chanhvinh.com

Sensor/actuator cable - SAC-3P-M12MS/ 0,3-800/M12FR-2L

1456857

https://www.phoenixcontact.com/gb/products/1456857

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, 3-position, PUR halogen-free, resistant to welding sparks, highly flexible, gray RAL 7001, Plug straight M12, coding: A, on Socket angled M12, coding: A, with 2 LEDs, cable length: 0.3 m, for robots and drag chains

Your advantages

- Easy and safe: 100% electrically tested plug-in components
- Reliable solution for the body shop as cable is resistant to welding sparks
- Convenient: increased machine availability thanks to quick and easy diagnostics

Commercial Data

Item number	1456857
Packing unit	1 pc
Minimum order quantity	1 pc
Sales Key	BF1CBA
Product Key	BF1CBA
Catalog Page	Page 192 (C-2-2019)
GTIN	4046356593212
Weight per Piece (including packing)	28.1 g
Weight per Piece (excluding packing)	28.1 g
Customs tariff number	85444290
Country of origin	PL

Sensor/actuator cable - SAC-3P-M12MS/ 0,3-800/M12FR-2L

1456857

https://www.phoenixcontact.com/gb/products/1456857

Technical Data

Product properties

Product type	Sensor/actuator cable
Number of positions	3
Application	Robots and drag chains
No. of cable outlets	1
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	24 V DC
Nominal current I_N	4 A
Protective circuit	unwired

Connection data

Conductor connection

Tightening torque	0.4 NmM12 connector

Connector

Insertion/withdrawal cycles	≥ 100

Connection 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-3P-M12MS/ 0,3-800/M12FR-2L

1456857

https://www.phoenixcontact.com/gb/products/1456857

Head thread type	M12
Coding	A
Status indicator head	2 LEDs

LED signaling

Status display	2 LEDs
Status display present	yes

Cable / line

Cable length	0.3 m
Note	Due to the extremely robust outer sheath, this cable should only be stripped in 5 cm increments.
Cable weight	28.3 kg/km
UL AWM Style	20549
Number of positions	3
Shielded	no
Cable type	Gray, highly flexible PUR [800]
Conductor structure signal line	42x 0.10 mm
AWG signal line	22
Conductor cross section	3x 0.34 mm² (Signal line)
Wire diameter incl. insulation	1.3 mm ±0.05 mm (Signal line)
External cable diameter	4.5 mm ±0.2 mm
Outer sheath, material	PUR
External sheath, color	gray RAL 7001
Conductor material	Bare Cu litz wires
Material wire insulation	PP
Single wire, color	brown, blue, black
Overall twist	3 wires, twisted
Max. conductor resistance	approx. 53 Ω/km
Insulation resistance	≥ 20 MΩ*km
Nominal voltage, cable	300 V
Test voltage	2000 V
Minimum bending radius, fixed installation	4 x D
Minimum bending radius, flexible installation	7.5 x D
Max. bending cycles	10000000
	15000000
Torsion force	± 360 °/m
Torsion cycles	1000000
Halogen-free	in accordance with DIN VDE 0472 part 815
Flame resistance	in accordance with UL 758/1581 FT2
Resistance to oil	in accordance with DIN EN 60811-2-1
Other resistance	Highly resistant to acids, alkaline solutions and solvents
	Silicone-free
Special properties	Cable jacket is welding spark-resistant, recyclable, matt, low-adhesion, abrasion-resistant, flame-retardant, and self-

chanhvinh.com

Sensor/actuator cable - SAC-3P-M12MS/ 0,3-800/M12FR-2L

1456857

https://www.phoenixcontact.com/gb/products/1456857

	extinguishing
	Free from silicone and cadmium
	Free of substances which would hinder coating with paint or varnish
Ambient temperature (operation)	-40 °C ... 80 °C (cable, fixed installation)
	-25 °C ... 80 °C (Cable, flexible installation)

Ambient conditions

Ambient temperature (operation)	-30 °C ... 90 °C (Cable, flexible installation)
	-40 °C ... 90 °C (cable, fixed installation)

Ambient conditions

Degree of protection	IP65
	IP67
	IP68
Ambient temperature (operation)	-25 °C ... 90 °C (Plug / socket)
	-40 °C ... 90 °C (cable, fixed installation)
	-30 °C ... 90 °C (Cable, flexible installation)
	to 120 °C (for 3000 h)
	to 90 °C (in acc. with UL)

Standards and regulations

Standards/specifications	IEC 61076-2-101

chanhvinh.com

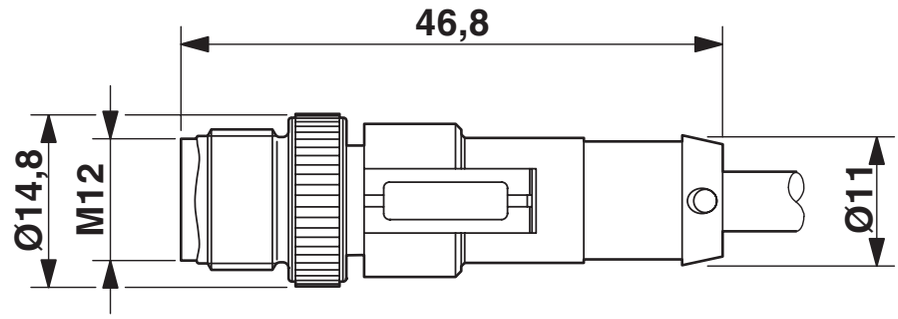
Sensor/actuator cable - SAC-3P-M12MS/ 0,3-800/M12FR-2L

1456857

https://www.phoenixcontact.com/gb/products/1456857

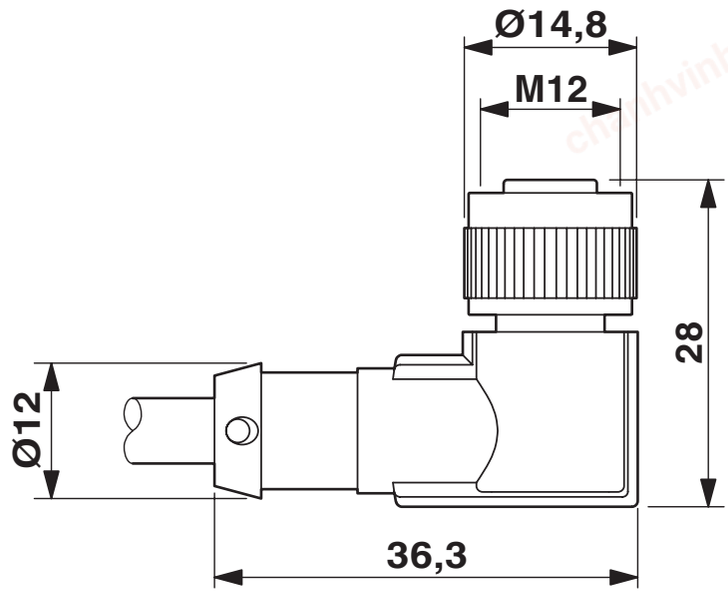
Drawings

Dimensional drawing



Plug, M12 x 1, straight, shielded

Dimensional drawing



Socket M12 x 1, angled, with LED

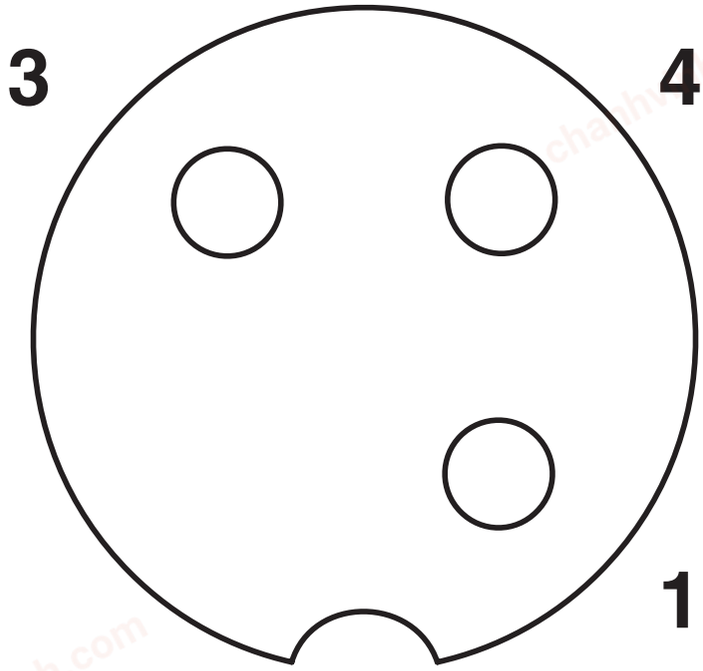
chanhvinh.com

Sensor/actuator cable - SAC-3P-M12MS/ 0,3-800/M12FR-2L

1456857

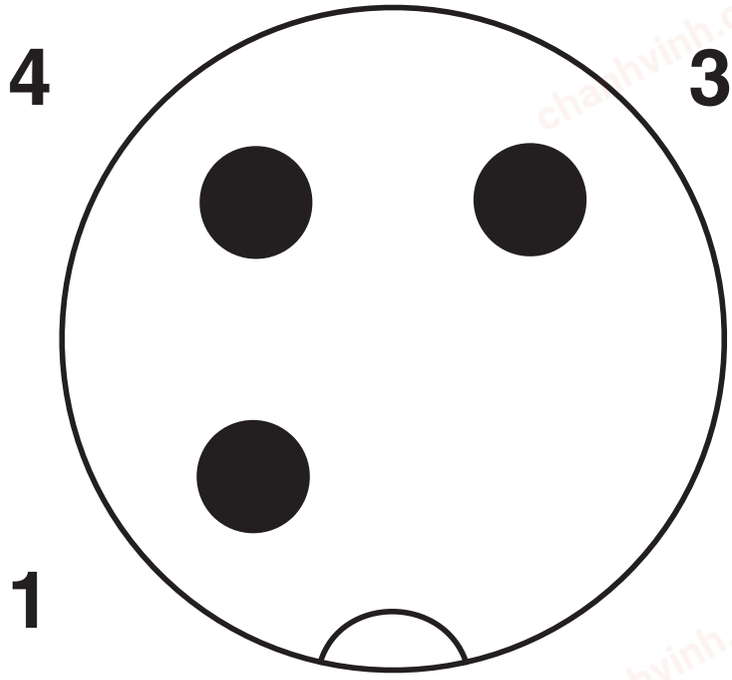
https://www.phoenixcontact.com/gb/products/1456857

Schematic diagram



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

Schematic diagram



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

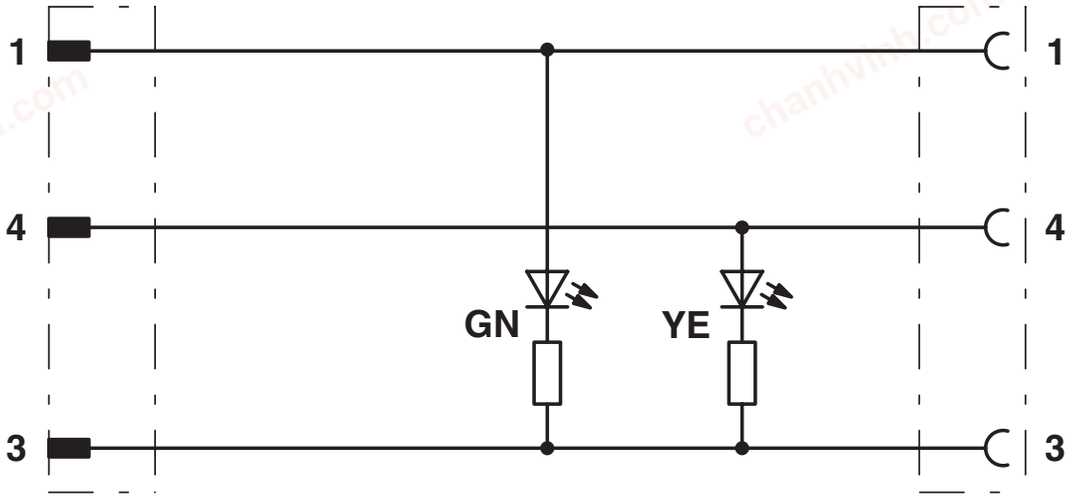
chanhvinh.com

Sensor/actuator cable - SAC-3P-M12MS/ 0,3-800/M12FR-2L

1456857

https://www.phoenixcontact.com/gb/products/1456857

Circuit diagram



Contact assignment of the M12 plug and the M12 socket

chanhvinh.com

Sensor/actuator cable - SAC-3P-M12MS/ 0,3-800/M12FR-2L

1456857

https://www.phoenixcontact.com/gb/products/1456857

Approvals

EAC
Approval ID: RU C-DE.BL08.B.00286

UL Listed
Approval ID: FILE E 221474

	Nominal Voltage U_N	Nominal Current I_N	Cross Section AWG	Cross Section mm^2
	24 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
	24 V	4 A	-	-

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

cULus Listed

chanhvinh.com

Sensor/actuator cable - SAC-3P-M12MS/ 0,3-800/M12FR-2L

1456857

https://www.phoenixcontact.com/gb/products/1456857

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-3P-M12MS/ 0,3-800/M12FR-2L

1456857

https://www.phoenixcontact.com/gb/products/1456857

Environmental Product Compliance

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

chanhvinh.com

Sensor/actuator cable - SAC-3P-M12MS/ 0,3-800/M12FR-2L

1456857

https://www.phoenixcontact.com/gb/products/1456857

Accessories

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

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

chanhvinh.com

Sensor/actuator cable - SAC-3P-M12MS/ 0,3-800/M12FR-2L

1456857

https://www.phoenixcontact.com/gb/products/1456857

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



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



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