

1404642

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Power connector, Power, 4-position, Socket straight M12, S, Screw connection, knurl material: Zinc die-cast, nickel-plated, cable gland Pg11, external cable diameter 8 mm ... 10 mm, for AC current up to 12 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 12 A and 630 V AC
- · Protection against incorrect connection using special S-coding

### Commercial Data

Item number	1404642
Packing unit	1 pc
Minimum order quantity	1 pc
Sales Key	BF2
Product Key	BF2CAB
Catalog Page	Page 279 (C-2-2019)
GTIN	4046356707732
Weight per Piece (including packing)	28.65 g
Weight per Piece (excluding packing)	28.61 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.
Assembly instruction:	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 mechanical loads upstream of the connector, e.g. by using cable ties.

## Product properties

Product type	Circular connector (cable-side)
Number of positions	4
Application	Power supply
No. of cable outlets	1
Shielded	no
Coding	S
Cable outlet	straight
Pg screw connection	Pg11

## Insulation characteristics

Overvoltage category	III
Degree of pollution	3

### **Dimensions**

Dimensional drawing	19 11 11 11 11 11 11 11 11 11 11 11 11 1
Width	20 mm
Height	20 mm
Length	60.4 mm
Wrench size, union nut	19 mm
External dimensions	
Outside diameter	8 mm 10 mm
Housing	
Diameter housing	20 mm
Material specifications	

## M

Color Handle area	black
Flammability rating according to UL 94	V0
Seal material	Viton



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	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

#### Conductor connection

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)
	1.5 Nm 2 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	≤ 3 mΩ
Insulation resistance	> 10 GΩ
Nominal voltage U <sub>N</sub>	630 V AC
Nominal current I <sub>N</sub>	12 A (when using 1.5 mm² conductors)
	12 A (at 40 °C)

## Mechanical properties

## Mechanical data

Insertion/withdrawal cycles	≥ 100
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## Connector

## Connection 1

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

## Cable/line

Signal type/category	Power
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 regulations

#### M12

Standards/specifications	IEC 61076-2-111
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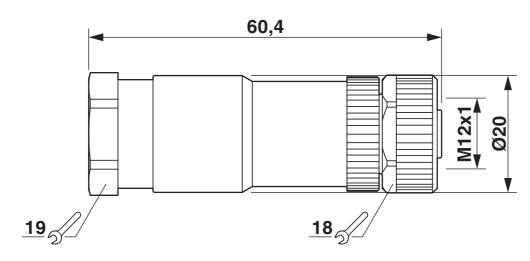


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## **Drawings**

Dimensional drawing



M12 x 1 socket, straight

Schematic diagram



Pin assignment of M12 socket, 4-pos., S-coded, socket side view



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## Approvals

CUL Recognized 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>
		600 V	12 A	- 16	-

<b>7.1</b>	UL Recognized Approval ID: FILE E 221474					
		Nominal Voltage $U_N$	Nominal Current I <sub>N</sub>	Cross Section AWG	Cross Section mm <sup>2</sup>	
		600 V	12 A	- 16	-	

EAC	EAC Approval ID: RU C-DE.Al30.B.01102

EAC	EAC Approval ID: RU C-DE.BL08.B.00511
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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  $\mbox{Nm}$ 



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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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### WIREFOX 6SC - Stripping tool

1212158

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



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

## 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



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### A 1,5 - 7 - Ferrule

3200263

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



Ferrule, length: 7 mm, color: silver

## 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



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