

#### 1419640

https://www.phoenixcontact.com/us/products/1419640

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Power connector, 3-position, unshielded, Socket straight M12, S, Screw connection, knurl material: Zinc die-cast, nickel-plated, cable gland Pg9, external cable diameter 6 mm ... 8 mm, for alternating current up to 16 A/630 V

### 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
- · High-performance: AC connectors for up to 16 A and 630 V AC
- Protection against incorrect connection using special S-coding

### Commercial data

Item number	1419640
Packing unit	1 pc
Minimum order quantity	1 pc
Sales key	BF30
Product key	BF2CAB
Catalog page	Page 279 (C-2-2019)
GTIN	4055626181783
Weight per piece (including packing)	26.27 g
Weight per piece (excluding packing)	26.27 g
Customs tariff number	85366990
Country of origin	DE

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### Technical data

### Notes

General	Strip 21 mm off the cable sheath, strip 6 mm off the conductor insulation, crimp the ferrule, then shorten this to 5 mm. Conductor length with shortened ferrule: 20 mm. Connect conductors and tighten the mounting screws with 0.2 Nm.
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.

### Mounting

Connection method	Screw connection
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### Product properties

Product type	Circular connector (cable-side)
Number of positions	3
Application	Power supply
No. of cable outlets	1
Shielded	no
Coding	S
Cable outlet	straight
Pg screw connection	Pg9

Overvoltage category	III
Degree of pollution	3

### Dimensions

Dimensional drawing	
Length	54 mm
Wrench size, union nut	16 mm
External dimensions	
Outside diameter	6 mm 8 mm
Housing	
Diameter housing	20 mm
Material specifications	
Flammability rating according to UL 94	VO



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Seal material	Viton
	NBR
Material of grip body	PA
Contact material	CuZn
Contact surface material	Au
Contact carrier material	PA
Material for screw connection	Zinc die-cast, nickel-plated

### Connection data

Connection method	Screw connection
Connection cross section	0.75 mm <sup>2</sup> 1.5 mm <sup>2</sup> (with ferrule)
	0.75 mm <sup>2</sup> 2.5 mm <sup>2</sup> (solid)
Connection cross section AWG	18 16 (with ferrule)
Stripping length of the individual wire	5 mm
Tightening torque	0.4 Nm (M12 knurl)
	0.8 Nm 1 Nm (Pressure screw with sleeve housing)
	0.4 Nm (Screw plug insert with sleeve housing as far it will go)
	0.2 Nm (Screw terminal blocks)

### **Electrical properties**

Rated surge voltage	6 kV
Contact resistance	≤ 5 mΩ
Insulation resistance	> 10 GΩ
Nominal voltage U <sub>N</sub>	630 V AC
Nominal current I <sub>N</sub>	16 A (when using 2.5 mm <sup>2</sup> conductors)
	16 A (at 40 °C)

### Mechanical properties

Mechanical data	
Insertion/withdrawal cycles	> 100

### Connector

Connection 1	
Head design	Socket
Head cable outlet	straight
Head thread type	M12
Coding	S

### Cable/line

Stripping length of the individual wire	5 mm
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Environmental and real-life conditions



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

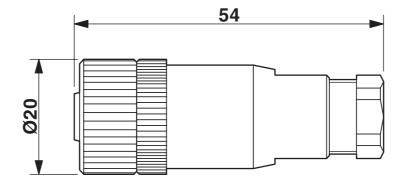


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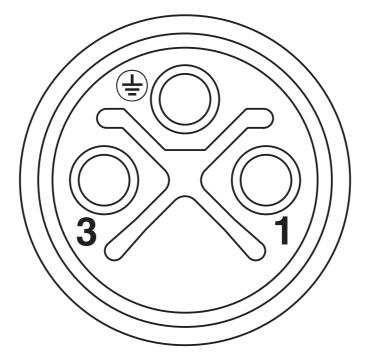
### Drawings

Dimensional drawing



M12 x 1 socket, straight

Schematic diagram



Pin assignment of M12 socket, 3-pos., S-coded, socket side view



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### Approvals

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UL Recognized	74			
	Nominal voltage U <sub>N</sub>	Nominal current I <sub>N</sub>	Cross section AWG	Cross section mm <sup>2</sup>
	600 V	16 A	- 14	-
L Recognized	4			
	Nominal voltage U <sub>N</sub>	Nominal current I <sub>N</sub>	Cross section AWG	Cross section mm <sup>2</sup>
	600 V	16 A	- 14	-
C roval ID: RU C-DE.BL08	.B.00511			

cULus Recognized



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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

A 1,5 - 7 - Ferrule

3200263 https://www.phoenixcontact.com/us/products/3200263

Ferrule, length: 7 mm, color: silver



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





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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

### 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

### 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



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### WIREFOX 6SC - Stripping tool

#### 1212158

https://www.phoenixcontact.com/us/products/1212158



Stripping tool, for cables and conductors (especially for cables protected against short circuits and ground leakages) 1.5 - 6 mm<sup>2</sup>, self-adjusting, stripping length of up to 18 mm, cutting capacity of up to 10 mm<sup>2</sup> stranded/1.5 mm<sup>2</sup> solid, replaceable stripping blade

### **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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