#### 1681460

https://www.phoenixcontact.com/pc/products/1681460

Please be informed that the data shown in this PDF document is generated from our online catalog. Please find the complete data in the user documentation. Our general terms of use for downloads are valid.



Connector, Universal, 5-position, Plug 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	1681460
Packing unit	1 pc
Minimum order quantity	1 pc
Sales key	02
Product key	BF2CAA
Catalog page	Page 22 (C-2-2019)
GTIN	4017918157432
Weight per piece (including packing)	24.17 g
Weight per piece (excluding packing)	24.17 g
Customs tariff number	85366990
Country of origin	HU

PHŒN

1681460

https://www.phoenixcontact.com/pc/products/1681460



## 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	
Connection method	Screw connection
roduct 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	straight
Pg screw connection	Pg9
Insulation characteristics	
Overvoltage category	Ш
	3

## Dimensions

Dimensional drawing	
Width	20 mm
Height	20 mm
Length	60 mm
External dimensions Outside diameter	6 mm 8 mm
Housing	
Diameter housing	20 mm
Material specifications	
Flammability rating according to UL 94	HB
Seal material	NBR
Material of grip body	PA



### 1681460

https://www.phoenixcontact.com/pc/products/1681460

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	Plug
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

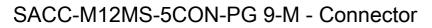
### 1681460

https://www.phoenixcontact.com/pc/products/1681460

Degree of protection	IP67
Ambient temperature (operation)	-40 °C 85 °C (Plug / socket)
Standards and regulations	
Standards and regulations Standard designation	M12 connector

**PHŒNIX** CONTACT

Q

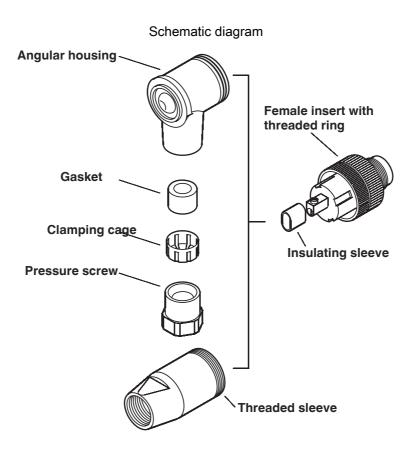


1681460

https://www.phoenixcontact.com/pc/products/1681460



## Drawings



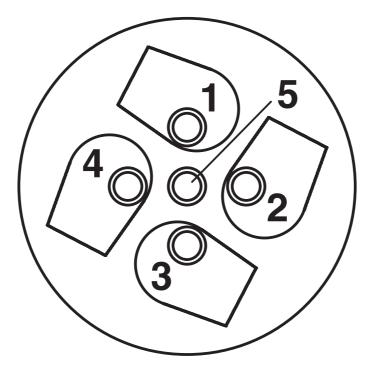
Male/Female M12



1681460

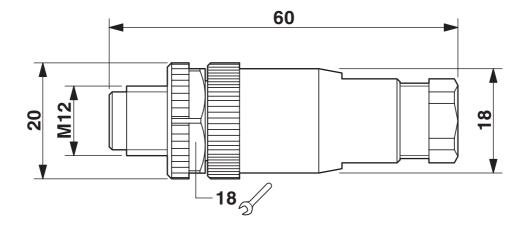
https://www.phoenixcontact.com/pc/products/1681460

Schematic diagram



Cable connection side M12 (screw connection)

Dimensional drawing

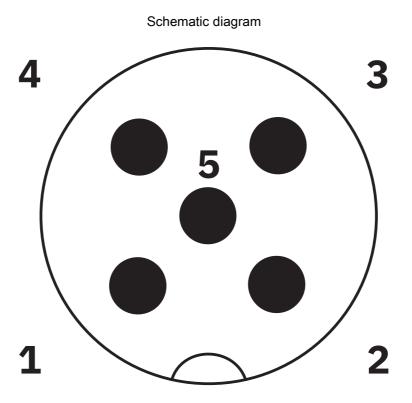


Plug, M12 x 1, straight



1681460

https://www.phoenixcontact.com/pc/products/1681460



Pin assignment M12 male connector, 5-pos., A-coded, male side



1681460

https://www.phoenixcontact.com/pc/products/1681460

## Approvals

🌣 To download certificates, visit the product detail page: https://www.phoenixcontact.com/pc/products/1681460

<b>.</b> <b>R</b>	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	-	-	

Approval ID: FILE E 22	1474			
	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	-	-

cULus Recognized

1681460

https://www.phoenixcontact.com/pc/products/1681460



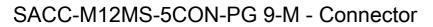
## Classifications

### ECLASS

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

## ETIM

	ETIM 8.0	EC002635		
UNSPSC				
	UNSPSC 21.0	39121400		



1681460

https://www.phoenixcontact.com/pc/products/1681460



## 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"

1681460

https://www.phoenixcontact.com/pc/products/1681460



Accessories

PROT-M12 FS-PA-CHAIN - Sealing cap

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

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



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

1535590 https://www.phoenixcontact.com/pc/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

1681460

https://www.phoenixcontact.com/pc/products/1681460



A 0,25-5-Ferrule

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



Ferrule, length: 5 mm, color: silver

## TSD 04 SAC - Torque screwdriver

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



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

1681460

https://www.phoenixcontact.com/pc/products/1681460



TSD-M 1,2NM - Torque screwdriver

#### 1212224

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



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

1681460

https://www.phoenixcontact.com/pc/products/1681460



SACC BIT M12-D20 - Tool

#### 1208445

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

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



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

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

1681460

https://www.phoenixcontact.com/pc/products/1681460



SZF 1-0,6X3,5 - Screwdriver

#### 1204517

https://www.phoenixcontact.com/pc/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

Phoenix Contact 2023 © - all rights reserved https://www.phoenixcontact.com

PHOENIX CONTACT GmbH & Co. KG Flachsmarktstraße 8 D-32825 Blomberg +49 (0) 5235-3 00 info@phoenixcontact.com