

1437821

https://www.phoenixcontact.com/us/products/1437821

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Bus system flush-type plug, PROFINET, 4-pos., M12, shielded, D-coded, SPEEDCON, rear/screw mounting with Pg9 thread, with 2.0 m bus cable,  $2 \times 2 \times 0.34 \text{ mm}^2$ 

## Your advantages

- · Preassembled with cables in various standard lengths for immediate use
- · Customer-specific assemblies and cable lengths can be supplied
- · Sealed on the cable side for optimum tightness of seal
- · Cable designs for all common networks and fieldbuses
- · For high transmission safety: shield connection to the housing with optional EMC nut

### Commercial data

Item number	1437821
Packing unit	1 pc
Minimum order quantity	1 pc
Sales key	AB25
Product key	ABQDGD
Catalog page	Page 307 (PC-2011)
GTIN	4046356458566
Weight per piece (including packing)	163.7 g
Weight per piece (excluding packing)	154.9 g
Customs tariff number	85444290
Country of origin	DE



1437821

https://www.phoenixcontact.com/us/products/1437821

## 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	Lock nut is included in the scope of delivery
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.         The products must be regularly inspected for damage.         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>
	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>
	When using the product in direct connection with third-party manufacturers, the user is responsible.
	<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



1437821

https://www.phoenixcontact.com/us/products/1437821

	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
Product properties	
Product type	Circular connectors (device side)
Sensor type	PROFINET
Number of positions	4
Application	Data
No. of cable outlets	1
Shielded	yes
Coding	D
Thread type	M12
Insulation characteristics	
Overvoltage category	II
Degree of pollution	3
laterial specifications	
Flammability rating according to UL 94	Vo
Seal material	FKM
Contact material	CuZn
Contact surface material	Ni/Au
Contact carrier material	PA 6.6
Outer sheath, material	PVC
ilectrical properties	
Rated surge voltage	2.5 kV
Contact resistance	≤ 3 mΩ
Insulation resistance	≥ 100 MΩ
Nominal voltage U <sub>N</sub>	250 V AC
Nominal current I <sub>N</sub>	4 A
Transmission medium	Copper
Transmission characteristics (category)	CAT5 (IEC 11801:2002)



1437821

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#### Connection data

#### Conductor connection

Connection method	Cable connection
Contact connection type	Pin
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	SPEEDCON
Coding	D

#### Connection 2

Head design	free cable end
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### Cable/line

Cable length	2 m
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### PROFINET PVC stranded CAT5 [93B]

Dimensional drawing



Cable weight	67 kg/km
UL AWM Style	21694
Number of positions	4
Shielded	yes
Cable type	PROFINET PVC stranded CAT5 [93B]
Conductor structure	1x4xAWG22/7, SF/TQ
Signal runtime	5.3 ns/m
Signal speed	0.66 c



1437821

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Conductor structure signal line	7x 0.25 mm
AWG signal line	22
Conductor cross section	4x 0.34 mm²
Wire diameter incl. insulation	1.55 mm
External cable diameter	6.50 mm ±0.2 mm
Outer sheath, material	PVC
External sheath, color	green RAL 6018
Conductor material	Tin-plated Cu litz wires
Material wire insulation	PE
Single wire, color	white, yellow, blue, orange
Thickness, outer sheath	approx. 0.90 mm
Overall twist	Star quad
Optical shield covering	85 %
Insulation resistance	≥ 500 MΩ*km
Coupling resistance	≤ 20.00 mΩ/m (at 10 MHz)
Loop resistance	≤ 120.00 Ω/km
Wave impedance	100 Ω ±15 Ω (at 100 MHz)
Nominal voltage, cable	600 V
Test voltage Core/Core	2000 V (50 Hz, 1 min.)
Test voltage Core/Shield	2000.00 V (50 Hz, 1 min.)
Minimum bending radius, fixed installation	3 x D
Minimum bending radius, flexible installation	7 x D
Smallest bending radius, fixed installation	20 mm
Smallest bending radius, movable installation	46 mm
Near end crosstalk attenuation (NEXT)	80 dB (with 1 MHz)
	76 dB (at 4 MHz)
	70 dB (at 10 MHz)
	65 dB (at 16 MHz)
	63 dB (at 20 MHz)
	60 dB (at 31.25 MHz)
	55 dB (at 62.5 MHz)
	50 dB (at 100 MHz)
Shield attenuation	2.1 dB (with 1 MHz)
	4 dB (at 4 MHz)
	6.3 dB (at 10 MHz)
	8 dB (at 16 MHz)
	9 dB (at 20 MHz)
	11.4 dB (at 31.25 MHz)
	16.5 dB (at 62.5 MHz)
	21.3 dB (at 100 MHz)
Flame resistance	according to UL 1685 (CSA FT 4)
Resistance to oil	Resistant to oil to a limited extent



1437821

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Other resistance	UV resistant (According to UL 1581, Section 1200)
Ambient temperature (operation)	-40 °C 70 °C (cable, fixed installation)
	-40 °C 70 °C (Cable, flexible installation)
Ambient temperature (installation)	-20 °C 60 °C

#### Environmental and real-life conditions

#### Ambient conditions

Degree of protection	IP67 (When plugged in)
	IP65 (When plugged in)
	IP65/IP67
Ambient temperature (operation)	-25 °C 85 °C (Plug / socket)
	-40 °C 85 °C (without mechanical actuation)

# Standards and regulations

#### M12

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



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# Classifications

### **ECLASS**

202.00	
ECLASS-11.0	27440102
ECLASS-12.0	27440116
ECLASS-13.0	27440116
ETIM	
ETIM 9.0	EC002635
UNSPSC	



1437821

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# Environmental product compliance

REACh SVHC	Lead 7439-92-1
China RoHS	Environmentally Friendly Use Period = 50 years
	For information on hazardous substances, refer to the manufacturer's declaration available under "Downloads"

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