

1424660

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Connector, Universal, 5-position, shielded, Socket straight M12, A, Push-lock spring connection, knurl material: Zinc die-cast, nickel-plated, external cable diameter 4 mm ... 8 mm

### Your advantages

- Time-saving Push-Lock connection: Tool-free connection and disconnection of conductors by opening the contact levers
- · Intuitive connection: Easy assignment of individual litz wires with color-coded and numerical identification of the contact levers
- · Integrated Push-in Technology: Wire rigid and pretreated conductors easily by means of simple, direct insertion
- Shock- and vibration-resistant connection: Proven spring-cage technology guarantees secure and reliable contacting
- Safely shielded: Reliable 360° shield connection even under extreme mechanical strain

#### **Commercial Data**

Item number	1424660
Packing unit	1 pc
Minimum order quantity	1 pc
Sales Key	BF2
Product Key	BF2CFA
Catalog Page	Page 19 (C-2-2019)
GTIN	4055626375878
Weight per Piece (including packing)	41.9 g
Weight per Piece (excluding packing)	41.9 g
Customs tariff number	85366990
Country of origin	DE



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## **Technical Data**

#### Notes

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.
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## Mounting

Assembly instructions	The wires can be connected both with ferrules and without
	ferrules

## Product properties

Product type	Circular connector (cable-side)	
Number of positions	5	
No. of cable outlets	1	
Shielded	yes	
Coding	A	
Cable outlet	straight	
Insulation characteristics		
Overvoltage category	II	
Degree of pollution	3	

### **Dimensions**

Dimensional drawing	ca. 59
Length	59 mm
External dimensions	
Outside diameter	4 mm 8 mm
Housing	
Diameter housing	19 mm

## Material specifications

Material	TPE-U
	PA 6
Flammability rating according to UL 94	V0
Seal material	NBR
Material of grip body	Zinc die-cast, nickel-plated
Contact material	CuSn
Contact surface material	Ni/Au



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Contact carrier material	PA 6.6
Material for screw connection	Zinc die-cast, nickel-plated
Standards/regulations	PA 6.6: Fire protection in rail vehicles - requirement sets R22, R23, R24, R25, and R26 acc. to DIN EN 45545-2 (Risk level HL1 - HL3)
	PA 6: Fire protection in rail vehicles - requirement sets R22, R23, and R24 acc. to DIN EN 45545-2 (Risk level HL1 - HL3)

### Connection data

#### Conductor connection

Connection method	Push-lock spring connection
Connection cross section	0.14 mm² 0.75 mm² (without ferrule)
	0.08 mm <sup>2</sup> 0.5 mm <sup>2</sup> (with ferrule)
	0.14 mm² 0.75 mm² (solid)
Connection cross section AWG	26 18 (without ferrule)
	28 20 (with ferrule)
Stripping length of the individual wire	7 mm
Tightening torque	0.4 Nm (M12 knurl)
	0.8 Nm (Connector with coupling sleeve)
	3 Nm (Pressure nut with coupling sleeve)

### Pin assignment

Contact   Color (signal designation)   Contact (optional)	1 = BN
	2 = WH
	3 = BU
	4 = BK
	5 = GY

## 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 (2 A when using 0.14 mm² conductors)

### Mechanical properties

#### Mechanical data

Insertion/withdrawal cycles	≥ 100

#### Connector

### Connection 1

Head design	Socket
Head cable outlet	straight



1424660

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Standards/specifications Standards/specifications

Head thread type	M12
Coding	A
Cable/line	
Signal type/category	Universal
Stripping length of the individual wire	7 mm
Environmental and real-life conditions	
Ambient conditions	
Degree of protection	IP65
	IP67
Ambient temperature (operation)	-40 °C 85 °C (Plug / socket)
Standards and regulations  Testing	
	DA C O Fire and offering the bibles are in most sets DOO
Standards/regulations	PA 6.6: Fire protection in rail vehicles - requirement sets R22, R23, R24, R25, and R26 acc. to DIN EN 45545-2 (Risk level HL1 - HL3)
	PA 6: Fire protection in rail vehicles - requirement sets R22, R23, and R24 acc. to DIN EN 45545-2 (Risk level HL1 - HL3)
M12	

IEC 61076-2-101

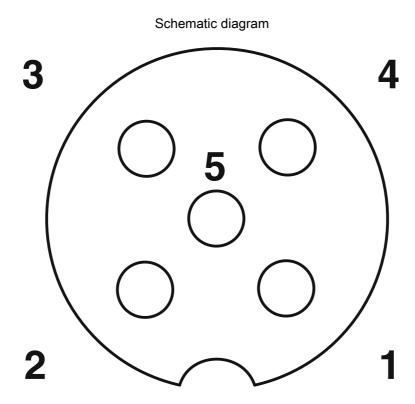
EN 50155:2001

1424660

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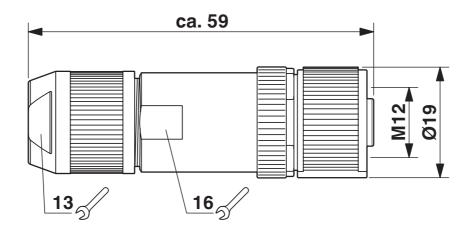


## Drawings



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

Dimensional drawing

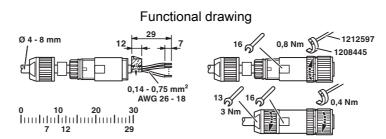


Socket M12-SPEEDCON, straight, shielded



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Slide the pressure nut and sleeve housing along the cable, strip the cable, shorten the shield, strip the single wires, connect the wires, in the case of a straight sleeve housing gently twist the wires together, stick the shielding foil around the shortened shield, in the case of a cable outside diameter < 6 mm stick an additional shielding foil around the wire pack, screw the sleeve housing to the plug insert, screw the pressure nut tight.



1424660

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# Approvals



EAC

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



EAC

Approval ID: RU C-DE.BL08.B.00511

UL Listed Approval ID: E221474				
	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	-	26 - 18

•	<b>cUL Listed</b> Approval ID: E221474				
		Nominal Voltage $U_N$	Nominal Current I <sub>N</sub>	Cross Section AWG	Cross Section mm <sup>2</sup>
		60 V	4 A	26 - 18	-



1424660

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## Classifications

UNSPSC 21.0

### **ECLASS**

ECLASS-11.0	27440102	
ECLASS-12.0	27440116	
ECLASS-13.0	27440116	
ETIM		
ETIM 8.0	EC002635	
UNSPSC		

39121400



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# **Environmental Product Compliance**

China RoHS	Environmentally friendly use period: unlimited = EFUP-e
	No hazardous substances above threshold values



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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 08 SAC - Torque screwdriver

1212597

https://www.phoenixcontact.com/in/products/1212597



Torque screw driver with preset torque of 0.8 Nm, with 4 mm hexagon for accommodating SAC bits, two-component handle with non-slip grip



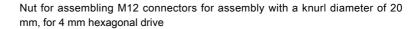
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#### SACC BIT M12-D20 - Tool

1208445

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





### 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 Nm



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### TSD-M 3NM - Torque screwdriver

1212225

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Torque screw driver, accuracy as per EN ISO 6789 standard, adjustable from 1. 2 - 3 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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## PROT-M12 MS-PA-CHAIN - Screw plug

1430899

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



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

1501728

https://www.phoenixcontact.com/in/products/1501728



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



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### ALU-SB - Shielding foil

1404531

https://www.phoenixcontact.com/in/products/1404531

Shielding foil, for fixing the braided shield of shielded cables. Length: 4 cm, width:  $1.2\ \text{cm}$ 



### VS-CABLE-STRIP-VARIO - Stripping tool

1657407

https://www.phoenixcontact.com/in/products/1657407

Stripping tool, for the multi-level stripping of shielded cables





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### WIREFOX 2,5 - Stripping tool

1212368

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Stripping tool, for conductors and cables with a conductor cross section from 0. 08 to 2.5 mm, self-adjusting, stripping length adjustable up to 15 mm, cutting capacity up to 6 mm² stranded/1.5 mm² solid

#### AI 0,25-6 YE - Ferrule

3203024

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Ferrule, sleeve length: 6 mm, length: 10.5 mm, color: yellow



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### A 0,25-7-Ferrule

3202478

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Ferrule, length: 7 mm, color: silver

## A 0,34-7-Ferrule

3009202

https://www.phoenixcontact.com/in/products/3009202



Ferrule, length: 7 mm, color: silver



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### A 0,5 - 6 - Ferrule

3200218

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Ferrule, length: 6 mm, color: silver

### AI 0,5 - 6 WH - Ferrule

3200687

https://www.phoenixcontact.com/in/products/3200687



Ferrule, sleeve length: 6 mm, length: 12 mm, color: white



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### CRIMPFOX 6H - Crimping pliers

1212046

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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  $\text{mm}^2$  ... 6  $\text{mm}^2$ , unlockable pressure lock, lateral entry

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