

# SAC-5P-3,0-500/M12FR FB - Sensor/actuator cable



1421003

<https://www.phoenixcontact.com/us/products/1421003>

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Sensor/actuator cable, 5-position, PVC, gray RAL 7001, free cable end, on Socket angled M12, coding: A, cable length: 3 m, with high-grade steel knurl

## Your advantages

- Easy and safe: 100 % electrically tested plug-in components
- Contamination can be detected quickly – thanks to the light color

## Commercial data

|                                      |                                |
|--------------------------------------|--------------------------------|
| Item number                          | 1421003                        |
| Packing unit                         | 1 pc                           |
| Minimum order quantity               | 1 pc                           |
| Note                                 | Made to order (non-returnable) |
| Sales key                            | BF03                           |
| Product key                          | AF1CDA                         |
| GTIN                                 | 4055626250335                  |
| Weight per piece (including packing) | 144.15 g                       |
| Weight per piece (excluding packing) | 135.11 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  | 5                        |
| 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 $U_N$ | 48 V AC                    |
|                       | 60 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 |

### Connector

#### Connection 1

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

#### Connection 2

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

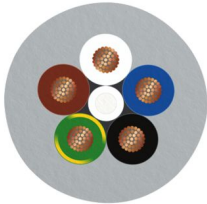
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## Cable/line

|                                               |                                                                                                 |
|-----------------------------------------------|-------------------------------------------------------------------------------------------------|
| Cable length                                  | 3 m                                                                                             |
| PVC gray [500]                                |                                                                                                 |
| Dimensional drawing                           |               |
| Cable weight                                  | 51 kg/km                                                                                        |
| UL AWM Style                                  | 2464 / 1729 (80°C/300 V)                                                                        |
| Number of positions                           | 5                                                                                               |
| Shielded                                      | no                                                                                              |
| Cable type                                    | PVC gray [500]                                                                                  |
| Conductor structure signal line               | 19x 0.15 mm                                                                                     |
| AWG signal line                               | 22                                                                                              |
| Conductor cross section                       | 5x 0.34 mm <sup>2</sup> (Signal line)                                                           |
| Wire diameter incl. insulation                | 1.26 mm ±0.05 mm                                                                                |
| External cable diameter                       | 5.00 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, green-yellow                                                         |
| Thickness, insulation                         | ≥ 0.23 mm (Core insulation)                                                                     |
| Thickness, outer sheath                       | ≥ 0.76 mm                                                                                       |
| Overall twist                                 | 5 wires around filler to the core                                                               |
| 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   | 25 mm                                                                                           |
| Smallest bending radius, movable installation | 50 mm                                                                                           |
| Flame resistance                              | As per UL-Style 2464                                                                            |
| Ambient temperature (operation)               | -40 °C ... 80 °C (cable, fixed installation)<br>-25 °C ... 80 °C (Cable, flexible installation) |

## Environmental and real-life conditions

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## Ambient conditions

|                                                                   |                                  |
|-------------------------------------------------------------------|----------------------------------|
| Degree of protection                                              | IP65                             |
|                                                                   | IP67                             |
|                                                                   | IP68                             |
|                                                                   | IP69K                            |
| Ambient temperature (operation) (male connector/female connector) | -25 °C ... 90 °C (Plug / socket) |

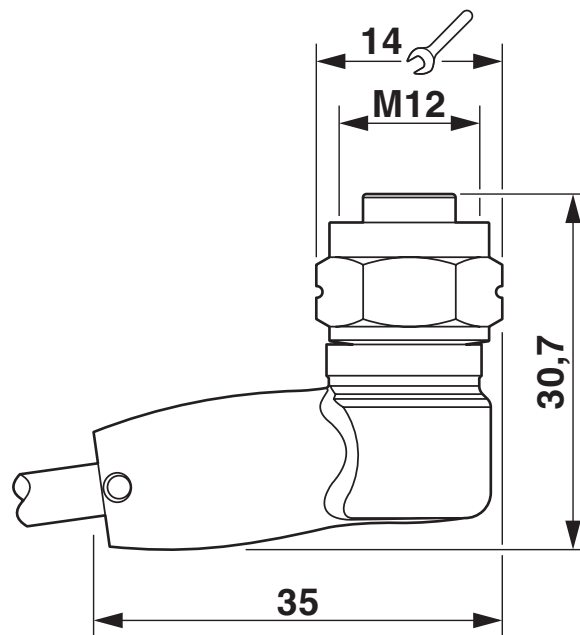
## Standards and regulations

### M12

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

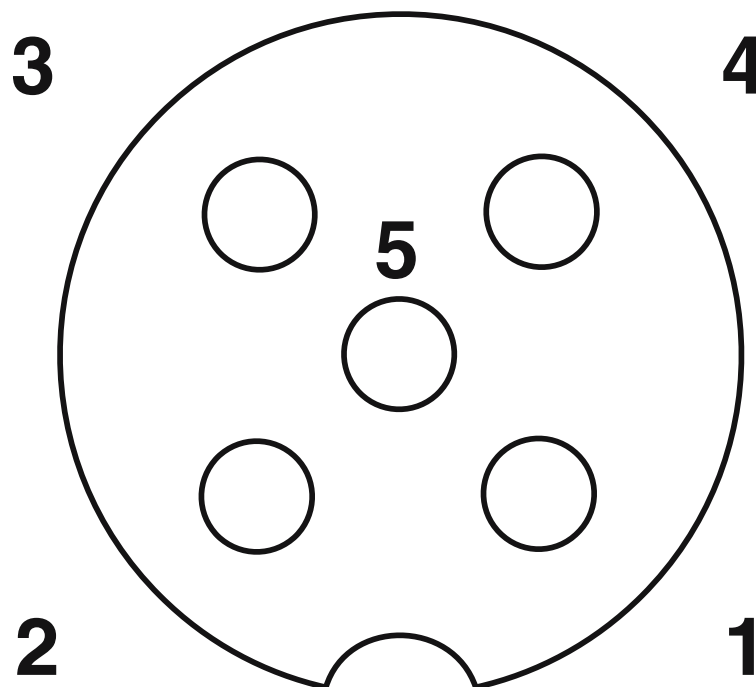
## Drawings

Dimensional drawing



M12 x 1 male plug, angled

Schematic diagram



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

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Circuit diagram



Contact assignment of 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 |
|-------------|----------|

## 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" <sup>TM</sup> )(CAS: n/a) |
| SCIP                                | 8d9ad6e9-1601-49c3-8951-a9ed18a3bae1                                                                                                           |