chanhvinh.com

Sensor/actuator cable - SAC-4P-M12MS/10,0-PUR/M12FR

1696442

https://www.phoenixcontact.com/gb/products/1696442

Please be informed that the data shown in this PDF document is generated from our Online Catalog. Please find the complete data in the user documentation. Our General Terms of Use for Downloads are valid.



Sensor/actuator cable, 4-position, PUR halogen-free, black-gray RAL 7021, Plug straight M12, coding: A, on Socket angled M12, coding: A, cable length: 10 m

Commercial Data

Item number	1696442
Packing unit	1 pc
Minimum order quantity	1 pc
Sales Key	BF1CCA
Product Key	BF1CCA
GTIN	4017918485115
Weight per Piece (including packing)	272.4 g
Weight per Piece (excluding packing)	272.4 g
Customs tariff number	85444290
Country of origin	DE

chanhvinh.com

Sensor/actuator cable - SAC-4P-M12MS/10,0-PUR/M12FR

1696442

https://www.phoenixcontact.com/gb/products/1696442

Technical Data

Product properties

Product type	Sensor/actuator cable
Number of positions	4
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
Cable gland material	Zinc die-cast, nickel-plated

Electrical properties

Contact resistance	≤ 5 mΩ
Insulation resistance	≥ 100 MΩ
Nominal voltage U_N	250 V AC
	250 V DC
Nominal current I_N	4 A

Connection data

Conductor connection

Tightening torque	0.4 Nm

Connector

Insertion/withdrawal cycles	≥ 100

Header 1

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

Head 2

Head design	Socket
Head cable outlet	angled

chanhvinh.com

Sensor/actuator cable - SAC-4P-M12MS/10,0-PUR/M12FR

1696442

https://www.phoenixcontact.com/gb/products/1696442

Head thread type	M12
Coding	A

LED signaling

Status display	No
Status display present	No

Cable / line

Cable length	10 m
Cable weight	30 kg/km
UL AWM Style	20549 / 10493 (80°C/300 V)
Number of positions	4
Shielded	no
Cable type	PUR halogen-free black [PUR]
Conductor structure signal line	42x 0.10 mm
AWG signal line	22
Conductor cross section	4x 0.34 mm²
Wire diameter incl. insulation	1.27 mm ±0.02 mm
External cable diameter	4.2 mm ±0.15 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
Thickness, insulation	≥ 0.21 mm
Thickness, outer sheath	approx. 0.5 mm
Overall twist	4 wires, twisted
Max. conductor resistance	≤ 58 Ω/km
Insulation resistance	≥ 1 GΩ*km
Nominal voltage, cable	≤ 300 V
Test voltage	≥ 3000 V
Minimum bending radius, fixed installation	5 x D
Minimum bending radius, flexible installation	10 x D
Max. bending cycles	10000000
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
Other resistance	Highly resistant to acids, alkaline solutions and solvents
	hydrolysis and microbe resistant
	partly UV-resistant in accordance with DIN EN ISO 4892-2-A
	Low adhesion
	abrasion-resistant

chanhvinh.com

Sensor/actuator cable - SAC-4P-M12MS/10,0-PUR/M12FR

1696442

https://www.phoenixcontact.com/gb/products/1696442

Special properties	Flexible cable conduit capable
	Silicone-free
	Free of substances which would hinder coating with paint or varnish
	flexible
Ambient temperature (operation)	-40 °C ... 80 °C (cable, fixed installation)
	-25 °C ... 80 °C (Cable, flexible installation)
Cable weight	30 kg/km

Cable structure

Cable abbreviation	Li9Y11Y-HF
Cable type	PUR halogen-free black
External cable diameter	4.70 mm
Outer sheath, material	PUR
External sheath, color	black-gray RAL 7021
Conductor material	Bare Cu litz wires
Conductor structure signal line	42x 0.10 mm
AWG signal line	22
Material wire insulation	PP
Thickness, insulation	approx. 0.21 mm (Core insulation)
Wire diameter incl. insulation	1.27 mm ±0.02 mm
Single wire, color	brown, white, blue, black
Overall twist	4 wires, twisted

Electrical properties

Nominal voltage, cable	300 V
Test voltage, cable	3000 V
Conductor resistance	≤ 58 Ω/km
Cable insulation resistance	≥ 100 MΩ*km

Mechanical properties

Smallest bending radius, movable installation	47 mm
Number of bending cycles	4000000
Bending radius	47 mm
Traversing path	10 m
Traversing rate	3 m/s

Bending cycles

Smallest bending radius, movable installation	47 mm
Number of bending cycles	4000000
Bending radius	47 mm
Traversing path	10 m
Traversing rate	3 m/s

Ambient conditions

Ambient temperature (operation)	-5 °C ... 80 °C (Cable, flexible installation)

chanhvinh.com

Sensor/actuator cable - SAC-4P-M12MS/10,0-PUR/M12FR

1696442

https://www.phoenixcontact.com/gb/products/1696442

	-40 °C ... 80 °C (cable, fixed installation)

Ambient conditions

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)

chanhvinh.com

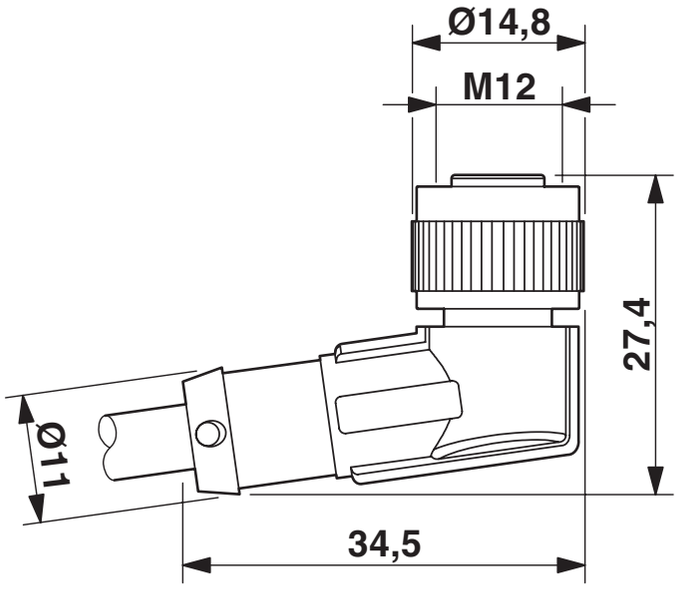
Sensor/actuator cable - SAC-4P-M12MS/10,0-PUR/M12FR

1696442

https://www.phoenixcontact.com/gb/products/1696442

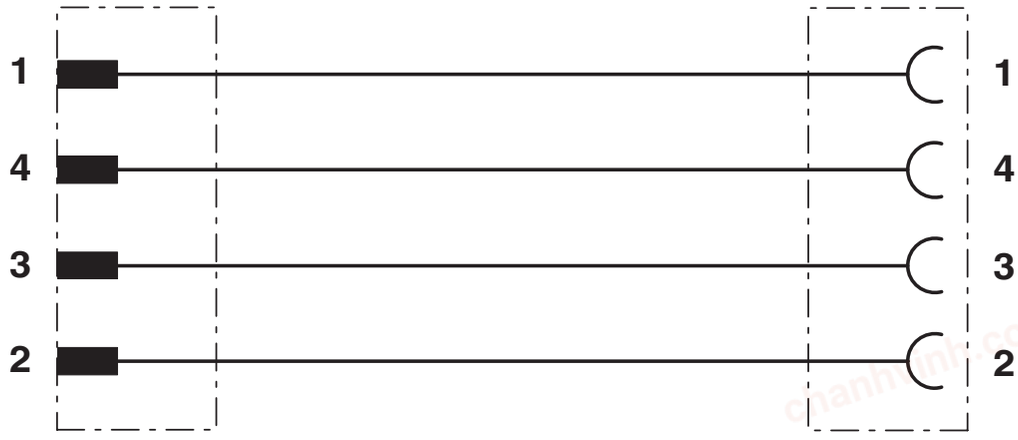
Drawings

Dimensional drawing



M12 x 1 socket, angled

Circuit diagram



Contact assignment of the M12 plug and the M12 socket

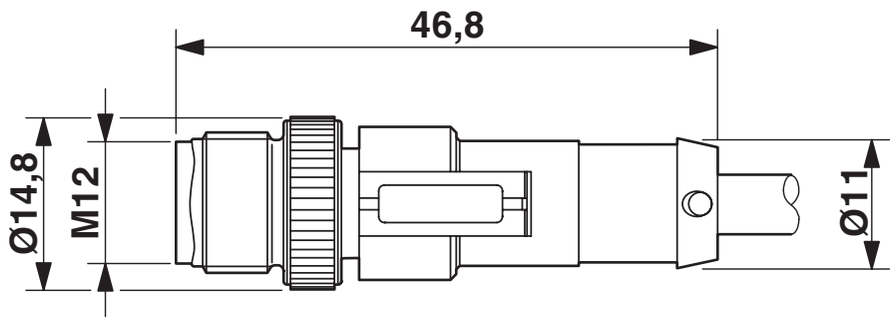
chanhvinh.com

Sensor/actuator cable - SAC-4P-M12MS/10,0-PUR/M12FR

1696442

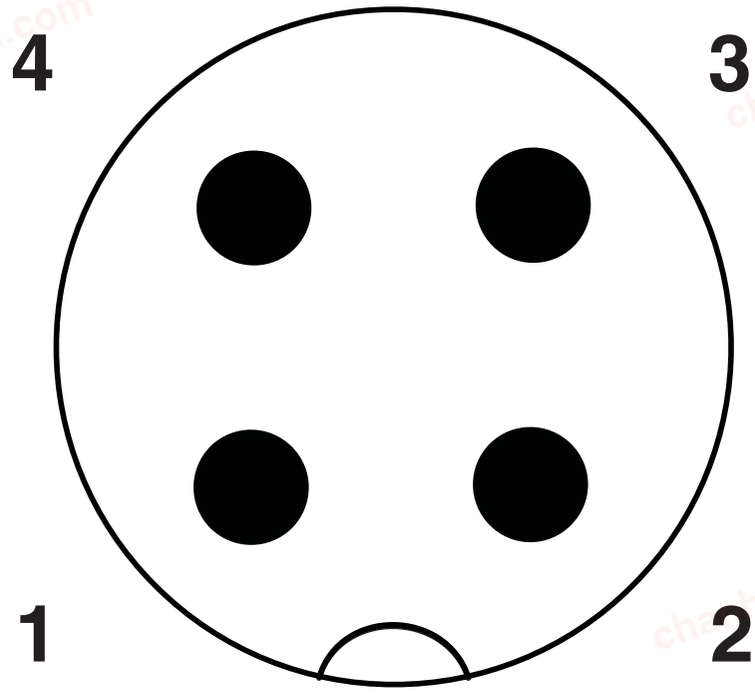
https://www.phoenixcontact.com/gb/products/1696442

Dimensional drawing



Plug, M12 x 1, straight, shielded

Schematic diagram



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

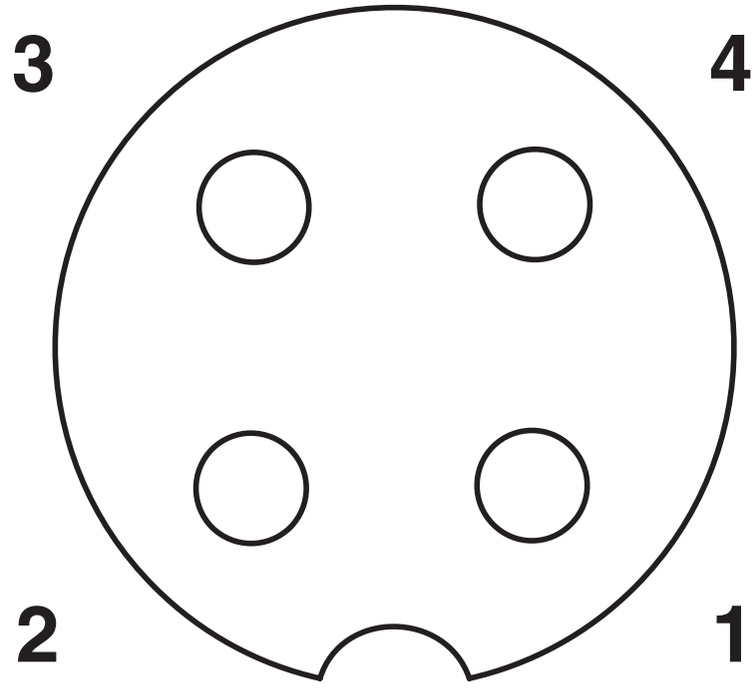
chanhvinh.com

Sensor/actuator cable - SAC-4P-M12MS/10,0-PUR/M12FR

1696442

https://www.phoenixcontact.com/gb/products/1696442

Schematic diagram



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

chanhvinh.com

Sensor/actuator cable - SAC-4P-M12MS/10,0-PUR/M12FR

1696442

https://www.phoenixcontact.com/gb/products/1696442

Approvals

EAC

UL Listed

	Nominal Voltage U_N	Nominal Current I_N	Cross Section AWG	Cross Section mm^2
	300 V	4 A	-	-

cUL Listed

	Nominal Voltage U_N	Nominal Current I_N	Cross Section AWG	Cross Section mm^2
	300 V	4 A	-	-

EAC

cULus Listed

chanhvinh.com

Sensor/actuator cable - SAC-4P-M12MS/10,0-PUR/M12FR

1696442

https://www.phoenixcontact.com/gb/products/1696442

Classifications

ECLASS

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

ETIM

ETIM 8.0	EC001855

UNSPSC

UNSPSC 21.0	26121600

chanhvinh.com

Sensor/actuator cable - SAC-4P-M12MS/10,0-PUR/M12FR

1696442

https://www.phoenixcontact.com/gb/products/1696442

Environmental Product Compliance

China RoHS	Environmentally friendly use period: unlimited = EFUP-e
	No hazardous substances above threshold values

chanhvinh.com

Sensor/actuator cable - SAC-4P-M12MS/10,0-PUR/M12FR

1696442

https://www.phoenixcontact.com/gb/products/1696442

Accessories

Sealing cap

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

https://www.phoenixcontact.com/gb/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/gb/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



chanhvinh.com

Sensor/actuator cable - SAC-4P-M12MS/10,0-PUR/M12FR

1696442

https://www.phoenixcontact.com/gb/products/1696442

Insert label

Insert label - PABA WH/23 - 1013779

https://www.phoenixcontact.com/gb/products/1013779

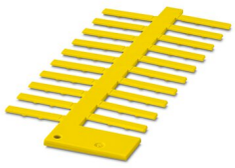


Insert label, Strip, white, unlabeled, can be labeled with: CMS-P1-PLOTTER, mounting type: slide-on, cable diameter range: 1.5 ... 35 mm, lettering field size: 23 x 4 mm, Number of individual labels: 20

Insert label

Insert label - PABA YE/23 - 1013782

https://www.phoenixcontact.com/gb/products/1013782



Insert label, Strip, yellow, unlabeled, can be labeled with: CMS-P1-PLOTTER, mounting type: slide-on, cable diameter range: 1.5 ... 35 mm, lettering field size: 23 x 4 mm, Number of individual labels: 20

chanhvinh.com

Sensor/actuator cable - SAC-4P-M12MS/10,0-PUR/M12FR

1696442

https://www.phoenixcontact.com/gb/products/1696442

Marker pen

Marker pen - B-STIFT - 1051993

https://www.phoenixcontact.com/gb/products/1051993



Marker pen, for manual labeling of unprinted Zack strips, smear-proof and waterproof, line thickness 0.5 mm

Screw plug

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

https://www.phoenixcontact.com/gb/products/1430899

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



chanhvinh.com

Sensor/actuator cable - SAC-4P-M12MS/10,0-PUR/M12FR

1696442

https://www.phoenixcontact.com/gb/products/1696442

Locking clip

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

https://www.phoenixcontact.com/gb/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

Torque screwdriver

Torque screwdriver - TSD 04 SAC - 1208429

https://www.phoenixcontact.com/gb/products/1208429



Torque screwdriver, with preset torque of 0.4 Nm and 4 mm hexagonal drive for M12 connectors

chanhvinh.com

Sensor/actuator cable - SAC-4P-M12MS/10,0-PUR/M12FR

1696442

https://www.phoenixcontact.com/gb/products/1696442

Torque screwdriver

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

https://www.phoenixcontact.com/gb/products/1212224



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

Adapter insert

Adapter insert - TSD-M SAC-BIT ADAPTER - 1212600

https://www.phoenixcontact.com/gb/products/1212600



Adapter bit for TSD-M...torque tools, E6.3-1/4" drive with 4 mm hexagon to accommodate SAC bits

chanhvinh.com

Sensor/actuator cable - SAC-4P-M12MS/10,0-PUR/M12FR

1696442

https://www.phoenixcontact.com/gb/products/1696442

Tool

Tool - SAC BIT M12-D15 - 1208432

https://www.phoenixcontact.com/gb/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

Phoenix Contact 2022 © - all rights reserved
https://www.phoenixcontact.com

PHOENIX CONTACT Ltd
Halesfield 13, Telford
Shropshire, TF7 4PG
01952 681700
info@phoenixcontact.co.uk