SAC-5P-M12MS/ 3,0-PUR/M12FS SH - Sensor/actuator cable

1500910

https://www.phoenixcontact.com/us/products/1500910

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Sensor/actuator cable, 5-position, PUR halogen-free, black-gray RAL 7021, shielded (Advanced Shielding Technology), Plug straight M12, coding: A, on Socket straight M12, coding: A, cable length: 3 m

Your advantages

- Easy and safe: 100 % electrically tested plug-in components
- Reliable signal transmission – 360° shielding in environments with electromagnetic interference

Commercial data

Item number	1500910
Packing unit	1 pc
Minimum order quantity	1 pc
Sales key	BF03
Product key	AF1CKA
GTIN	4017918612290
Weight per piece (including packing)	162 g
Weight per piece (excluding packing)	150 g
Customs tariff number	85444290
Country of origin	PL

Technical data

Product properties

Product type	Sensor/actuator cable
Application	Standard
Number of positions	5
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 grommet GRP	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

Insulation resistance	≥ 100 MΩ
Nominal voltage U_N	48 V AC
	60 V DC
Nominal current I_N	4 A

Mechanical properties

Mechanical data

Insertion/withdrawal cycles	≥ 100

Signaling

Status display	no
Status display present	no

Connection data

Conductor connection

Tightening torque	0.4 Nm (M12 connector)

Connector

Connection 1

Type	M12 Plug, straight, 5-position, Keying: A
Number of positions	5
Shielded	yes
Insertion/withdrawal cycles	≥ 100
Material Contact	CuSn
Material Contact surface	Ni/Au
Material Contact carrier	TPU
Material Grip body	TPU, hardly inflammable, self-extinguishing
Material Screw connection	Die-cast zinc, nickel-plated
Flammability rating according to UL 94	HB
Degree of protection	IP65
	IP67
Ambient temperature (operation)	-25 °C ... 90 °C
Standard designation	M12 connector
Standards/regulations	IEC 61076-2-101

Connection 2

Type	M12 Socket, straight, 5-position, Keying: A
Number of positions	5
Shielded	yes
Insertion/withdrawal cycles	≥ 100
Material Contact	CuSn
Material Contact surface	Ni/Au
Material Contact carrier	TPU
Material Grip body	TPU, hardly inflammable, self-extinguishing
Material Seal	NBR
Material Screw connection	Die-cast zinc, nickel-plated
Flammability rating according to UL 94	HB
Degree of protection	IP65
	IP67
Ambient temperature (operation)	-25 °C ... 90 °C
Standard designation	M12 connector
Standards/regulations	IEC 61076-2-101

Cable/line

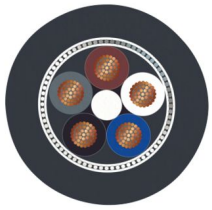
Cable length	3 m

PUR halogen-free black [PUR]

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Dimensional drawing	
Cable weight	43 kg/km
UL AWM Style	20549 / 10493 (80°C/300 V)
Number of positions	5
Shielded	yes
Cable type	PUR halogen-free black [PUR]
Conductor structure signal line	42x 0.10 mm
AWG signal line	22
Conductor cross-section	5x 0.34 mm² (Signal line)
Wire diameter incl. insulation	1.27 mm ±0.05 mm (Signal line)
External cable diameter	5.30 mm ±0.25 mm
Outer sheath, material	PUR
External sheath, color	black-gray RAL 7021
Conductor material	Bare Cu litz wires
Material wire insulation	PP
Single wire, color	brown, white, blue, black, gray
Thickness, insulation	≥ 0.21 mm
Thickness, outer sheath	approx. 0.50 mm
Overall twist	5 wires around filler to the core
Optical shield covering	80 %
Max. conductor resistance	max. 57 Ω/km (at 20 °C)
Insulation resistance	70 GΩ*km (at 20 °C)
Nominal voltage, cable	300 V (at 20 °C)
Test voltage Core/Core	3000 V (at 20 °C)
Smallest bending radius, fixed installation	26 mm
Smallest bending radius, movable installation	52 mm (up to +60 °C)
Dynamic load capacity (bending)	Max. bending cycles: 10000000, Bending radius: 52 mm, Traversing path: 10 m, Traversing rate: 3 m/s, Acceleration: 10 m/s²
Dynamic load capacity (torsion)	Torsion: ±180 °/m, Torsion cycles: ≥5000000, Torsional frequency: 35 cycles/min.
Halogen-free	in accordance with DIN VDE 0472 part 815
	in accordance with DIN EN 50267-2-1
Flame resistance	in accordance with UL 758/1581 FT2
	DIN EN 60332-2-2 (20 s)
Resistance to oil	in accordance with DIN EN 60811-2-1
	Highly resistant to acids, alkaline solutions and solvents

Other resistance	hydrolysis and microbe resistant
	Resistant to salt water
	partly UV-resistant (in accordance with DIN EN ISO 4892-2-A)
	abrasion-resistant
Special properties	Flexible cable conduit capable
	Silicone-free
	Free of substances which would hinder coating with paint or varnish
	Low adhesion surface
Ambient temperature (operation)	-40 °C ... 80 °C (cable, fixed installation)
	-25 °C ... 80 °C (Cable, flexible installation)

Environmental and real-life conditions

Ambient conditions

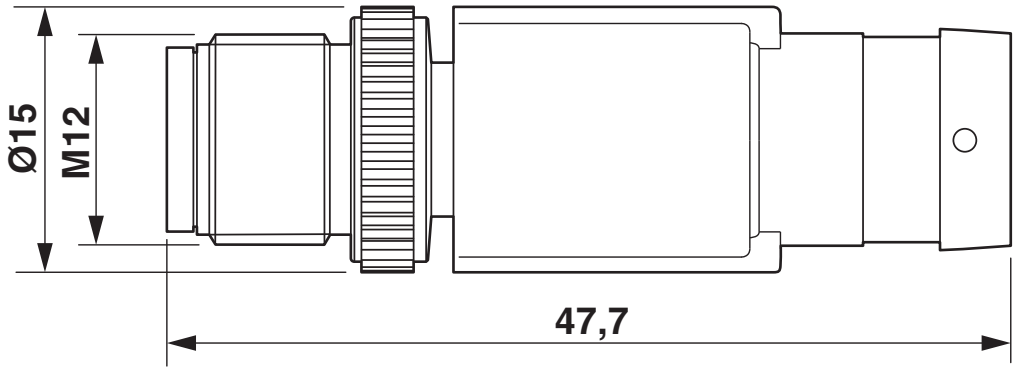
Degree of protection	IP65
	IP67
Ambient temperature (operation) (male connector/female connector)	-25 °C ... 90 °C (Plug / socket)
Ambient temperature (operation) (Cable, fixed installation)	-25 °C ... 80 °C (cable, fixed installation)
Ambient temperature (operation) (Cable, flexible installation)	-5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

Standards and regulations

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

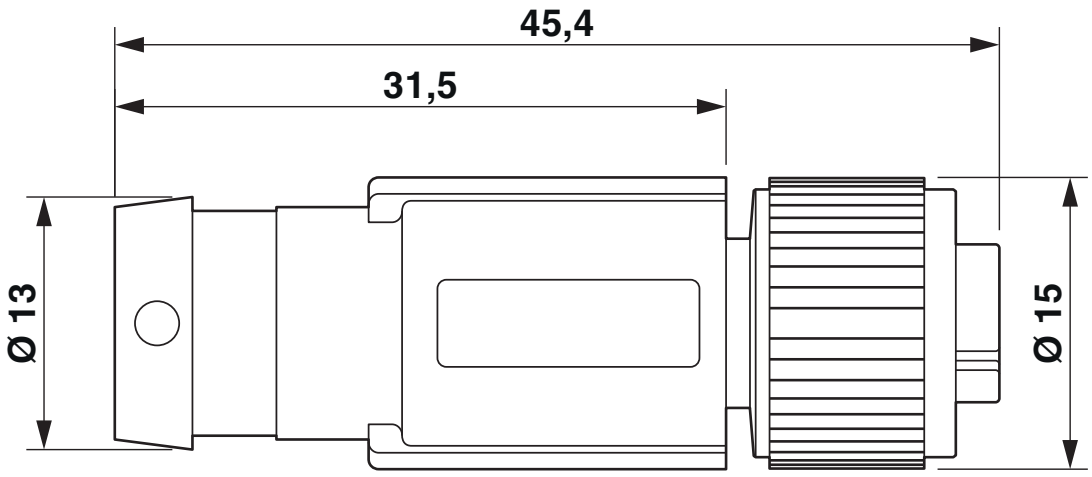
Drawings

Dimensional drawing



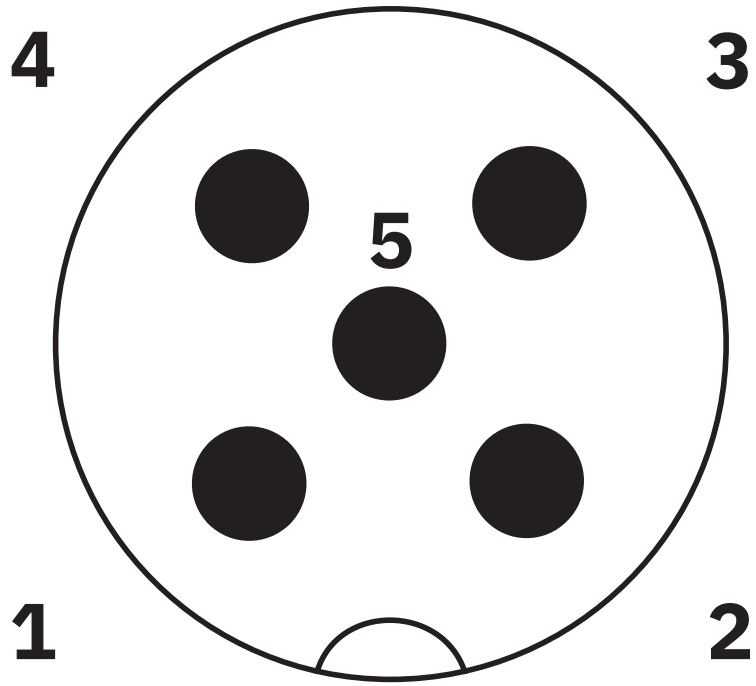
Plug, M12 x 1, straight, shielded

Dimensional drawing



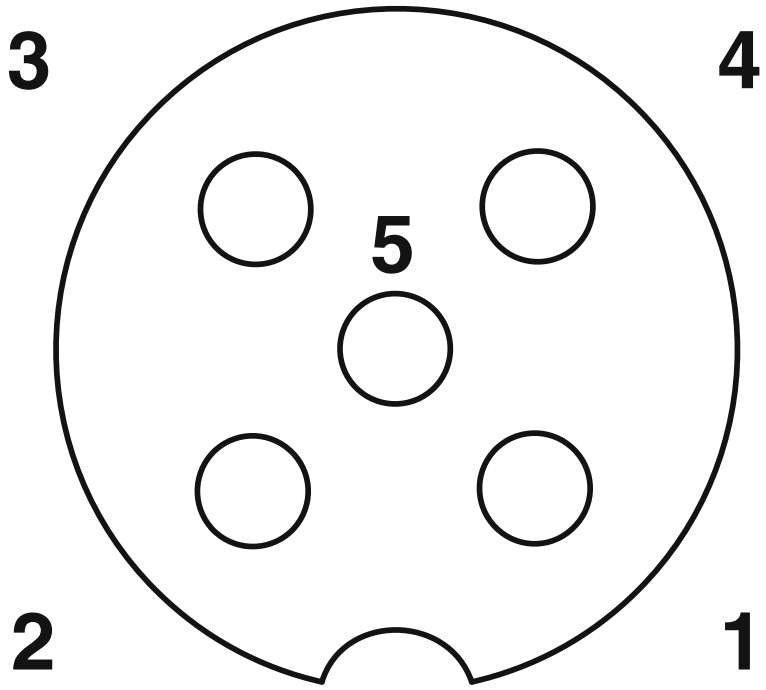
M12 x 1 socket, straight, shielded

Schematic diagram



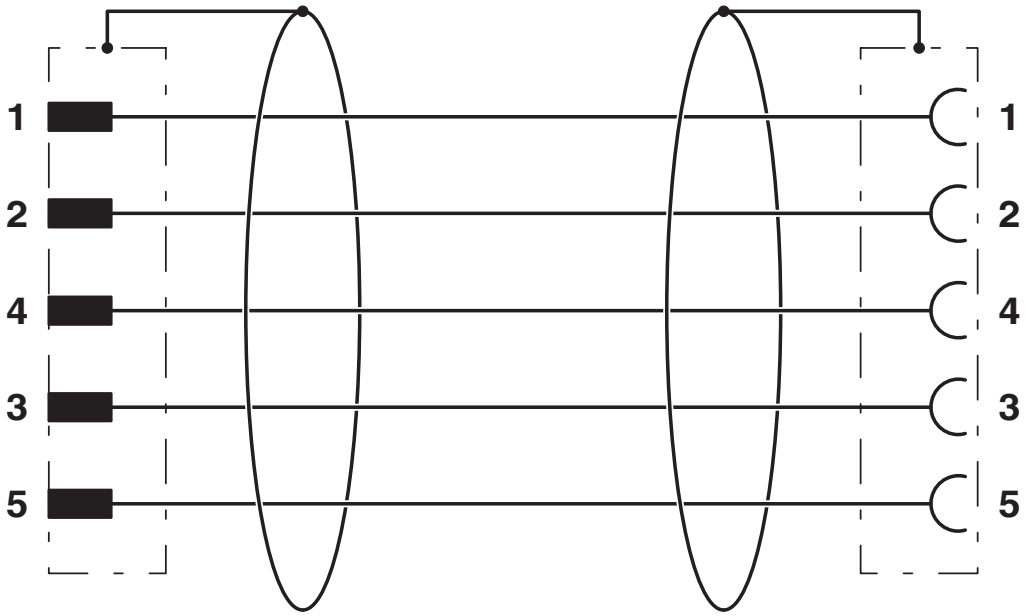
Pin assignment M12 male connector, 5-pos., A-coded, male side

Schematic diagram



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

Circuit diagram



Contact assignment of the M12 plug and the M12 socket

Approvals

To download certificates, visit the product detail page: https://www.phoenixcontact.com/us/products/1500910

UL Listed
Approval ID: FILE E 221474

	Nominal voltage U_N	Nominal current I_N	Cross section AWG	Cross section mm^2
keine				
	125 V	4 A	-	-

cUL Listed
Approval ID: FILE E 221474

	Nominal voltage U_N	Nominal current I_N	Cross section AWG	Cross section mm^2
keine				
	125 V	4 A	-	-

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

Classifications

ECLASS

ECLASS-13.0	27060311
ECLASS-15.0	27060311

ETIM

ETIM 10.0	EC001855

UNSPSC

UNSPSC 21.0	26121600

Environmental product compliance

EU RoHS

Fulfills EU RoHS substance requirements	Yes, No exemptions

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%

EF3.1 Climate Change

CO2e kg	2.863 kg CO2e

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