

1554681

https://www.phoenixcontact.com/us/products/1554681

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Device connector rear mounting, Universal, 5-position, Pin, straight, M12-Standard, coding: A, on free cable end, Rear mounting, Pg9, Individual wires, cable length: 0.5 m, 0.34 mm², TPE litz wire

### 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 and codings for signal transmission with a uniform design-in design
- · For high transmission safety: shield connection to the housing with optional EMC nut

### Commercial data

Item number	1554681
Packing unit	1 pc
Minimum order quantity	1 pc
Sales key	AB24
Product key	ABQCWE
Catalog page	Page 270 (C-2-2013)
GTIN	4046356170383
Weight per piece (including packing)	36.23 g
Weight per piece (excluding packing)	26.7 g
Customs tariff number	85444290
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
General	Contact connection method: Crimp connection

#### 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 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:
- 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>
	<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 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 Pg9 With locking nut
Assembly note	With locking nut
Product properties	
Product type	Circular connectors (device side)
Sensor type	Universal
Number of positions	5
No. of cable outlets	1
Shielded	no
Coding	A
Thread type	M12
Data management status  Article revision	09
Article revision	09
Insulation characteristics	
Overvoltage category	II .
Degree of pollution	3
Material specifications	
Flammability rating according to UL 94	V0
Seal material	FKM
Contact material	CuZn
Contact surface material	Au
Contact carrier material	PA 6.6
Material for screw connection	Stainless steel
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 (AC)
	00 (10)



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	60 V (DC)
Nominal current I <sub>N</sub>	4 A
Max. conductor resistance	57.6 mΩ/m

### Connection data

#### Conductor connection

Connection method	Individual wires
Contact connection type	Pin
Conductor cross section	0.34 mm²
Tightening torque	2 Nm 3 Nm (Installation-side)

### Mechanical properties

#### Mechanical data

Insertion/withdrawal cycles	> 100

#### Connector

#### Connection 1

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

#### Connection 2

Head design	free cable end
rioda doolgii	noo cable ona

### Cable/line

Cable length	0.5 m
Cable type	TPE litz wire
Signal type/category	Universal
Wire diameter incl. insulation	1.2 mm ±0.07 mm
Single wire, color	black, brown,blue, white, gray
Cable cross section	0.34 mm²
Conductor material	Tin-plated Cu litz wires
Conductor structure signal line	7x 0.25 mm
AWG signal line	22
Material wire insulation	TPE
Thickness, insulation	0.21 mm
Nominal voltage, cable	300 V
Test voltage, cable	2000 V AC
Cable resistance	≤ 57.6 mΩ/m
Cable insulation resistance	≥ 20 MΩ*km



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Ambient temperature (operation)	-40 °C 85 °C (cable, fixed installation)
	-25 °C 85 °C (Cable, flexible installation)

### Environmental and real-life conditions

### Ambient conditions

Degree of protection	IP65/IP67/IP69/IP69K
	IP69K
	IP65/IP67/IP69K
Ambient temperature (operation)	-25 °C 85 °C (Plug / socket)
	-40 °C 85 °C (without mechanical actuation)
	-25 °C 85 °C (Cable, flexible installation)
	-40 °C 85 °C (cable, fixed installation)

### Standards and regulations

#### M12

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

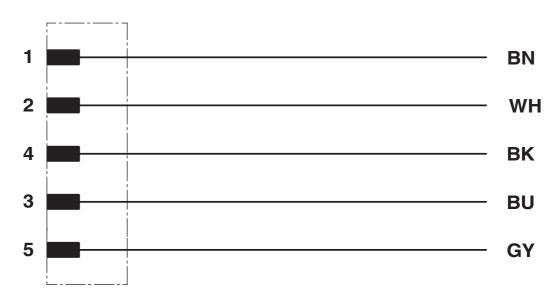


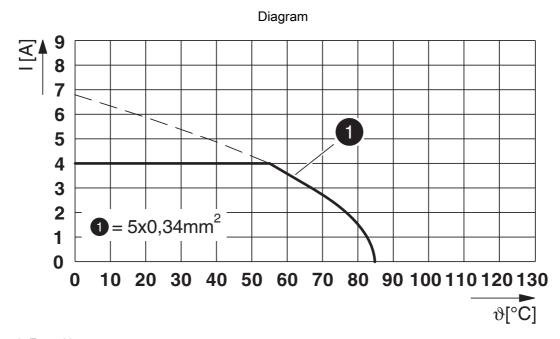
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## Drawings

### Circuit diagram



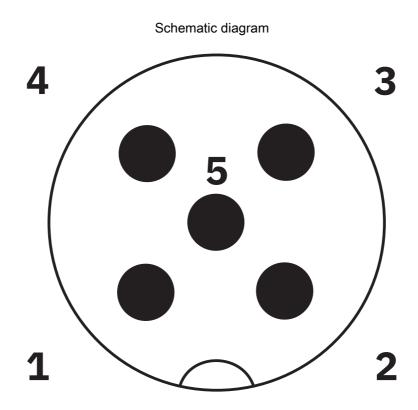


I = current strength, T = ambient temperature



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



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## Approvals

To download certificates, visit the product detail page: https://www.phoenixcontact.com/us/products/1554681

.71	cUL 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>
		60 V	4 A	22 - 22	-

<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>	
		60 V	4 A	22 - 22	-	

e <b>932</b> us	cULus Recognized Approval ID: E221474-20140616				
		Nominal voltage U <sub>N</sub>	Nominal current I <sub>N</sub>	Cross section AWG	Cross section mm <sup>2</sup>
		60 V	4 A	22 - 20	-

cULus Recognized



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### Classifications

### **ECLASS**

	ECLASS-11.0	27440102			
	ECLASS-12.0	27440116			
	ECLASS-13.0	27440116			
ETIM					
	ETIM 9.0	EC002635			
UNSPSC					
	UNSPSC 21.0	39121400			



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## Environmental product compliance

#### EU RoHS

20 1.0.10			
Fulfills EU RoHS substance requirements	Yes, No exemptions		
China RoHS			
Environment friendly use period (EFUP)	EFUP-E		
	No hazardous substances above the limits		
EU REACH SVHC			
REACH candidate substance (CAS No.)	No substance above 0.1 wt%		

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Phoenix Contact USA 586 Fulling Mill Road Middletown, PA 17057, United States (+717) 944-1300 info@phoenixcon.com