

1408204

https://www.phoenixcontact.com/us/products/1408204

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Device connector rear mounting, 5-position, PUR, red lilac RAL 4001, Socket, straight, M12-SPEEDCON, B-coding, on free cable end, Bus line, cable length: $0.5 \, \text{m}$, this item is expected to be lead-free from Q1 2027 in accordance with RoHS II without exception 6c (Pb < 0.1%), a lead-free alternative is possible on request in advance

Commercial data

Item number	1408204
Packing unit	1 pc
Minimum order quantity	1 pc
Product key	ABQDGG
GTIN	4046356796927
Weight per piece (including packing)	64.6 g
Weight per piece (excluding packing)	47.687 g
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.
Order information:	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.
	 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: 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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	section of the product at phoenixcontact.com/products
	 Ensure that the protective or functional ground has been properly connected.
	 VDE 0100/1.97 § 411.1.3.2 and DIN EN 60 204/11.98 § 14.1. are applicable when combining several circuits in a cable and/oconnector
	 The connector warms up in normal operation. Depending on tambient 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	Rear mounting (M16 x 1.5, with flat nut)
Tightening torque	2 Nm 3 Nm (Installation-side)
oduct properties	
Product type	Circular connectors (device side)
Number of positions	5
Shielded	yes
Coding	В
Thread type	M12
Insulation characteristics	
Overvoltage category	III
Degree of pollution	3
aterial specifications	
Material Housing	GD-Zn
Material Housing surface	Ni
Flammability rating according to UL 94	V0
Contact material	CuZn
Contact surface material	Ni/Au
Contact carrier material	PA 6.6
Outer sheath, material	PUR
Conductor material	Tin-plated Cu litz wires
ectrical properties	
Rated surge voltage	1.5 kV AC
Contact resistance	≤ 3 mΩ
Insulation resistance	≥ 100 MΩ
Nominal voltage U _N	48 V AC
	60 V DC
Nominal current I _N	4 A
Transmission medium	Соррег



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Connection data

Conductor connection

Connection method	Bus line
Contact connection type	Socket
Tightening torque	2 Nm 3 Nm (Installation-side)

Mechanical properties

Mechanical data

Insertion/withdrawal cycles	> 100
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Connector

Connection 1

Head design	Socket
Head cable outlet	straight
Head thread type	M12
Head locking type	SPEEDCON
Coding	В

Connection 2

neau desidii	free cable end
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Cable/line

Cable length	0.5 m
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CANopen®/DeviceNet™, PUR, violet [920]

Dimensional drawing



UL AWM Style	21198 (80°C/300 V)
Number of positions	4
Shielded	yes
Cable type	CANopen®/DeviceNet™, PUR, violet [920]
Conductor structure	2xAWG24/19+2xAWG22/19
AWG signal line	24
AWG power supply	22
	2x 0.25 mm² (Data cable)



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Conductor cross section	2x 0.34 mm² (Power supply)
	1x 0.34 mm² (Drain wire)
Wire diameter incl. insulation	1.95 mm ±0.05 mm (Data cable)
	1.4 mm ±0.05 mm (Power supply)
External cable diameter	6.70 mm ±0.3 mm
Outer sheath, material	PUR
External sheath, color	red lilac RAL 4001
Conductor material	Tin-plated Cu litz wires
Material wire insulation	Foamed PE (Data cable)
	PE (Power supply)
Single wire, color	red-black, blue-white
Twisted pairs	2 cores to the pair
Overall twist	2 pairs around a drain wire in the center to the core
Optical shield covering	80 %
Insulation resistance	≥ 5 GΩ*km (Data cable)
	≥ 5 GΩ*km (Power supply)
Wave impedance	120 Ω ±10 % (with 1 MHz)
Nominal voltage, cable	≤ 300 V (Peak value, not for high-power applications)
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	4 x D
Minimum bending radius, flexible installation	8 x D
Dynamic load capacity (bending)	Max. bending cycles: 5000000, Bending radius: 70 mm, Bending radius: 15 x D, Traversing path: 4.5 m, Traversing rate: 3 m/s, Acceleration: 3 m/s², Ambient temperature: -20 °C 60 °C
Shield attenuation	≤ 22.9 dB/km (with 1 MHz)
	≤ 16.4 dB/km (At 500 kHz)
	≤ 9.5 dB/km (At 125 kHz)
Halogen-free	in accordance with DIN VDE 0472 part 815
	according to IEC 60754-1
Flame resistance	UL 1581, Section 1060 and UL 2556, Section 9.3 (FT1)
	UL 1581, Section 1100 and UL 2556, Section 9.1 (HFT/FT2)
	IEC 60332-1-2
	in accordance with ISO 6722-1 5.22 (UN ECE-R 118.01)
Ambient temperature (operation)	-40 °C 80 °C (cable, fixed installation)
	-30 °C 70 °C (Cable, flexible installation)
	-20 °C 60 °C (for installation)
	-20 °C 60 °C (cable, drag chain applications)

Environmental and real-life conditions

Ambient conditions

Degree of protection	IP67 (When plugged in)
	IP65 (When plugged in)



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	IP65/IP67
Ambient temperature (operation) (male connector/female connector)	-25 °C 85 °C (Plug / socket)
	-40 °C 85 °C (without mechanical actuation)
Ambient temperature (operation) (flexible installation)	-20 °C 75 °C (Cable, flexible installation)
Ambient temperature (operation) (Cable, fixed installation)	-40 °C 80 °C (cable, fixed installation)
UL Type Rating	Type 4 (indoor use only)

Standards and regulations

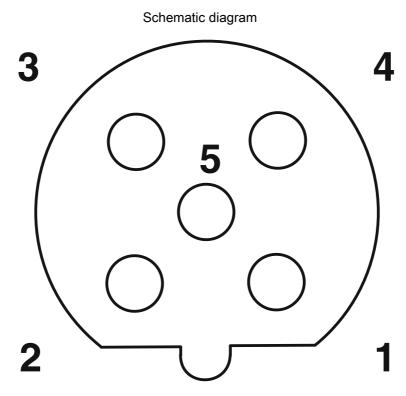
Standard designation	M12 circular connector
Standards/specifications	according to IEC 61076-2-101



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Drawings



Pin assignment M12 socket, 5-pos., B-coded, female side



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Approvals

To download certificates, visit the product detail page: https://www.phoenixcontact.com/us/products/1408204

. 9 1	cUL Recognized Approval ID: E221474-2	cUL Recognized Approval ID: E221474-20220907			
		Nominal voltage U _N	Nominal current I _N	Cross section AWG	Cross section mm ²
keine					
		30 V	1.5 A	-	-

7.1	UL Recognized Approval ID: E221474-2	0220907			
		Nominal voltage U _N	Nominal current I _N	Cross section AWG	Cross section mm ²
keine					
		30 V	2 A	-	-



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Classifications

ECLASS

	ECLASS-13.0	27440103		
	ECLASS-15.0	27440103		
ETIM				
	ETIM 9.0	EC003570		
	JORGO			
UNSPSC				
	UNSPSC 21.0	39121400		



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Environmental product compliance

EU RoHS

Fulfills EU RoHS substance requirements	Yes
Exemption	6(c)
China RoHS	
Environment friendly use period (EFUP)	EFUP-50
	An article-related China RoHS declaration table can be found in the download area for the respective article under "Manufacturer declaration". For all articles with EFUP-E, no China RoHS declaration table issued and required.
EU REACH SVHC	
REACH candidate substance (CAS No.)	Lead(CAS: 7439-92-1)
SCIP	790b63b7-9f6a-41b4-bfbd-a0e2b9f9ff0e

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