#### 1681499

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Connector, Universal, 5-position, Socket angled 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	1681499
Packing unit	1 pc
Minimum order quantity	1 pc
Sales Key	BF2
Product Key	BF2CAA
Catalog Page	Page 22 (C-2-2019)
GTIN	4017918157418
Weight per Piece (including packing)	27.95 g
Weight per Piece (excluding packing)	27.76 g
Customs tariff number	85366990
Country of origin	DE

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### **Technical Data**

### Notes

General	<b>NOTE:</b> 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.
ounting	
Assembly instructions	The connector pin assignment can be rotated 90° to the cable outlet
Connection method	Screw connection
oduct properties	
Product type	Circular connector (cable-side)
Sensor type	Universal
Number of positions	5
No. of cable outlets	1
Shielded	no
Coding	A
Cable outlet	angled
Pg screw connection	Pg9
Insulation characteristics	
Overvoltage category	II
Degree of pollution	3

### Dimensions

Dimensions	
Dimensional drawing	
Length	35 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	НВ
Seal material	NBR



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Material of grip body	PA
Contact material	CuZn
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 mm <sup>2</sup> 0.75 mm <sup>2</sup> (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	angled
Head thread type	M12
Coding	А

### Cable/line

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

Environmental and real-life conditions

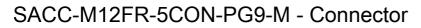


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Ambient conditions		
Degree of protection		IP67
Ambient temperature	(operation)	-40 °C 85 °C (Plug / socket)
Standards and regula	tions	
Standards/specificati	ons	IEC 61076-2-101

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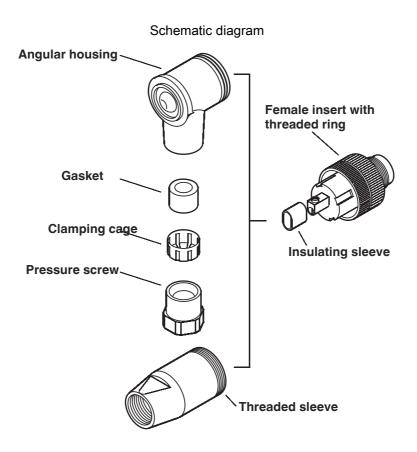


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### Drawings

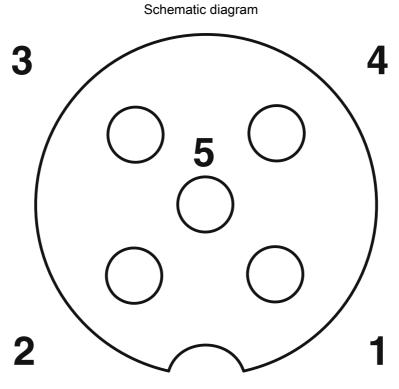


Male/Female M12



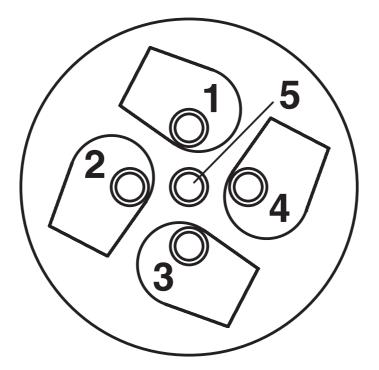
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Pin assignment M12 socket, 5-pos., A-coded, socket side view

Schematic diagram



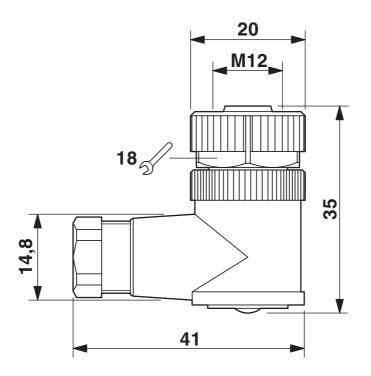
Cable connection side M12 (screw connection)



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Dimensional drawing



M12 x 1 socket, angled



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### Approvals

🌣 To download certificates, visit the product detail page: https://www.phoenixcontact.com/in/products/1681499

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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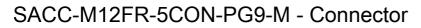
### Classifications

### ECLASS

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

### ETIM

	ETIM 8.0	EC002635		
UNSPSC				
	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

https://www.phoenixcontact.com/in/products/1212600



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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### 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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### **CRIMPFOX 6H - Crimping pliers**

### 1212046

https://www.phoenixcontact.com/in/products/1212046



Crimping pliers, for ferrules without insulating collar according to DIN 46228 Part 1 and ferrules with insulating collar according to DIN 46228 Part 4, 0.14 mm<sup>2</sup> ... 6 mm<sup>2</sup>, unlockable pressure lock, lateral entry

### VS-CABLE-STRIP-VARIO - Stripping tool

1657407 https://www.phoenixcontact.com/in/products/1657407

Stripping tool, for the multi-level stripping of shielded cables



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WIREFOX SAC - Stripping tool

#### 1212623

https://www.phoenixcontact.com/in/products/1212623



Stripping pliers, for halogen-free sensor/actuator cables (SAC cables), with PUR and PVC insulation, from  $\emptyset$  of 4.4 to 7 mm, any stripping length

### SZF 1-0,6X3,5 - Screwdriver

1204517 https://www.phoenixcontact.com/in/products/1204517



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

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