

SAC-5P-M12MS/0,6-810/M12FS - Sensor/actuator cable



1416101

<https://www.phoenixcontact.com/us/products/1416101>

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, on Socket straight M12, coding: A, cable length: 0.6 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

Commercial data

| | |
|--------------------------------------|---------------|
| Item number | 1416101 |
| Packing unit | 1 pc |
| Minimum order quantity | 1 pc |
| Product key | AF1CDA |
| GTIN | 4055626063720 |
| Weight per piece (including packing) | 53.8 g |
| Weight per piece (excluding packing) | 53.8 g |
| Country of origin | PL |

SAC-5P-M12MS/0,6-810/M12FS - Sensor/actuator cable



1416101

<https://www.phoenixcontact.com/us/products/1416101>

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 | 48 V AC |
| | 60 V DC |
| Nominal current I_N | 4 A |

Mechanical properties

Mechanical data

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

Signaling

| | |
|------------------------|----|
| Status display | no |
| Status display present | no |

Connection data

Conductor connection

| | |
|-------------------|------------------------|
| Tightening torque | 0.4 Nm (M12 connector) |
|-------------------|------------------------|

Connector

Connection 1

SAC-5P-M12MS/0,6-810/M12FS - Sensor/actuator cable



1416101

<https://www.phoenixcontact.com/us/products/1416101>

| | |
|---------------------|-------------------|
| Type | Plug straight M12 |
| Number of positions | 5 |
| Coding type | A |


Connection 2

| | |
|---------------------|---------------------|
| Type | Socket straight M12 |
| Number of positions | 5 |
| Coding type | A |

Cable/line

| | |
|--------------|-------|
| Cable length | 0.6 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 |

SAC-5P-M12MS/0,6-810/M12FS - Sensor/actuator cable



1416101

<https://www.phoenixcontact.com/us/products/1416101>

| | |
|---|---|
| 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 ² , Ambient temperature: ≤ 60 °C |
| 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 |
| | IP67 |
| | 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/0,6-810/M12FS - Sensor/actuator cable

1416101

<https://www.phoenixcontact.com/us/products/1416101>

Drawings

Dimensional drawing



Plug, M12 x 1, straight, shielded

Dimensional drawing



M12 x 1 socket, straight

SAC-5P-M12MS/0,6-810/M12FS - Sensor/actuator cable

1416101

<https://www.phoenixcontact.com/us/products/1416101>

Schematic diagram



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

Schematic diagram



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

SAC-5P-M12MS/0,6-810/M12FS - Sensor/actuator cable

1416101

<https://www.phoenixcontact.com/us/products/1416101>

Circuit diagram



Contact assignment of the M12 plug and the M12 socket

SAC-5P-M12MS/0,6-810/M12FS - Sensor/actuator cable



1416101

<https://www.phoenixcontact.com/us/products/1416101>

Approvals

To download certificates, visit the product detail page: <https://www.phoenixcontact.com/us/products/1416101>

|  UL Listed Approval ID: FILE E 221474 | | | | |
|--|-----------------------|-----------------------|-------------------|-----------------------------|
| | Nominal voltage U_N | Nominal current I_N | Cross section AWG | Cross section mm^2 |
| keine | | | | |
| | 125 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 |
| keine | | | | |
| | 125 V | 4 A | - | - |

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

SAC-5P-M12MS/0,6-810/M12FS - Sensor/actuator cable



1416101

<https://www.phoenixcontact.com/us/products/1416101>

Classifications

ECLASS

| | |
|-------------|----------|
| ECLASS-13.0 | 27060311 |
| ECLASS-15.0 | 27060311 |

ETIM

| | |
|-----------|----------|
| ETIM 10.0 | EC001855 |
|-----------|----------|

UNSPSC

| | |
|-------------|----------|
| UNSPSC 21.0 | 26121600 |
|-------------|----------|

SAC-5P-M12MS/0,6-810/M12FS - Sensor/actuator cable



1416101

<https://www.phoenixcontact.com/us/products/1416101>

Environmental product compliance

EU RoHS

| | |
|---|--------------------|
| Fulfills EU RoHS substance requirements | Yes, No exemptions |
|---|--------------------|

China RoHS

| | |
|--|--|
| Environment friendly use period (EFUP) | EFUP-E |
| | No hazardous substances above the limits |

EU REACH SVHC

| | |
|-------------------------------------|----------------------------|
| REACH candidate substance (CAS No.) | No substance above 0.1 wt% |
|-------------------------------------|----------------------------|

EF3.1 Climate Change

| | |
|---------|---------------|
| CO2e kg | 0.582 kg CO2e |
|---------|---------------|

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