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Sensor/actuator cable - SAC-4P-M12MS/ 0,3-800/M12FR-3L

1457102

https://www.phoenixcontact.com/gb/products/1457102

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Sensor/actuator cable, 4-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 3 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	1457102
Packing unit	1 pc
Minimum order quantity	1 pc
Sales Key	BF1CCA
Product Key	BF1CCA
Catalog Page	Page 198 (C-2-2019)
GTIN	4046356593465
Weight per Piece (including packing)	28 g
Weight per Piece (excluding packing)	28 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	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

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
Note	Due to the extremely robust outer sheath, this cable should only be stripped in 5 cm increments.
Cable weight	33.5 kg/km
UL AWM Style	20549
Number of positions	4
Shielded	no
Cable type	Gray, highly flexible PUR [800]
Conductor structure signal line	42x 0.10 mm
AWG signal line	22
Conductor cross section	4x 0.34 mm² (Signal line)
Wire diameter incl. insulation	1.3 mm ±0.05 mm (Signal line)
External cable diameter	4.8 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, white, blue, black
Overall twist	4 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-

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	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 80 °C (in acc. with UL)

Standards and regulations

Standards/specifications	IEC 61076-2-101

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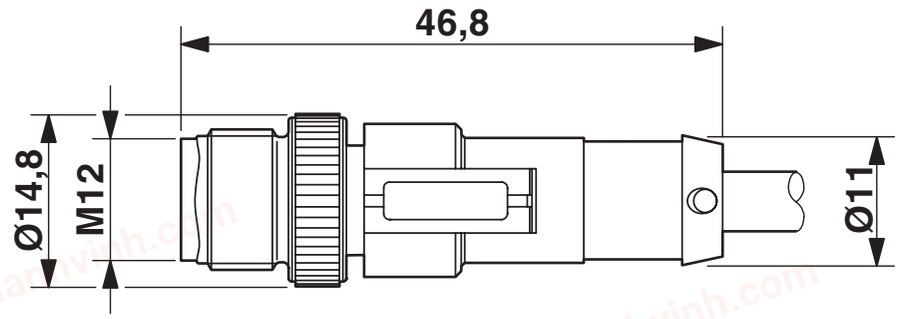
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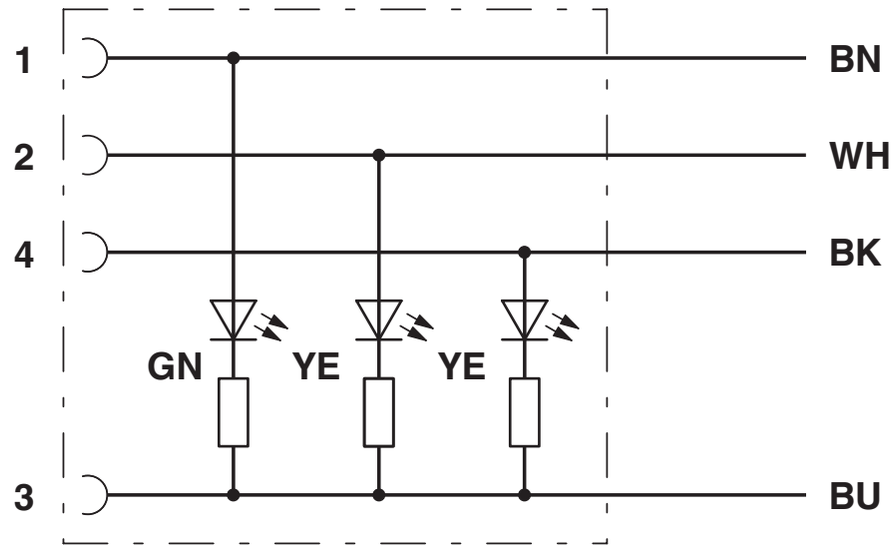
Drawings

Dimensional drawing



Plug, M12 x 1, straight, shielded

Circuit diagram



Contact assignment of the M12 plug and the M12 socket

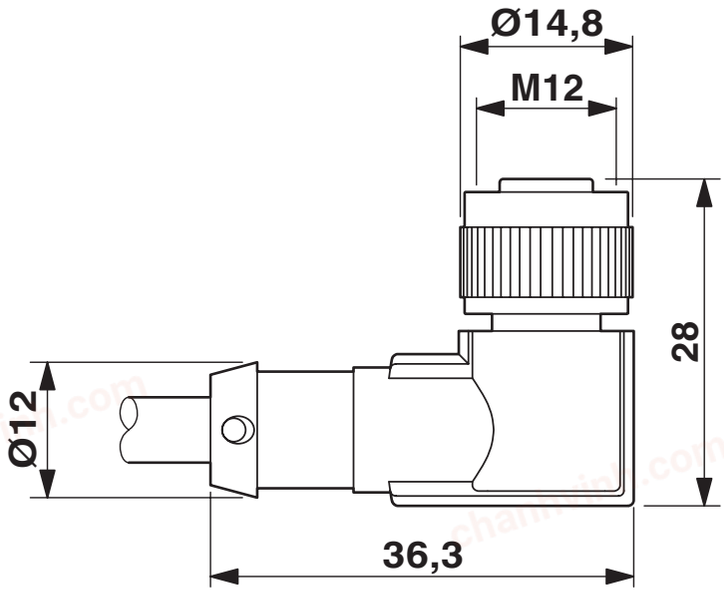
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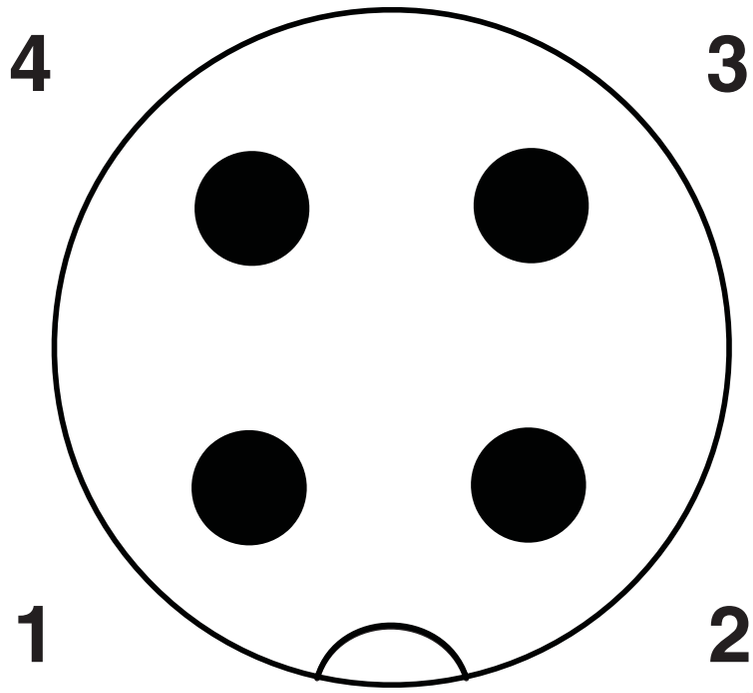
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Dimensional drawing



Socket M12 x 1, angled, with LED

Schematic diagram



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

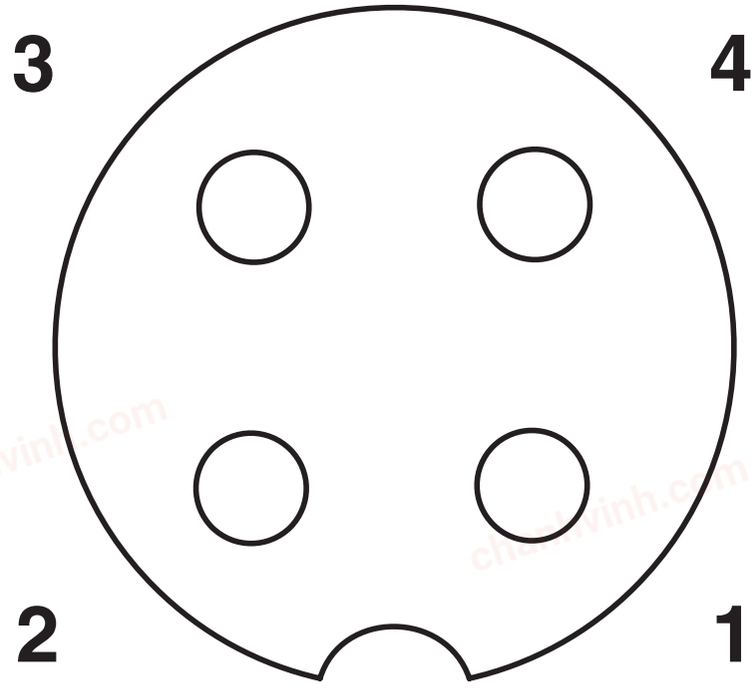
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Schematic diagram



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

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Approvals

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

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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

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

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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



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