#### 1663129

https://www.phoenixcontact.com/in/products/1663129

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Connector, Universal, 5-position, Plug angled M12, A, Screw connection, knurl material: Zinc die-cast, nickel-plated, cable gland Pg7, external cable diameter 4 mm ... 6 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	1663129	
Packing unit	1 pc	
Minimum order quantity	1 pc BF2 BF2CAA	
Sales Key		
Product Key		
Catalog Page	Page 22 (C-2-2019)	
GTIN	4017918116590 24.37 g 22.4 g	
Weight per Piece (including packing)		
Weight per Piece (excluding packing)		
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
roduct properties	
Product type	Circular connector (cable-side)
Number of positions	5
Sensor type	Universal
No. of cable outlets	1
Shielded	no
Coding	A
Cable outlet	angled
Pg screw connection	Pg7
Insulation characteristics	
Overvoltage category	II
Degree of pollution	3

#### Dimensions

Dimensional drawing					
Width	20 mm				
Height	41 mm				
Length	41 mm				
External dimensions					
Outside diameter	4 mm 6 mm				
Housing					
Diameter housing	20 mm				
laterial specifications					
Color Handle area	black				



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Flammability rating according to UL 94	НВ
Seal material	NBR
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)

### 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	Plug			
Head cable outlet	angled			
Head thread type	M12			
Coding	A			

### Cable/line

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



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### Environmental and real-life conditions

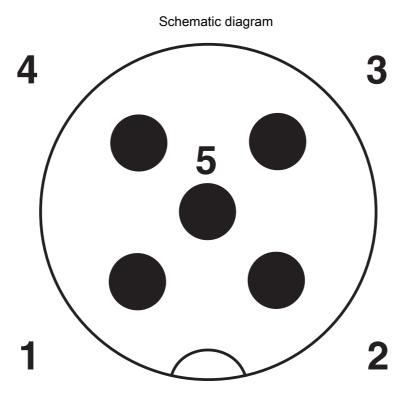
Amhient	conditions
Amplent	CONTIGUENTS

	Degree of protection	IP67
	Ambient temperature (operation)	-40 °C 85 °C (Plug / socket)
St	andards and regulations	
	Standards/specifications	IEC 61076-2-101

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### Drawings



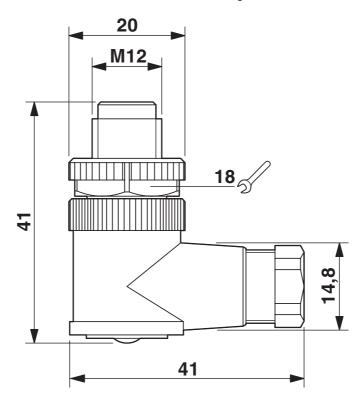
Pin assignment, plug M 12 (male side)



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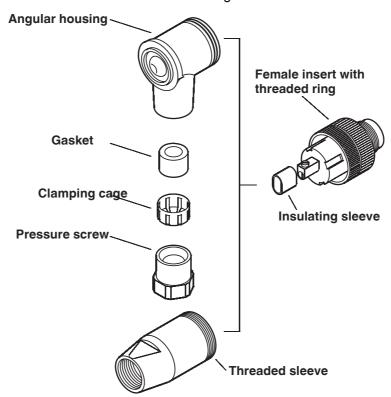
https://www.phoenixcontact.com/in/products/1663129

Dimensional drawing



M12 x 1 male plug, angled

Schematic diagram



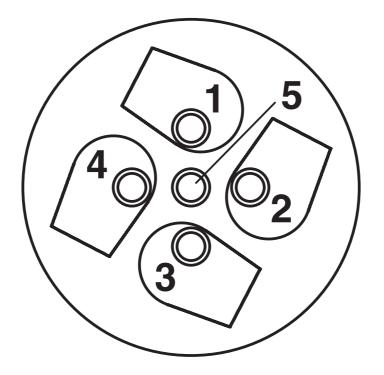
Male/Female M12



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Schematic diagram



Cable connection side M12 (screw connection)



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### Approvals

.81	Approval ID: FILE E 221474					
		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>F/</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

SACC-M12-SET/2,5-3,5 - Connector

1436505 https://www.phoenixcontact.com/in/products/1436505



Sensor/actuator connector, accessories, pressure screw and Pg7 seal, for unshielded M12 connector, cable diameter 2.5 mm - 3.5 mm

#### 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

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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  $\mbox{Nm}$ 

#### 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

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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  $\,$ 



### PROT-M12 FS-PA-CHAIN - Sealing cap

1430873 https://www.phoenixcontact.com/in/products/1430873

 $\mathsf{M12}$  sealing cap made of plastic with fixing band, for sensor cables, for free  $\mathsf{M12}$  plugs



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SAC-5P-100,0-PUR/0,34 - Cable reel

#### 1501676

https://www.phoenixcontact.com/in/products/1501676



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

### A 0,25-5 - Ferrule

3202465 https://www.phoenixcontact.com/in/products/3202465



Ferrule, length: 5 mm, color: silver

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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

#### 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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