

Sensor/actuator cable - SAC-HZ-3P-M12MR/1,5-542/M12FSSH



1409517

<https://www.phoenixcontact.com/pc/products/1409517>

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Sensor/actuator cable, 3-position, PVC, yellow, shielded, Plug angled M12, coding: A, on Socket straight M12, coding: A, cable length: 1.5 m



Commercial Data

Item number	1409517
Packing unit	1 pc
Minimum order quantity	10 pc
Note	Made to Order (non-returnable)
Product Key	BF1IGA
GTIN	4055626017716
Weight per Piece (including packing)	22.22 g
Weight per Piece (excluding packing)	22.22 g
Customs tariff number	85444290
Country of origin	US

Sensor/actuator cable - SAC-HZ-3P-M12MR/1,5-542/M12FSSH



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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	yes
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	48 V AC
	60 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

Connection 1

Head design	Plug
Head cable outlet	angled
Head thread type	M12
Coding	A


Connection 2

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

Cable / line

Cable length	1.5 m
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PVC yellow 105 °C [542]

Dimensional drawing	
Cable weight	40 kg/km
UL AWM Style	2517 (105 °C / 300 V)
Number of positions	3
Shielded	yes
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	5.2 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
Optical shield covering	85 %
Max. conductor resistance	max. 50.5 Ω/km (20 °C)

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Insulation resistance	≥ (550 M Ohms/m @ 500V)
Nominal voltage, cable	300 V
Minimum bending radius, flexible installation	12 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
Ambient temperature (operation)	-25 °C ... 90 °C (Plug / socket)

Standards and regulations

Standards/specifications	IEC 61076-2-101
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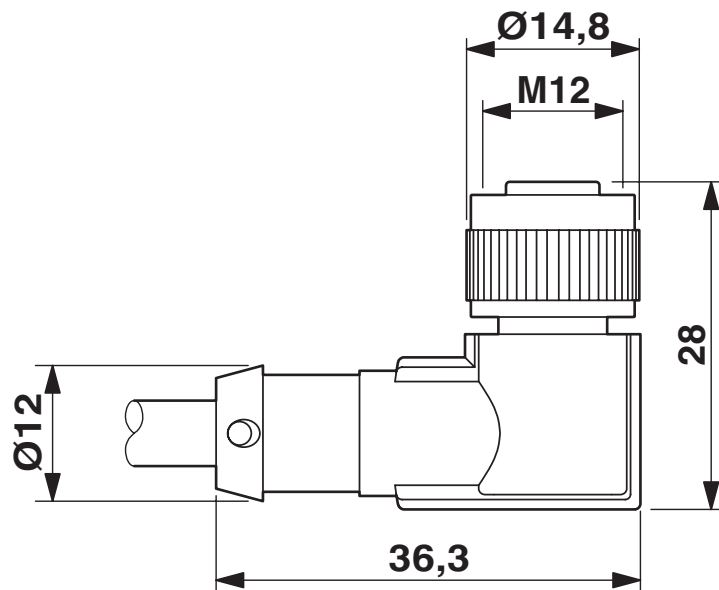
Sensor/actuator cable - SAC-HZ-3P-M12MR/1,5-542/M12FSSH

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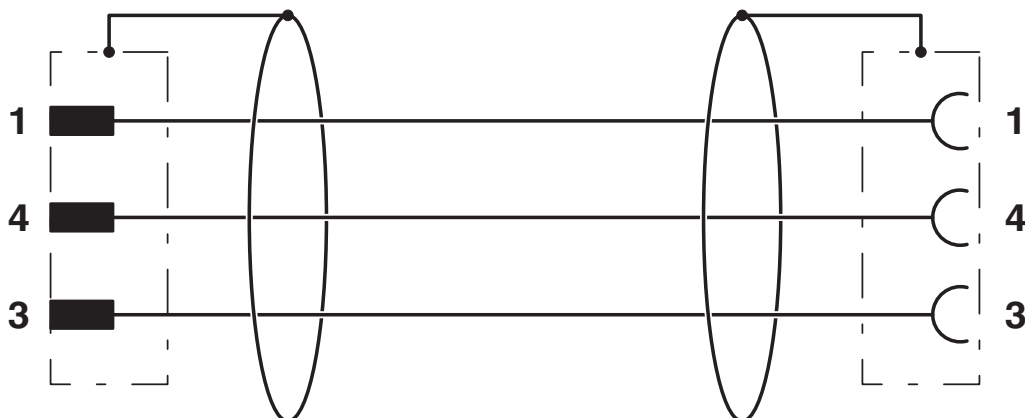
Drawings

Dimensional drawing



M12 x 1 socket, angled, shielded

Circuit diagram



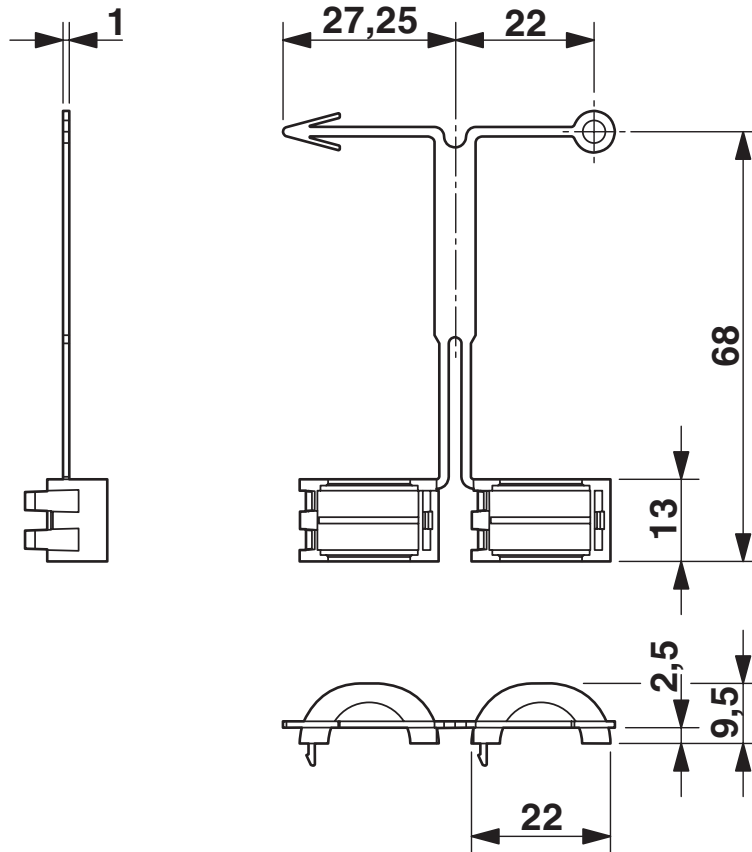
Sensor/actuator cable - SAC-HZ-3P-M12MR/1,5-542/M12FSSH



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Dimensional drawing



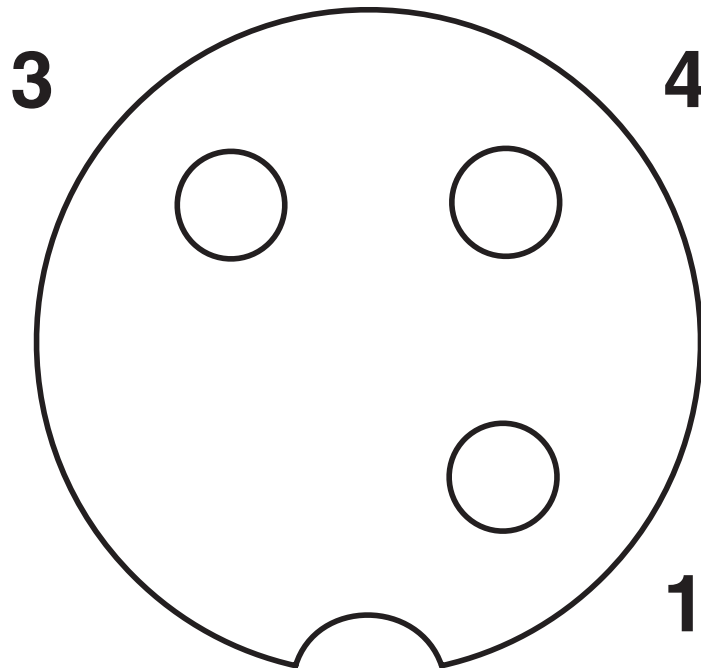
EXCLIP socket

Sensor/actuator cable - SAC-HZ-3P-M12MR/1,5-542/M12FSSH

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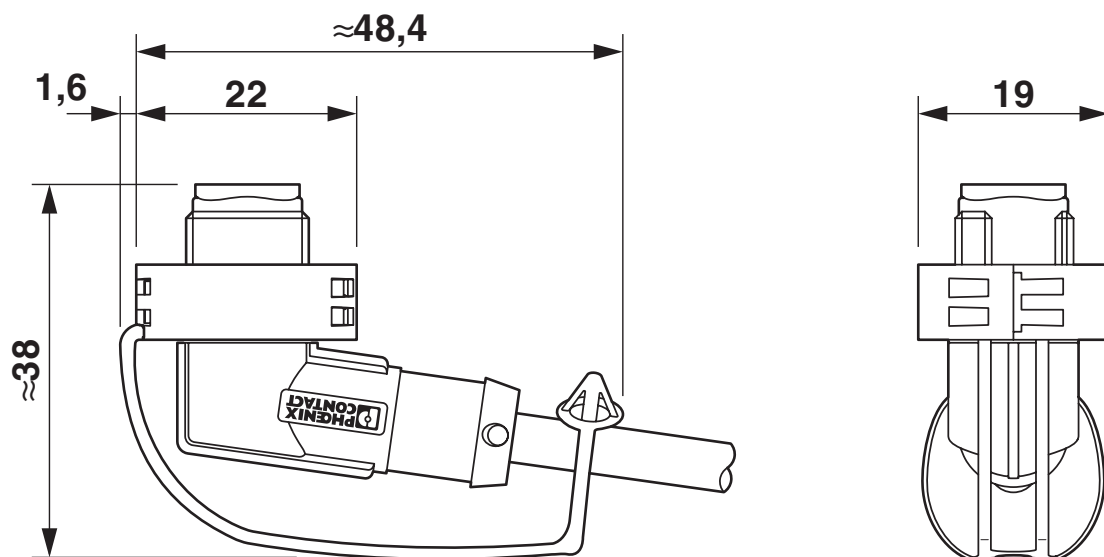
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Schematic diagram



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

Dimensional drawing



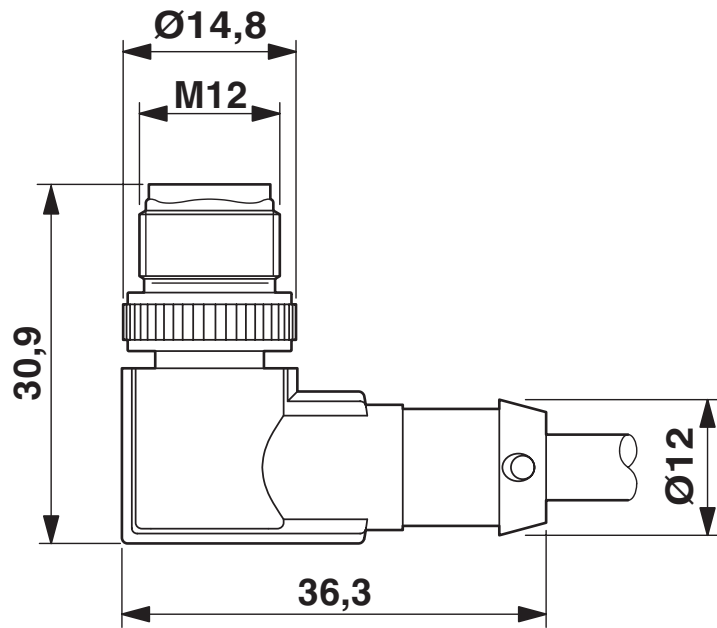
EXCLIP mounted plug

Sensor/actuator cable - SAC-HZ-3P-M12MR/1,5-542/M12FSSH

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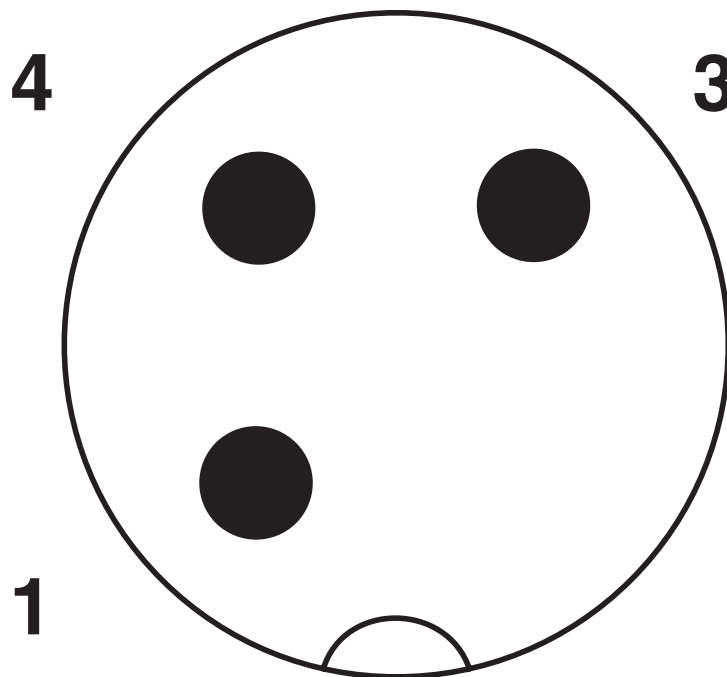
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Dimensional drawing



M12 x 1 male plug, angled, shielded

Schematic diagram



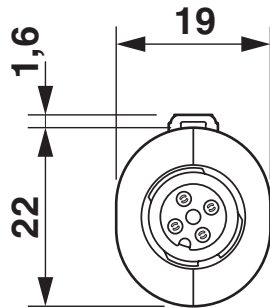
Pin assignment M12 plug, 3-pos., A-coded, view male side

Sensor/actuator cable - SAC-HZ-3P-M12MR/1,5-542/M12FSSH

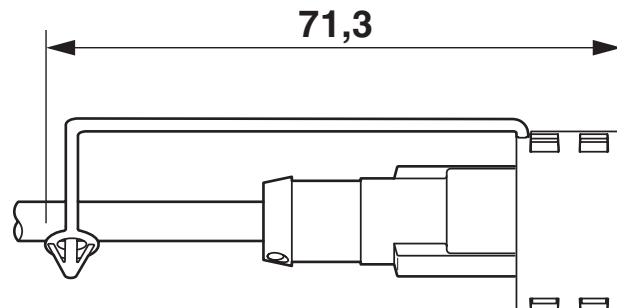
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Dimensional drawing



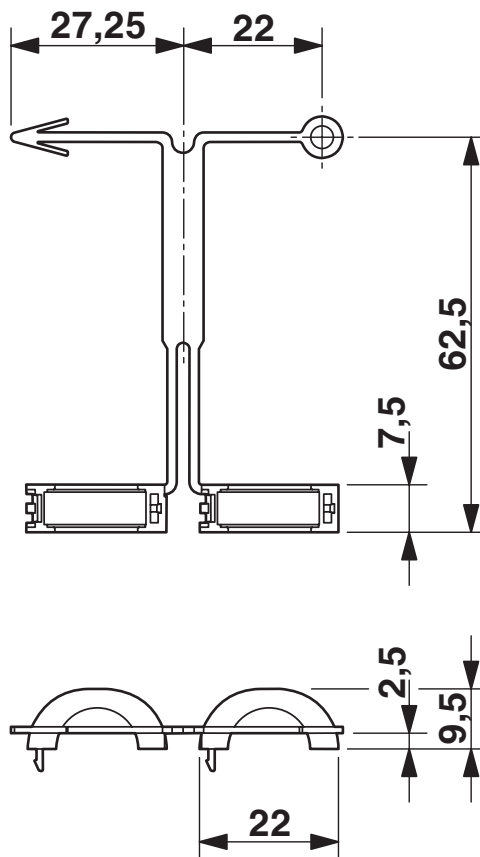
EXCLIP mounted plug



Dimensional drawing



EXCLIP plug



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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 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 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 = 50 years
	For information on hazardous substances, refer to the manufacturer's declaration available under "Downloads"

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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



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



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

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

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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