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Sensor/actuator cable - SAC-4P-M12MS/0,3-PUR/M12FR-3L

1668519

https://www.phoenixcontact.com/gb/products/1668519

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Sensor/actuator cable, 4-position, PUR halogen-free, black-gray RAL 7021, Plug straight M12, coding: A, on Socket angled M12, coding: A, with 3 LEDs, cable length: 0.3 m

Your advantages

- Easy and safe: 100% electrically tested plug-in components
- Convenient: increased machine availability thanks to quick and easy diagnostics

Commercial Data

Item number	1668519
Packing unit	1 pc
Minimum order quantity	1 pc
Sales Key	BF1CCA
Product Key	BF1CCA
Catalog Page	Page 194 (C-2-2019)
GTIN	4017918137175
Weight per Piece (including packing)	27.6 g
Weight per Piece (excluding packing)	27.6 g
Customs tariff number	85444290
Country of origin	PL

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Technical Data

Product properties

Product type	Sensor/actuator cable
Number of positions	4
Application	Standard
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

Header 1

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

Head 2

Head design	Socket
Head cable outlet	angled

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Head thread type	M12
Coding	A
Status indicator head	3 LEDs

LED signaling

Status display	3 LEDs
Status display present	yes

Cable / line

Cable length	0.3 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

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	abrasion-resistant
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)

Ambient conditions

Degree of protection	IP65
	IP67
	IP68
Ambient temperature (operation)	-25 °C ... 90 °C (Plug / socket)

Standards and regulations

Standards/specifications	IEC 61076-2-101

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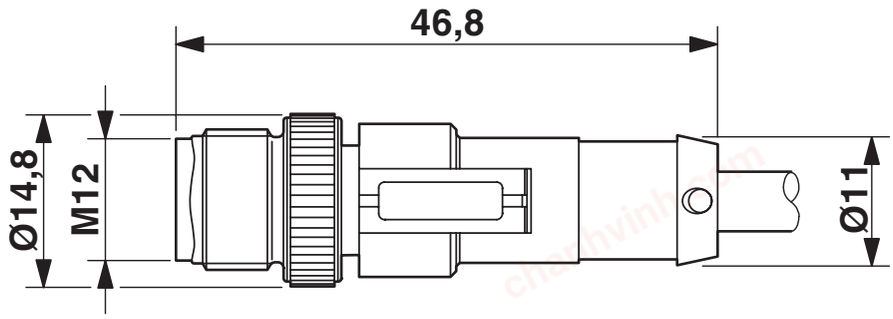
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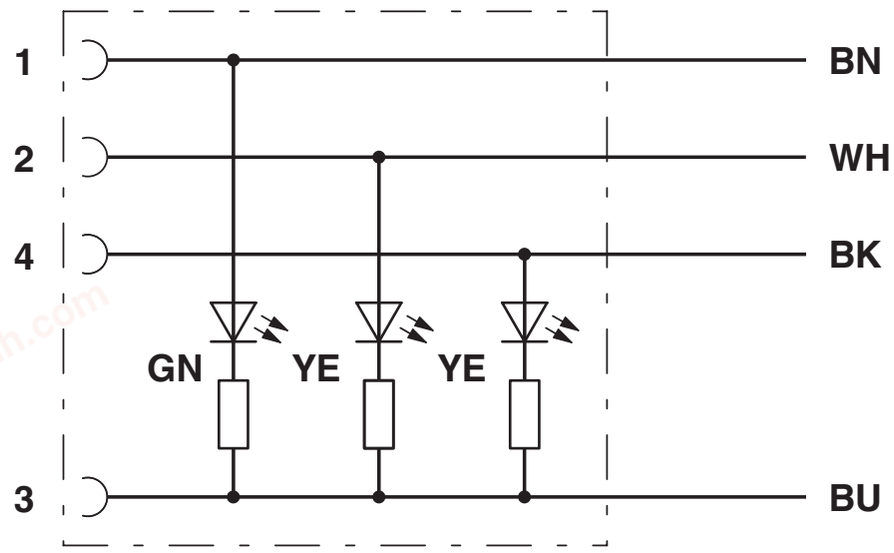
Drawings

Dimensional drawing



Plug, M12 x 1, straight, shielded

Circuit diagram



Contact assignment of the M12 plug and the M12 socket

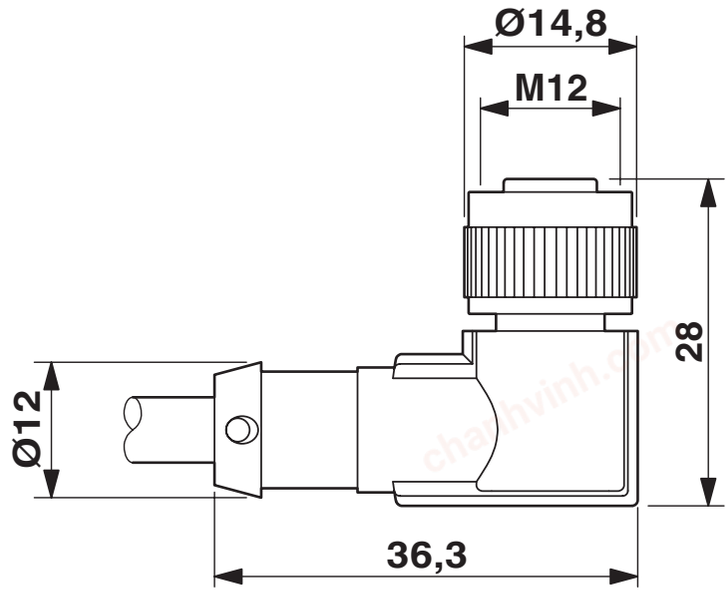
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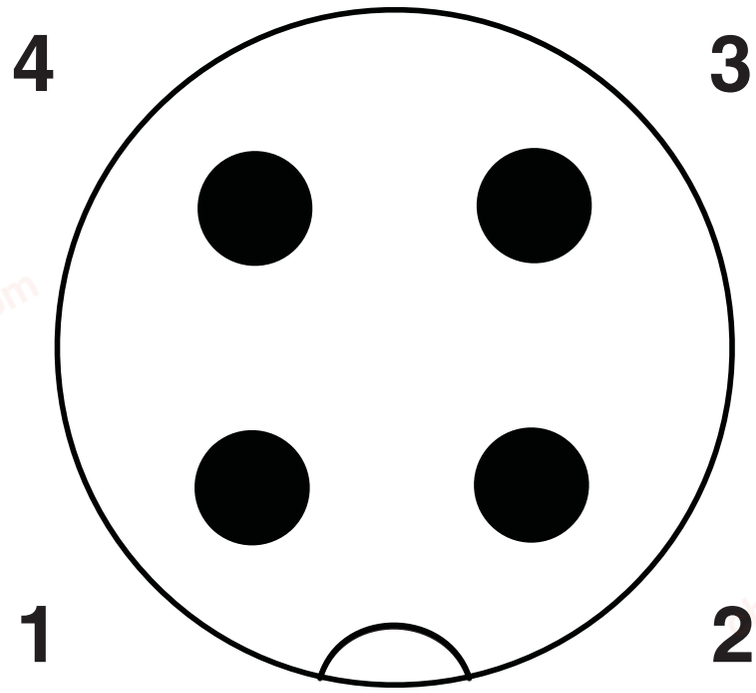
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Dimensional drawing



Socket M12 x 1, angled, with LED

Schematic diagram



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

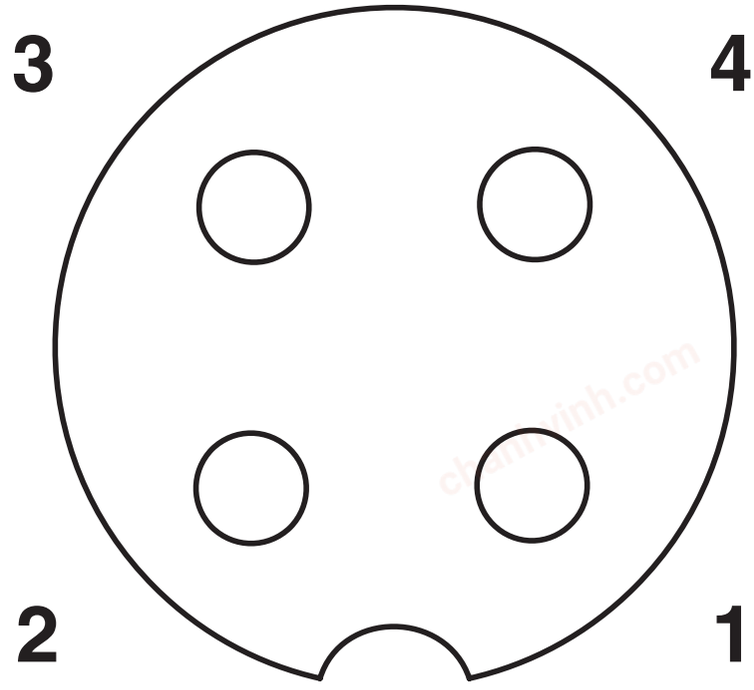
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Schematic diagram



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

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Approvals

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

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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

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Environmental Product Compliance

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

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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



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Insert label

Insert label - PABA WH/23 - 1013779

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

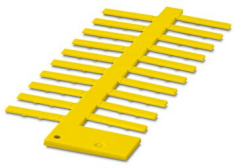


Insert label, Strip, white, unlabeled, can be labeled with: CMS-P1-PLOTTER, mounting type: slide-on, cable diameter range: 1.5 ... 35 mm, lettering field size: 23 x 4 mm, Number of individual labels: 20

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

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Sensor/actuator cable - SAC-4P-M12MS/0,3-PUR/M12FR-3L

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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



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Sensor/actuator cable - SAC-4P-M12MS/0,3-PUR/M12FR-3L

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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

Sensor/actuator cable - SAC-4P-M12MS/0,3-PUR/M12FR-3L

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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

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Sensor/actuator cable - SAC-4P-M12MS/0,3-PUR/M12FR-3L

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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

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