Conductor material	Tin-plated Cu litz wires
Electrical properties	
Rated surge voltage	1.5 kV
Contact resistance	≤ 3 mΩ
Insulation resistance	≥ 100 MΩ
Nominal voltage U <sub>N</sub>	60 V
Nominal voltage ON	UU V



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Nominal current I <sub>N</sub>	4 A
Max. conductor resistance	37.1 mΩ/m

#### Connection data

#### Conductor connection

Connection method	Individual wires
Contact connection type	Pin
Conductor cross-section	0.5 mm <sup>2</sup>
Tightening torque	3 Nm 4 Nm (Installation-side)

#### Mechanical properties

#### Mechanical data

Insertion/withdrawal cycles	> 100
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#### Connector

#### Connection 1

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

#### Cable/line

Cable length	0.5 m
Cable type	PVC litz wire
Signal type/category	Universal
Wire diameter incl. insulation	1.8 mm
Single wire, color	black, brown,blue, white, gray
Cable cross section	0.5 mm <sup>2</sup>
Conductor material	Tin-plated Cu litz wires
Conductor structure signal line	16x 0.20 mm
AWG signal line	20
Material wire insulation	PVC
Nominal voltage, cable	900 V
Test voltage, cable	2500 V
Cable resistance	≤ 37.1 mΩ/m
Cable insulation resistance	≥ 20 MΩ*km
Ambient temperature (operation)	-40 °C 85 °C (cable, fixed installation)
	-25 °C 85 °C (Cable, flexible installation)

#### Environmental and real-life conditions



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#### Ambient conditions

Degree of protection	IP67 (When plugged in)
	IP65 (When plugged in)
Ambient temperature (operation) (male connector/female connector)	-25 °C 85 °C (Plug / socket)
	-40 °C 85 °C (without mechanical actuation)
Ambient temperature (operation) (Cable, flexible installation)	-25 °C 85 °C (Cable, flexible installation)
Ambient temperature (operation) (Cable, fixed installation)	-40 °C 85 °C (cable, fixed installation)
UL Type Rating	Type 4 (indoor use only)

#### Standards and regulations

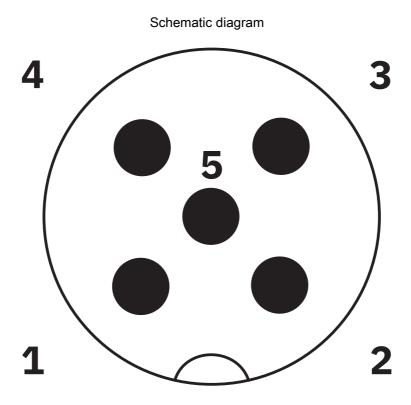
Standard designation	M12 circular connector
Standards/specifications	according to IEC 61076-2-101



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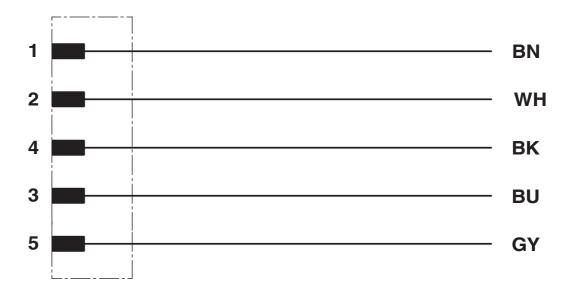
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### Drawings



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

#### Circuit diagram



Contact assignment of the M12 plug and the M12 socket



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#### Classifications

#### **ECLASS**

	ECLASS-13.0	27440103
	ECLASS-15.0	27440103
ETIM		
	ETIM 9.0	EC003570
UN	ISPSC	

UNSPSC 21.0	39121400



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#### Environmental product compliance

#### EU RoHS

Fulfills EU RoHS substance requirements  Exemption	Yes 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)

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