

# SAC-3P-M12MS/ 2,0-680 FDN - Sensor/actuator cable



1095912

<https://www.phoenixcontact.com/us/products/1095912>

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Sensor/actuator cable, 3-position, PVC, gray, shielded (Plastic-coated aluminum foil connection with a drain wire), Plug straight M12, coding: A, on free cable end, cable length: 2 m, Foil shielding plus drain wire

## Commercial data

Item number	1095912
Packing unit	1 pc
Note	Made to order (non-returnable)
Sales key	BF13
Product key	BF1IEA
GTIN	4055626928630
Weight per piece (including packing)	22.22 g
Weight per piece (excluding packing)	22.22 g
Country of origin	US

## Technical data

### Product properties

Product type	Sensor/actuator cable
Application	Standard, U.S. cables
Number of positions	3
No. of cable outlets	1
Shielded	yes
Coding	A

### Insulation characteristics

Overvoltage category	II
Degree of pollution	3

### Material specifications

Flammability rating according to UL 94	HB
Material of grip body	TPU, hardly inflammable, self-extinguishing
Contact material	CuSn
Contact surface material	Ni/Au
Contact carrier material	TPU GF
Material for screw connection	Zinc die-cast, nickel-plated

### Electrical properties

Insulation resistance	≥ 100 MΩ
Nominal voltage $U_N$	250 V AC
	250 V DC
Nominal current $I_N$	4 A

### Mechanical properties

#### Mechanical data

Insertion/withdrawal cycles	≥ 100
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### Signaling

Status display	No
Status display present	No

### Connection data

#### Conductor connection

Tightening torque	0.4 Nm (M12 connector)
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### Connector

#### Connection 1

Type	Plug straight M12
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Coding type	A
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## Connection 2

Type	free cable end
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## Cable/line

Cable length	2 m
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PVC, gray, 105°C [680]

Dimensional drawing	
Cable weight	35.4 kg/km
UL AWM Style	2517 (105 °C / 300 V)
Number of positions	3
Shielded	yes
Cable type	PVC, gray, 105°C [680]
AWG signal line	22
Wire diameter incl. insulation	1.27 mm ±0.03 mm
External cable diameter	4.75 mm ±0.2 mm
Outer sheath, material	PVC
External sheath, color	gray
Conductor material	Tin-plated Cu litz wires
Material wire insulation	PVC (Signal line)
Single wire, color	brown, blue, black
Type of pair shielding	Plastic-coated aluminum foil, aluminum side inside
Overall twist	Conductors, fillers, and drain wire are twisted with left-hand lay
Max. conductor resistance	max. 51.1 Ω/km (20 °C)
Insulation resistance	≥ (550 M Ohms/m @ 500V)
Nominal voltage, cable	300 V
Minimum bending radius, flexible installation	8 x D
Smallest bending radius, movable installation	38 mm
Flame resistance	FT4
Other resistance	UV resistant
Special properties	UL standards PLTC and ITC
Ambient temperature (operation)	-30 °C ... 105 °C (cable, fixed installation)

## Environmental and real-life conditions

Ambient conditions

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Degree of protection	IP65
	IP67
	IP68
Ambient temperature (operation)	-25 °C ... 90 °C (Plug / socket)
	-40 °C ... 80 °C (cable, fixed installation)
	-5 °C ... 80 °C (Cable, flexible installation)

## Standards and regulations

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

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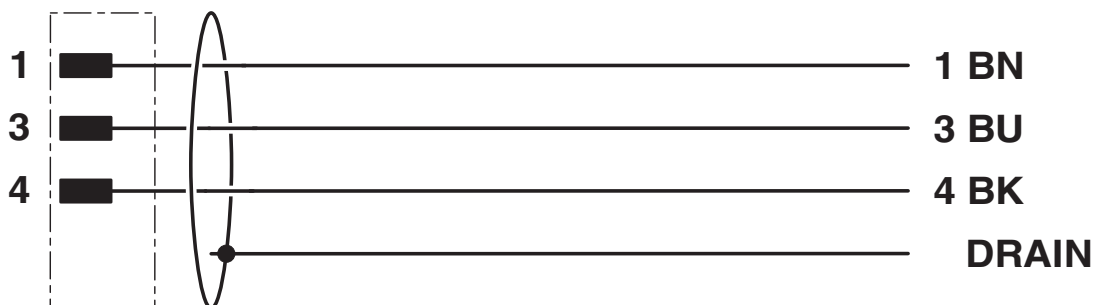


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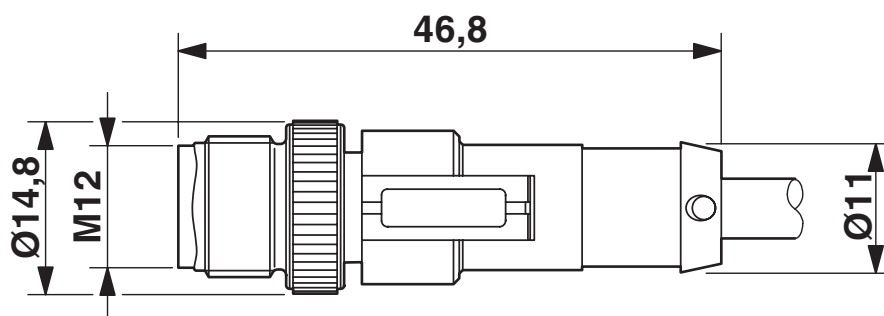
<https://www.phoenixcontact.com/us/products/1095912>

## Drawings

Circuit diagram

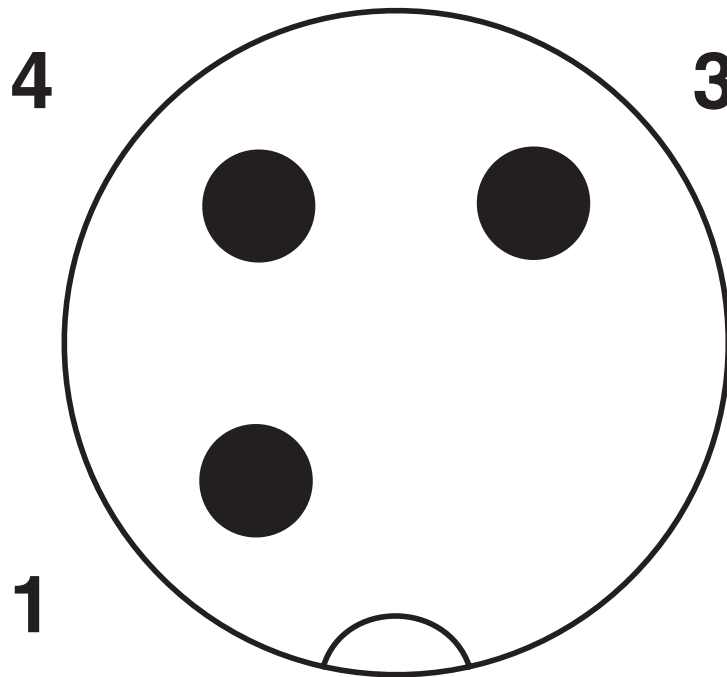


Dimensional drawing



Plug, M12 x 1, straight

Schematic diagram



Pin assignment M12 plug, 3-pos., A-coded, view male side

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## Approvals

To download certificates, visit the product detail page: <https://www.phoenixcontact.com/us/products/1095912>

	<b>UL Listed</b> Approval ID: FILE E 221474			
	Nominal voltage $U_N$	Nominal current $I_N$	Cross section AWG	Cross section $\text{mm}^2$
	300 V	4 A	-	-

	<b>cUL Listed</b> Approval ID: FILE E 221474			
	Nominal voltage $U_N$	Nominal current $I_N$	Cross section AWG	Cross section $\text{mm}^2$
	300 V	4 A	-	-

<b>cULus Listed</b>				
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## Classifications

### ECLASS

ECLASS-11.0	27060311
ECLASS-12.0	27060311
ECLASS-13.0	27060311

### ETIM

ETIM 8.0	EC001855
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### UNSPSC

UNSPSC 21.0	31251501
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Environmental product compliance

EU RoHS	
Fulfills EU RoHS substance requirements	Yes, No exemptions
China RoHS	
Environment friendly use period (EFUP)	EFUP-50
	An article-related China RoHS declaration table can be found in the download area for the respective article under "Manufacturer declaration". For all articles with EFUP-E, no China RoHS declaration table issued and required.
EU REACH SVHC	
REACH candidate substance (CAS No.)	No substance above 0.1 wt%

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## Accessories

### PROT-M12 FS-PA-CHAIN - Sealing cap

1430873

<https://www.phoenixcontact.com/us/products/1430873>

M12 sealing cap made of plastic with fixing band, for sensor cables, for free M12 plugs



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### SAC-M12-EXCLIP-M - Locking clip

1558988

<https://www.phoenixcontact.com/us/products/1558988>

Locking clip for the pin side of sensor/actuator cables with M12 connector and M12 connectors for assembly, for knurl diameter: 15 mm or for Allen key with a wrench size of 14 mm, prevents the disconnection of plug-in connections without tools



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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

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## 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 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

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## SAC BIT M12-D15 - Tool

1208432

<https://www.phoenixcontact.com/us/products/1208432>



Nut for assembling sensor/actuator cables with M12 connector and M12 connectors for assembly, with a knurl diameter of 15 mm, for 4 mm hexagonal drive

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