

SAC-HZ-4P-MS/1,5-542/FRSHSCOBK - Sensor/actuator cable



1409540

<https://www.phoenixcontact.com/us/products/1409540>

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Sensor/actuator cable, 4-position, PVC, yellow, shielded, Plug straight M12, coding: A, on
Socket angled M12, coding: A, cable length: 1.5 m



Commercial data

Item number	1409540
Packing unit	1 pc
Minimum order quantity	1 pc
Note	Made to order (non-returnable)
Sales key	BF13
Product key	AF1IGB
GTIN	4055626017969
Weight per piece (including packing)	22.22 g
Weight per piece (excluding packing)	22.22 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
Application	U.S. cables for hazardous locations
Number of positions	4
No. of cable outlets	1
Shielded	yes
Coding	A

Insulation characteristics

Overvoltage category	II
Degree of pollution	3

Material specifications

Material	TPE-U (Locking clip)
Flammability rating according to UL 94	HB
Seal 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
Outer sheath, material	PVC

Electrical properties

Insulation resistance	$\geq 100 \text{ M}\Omega$
Nominal voltage U_N	48 V AC
	60 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

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Conductor connection

Tightening torque	0.4 Nm (M12 connector)
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Connector

Connection 1

Type	Plug straight M12
Number of positions	4
Coding type	A

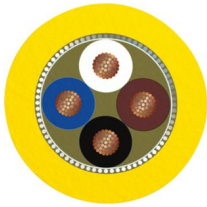
Connection 2

Type	Socket angled M12
Number of positions	4
Coding type	A

Cable/line

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

Dimensional drawing	
Cable weight	48 kg/km
UL AWM Style	2517 (105 °C / 300 V)
Number of positions	4
Shielded	yes
Cable type	PVC yellow 105 °C [542]
Conductor structure signal line	7x 0.25 mm
AWG signal line	22
Wire diameter incl. insulation	1.27 mm ±0.03 mm
External cable diameter	5.50 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, white
Overall twist	4 wires, twisted
Optical shield covering	85 %
Max. conductor resistance	max. 50.5 Ω/km (20 °C)
Insulation resistance	≥ (550 M Ohms/m @ 500V)

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Nominal voltage, cable	300 V
Minimum bending radius, flexible installation	12 x D
Smallest bending radius, movable installation	66 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)
	-5 °C ... 105 °C (Cable, flexible installation)

Environmental and real-life conditions

Ambient conditions

Degree of protection	IP65
	IP67
	IP68
Ambient temperature (operation) (male connector/female connector)	-25 °C ... 90 °C (Plug / socket)
Ambient temperature (operation) (Locking clip)	-40 °C ... 65 °C (Locking clip)

Approvals

Conformity/Approvals

UL, USA / Canada	Class I, Div. 2, Groups A, B, C, D
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Standards and regulations

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

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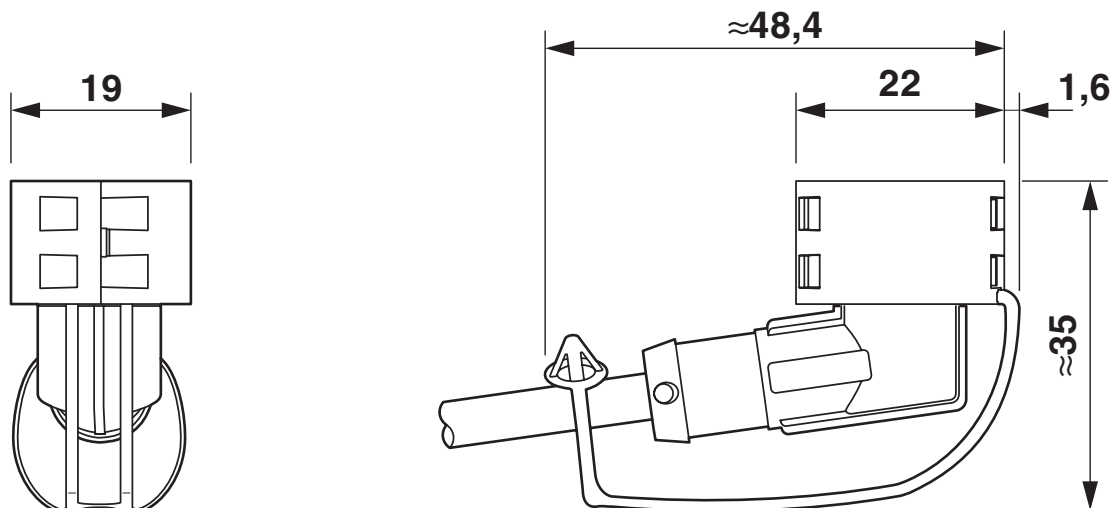
Drawings

Dimensional drawing



EXCLIP mounted plug

Dimensional drawing



EXCLIP mounted socket

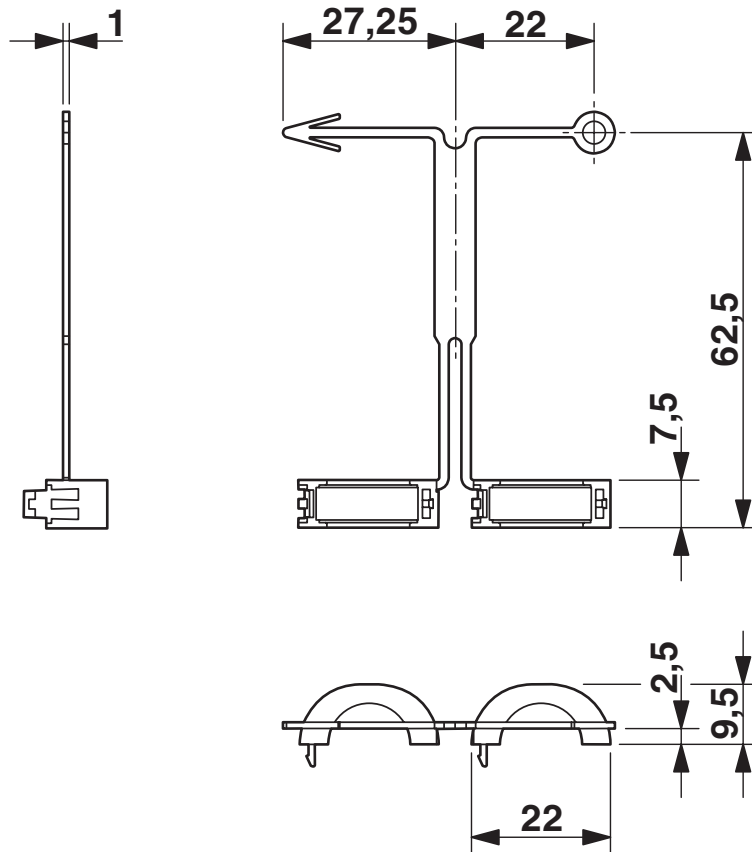
SAC-HZ-4P-MS/1,5-542/FRSHSCOBK - Sensor/actuator cable



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Dimensional drawing



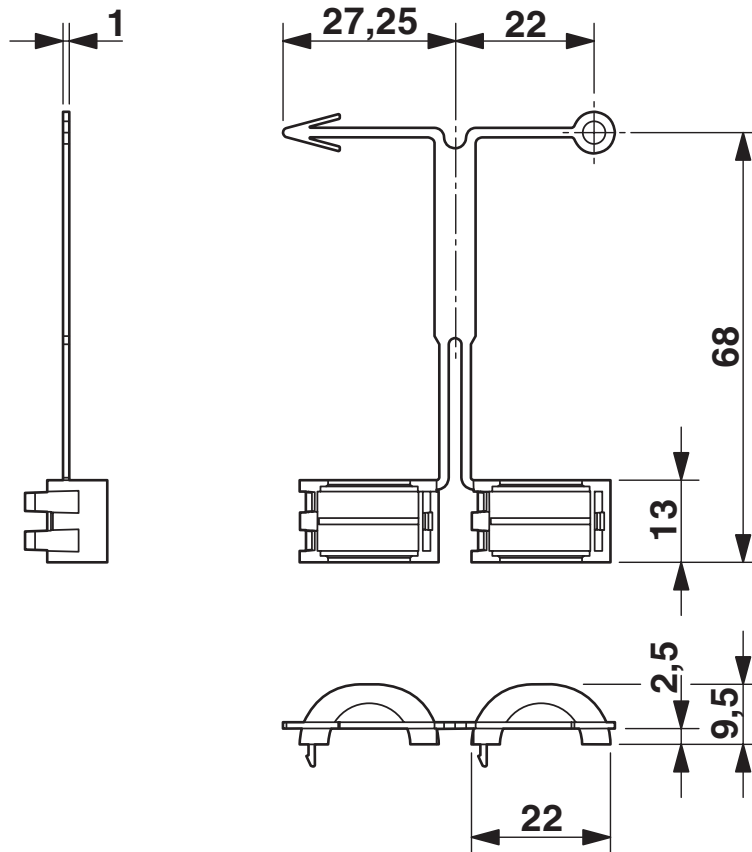
EXCLIP plug

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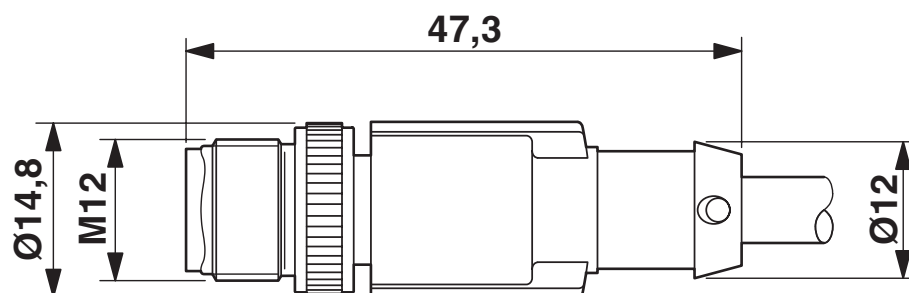
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Dimensional drawing



EXCLIP socket

Dimensional drawing



Plug, M12 x 1, straight, shielded

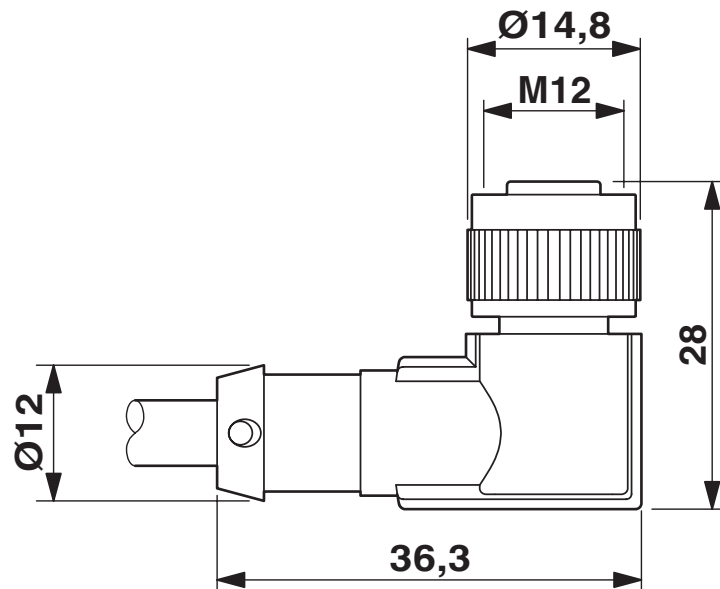
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Dimensional drawing



M12 x 1 socket, angled, shielded

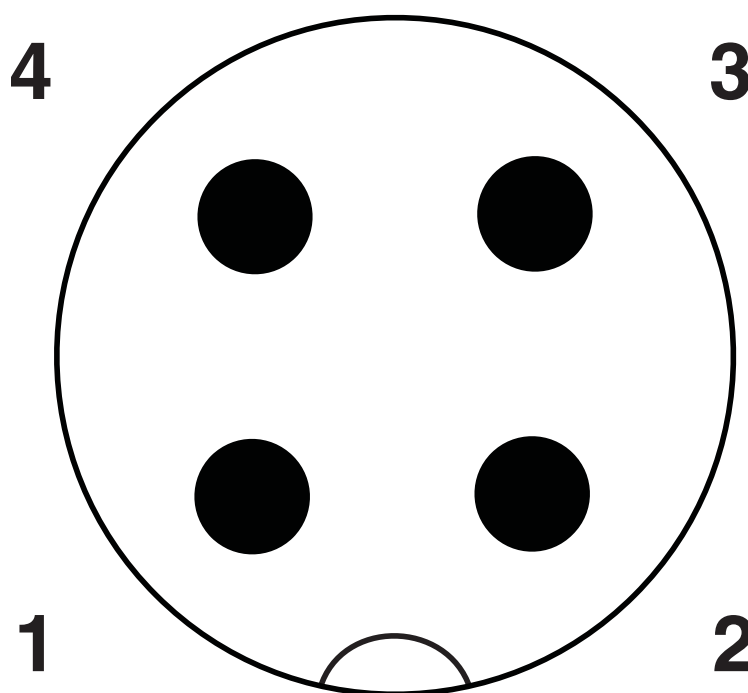
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Schematic diagram



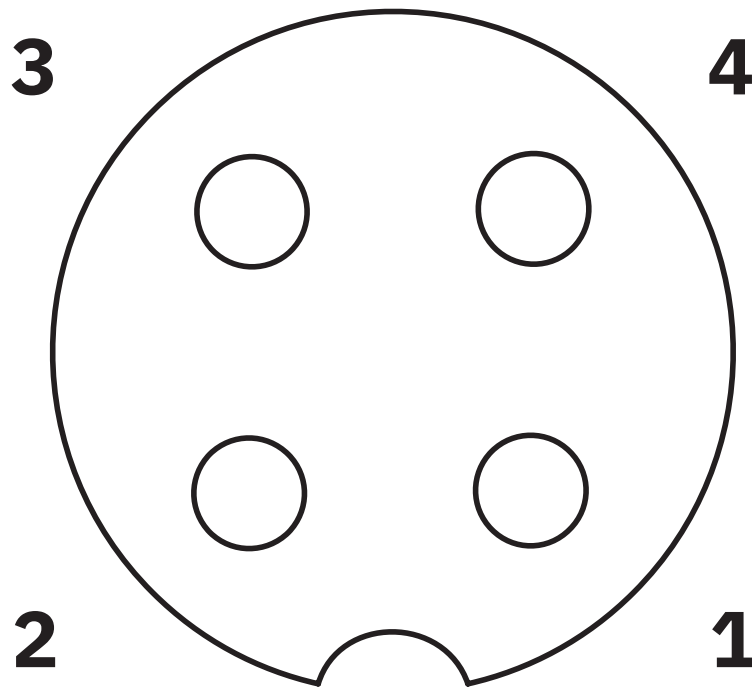
Pin assignment M12 plug, 4-pos., A-coded, view plug side

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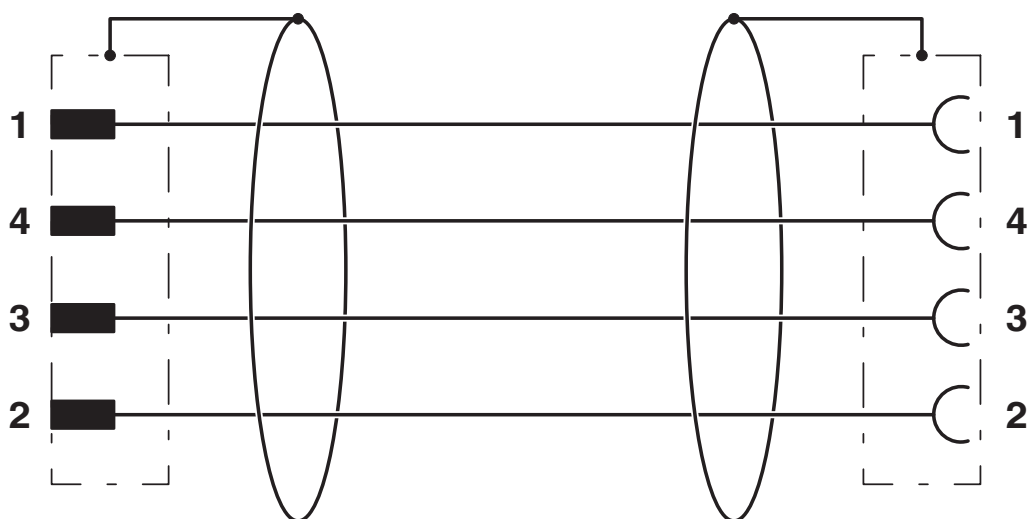
<https://www.phoenixcontact.com/us/products/1409540>

Schematic diagram



Pin assignment M12 socket, 4-pos., A-coded, view female side

Circuit diagram



Contact assignment of the M12 plug and the M12 socket

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Approvals

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EAC-RoHS

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
keine				
	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
keine				
	150 V	4 A	-	-

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Classifications

ECLASS

ECLASS-13.0	27060311
ECLASS-15.0	27060311

ETIM

ETIM 9.0	EC001855
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UNSPSC

UNSPSC 21.0	26121600
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Environmental product compliance

EU RoHS

Fulfills EU RoHS substance requirements	Yes, No exemptions
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China RoHS

Environment friendly use period (EFUP)	EFUP-E
	No hazardous substances above the limits

EU REACH SVHC

REACH candidate substance (CAS No.)	No substance above 0.1 wt%
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