

# Sensor/actuator cable - SAC-HZ-3P-M12MS/ 0,5-542/M12FS



1409519

<https://www.phoenixcontact.com/pc/products/1409519>

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Sensor/actuator cable, 3-position, PVC, yellow, Plug straight M12 SPEEDCON, coding: A, on Socket straight M12 SPEEDCON, coding: A, cable length: 0.5 m



## Commercial Data

Item number	1409519
Packing unit	1 pc
Minimum order quantity	10 pc
Note	Made to Order (non-returnable)
Product Key	BF11GA
GTIN	4055626017730
Weight per Piece (including packing)	58.2 g
Weight per Piece (excluding packing)	58.2 g
Customs tariff number	85444290
Country of origin	US

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## Technical Data

### Notes

General	These cable assemblies are UL/cUL listed for use in Class I, Division 2 (CID2) hazardous locations.
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### Product properties

Product type	Sensor/actuator cable
Number of positions	3
Application	U.S. cables for hazardous locations
No. of cable outlets	1
Shielded	no
Coding	A - standard

### Insulation characteristics

Overvoltage category	II
Degree of pollution	3

### Material specifications

Flammability rating according to UL 94	HB
Sealing material	NBR
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

Contact resistance	$\leq 5 \text{ m}\Omega$
Insulation resistance	$\geq 100 \text{ M}\Omega$
Nominal voltage $U_N$	250 V AC
	250 V DC
Nominal current $I_N$	4 A
Protective circuit	unwired

### LED signaling

Status display	No
Status display present	No

### Connection data

#### Conductor connection

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

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## Connection 1

Head design	Plug
Head cable outlet	straight
Head thread type	M12
Head locking type	SPEEDCON
Coding	A


## Connection 2

Head design	Socket
Head cable outlet	straight
Head thread type	M12
Head locking type	SPEEDCON
Coding	A

## Cable / line

Cable length	0.5 m
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PVC yellow 105 °C [542]

Dimensional drawing	
Cable weight	30 kg/km
UL AWM Style	2517 (105 °C / 300 V)
Number of positions	3
Shielded	no
Cable type	PVC yellow 105 °C [542]
Conductor structure signal line	30x 1.30 mm
AWG signal line	22
Wire diameter incl. insulation	1.27 mm ±0.03 mm
External cable diameter	4.7 mm ±0.2 mm
Outer sheath, material	PVC
External sheath, color	yellow
Conductor material	Tin-plated Cu litz wires
Material wire insulation	PVC
Single wire, color	brown, blue, black
Overall twist	3 wires, twisted
Max. conductor resistance	max. 50.5 Ω/km (20 °C)
Insulation resistance	≥ (550 M Ohms/m @ 500V)
Nominal voltage, cable	300 V

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Minimum bending radius, flexible installation	8 x D
Flame resistance	FT4
Other resistance	UV resistant
Special properties	UL standards PLTC and ITC
Ambient temperature (operation)	-30 °C ... 105 °C (cable, fixed installation)
	-5 °C ... 105 °C (Cable, flexible installation)

## Ambient conditions

Degree of protection	IP65
	IP67
	IP68
Ambient temperature (operation)	-25 °C ... 90 °C (Plug / socket)

## Standards and regulations

Standards/specifications	IEC 61076-2-101
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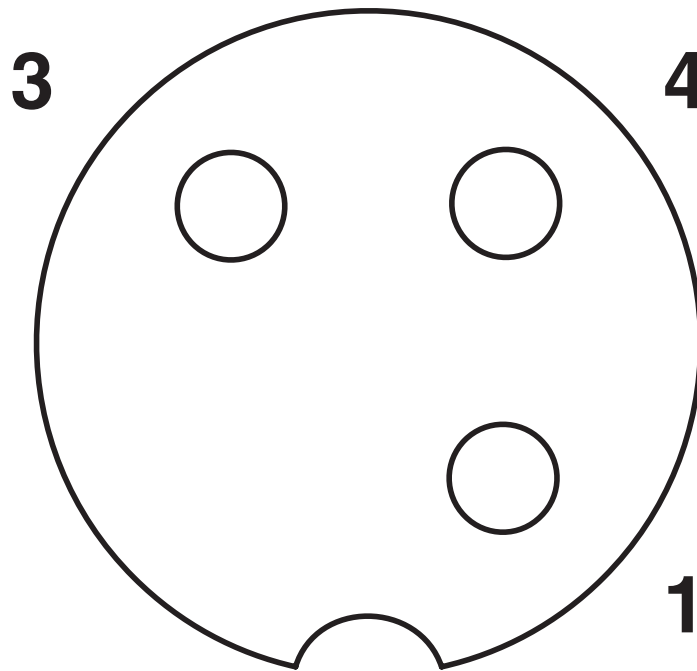
# Sensor/actuator cable - SAC-HZ-3P-M12MS/ 0,5-542/M12FS

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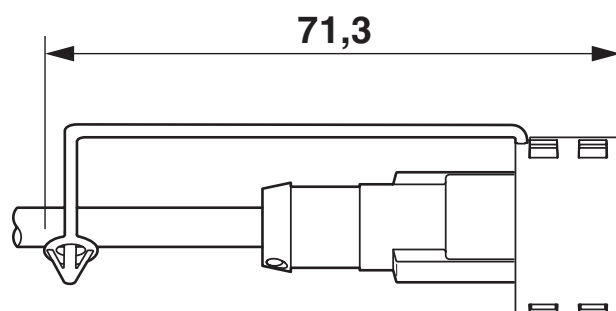
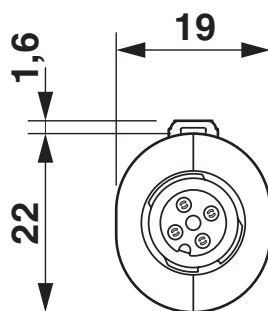
## Drawings

Schematic diagram



Pin assignment M12 socket, 3-pos., A-coded, view female side

Dimensional drawing



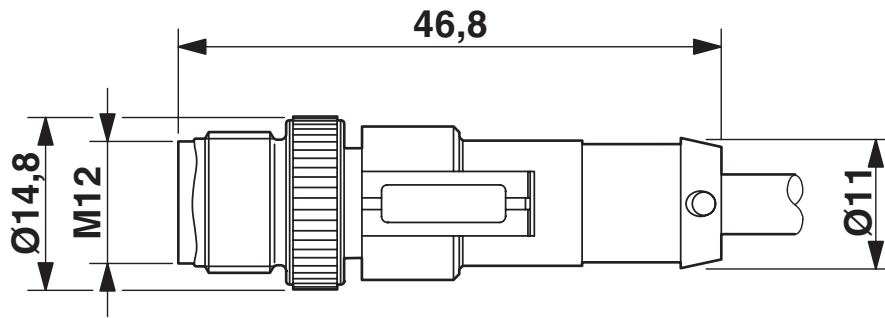
EXCLIP mounted plug

# Sensor/actuator cable - SAC-HZ-3P-M12MS/ 0,5-542/M12FS

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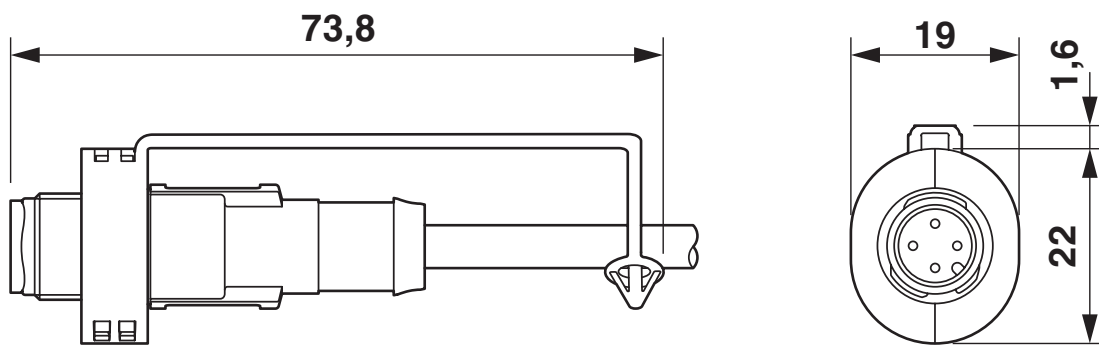
<https://www.phoenixcontact.com/pc/products/1409519>

Dimensional drawing



Plug, M12 x 1, straight, shielded

Dimensional drawing



EXCLIP mounted plug

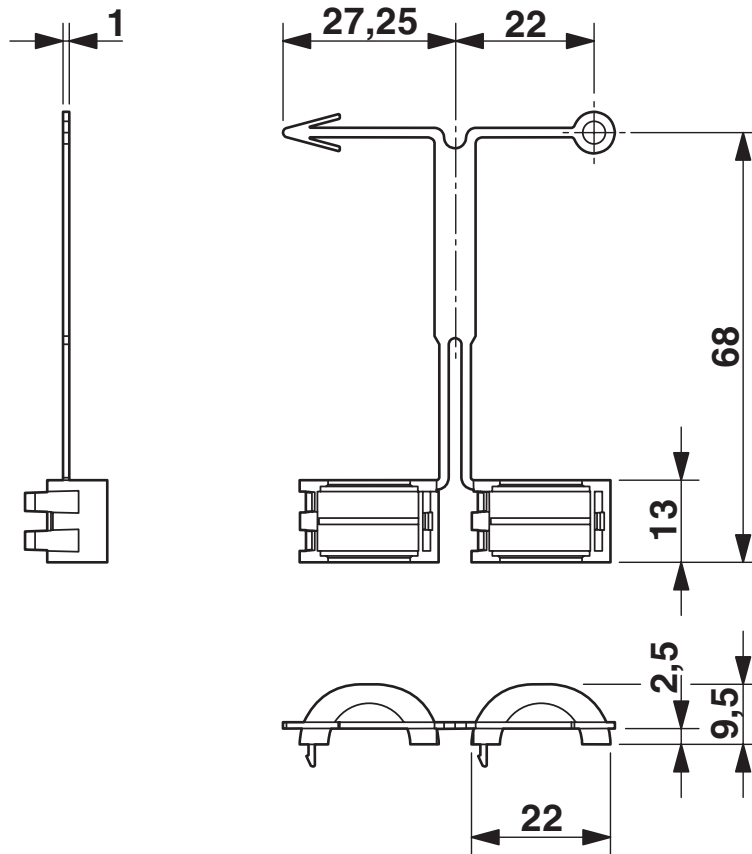
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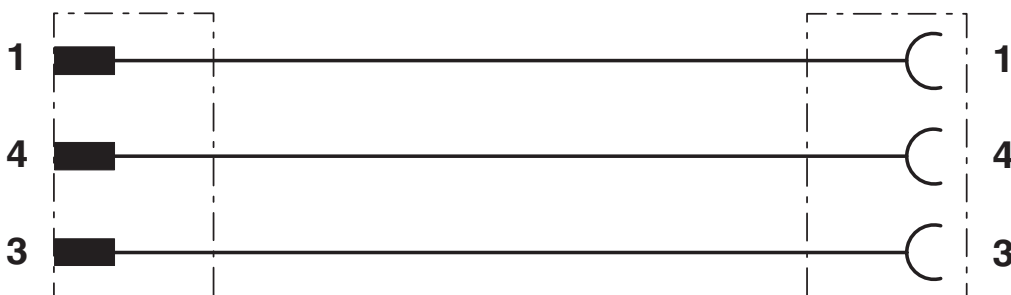
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Dimensional drawing



EXCLIP socket

Circuit diagram

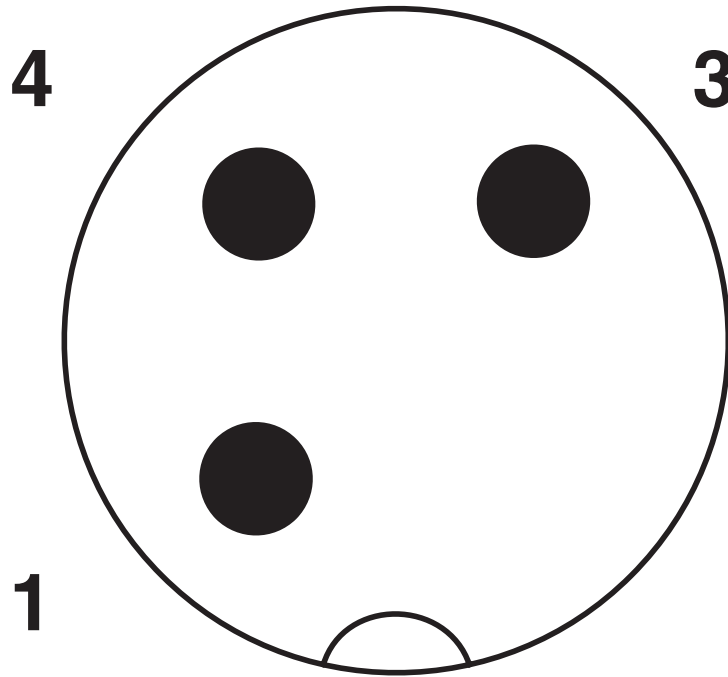


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Schematic diagram



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

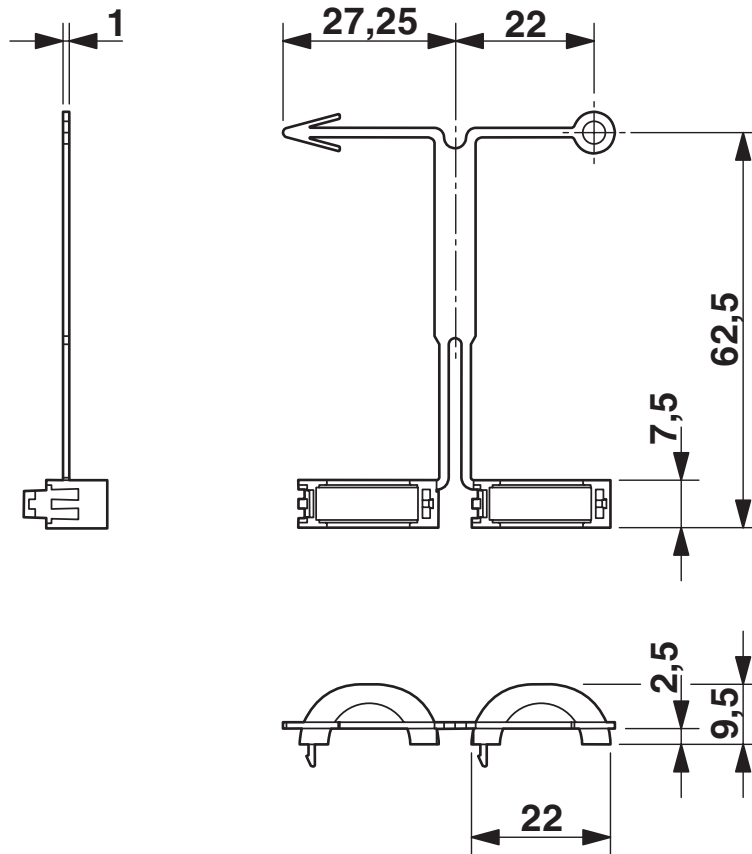
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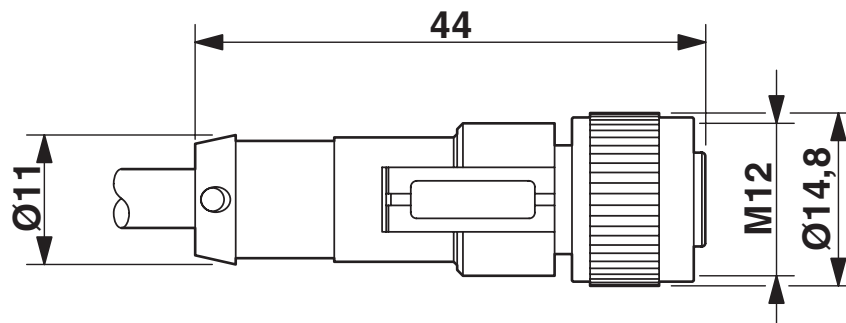
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Dimensional drawing



EXCLIP plug

Dimensional drawing



M12 x 1 socket, straight

# Sensor/actuator cable - SAC-HZ-3P-M12MS/ 0,5-542/M12FS



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## Approvals



### EAC

Approval ID: RU D-DE.HB35.B.00387



### cUL Listed

Approval ID: FILE E 359524

	Nominal Voltage $U_N$	Nominal Current $I_N$	Cross Section AWG	Cross Section $\text{mm}^2$
	150 V	4 A	-	-



### UL Listed

Approval ID: FILE E 359524

	Nominal Voltage $U_N$	Nominal Current $I_N$	Cross Section AWG	Cross Section $\text{mm}^2$
	150 V	4 A	-	-

### cULus Listed

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## Classifications

### ECLASS

ECLASS-9.0	27060311
ECLASS-10.0.1	27060311
ECLASS-11.0	27060311

### ETIM

ETIM 8.0	EC001855
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### UNSPSC

UNSPSC 21.0	26121600
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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

### Sealing cap

Sealing cap - PROT-M12 FS-PA-CHAIN - 1430873

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

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



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### Locking clip

Locking clip - SAC-M12-EXCLIP-M - 1558988

<https://www.phoenixcontact.com/pc/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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## Screw plug

Screw plug - PROT-M12 MS-PA-CHAIN - 1430899

<https://www.phoenixcontact.com/pc/products/1430899>

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



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## Locking clip

Locking clip - SAC-M12-EXCLIP-F - 1558991

<https://www.phoenixcontact.com/pc/products/1558991>

Locking clip for the socket 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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## Torque screwdriver

Torque screwdriver - TSD 04 SAC - 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

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## Torque screwdriver

Torque screwdriver - TSD-M 1,2NM - 1212224

<https://www.phoenixcontact.com/pc/products/1212224>



Torque screw driver, accuracy as per EN ISO 6789 standard, adjustable from 0.3 - 1.2 Nm

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## Adapter insert

Adapter insert - TSD-M SAC-BIT ADAPTER - 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

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## Tool

Tool - SAC BIT M12-D15 - 1208432

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