

# SAC-4P-M12MS/ 1,5-800 - Sensor/actuator cable



1457018

<https://www.phoenixcontact.com/us/products/1457018>

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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 free cable end, cable length: 1.5 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

## Commercial data

|                                      |                     |
|--------------------------------------|---------------------|
| Item number                          | 1457018             |
| Packing unit                         | 1 pc                |
| Minimum order quantity               | 1 pc                |
| Sales key                            | BF03                |
| Product key                          | BF1CCA              |
| Catalog page                         | Page 198 (C-2-2019) |
| GTIN                                 | 4046356593373       |
| Weight per piece (including packing) | 55.3 g              |
| Weight per piece (excluding packing) | 52.9 g              |
| Customs tariff number                | 85444290            |
| Country of origin                    | PL                  |

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## Technical data

### Product properties

|                      |                        |
|----------------------|------------------------|
| Product type         | Sensor/actuator cable  |
| Application          | Robots and drag chains |
| Number of positions  | 4                      |
| 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                                          |
| 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 $U_N$ | 250 V AC                   |
|                       | 250 V DC                   |
| Nominal current $I_N$ | 4 A                        |

### Mechanical properties

#### Mechanical data

|                             |            |
|-----------------------------|------------|
| Insertion/withdrawal cycles | $\geq 100$ |
|-----------------------------|------------|

### Signaling

|                        |    |
|------------------------|----|
| Status display         | No |
| Status display present | No |

### Connection data

#### Conductor connection

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

### Connector

#### Connection 1

|      |                   |
|------|-------------------|
| Type | Plug straight M12 |
|------|-------------------|

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|                     |   |
|---------------------|---|
| Number of positions | 4 |
| Coding type         | A |

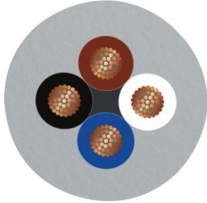
## Connection 2

|      |                |
|------|----------------|
| Type | free cable end |
|------|----------------|

## Cable/line

|              |       |
|--------------|-------|
| Cable length | 1.5 m |
|--------------|-------|

Gray, highly flexible PUR [800]

|                                               |                                                                                                  |
|-----------------------------------------------|--------------------------------------------------------------------------------------------------|
| Dimensional drawing                           |                |
| 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 mm <sup>2</sup> (Signal line)                                                            |
| Wire diameter incl. insulation                | 1.3 mm ±0.05 mm (Signal line)                                                                    |
| External cable diameter                       | 4.80 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                                                                                          |
| Smallest bending radius, fixed installation   | 20 mm                                                                                            |
| Smallest bending radius, movable installation | 36 mm                                                                                            |
| Max. bending cycles                           | 10000000                                                                                         |

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|                                 |                                                                                                                                      |
|---------------------------------|--------------------------------------------------------------------------------------------------------------------------------------|
|                                 | 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-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)                                                                                      |

## Environmental and real-life conditions

### 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

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

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