

# 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	AF1CDA
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	$\geq 100$
-----------------------------	------------

### 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 <sup>2</sup>
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
Dynamic load capacity (bending)	Max. bending cycles: 5000000, Bending radius: 10 x D, Traversing path: 10 m, Traversing rate: 3 m/s, Acceleration: 10 m/s <sup>2</sup> , Ambient temperature: ≤ 60 °C
Halogen-free	in accordance with DIN VDE 0472 part 815

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



1416223

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

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) (male connector/female connector)	-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 male connector, 5-pos., A-coded, male side

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

1416223

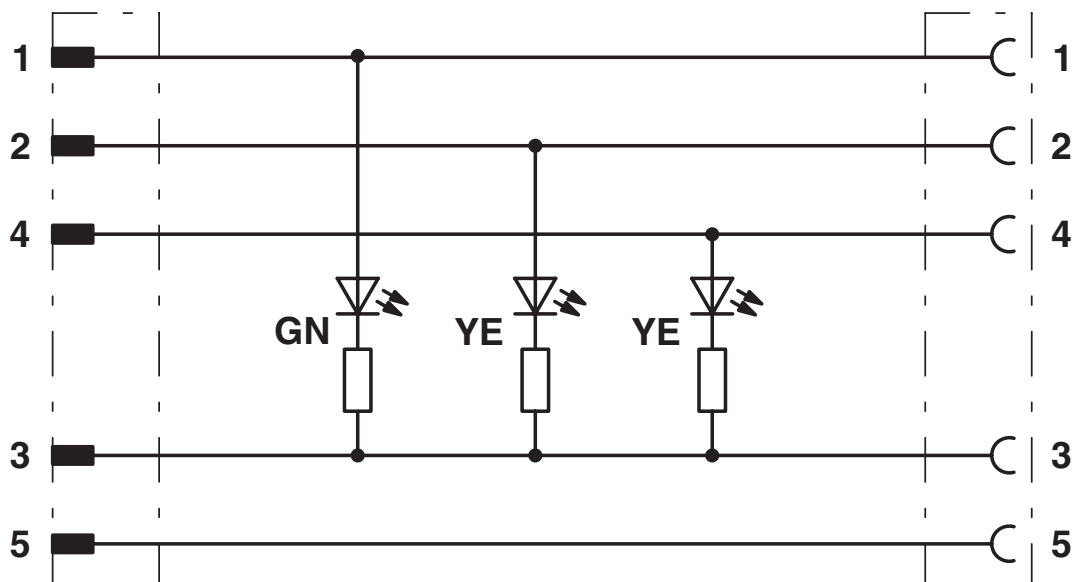
<https://www.phoenixcontact.com/us/products/1416223>

Schematic diagram



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

Circuit diagram



Contact assignment of M12 plugs / sockets with 3 LEDs

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



1416223

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

## Classifications

### ECLASS

ECLASS-13.0	27060311
ECLASS-15.0	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%
-------------------------------------	----------------------------

Phoenix Contact 2026 © - 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](mailto:info@phoenixcon.com)