

SAC-5P-M12MS/2,0-810/M12FS-3L - Sensor/actuator cable

1416223
<https://www.phoenixcontact.com/us/products/1416223>

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, 5-position, PUR halogen-free, welding sputter-resistant, orange RAL 2003, Plug straight M12, coding: A, with 3 LEDs, on Socket straight M12, coding: A, with 3 LEDs, cable length: 2 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 welding sputter resistant
- Convenient: increased machine availability thanks to quick and easy diagnostics

Commercial data

Item number	1416223
Packing unit	1 pc
Minimum order quantity	1 pc
Product key	BF1CDA
GTIN	4055626066554
Weight per piece (including packing)	132.6 g
Weight per piece (excluding packing)	132.6 g
Country of origin	PL

SAC-5P-M12MS/2,0-810/M12FS-3L - Sensor/actuator cable



1416223

<https://www.phoenixcontact.com/us/products/1416223>

Technical data

Product properties

Product type	Sensor/actuator cable
Application	Robots and drag chains
Number of positions	5
No. of cable outlets	1
Shielded	no
Coding	A

Insulation characteristics

Overvoltage category	II
Degree of pollution	3

Material specifications

Flammability rating according to UL 94	HB
Seal material	NBR
Material of grip body	TPU, hardly inflammable, self-extinguishing
Contact material	CuSn
Contact surface material	Ni/Au
Contact carrier material	TPU GF
Material for screw connection	Zinc die-cast, nickel-plated

Electrical properties

Insulation resistance	$\geq 100 \text{ M}\Omega$
Nominal voltage U_N	24 V
Nominal current I_N	4 A

Mechanical properties

Mechanical data

Insertion/withdrawal cycles	≥ 100
-----------------------------	------------

Signaling

Status display	3 LEDs
Status display present	Yes

Connector

Connection 1

Type	Plug straight M12
Number of positions	5
Coding type	A

Connection 2

Type	Socket straight M12
------	---------------------

SAC-5P-M12MS/2,0-810/M12FS-3L - Sensor/actuator cable



1416223

<https://www.phoenixcontact.com/us/products/1416223>

Number of positions	5
Coding type	A

Cable/line

Cable length	2 m
--------------	-----

PUR, halogen-free, highly flexible, welding-sputter resistant, orange [810]

Dimensional drawing	
Note	Due to the extremely robust outer sheath, this cable should only be stripped in 5 cm increments.
UL AWM Style	20549 (80°C/300 V)
Number of positions	5
Shielded	no
Cable type	PUR, halogen-free, highly flexible, welding-sputter resistant, orange [810]
Conductor structure signal line	42x 0.10 mm
AWG signal line	22
Conductor cross section	5x 0.34 mm ²
Wire diameter incl. insulation	1.55 mm ±0.05 mm (Signal line)
External cable diameter	6.90 mm ±0.1 mm
Outer sheath, material	PUR
External sheath, color	orange RAL 2003
Conductor material	Bare Cu litz wires
Material wire insulation	PP
Single wire, color	brown, white, blue, black, green-yellow
Overall twist	5 wires around filler to the core
Max. conductor resistance	approx. 57 Ω/km
Insulation resistance	≥ 20 MΩ*km
Nominal voltage, cable	300 V (Peak value, not for high-power applications)
Test voltage Core/Core	3000 V (Spark test)
Minimum bending radius, fixed installation	5 x D
Minimum bending radius, flexible installation	10 x D
Smallest bending radius, fixed installation	35 mm
Smallest bending radius, movable installation	69 mm
Max. bending cycles	5000000
Minimum bending radius, drag chain applications	10 x D
Traversing path	10 m
Traversing rate	3 m/s

SAC-5P-M12MS/2,0-810/M12FS-3L - Sensor/actuator cable



1416223

<https://www.phoenixcontact.com/us/products/1416223>

Acceleration	10 m/s ²
Halogen-free	in accordance with DIN VDE 0472 part 815
Flame resistance	in acc. with UL FT-2
Other resistance	hydrolysis and microbe resistant
Special properties	Sheath resistant to welding beads, can be recycled, matt, without adhesion, wear-resistant, flame resistant and self-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)
	≤ 60 °C (cable, drag chain applications)

Environmental and real-life conditions

Ambient conditions

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

Standards and regulations

Standard designation	M12 connector
Standards/specifications	IEC 61076-2-101

SAC-5P-M12MS/2,0-810/M12FS-3L - Sensor/actuator cable

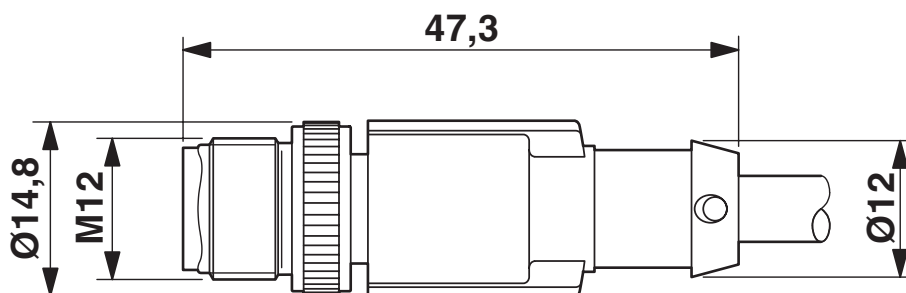


1416223

<https://www.phoenixcontact.com/us/products/1416223>

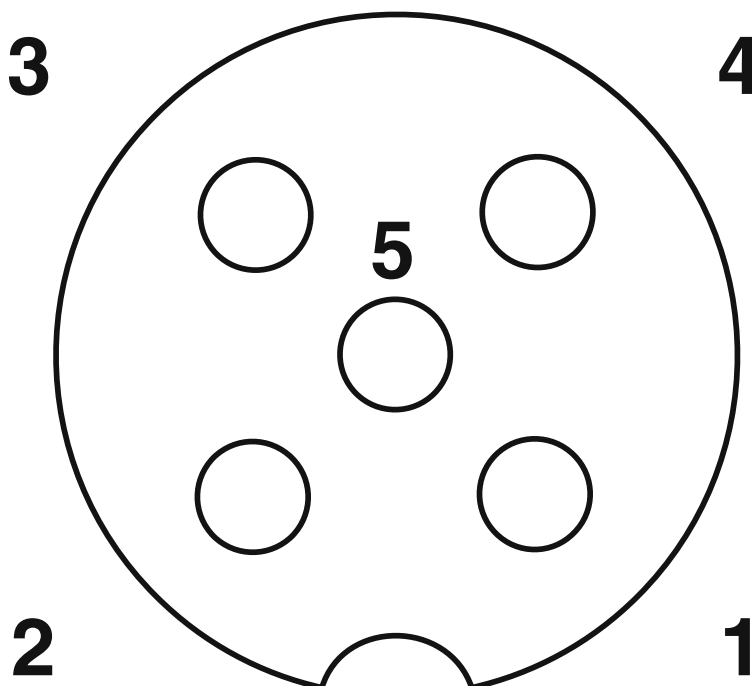
Drawings

Dimensional drawing



Plug, M12 x 1, straight, shielded

Schematic diagram



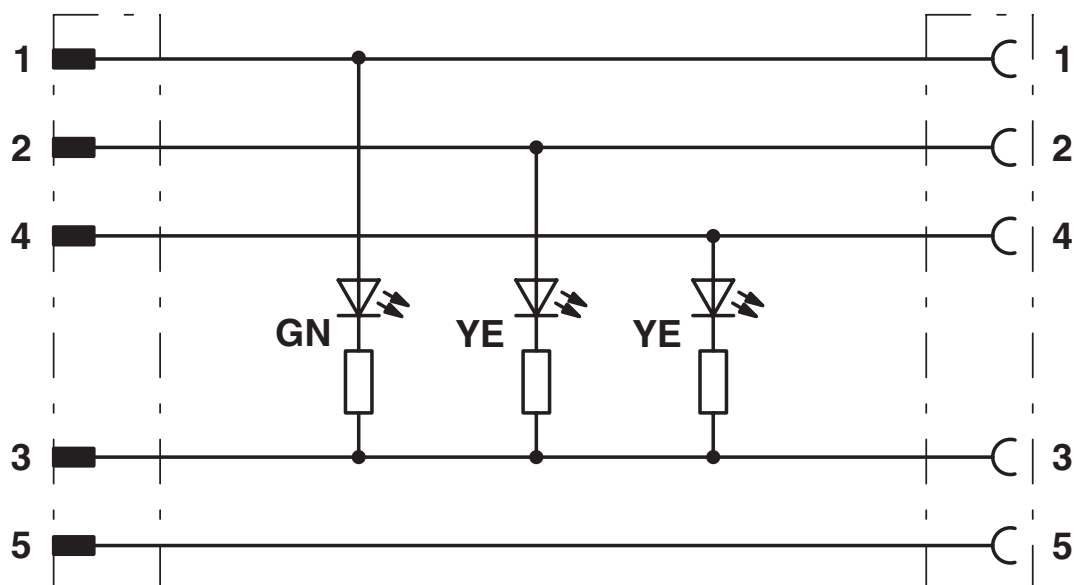
Pin assignment M12 socket, 5-pos., A-coded, socket side view

SAC-5P-M12MS/2,0-810/M12FS-3L - Sensor/actuator cable

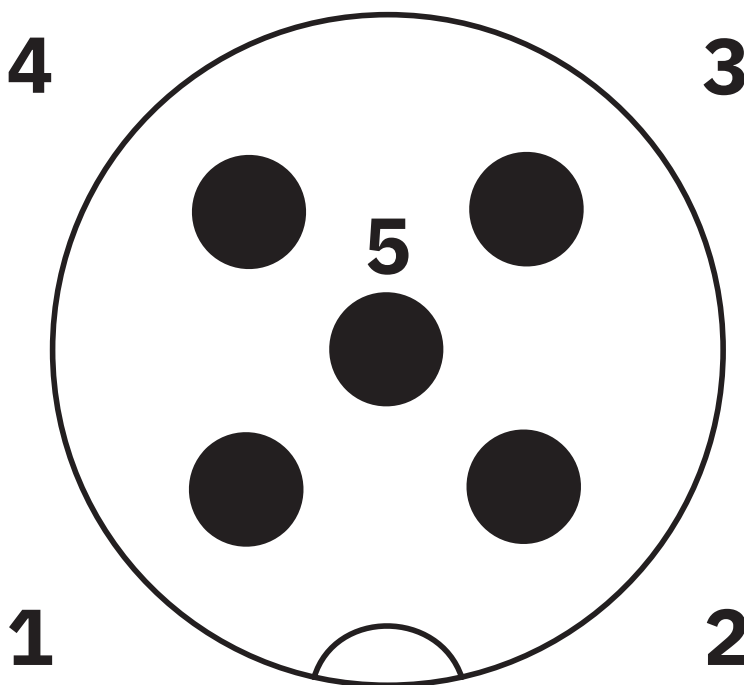
1416223

<https://www.phoenixcontact.com/us/products/1416223>

Circuit diagram



Schematic diagram



Pin assignment M12 male connector, 5-pos., A-coded, male side

SAC-5P-M12MS/2,0-810/M12FS-3L - Sensor/actuator cable



1416223
<https://www.phoenixcontact.com/us/products/1416223>

Classifications

ECLASS

ECLASS-11.0	27060311
ECLASS-13.0	27060311

SAC-5P-M12MS/2,0-810/M12FS-3L - Sensor/actuator cable



1416223
<https://www.phoenixcontact.com/us/products/1416223>

Environmental product compliance

China RoHS	
Environment friendly use period (EFUP)	EFUP-50 An article-related China RoHS declaration table can be found in the download area for the respective article under "Manufacturer declaration". For all articles with EFUP-E, no China RoHS declaration table issued and required.
EU REACH SVHC	
REACH candidate substance (CAS No.)	No substance above 0.1 wt%

SAC-5P-M12MS/2,0-810/M12FS-3L - Sensor/actuator cable



1416223

<https://www.phoenixcontact.com/us/products/1416223>

Accessories

PROT-M12 FS-PA-CHAIN - Sealing cap

1430873

<https://www.phoenixcontact.com/us/products/1430873>

M12 sealing cap made of plastic with fixing band, for sensor cables, for free M12 plugs



SAC-M12-EXCLIP-M - Locking clip

1558988

<https://www.phoenixcontact.com/us/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



SAC-5P-M12MS/2,0-810/M12FS-3L - Sensor/actuator cable



1416223

<https://www.phoenixcontact.com/us/products/1416223>

UCT-WMT (23X4) - Conductor marker

0801453

<https://www.phoenixcontact.com/us/products/0801453>



Conductor marker, Sheet, white, unlabeled, can be labeled with: TOPMARK NEO, TOPMARK LASER, BLUEMARK ID COLOR, BLUEMARK ID, BLUEMARK CLED, THERMOMARK PRIME, THERMOMARK CARD 2.0, THERMOMARK CARD, mounting type: insert, cable diameter range: 1.5 ... 35 mm, lettering field size: 23 x 4 mm, Number of individual labels: 30

UC-WMT (23X4) - Conductor marker

0819411

<https://www.phoenixcontact.com/us/products/0819411>



Conductor marker, Sheet, white, unlabeled, can be labeled with: BLUEMARK ID COLOR, BLUEMARK ID, BLUEMARK CLED, PLOTMARK, CMS-P1-PLOTTER, mounting type: insert, cable diameter range: 1.5 ... 35 mm, lettering field size: 23 x 4 mm, Number of individual labels: 24

SAC-5P-M12MS/2,0-810/M12FS-3L - Sensor/actuator cable



1416223

<https://www.phoenixcontact.com/us/products/1416223>

US-WMT (23X4) - Cable marker

0828769

<https://www.phoenixcontact.com/us/products/0828769>



Cable marker, Card, white, unlabeled, can be labeled with: BLUEMARK ID COLOR, BLUEMARK ID, THERMOMARK PRIME, THERMOMARK CARD 2.0, THERMOMARK CARD, mounting type: slide-on, cable diameter range: 1.5 ... 35 mm, lettering field size: 23 x 4 mm, Number of individual labels: 56

WMTW (23X4)R - Cable marker

0831004

<https://www.phoenixcontact.com/us/products/0831004>



Cable marker, Roll, white, unlabeled, can be labeled with: THERMOMARK E.300 (D)/600 (D), THERMOMARK ROLL 2.0, THERMOMARK ROLL, THERMOMARK ROLL X1, THERMOMARK ROLLMASTER 300/600, THERMOMARK X1.2, mounting type: insert, cable diameter range: 1.5 ... 35 mm, lettering field size: 23 x 4 mm, Number of individual labels: 3000

SAC-5P-M12MS/2,0-810/M12FS-3L - Sensor/actuator cable



1416223

<https://www.phoenixcontact.com/us/products/1416223>

PROT-M12 MS-PA-CHAIN - Screw plug

1430899

<https://www.phoenixcontact.com/us/products/1430899>

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



SAC-M12-EXCLIP-F - Locking clip

1558991

<https://www.phoenixcontact.com/us/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



SAC-5P-M12MS/2,0-810/M12FS-3L - Sensor/actuator cable



1416223

<https://www.phoenixcontact.com/us/products/1416223>

B-STIFT - Marker pen

1051993

<https://www.phoenixcontact.com/us/products/1051993>



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

TSD 04 SAC - Torque screwdriver

1208429

<https://www.phoenixcontact.com/us/products/1208429>



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

SAC-5P-M12MS/2,0-810/M12FS-3L - Sensor/actuator cable



1416223

<https://www.phoenixcontact.com/us/products/1416223>

TSD-M 1,2NM - Torque screwdriver

1212224

<https://www.phoenixcontact.com/us/products/1212224>



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

TSD-M SAC-BIT ADAPTER - Adapter insert

1212600

<https://www.phoenixcontact.com/us/products/1212600>



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

SAC-5P-M12MS/2,0-810/M12FS-3L - Sensor/actuator cable



1416223

<https://www.phoenixcontact.com/us/products/1416223>

SAC BIT M12-D15 - Tool

1208432

<https://www.phoenixcontact.com/us/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 2024 © - all rights reserved

<https://www.phoenixcontact.com>

Phoenix Contact USA
586 Fulling Mill Road
Middletown, PA 17057, United States
(+717) 944-1300
info@phoenixcon.com