#### 1417877

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Connector, 5-position, shielded, Socket straight M12, A, Screw connection, knurl material: Zinc die-cast, nickel-plated, cable gland Pg11, external cable diameter 8 mm ... 10 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
- · Reliable signal transmission 360° shielding in environments with electromagnetic interference

## Commercial data

Item number	1417877
Packing unit	1 pc
Minimum order quantity	1 pc
Sales key	BF30
Product key	BF2CBA
GTIN	4055626129303
Weight per piece (including packing)	57.63 g
Weight per piece (excluding packing)	57.63 g
Customs tariff number	85366990
Country of origin	DE

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## Technical data

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 mechanica loads upstream of the connector, e.g. by using cable ties.
ounting	
Connection method	Screw connection
oduct properties	
Product type	Circular connector (cable-side)
Number of positions	5
No. of cable outlets	1
Shielded	yes
Coding	A
Cable outlet	straight
Pg screw connection	Pg11
Insulation characteristics	
Overvoltage category	II
Degree of pollution	3

### Dimensions

Dimensional drawing	
Length	57 mm
Wrench size, union nut	16 mm
External dimensions	
Outside diameter	8 mm 10 mm
Housing	
Diameter housing	20.2 mm
Material specifications	
Flammability rating according to UL 94	HB
Seal material	NBR
Material of grip body	Zinc die-cast, nickel-plated
Contact material	CuZn
Contact surface material	Au

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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)
	1 Nm 1.4 Nm (Pressure nut with 8 mm 12 mm external cable diameter)

### **Electrical properties**

Rated surge voltage	1.5 kV
Contact resistance	≤ 3 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	≥ 100

## Connector

### Connection 1

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

### Cable/line

Stripping length of the individual wire	5 mm

## Environmental and real-life conditions

Ambient conditions		
	Degree of protection	IP67
	Ambient temperature (operation)	-40 °C 85 °C (Plug / socket)



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## Standards and regulations

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

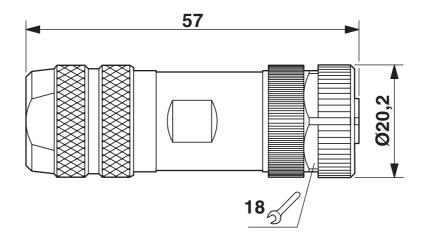
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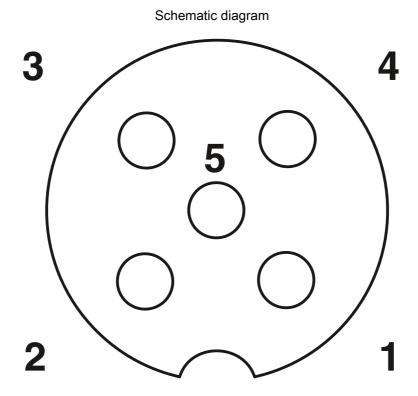


## Drawings

Dimensional drawing



M12 x 1 socket, straight, shielded

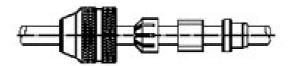


Pin assignment M12 socket, 5-pos., A-coded, socket side view

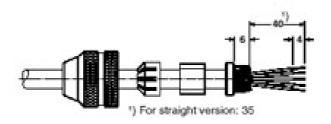
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Functional drawing

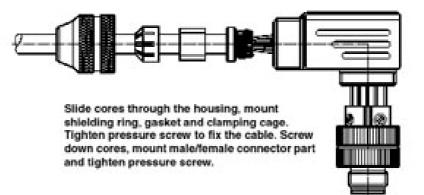
## Assembly steps for M 12 male/female connector and conductor



Slide parts onto the conductor



Strip conductor, widen shield and lay around the shielding ring, cut off projecting mesh.

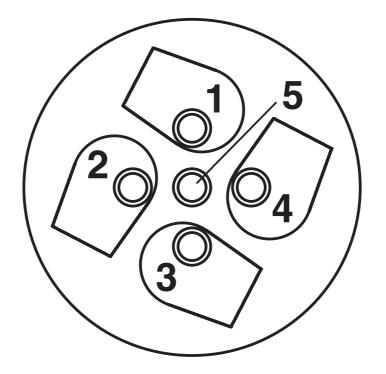




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Schematic diagram



Cable connection side M12 (screw connection)

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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

PROT-M12 MS-PA-CHAIN - Screw plug

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

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



### TSD 04 SAC - Torque screwdriver

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



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

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SACC BIT M12-D20 - Tool

#### 1208445

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

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



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

1212224 https://www.phoenixcontact.com/us/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/us/products/1212600



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

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

1212046 https://www.phoenixcontact.com/us/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

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SZF 1-0,6X3,5 - Screwdriver

#### 1204517

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



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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