#### 1681486

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Connector, Universal, 5-position, Socket straight M12, A, Screw connection, knurl material: Zinc die-cast, nickel-plated, cable gland Pg9, external cable diameter 6 mm ... 8 mm

### Your advantages

- Safe use in the field, thanks to a high degree of protection
- · Screw connection: proven connection technology for a large selection of different conductors

### **Commercial Data**

Item number	1681486
Packing unit	1 pc
Minimum order quantity	1 pc
Sales Key	BF2
Product Key	BF2CAA
Catalog Page	Page 22 (C-2-2019)
GTIN	4017918157449
Weight per Piece (including packing)	26.4 g
Weight per Piece (excluding packing)	26 g
Customs tariff number	85366990
Country of origin	DE

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### **Technical Data**

Contact material

### Notes General NOTE: Observe the permissible bending radii when laying conductors, since the degree of protection may be put in jeopardy if the bending forces are too high. Alleviate mechanical loads upstream of the connector, e.g. by using cable ties. Mounting Connection method Screw connection **Product properties** Product type Circular connector (cable-side) Sensor type Universal Number of positions 5 No. of cable outlets 1 Shielded no Coding А Cable outlet straight Pg screw connection Pg9 Insulation characteristics Ш Overvoltage category 3 Degree of pollution Dimensions Dimensional drawing Length 54 mm External dimensions Outside diameter 6 mm ... 8 mm Housing Diameter housing 20 mm Material specifications Color Handle area black Flammability rating according to UL 94 HΒ Seal material NBR Material of grip body PA

CuZn

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Contact surface material	CuSnZn	
Contact carrier material	PA	
Material for screw connection	Zinc die-cast, nickel-plated	

#### Connection data

Conductor connection	
Connection method	Screw connection
Connection cross section	0.25 mm <sup>2</sup> 0.75 mm <sup>2</sup> (without ferrule)
	0.14 mm <sup>2</sup> 0.75 mm <sup>2</sup> (with ferrule)
	0.25 mm² 0.75 mm² (solid)
Connection cross section AWG	24 18 (without ferrule)
	26 20 (with ferrule)
Stripping length of the individual wire	5 mm
Tightening torque	0.4 Nm (M12 knurl)
	0.2 Nm (Screw terminal blocks)
	0.8 Nm 1 Nm (Pressure screw with sleeve housing)

#### **Electrical properties**

Rated surge voltage	1.5 kV
Contact resistance	≤ 8 mΩ
Insulation resistance	≥ 100 MΩ
Nominal voltage U <sub>N</sub>	48 V AC
	60 V DC
Nominal current I <sub>N</sub>	4 A

### Mechanical properties

Mechanical data	
Insertion/withdrawal cycles	≥ 50

### Connector

### Connection 1

Head design	Socket
Head cable outlet	straight
Head thread type	M12
Coding	A

### Cable/line

Signal type/category	Universal
Stripping length of the individual wire	5 mm

### Environmental and real-life conditions

Ambient conditions	
Degree of protection	IP67

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Ambient temperature (operation)

-40 °C ... 85 °C (Plug / socket)

#### Standards and regulations

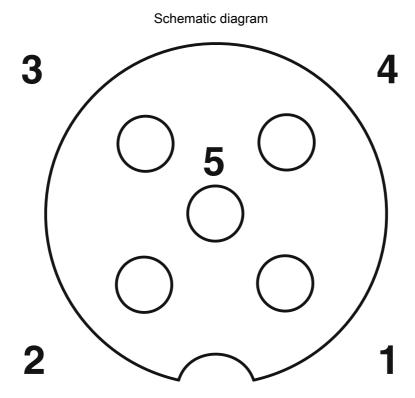
Standards/specifications

IEC 61076-2-101

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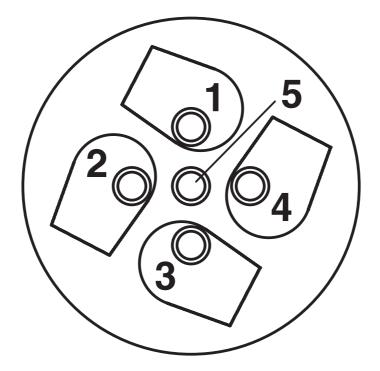
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### Drawings



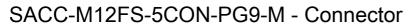
Pin assignment M12 socket, 5-pos., A-coded, socket side view

Schematic diagram



Cable connection side M12 (screw connection)

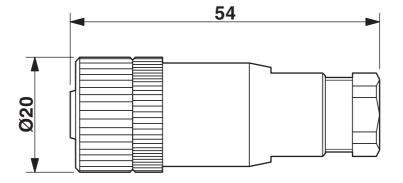
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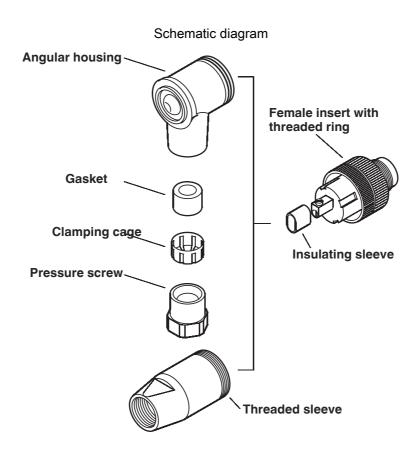
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Dimensional drawing



M12 x 1 socket, straight



Male/Female M12

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### Approvals

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Nominal Voltage U <sub>N</sub> Nominal Current I <sub>N</sub> Cross Section AWG Cross Section mm <sup>2</sup>	<b>. R</b> .	<b>CUL Recognized</b> Approval ID: FILE E 221	474			
60 \/ 4 A			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	-	-

<b>71</b>	UL Recognized Approval ID: FILE E 221	474			
		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	-	-

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### Classifications

### ECLASS

ECLASS-11.0	27440102
ECLASS-12.0	27440116
ECLASS-13.0	27440116

### ETIM

	ETIM 8.0	EC002635
UN	ISPSC	
	UNSPSC 21.0	39121400



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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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Accessories

TSD 04 SAC - Torque screwdriver

1208429 https://www.phoenixcontact.com/in/products/1208429



Torque screwdriver, with preset torque of 0.4 Nm and 4 mm hexagonal drive for M12 connectors

#### TSD-M 1,2NM - Torque screwdriver

1212224 https://www.phoenixcontact.com/in/products/1212224



Torque screw driver, accuracy as per EN ISO 6789 standard, adjustable from 0. 3 - 1.2  $\rm Nm$ 

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### TSD-M SAC-BIT ADAPTER - Adapter insert

#### 1212600

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Adapter bit for TSD-M...torque tools, E6.3-1/4" drive with 4 mm hexagon to accommodate SAC bits

### SACC BIT M12-D20 - Tool

1208445 https://www.phoenixcontact.com/in/products/1208445



Nut for assembling M12 connectors for assembly with a knurl diameter of 20 mm, for 4 mm hexagonal drive

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### **PHŒNIX** CONTACT

### PROT-M12 MS-PA-CHAIN - Screw plug

#### 1430899

https://www.phoenixcontact.com/in/products/1430899

M12 sealing cap with fixing band, for sensor cables, for free M12 sockets



### SAC-5P-100,0-186/0,75 - Cable reel

1535590 https://www.phoenixcontact.com/in/products/1535590



By the meter, Cable reel, PUR, black-gray RAL 7021, 5-wire, color single wire: brown, white, blue, black, gray, cable length: 100 m

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SZF 1-0,6X3,5 - Screwdriver

#### 1204517

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Actuation tool, for ST terminal blocks, also suitable for use as a bladed screwdriver, size:  $0.6 \times 3.5 \times 100$  mm, 2-component grip, with non-slip grip

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