

1452068

https://www.phoenixcontact.com/us/products/1452068

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Device connector front mounting, 5-position, Pin, straight, M12, coding: A, on free cable end, Front mounting, M20 x 1,5, Individual wires, cable length: 0.5 m, 0.34 mm<sup>2</sup>, TPE litz wire, potted

### 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
- All standard pin assignments and codings for signal, data, and power transmission with a uniform design-in design
- · For high transmission safety: shield connection to the housing with optional EMC nut

#### Commercial data

Item number	1452068	
Packing unit	1 pc	
Minimum order quantity	1 pc	
Sales key	AB24	
Product key	ABQCUC	
Catalog page	Page 269 (C-2-2013)	
GTIN 4046356528719		
Weight per piece (including packing)	44.3 g	
Weight per piece (excluding packing)	33.44 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.
General	Contact connection method: Crimp connection
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:     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		
	<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	Front mounting M20 x 1,5		
Product properties			
Product type	Circular connectors (device side)		
Application	Signal		
Number of positions	5		
No. of cable outlets	1		
Shielded	no		
Coding	A		
Thread type	M12		
Insulation characteristics			
Overvoltage category	II		
Degree of pollution	3		
Material specifications			
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		
Material for screw connection	Stainless steel		
Conductor material	Tin-plated Cu litz wires		
Electrical properties			
Rated surge voltage	1.5 kV		
Contact resistance $\leq 3 \text{ m}\Omega$			
Insulation resistance	≥ 100 MΩ		
Nominal voltage U <sub>N</sub>	60 V		
Nominal current I <sub>N</sub>	4 A		
Max. conductor resistance	57.6 mΩ/m		



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#### Connection data

#### Conductor connection

Connection method	Individual wires	
Contact connection type	Pin	
Conductor cross section	0.34 mm²	
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
Coding	A

#### Connection 2

Head design	free cable end
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#### Cable/line

Cable length	0.5 m		
Cable type	TPE litz wire		
Wire diameter incl. insulation	1.2 mm ±0.07 mm		
Single wire, color	brown, white, blue, black, 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		
Ambient temperature (operation)	-40 °C 85 °C (cable, fixed installation)		
	-25 °C 85 °C (Cable, flexible installation)		

#### Environmental and real-life conditions

Ambient conditions



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Degree of protection	IP65/IP67/IP69/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

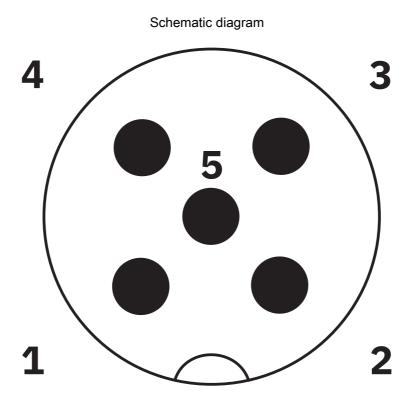
Standard designation	M12 circular connector
Standards/specifications	according to IEC 61076-2-101



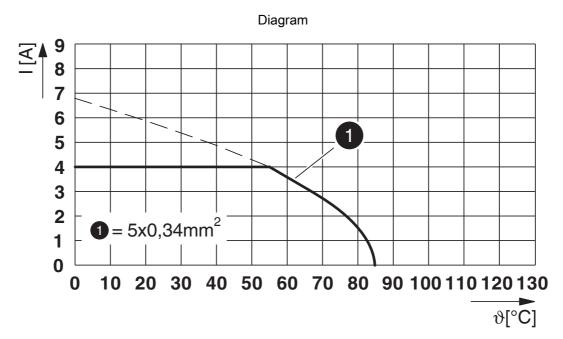
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### Drawings



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



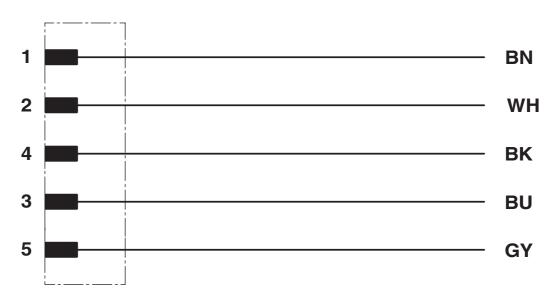
I = current strength, T = ambient temperature



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### Circuit diagram



Contact assignment of the M12 plug and the M12 socket



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### Approvals

To download certificates, visit the product detail page: https://www.phoenixcontact.com/us/products/1452068

CULus Recognized Approval ID: E221474-20140616				
	Nominal voltage $U_N$	Nominal current I <sub>N</sub>	Cross section AWG	Cross section mm <sup>2</sup>
	60 V	4 A	22 - 20	-

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	-

<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	-	



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### Classifications

UNSPSC 21.0

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	ECLASS-13.0	27440103		
ETIM				
	ETIM 9.0	EC003570		
UNSPSC				

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### Environmental product compliance

#### EU RoHS

20.10.10		
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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