

1408415

https://www.phoenixcontact.com/us/products/1408415

Please be informed that the data shown in this PDF document is generated from our online catalog. Please find the complete data in the user documentation. Our general terms of use for downloads are valid.



Device connector front mounting, Universal, 4-position, Pin, straight, M12-Standard, 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

### 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	1408415
Packing unit	1 pc
Minimum order quantity	1 pc
Sales key	AB24
Product key	ABQCUC
Catalog page	Page 269 (C-2-2013)
GTIN	4046356812597
Weight per piece (including packing)	43.2 g
Weight per piece (excluding packing)	32.7 g
Customs tariff number	85444290
Country of origin	DE



1408415

https://www.phoenixcontact.com/us/products/1408415

### Technical data

#### Notes

otes	
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.
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: On the product On the packing label In the supplied documentation 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



1408415

https://www.phoenixcontact.com/us/products/1408415

	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>
lounting	
Mounting type	Front mounting M20 x 1,5
Product properties	
Product type	Circular connectors (device side)
Sensor type	Universal
Number of positions	4
Application	Signal
No. of cable outlets	1
Shielded	no
Coding	A
Thread type	M12
Insulation characteristics	
Overvoltage category	II
Degree of pollution	3
Material specifications	
Material	Stainless steel
Flammability rating according to UL 94	V0
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
lectrical properties	
Rated surge voltage	2.5 kV
Contact resistance	≤ 3 mΩ
Insulation resistance	≥ 100 MΩ
Nominal voltage U <sub>N</sub>	250 V (AC)
N	250 V (DC)
Nominal current I <sub>N</sub>	4 A
Max. conductor resistance	57.6 mΩ/m



1408415

https://www.phoenixcontact.com/us/products/1408415

#### 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/withdrawar cycles > 100	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 c	able end
--------------------	----------

#### 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	brown, white, blue, black
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 (Core insulation)
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)



1408415

https://www.phoenixcontact.com/us/products/1408415

#### Environmental and real-life conditions

#### Ambient conditions

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

#### M12

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



1408415

https://www.phoenixcontact.com/us/products/1408415

### Classifications

#### **ECLASS**

20100		
	ECLASS-11.0	27440102
	ECLASS-12.0	27440116
	ECLASS-13.0	27440116
ETIM		
	ETIM 9.0	EC002635
UNSPSC		
	UNSPSC 21.0	39121400



1408415

https://www.phoenixcontact.com/us/products/1408415

### Environmental product compliance

China RoHS	Environmentally friendly use period: unlimited = EFUP-e
	No hazardous substances above threshold values

Phoenix Contact 2024 © - all rights reserved https://www.phoenixcontact.com

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