

1419784

https://www.phoenixcontact.com/us/products/1419784

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Device connector front mounting, Universal, 4-position, Pin, straight, M12, coding: A, on free cable end, Front mounting, Square flange, Individual wires, cable length: 0.5 m, 0.34 mm<sup>2</sup>, TPE

### 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
- · SPEEDCON fast locking system reduces cabling times

#### Commercial data

Item number	1419784
Packing unit	1 pc
Minimum order quantity	1 pc
Sales key	AB24
Product key	ABQCED
Catalog page	Page 42 (C-2-2019)
GTIN	4046356531764
Weight per piece (including packing)	28.4 g
Weight per piece (excluding packing)	18.8 g
Customs tariff number	85444290
Country of origin	DE



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### 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



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Mounting type Assembly instructions  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 Degree of pollution  Material Fiammability rating according to UL 94 V0 Seal material Material of grip body Contact surface material Contact surface material Material for screw connection Material of conductor material Conduct carrier material Material of screw connection Conduct raterial itz wires  Front mounting Square flange 20 mm side length  Circular connectors (device side)  Circular connectors (device side)  Linuversal  A  A  A  A  A  A  A  A  A  A  B  A  A		
properly connected.  - VDE 0100/1.97 § 41.1.3.2 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 it 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 13732-12008-12).  - Doubting  - Mounting type - Front mounting Square flange 20 mm side length  - Assembly instructions  - Order type - Circular connectors (device side)  - Product type - Circular connectors (device side)  - Number of positions - 4 - Application - Signal - No. of cable outlets - 1 - Shelded - no - Coding - A - Thread type - M12  - Insulation characteristics  - Overvoltage category - II - Degree of pollution - 3 - aterial specifications  - Material - FKM - Material - FKM - Material - FKM - Material of grip body - Zinc die-cast, nickel-plated - Contact material - Contact material - Contact variace material - Conductor mate		section of the product at phoenixcontact.com/products
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).  ounting  Mounting type  Front mounting Square flange 20 mm side length  Assembly instructions  20 mm side length  Front warming Square flange 20 mm side length  Circular connectors (device side)  Product type  Circular connectors (device side)  Sensor type  Universal  Number of positions  4  Application  No. of cable outlets  1  Shielded  no  Coding  A  Thread type  M12  Insulation characteristics  Overvoltage category  II  Degree of pollution  aterial specifications  Material  FixM  Material of grip body  Zinc die-cast, nickel-plated  Contact material  FixM  Material of grip body  Zinc die-cast, nickel-plated  Contact material  Contact carrier material  Ni/Au  Contact carrier material  PA 6.6  Material for screw connection  Conduct material  Fixed with a contact wife and the contact of the cast, nickel-plated  Conduct material  PA 6.6  Material for screw connection  Zinc die-cast, nickel-plated  Contact material  PA 6.6  Material for screw connection  Zinc die-cast, nickel-plated  Contact material  PA 6.6  Material for screw connection  Zinc die-cast, nickel-plated  Contact material  PA 6.6  Material for screw connection  Zinc die-cast, nickel-plated  Contact material  PA 6.6  Material for screw connection  Zinc die-cast, nickel-plated  Contact material  PA 6.6  Material for screw connection  Zinc die-cast, nickel-plated  Contact material  PA 6.6  Material for screw connection  Zinc die-cast, nickel-plated  Contact surface material  PA 6.6  Material for screw connection  Zinc die-cast, nickel-plated  Contact surface material  PA 6.6  Material for screw connection  Zinc die-cast, nickel-plated  Contact surface material  PA 6.6  Material for screw connection  Zinc die-cast, nickel-plated  Zinc die-cast, nicke		
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Mounting type       Front mounting Square flange 20 mm side length         Assembly instructions       20 mm side length         roduct 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         Overvoltage category       II         Degree of pollution       3         aterial specifications       Zinc die-cast, nickel-plated         Material       Zinc die-cast, nickel-plated         Flammability rating according to UL 94       V0         Seal material       FKM         Material of grip body       Zinc die-cast, nickel-plated         Contact material       QuZn         Contact carrier material       PA 6.6         Material for screw connection       Zinc die-cast, nickel-plated         Conductor material       Tin-plated Cu litz wires         eetrical properties         Rated surge voltage       2.5 kV         Contact resi		ambient conditions, the surface of the connector can continue to warm up. In this case, the user is responsible for posting
Assembly instructions   20 mm side length	lounting	
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Insulation characteristics  Overvoltage category  Degree of pollution  3  aterial specifications  Material  Flammability rating according to UL 94  V0  Seal material  FKM  Material of grip body  Contact material  Contact surface material  Contact carrier material  Ni/Au  Contact carrier material  PA 6.6  Material for screw connection  Zinc die-cast, nickel-plated  Tin-plated Cu litz wires  Rated surge voltage  2.5 kV  Contact resistance    ≥ 3 mΩ   Insulation resistance   ≥ 100 MΩ	Coding	A
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Flammability rating according to UL 94 V0  Seal material FKM  Material of grip body Zinc die-cast, nickel-plated  Contact material CuZn  Contact surface material Ni/Au  Contact carrier material PA 6.6  Material for screw connection Zinc die-cast, nickel-plated  Conductor material Tin-plated Cu litz wires  Rated surge voltage 2.5 kV  Contact resistance $\leq 3 \text{ m}\Omega$ Insulation resistance $\geq 100 \text{ M}\Omega$	laterial specifications	
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Seal materialFKMMaterial of grip bodyZinc die-cast, nickel-platedContact materialCuZnContact surface materialNi/AuContact carrier materialPA 6.6Material for screw connectionZinc die-cast, nickel-platedConductor materialTin-plated Cu litz wiresIectrical properties $2.5 \text{ kV}$ Contact resistance $\leq 3 \text{ m}\Omega$ Insulation resistance $\geq 100 \text{ M}\Omega$	Flammability rating according to UL 94	
$ \begin{array}{cccccccccccccccccccccccccccccccccccc$		FKM
	Material of grip body	Zinc die-cast, nickel-plated
	Contact material	CuZn
Material for screw connection       Zinc die-cast, nickel-plated         Conductor material       Tin-plated Cu litz wires         lectrical properties       Rated surge voltage         Contact resistance $\leq 3 \text{ m}\Omega$ Insulation resistance $\geq 100 \text{ M}\Omega$	Contact surface material	Ni/Au
Conductor material Tin-plated Cu litz wires  lectrical properties  Rated surge voltage 2.5 kV  Contact resistance $\leq 3 \text{ m}\Omega$ Insulation resistance $\geq 100 \text{ M}\Omega$	Contact carrier material	PA 6.6
Rated surge voltage     2.5 kV       Contact resistance     ≤ 3 mΩ       Insulation resistance     ≥ 100 MΩ	Material for screw connection	Zinc die-cast, nickel-plated
Rated surge voltage       2.5 kV         Contact resistance       ≤ 3 mΩ         Insulation resistance       ≥ 100 MΩ	Conductor material	Tin-plated Cu litz wires
Contact resistance       ≤ 3 mΩ         Insulation resistance       ≥ 100 MΩ	lectrical properties	
Contact resistance       ≤ 3 mΩ         Insulation resistance       ≥ 100 MΩ	Rated surge voltage	2.5 kV
Nominal voltage U <sub>N</sub> 250 V (AC)	Insulation resistance	≥ 100 MΩ
	Nominal voltage U <sub>N</sub>	250 V (AC)



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	250 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	3 Nm 4 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
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
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)



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Standards/specifications

	-25 °C 85 °C (Cable, flexible installation)
Environmental and real-life conditions	
Ambient conditions	
Degree of protection	IP67
	IP67
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

IEC 61076-2-101



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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

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

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