chanhvinh.com

Sensor/actuator cable - SAC-3P-M 8MR/0,6-PUR/M12FR

1682430

https://www.phoenixcontact.com/gb/products/1682430

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, black-gray RAL 7021, Plug angled M8, on Socket angled M12, coding: A, cable length: 0.6 m

Your advantages

- Easy and safe: 100% electrically tested plug-in components

Commercial Data

Item number	1682430
Packing unit	1 pc
Minimum order quantity	1 pc
Sales Key	BF1CBA
Product Key	BF1CBA
Catalog Page	Page 188 (C-2-2019)
GTIN	4017918159092
Weight per Piece (including packing)	26.4 g
Weight per Piece (excluding packing)	23.73 g
Customs tariff number	85444290
Country of origin	DE

chanhvinh.com

Sensor/actuator cable - SAC-3P-M 8MR/0,6-PUR/M12FR

1682430

https://www.phoenixcontact.com/gb/products/1682430

Technical Data

Product properties

Product type	Sensor/actuator cable
Number of positions	3
Application	Standard
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	48 V AC
	60 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

Header 1

Head design	Plug
Head cable outlet	angled
Head thread type	M8

Head 2

Head design	Socket

chanhvinh.com

Sensor/actuator cable - SAC-3P-M 8MR/0,6-PUR/M12FR

1682430

https://www.phoenixcontact.com/gb/products/1682430

Head cable outlet	angled
Head thread type	M12
Coding	A

LED signaling

Status display	No
Status display present	No

Cable / line

Cable length	0.6 m
Cable weight	18 kg/km
UL AWM Style	20549 / 10493 (80°C/300 V)
Number of positions	3
Shielded	no
Cable type	PUR halogen-free black [PUR]
Conductor structure signal line	32x 0.10 mm
AWG signal line	24
Conductor cross section	3x 0.25 mm²
Wire diameter incl. insulation	1.17 mm ±0.02 mm
External cable diameter	3.6 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, blue, black
Thickness, insulation	≥ 0.21 mm (Core insulation)
Thickness, outer sheath	approx. 0.5 mm
Overall twist	3 wires, twisted
Length of twist, overall twist	40 mm
Max. conductor resistance	≤ 78 Ω/km (at 20 °C)
Insulation resistance	≥ 100 GΩ*km (at 20 °C)
Nominal voltage, cable	≤ 300 V
Test voltage	≥ 3000 V
Smallest bending radius, fixed installation	18 mm
Smallest bending radius, movable installation	36 mm
Max. bending cycles	10000000
Halogen-free	in accordance with DIN VDE 0472 part 815
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	hydrolysis and microbe resistant
	Highly resistant to acids, alkaline solutions and solvents
	Resistant to salt water
	partly UV-resistant in accordance with DIN EN ISO 4892-2-A

chanhvinh.com

Sensor/actuator cable - SAC-3P-M 8MR/0,6-PUR/M12FR

1682430

https://www.phoenixcontact.com/gb/products/1682430

Special properties	Flexible cable conduit capable
	Silicone-free
	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)
Cable weight	23 kg/km

Cable structure

Cable abbreviation	Li9Y11Y-HF
Cable type	PUR halogen-free black
External cable diameter	4.40 mm
Outer sheath, material	PUR
External sheath, color	black-gray RAL 7021
Conductor material	Bare Cu litz wires
Conductor structure signal line	32x 0.10 mm
AWG signal line	24
Material wire insulation	PP
Thickness, insulation	≥ 0.38 mm (Core insulation)
Wire diameter incl. insulation	1.15 mm ±0.05 mm
Single wire, color	brown, blue, black
Overall twist	3 wires, twisted

Electrical properties

Nominal voltage, cable	300 V
Test voltage, cable	4000 V
Conductor resistance	≤ 77.6 Ω/m
Cable insulation resistance	≥ 100 GΩ*km

Mechanical properties

Smallest bending radius, movable installation	44 mm
Number of bending cycles	4000000
Bending radius	44 mm
Traversing path	10 m
Traversing rate	3 m/s

Bending cycles

Smallest bending radius, movable installation	44 mm
Number of bending cycles	4000000
Bending radius	44 mm
Traversing path	10 m
Traversing rate	3 m/s

Ambient conditions

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

chanhvinh.com

Sensor/actuator cable - SAC-3P-M 8MR/0,6-PUR/M12FR

1682430

https://www.phoenixcontact.com/gb/products/1682430

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)

Standards and regulations

Standards/specifications	IEC 61076-2-101
Standards/specifications	IEC 61076-2-104

chanhvinh.com

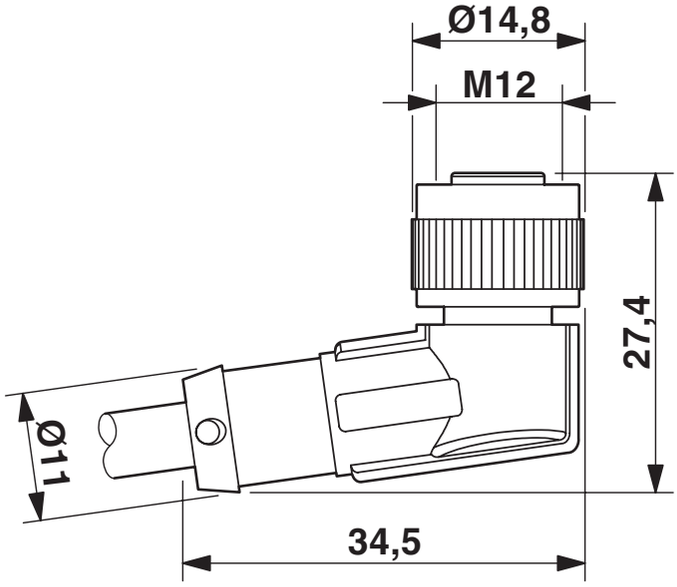
Sensor/actuator cable - SAC-3P-M 8MR/0,6-PUR/M12FR

1682430

https://www.phoenixcontact.com/gb/products/1682430

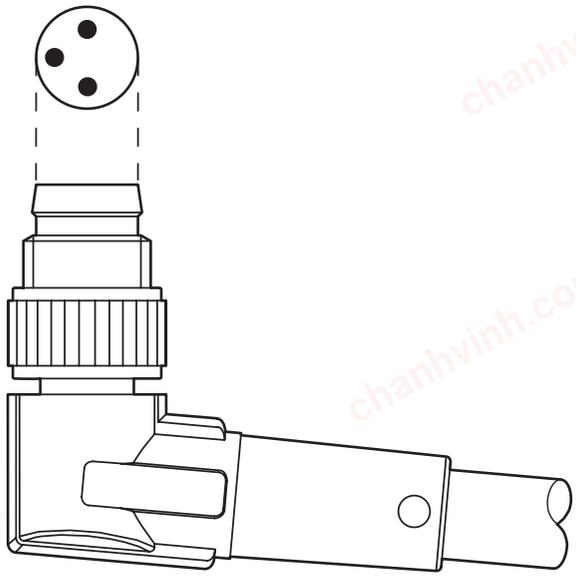
Drawings

Dimensional drawing



M12 x 1 socket, angled

Schematic diagram



Layout of connector pin assignments

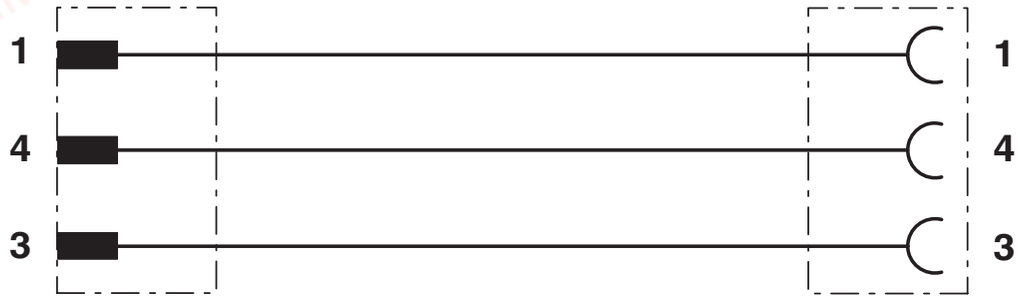
chanhvinh.com

Sensor/actuator cable - SAC-3P-M 8MR/0,6-PUR/M12FR

1682430

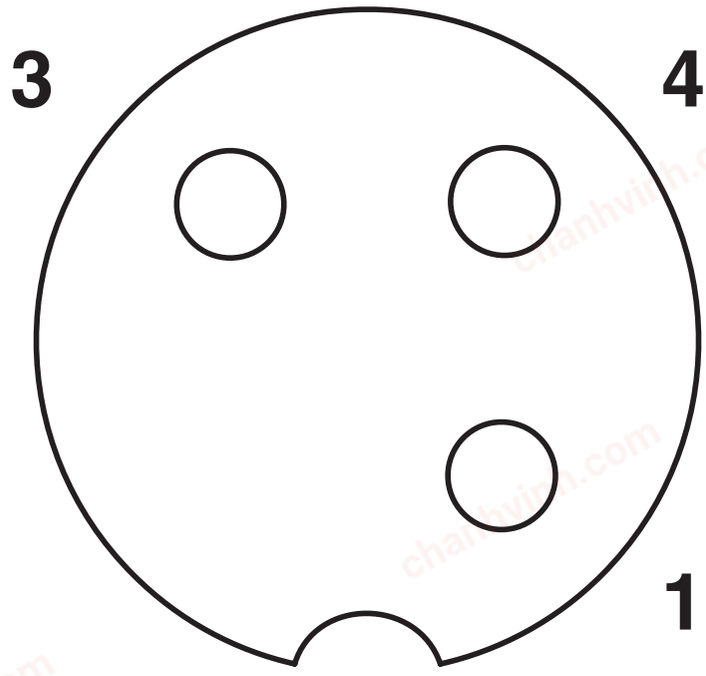
https://www.phoenixcontact.com/gb/products/1682430

Circuit diagram



Contact assignment of M8 plugs / M12 sockets

Schematic diagram



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

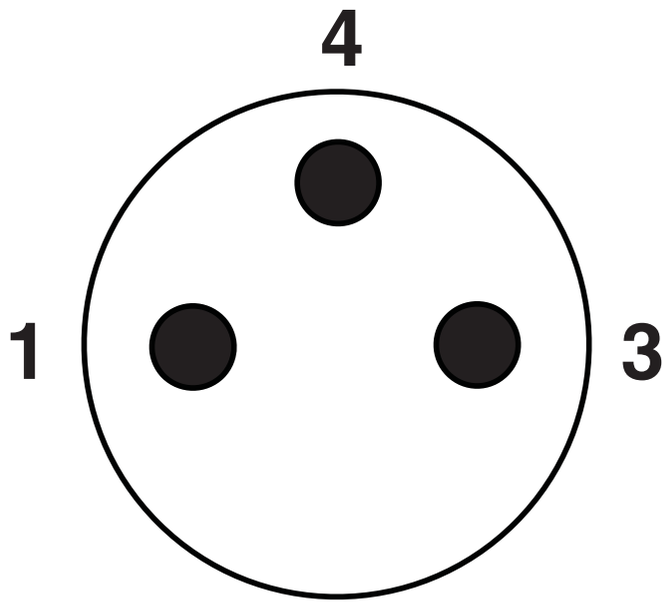
chanhvinh.com

Sensor/actuator cable - SAC-3P-M 8MR/0,6-PUR/M12FR

1682430

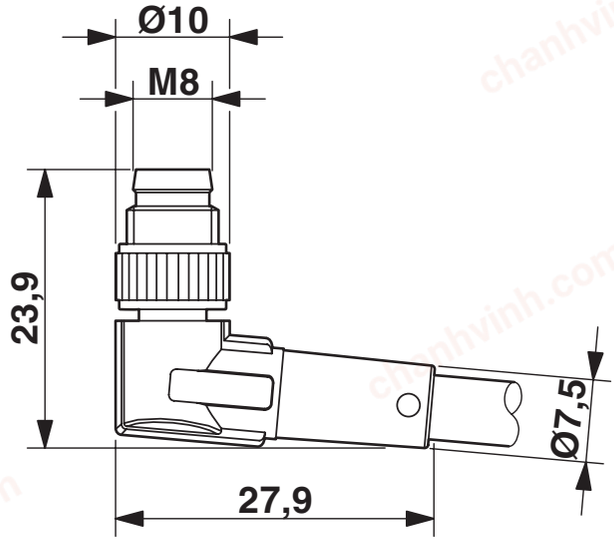
https://www.phoenixcontact.com/gb/products/1682430

Schematic diagram



Pin assignment M8 plug, 3-pos., view male side

Dimensional drawing



M8 x 1 male plug, angled version

chanhvinh.com

Sensor/actuator cable - SAC-3P-M 8MR/0,6-PUR/M12FR

1682430

https://www.phoenixcontact.com/gb/products/1682430

Approvals

UL Listed
Approval ID: FILE E 221474

	Nominal Voltage U_N	Nominal Current I_N	Cross Section AWG	Cross Section mm^2
	60 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
	60 V	4 A	-	-

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

cULus Listed

chanhvinh.com

Sensor/actuator cable - SAC-3P-M 8MR/0,6-PUR/M12FR

1682430

https://www.phoenixcontact.com/gb/products/1682430

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-M 8MR/0,6-PUR/M12FR

1682430

https://www.phoenixcontact.com/gb/products/1682430

Environmental Product Compliance

REACh SVHC	Lead 7439-92-1

China RoHS	Environmentally Friendly Use Period = 50 years
	For information on hazardous substances, refer to the manufacturer’s declaration available under “Downloads”

chanhvinh.com

Sensor/actuator cable - SAC-3P-M 8MR/0,6-PUR/M12FR

1682430

https://www.phoenixcontact.com/gb/products/1682430

Accessories

Sealing cap

Sealing cap - PROT-M 8 FS-PA-CHAIN - 1430857

https://www.phoenixcontact.com/gb/products/1430857

M8 sealing cap made of plastic with fixing band for sensor cables, for M8 plugs



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



chanhvinh.com

Sensor/actuator cable - SAC-3P-M 8MR/0,6-PUR/M12FR

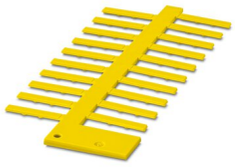
1682430

https://www.phoenixcontact.com/gb/products/1682430

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

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

chanhvinh.com

Sensor/actuator cable - SAC-3P-M 8MR/0,6-PUR/M12FR

1682430

https://www.phoenixcontact.com/gb/products/1682430

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



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



chanhvinh.com

Sensor/actuator cable - SAC-3P-M 8MR/0,6-PUR/M12FR

1682430

https://www.phoenixcontact.com/gb/products/1682430

Torque screwdriver

Torque screwdriver - TSD 02 SAC - 1208487

https://www.phoenixcontact.com/gb/products/1208487



Torque screwdriver, with preset torque of 0.2 Nm and 4 mm hexagonal drive for M8 connectors

Tool

Tool - SAC BIT M8-D10 - 1208461

https://www.phoenixcontact.com/gb/products/1208461



Nut for assembling M8 connectors with longitudinal knurl and a knurl diameter of 10 mm, for 4 mm hexagonal drive

chanhvinh.com

Sensor/actuator cable - SAC-3P-M 8MR/0,6-PUR/M12FR

1682430

https://www.phoenixcontact.com/gb/products/1682430

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

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

chanhvinh.com

Sensor/actuator cable - SAC-3P-M 8MR/0,6-PUR/M12FR

1682430

https://www.phoenixcontact.com/gb/products/1682430

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

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