

# SAC-4P-MS/0,3-500/M12FR-3L FB - Sensor/actuator cable



1420986

<https://www.phoenixcontact.com/us/products/1420986>

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Sensor/actuator cable, 4-position, PVC, gray RAL 7001, Plug straight M12, coding: A, with 3 LEDs, on Socket angled M12, coding: A, with 3 LEDs, cable length: 0.3 m, with high-grade steel knurl

## Your advantages

- Easy and safe: 100 % electrically tested plug-in components
- Convenient: increased machine availability thanks to quick and easy diagnostics
- Contamination can be detected quickly – thanks to the light color

## Commercial data

|                                      |                                |
|--------------------------------------|--------------------------------|
| Item number                          | 1420986                        |
| Packing unit                         | 1 pc                           |
| Minimum order quantity               | 1 pc                           |
| Note                                 | Made to order (non-returnable) |
| Sales key                            | BF03                           |
| Product key                          | AF1CCA                         |
| GTIN                                 | 4055626250168                  |
| Weight per piece (including packing) | 33.59 g                        |
| Weight per piece (excluding packing) | 24.55 g                        |
| Customs tariff number                | 85444290                       |
| Country of origin                    | PL                             |

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## Technical data

### Product properties

|                      |                          |
|----------------------|--------------------------|
| Product type         | Sensor/actuator cable    |
| Application          | Food processing industry |
| Number of positions  | 4                        |
| No. of cable outlets | 1                        |
| Shielded             | no                       |
| Coding               | A                        |

### Insulation characteristics

|                      |    |
|----------------------|----|
| Overvoltage category | II |
| Degree of pollution  | 3  |

### Material specifications

|                               |                 |
|-------------------------------|-----------------|
| Material of grip body         | PP              |
| Contact material              | CuSn            |
| Contact surface material      | Ni/Au           |
| Contact carrier material      | PP              |
| Material for screw connection | Stainless steel |

### Electrical properties

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

### Mechanical properties

#### Mechanical data

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

### Signaling

|                        |        |
|------------------------|--------|
| Status display         | 3 LEDs |
| Status display present | yes    |

### Connection data

#### Conductor connection

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

### Connector

#### Connection 1

|                     |                   |
|---------------------|-------------------|
| Type                | Plug straight M12 |
| Number of positions | 4                 |
| Coding type         | A                 |

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## Connection 2

|                     |                   |
|---------------------|-------------------|
| Type                | Socket angled M12 |
| Number of positions | 4                 |
| Coding type         | A                 |

## Cable/line

|              |       |
|--------------|-------|
| Cable length | 0.3 m |
|--------------|-------|

## PVC gray [500]

|   |  |
|---|--|
| Dimensional drawing                           |  |
| Cable weight                                  | 40 kg/km   |
| UL AWM Style                                  | 2464 / 1729 (80°C/300 V)   |
| Number of positions                           | 4  |
| Shielded                                      | no   |
| Cable type                                    | PVC gray [500]   |
| Conductor structure signal line               | 19x 0.15 mm  |
| AWG signal line                               | 22   |
| Conductor cross-section                       | 4x 0.34 mm <sup>2</sup> (Signal line)  |
| Wire diameter incl. insulation                | 1.26 mm ±0.05 mm   |
| External cable diameter                       | 4.70 mm ±0.15 mm   |
| Outer sheath, material                        | PVC  |
| External sheath, color                        | gray RAL 7001  |
| Conductor material                            | Bare Cu litz wires   |
| Material wire insulation                      | PVC  |
| Single wire, color                            | brown, white, blue, black  |
| Thickness, insulation                         | ≥ 0.23 mm (Core insulation)  |
| Thickness, outer sheath                       | ≥ 0.76 mm  |
| Overall twist                                 | 4 wires, twisted   |
| Max. conductor resistance                     | max. 57 Ω/km (at 20 °C)  |
| Insulation resistance                         | ≥ 200 MΩ*km (at 20 °C)   |
| Nominal voltage, cable                        | ≤ 300 V  |
| Test voltage                                  | ≥ 3000 V   |
| Minimum bending radius, fixed installation    | 5 x D  |
| Minimum bending radius, flexible installation | 10 x D   |
| Smallest bending radius, fixed installation   | 24 mm  |
| Smallest bending radius, movable installation | 47 mm  |
| Ambient temperature (operation)               | -40 °C ... 80 °C (cable, fixed installation)                                       |

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|  |   |
|--|---|
|  | -25 °C ... 80 °C (Cable, flexible installation) |
|--|---|

## Environmental and real-life conditions

### Ambient conditions

|   |                                  |
|---|----------------------------------|
| Degree of protection  | IP65                             |
|   | IP67                             |
|   | IP68                             |
|   | IP69K                            |
| 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 |

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## Drawings

Dimensional drawing



Plug, M12 x 1, straight

Dimensional drawing



M12 x 1 socket, angled

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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

Circuit diagram



Contact assignment of the M12 plug and the M12 socket

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## Classifications

### ECLASS

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

### ETIM

|          |          |
|----------|----------|
| ETIM 9.0 | EC001855 |
|----------|----------|

### UNSPSC

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

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## 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.) | 1,6,7,8,9,14,15,16,17,17,18,18-Dodecachloropentacyclo[12.2.1.16,9.02,13.05,10]octadeca-7,15-diene ("Dechlorane Plus™")(CAS: n/a) |
| SCIP                                | cde8821c-4091-45e4-a8ae-aaf8cbec23d7   |

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