

# SAC-4P-10,0-500/M12FR-3L FB - Sensor/actuator cable



1420977

<https://www.phoenixcontact.com/us/products/1420977>

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, 4-position, PVC, gray RAL 7001, free cable end, on Socket angled M12, coding: A, with 3 LEDs, cable length: 10 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                          | 1420977                        |
| Packing unit                         | 1 pc                           |
| Minimum order quantity               | 1 pc                           |
| Note                                 | Made to order (non-returnable) |
| Sales key                            | BF03                           |
| Product key                          | AF1CCA                         |
| GTIN                                 | 4055626250076                  |
| Weight per piece (including packing) | 374.54 g                       |
| Weight per piece (excluding packing) | 365.5 g                        |
| Customs tariff number                | 85444290                       |
| Country of origin                    | PL                             |

# SAC-4P-10,0-500/M12FR-3L FB - Sensor/actuator cable



1420977

<https://www.phoenixcontact.com/us/products/1420977>

## 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    |

### Connector

#### Connection 1

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

#### Connection 2

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

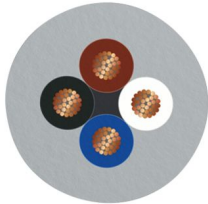
### Cable/line

# SAC-4P-10,0-500/M12FR-3L FB - Sensor/actuator cable



1420977

<https://www.phoenixcontact.com/us/products/1420977>

|   |   |
|---|---|
| Cable length                                  | 10 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)<br>-25 °C ... 80 °C (Cable, flexible installation) |

## Environmental and real-life conditions

### Ambient conditions

|                      |      |
|----------------------|------|
| Degree of protection | IP65 |
|                      | IP67 |

# SAC-4P-10,0-500/M12FR-3L FB - Sensor/actuator cable



1420977

<https://www.phoenixcontact.com/us/products/1420977>

|   |                                  |
|---|----------------------------------|
|   | 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 |

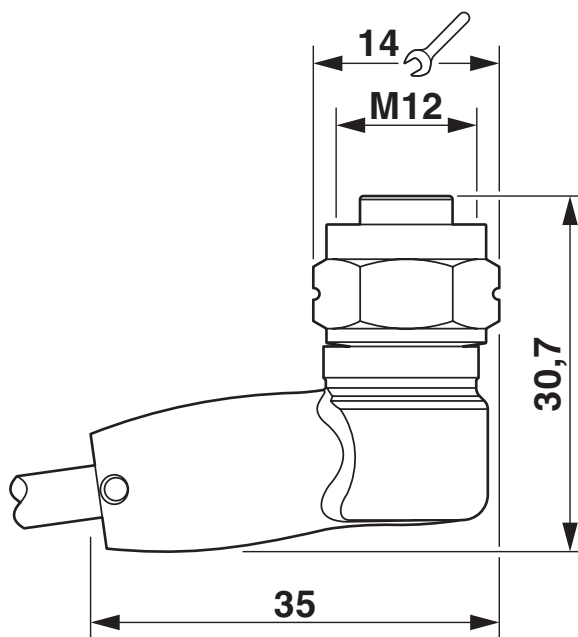
# SAC-4P-10,0-500/M12FR-3L FB - Sensor/actuator cable

1420977

<https://www.phoenixcontact.com/us/products/1420977>

## Drawings

Dimensional drawing



M12 x 1 socket, angled

# SAC-4P-10,0-500/M12FR-3L FB - Sensor/actuator cable

1420977

<https://www.phoenixcontact.com/us/products/1420977>

Schematic diagram



Pin assignment M12 socket, 4-pos., A-coded, view female side

Circuit diagram



Contact assignment of M12 sockets with LED

# SAC-4P-10,0-500/M12FR-3L FB - Sensor/actuator cable





1420977

<https://www.phoenixcontact.com/us/products/1420977>

## Approvals

To download certificates, visit the product detail page: <https://www.phoenixcontact.com/us/products/1420977>

|  <b>UL Listed</b><br>Approval ID: FILE E 221474 |                       |                       |                   |                             |
|--|-----------------------|-----------------------|-------------------|-----------------------------|
|  | Nominal voltage $U_N$ | Nominal current $I_N$ | Cross section AWG | Cross section $\text{mm}^2$ |
| keine  |                       |                       |                   |                             |
|  | 250 V                 | 4 A                   | -                 | -                           |

|  <b>cUL Listed</b><br>Approval ID: FILE E 221474 |                       |                       |                   |                             |
|---|-----------------------|-----------------------|-------------------|-----------------------------|
|   | Nominal voltage $U_N$ | Nominal current $I_N$ | Cross section AWG | Cross section $\text{mm}^2$ |
| keine   |                       |                       |                   |                             |
|   | 250 V                 | 4 A                   | -                 | -                           |

# SAC-4P-10,0-500/M12FR-3L FB - Sensor/actuator cable



1420977

<https://www.phoenixcontact.com/us/products/1420977>

## Classifications

### ECLASS

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

### ETIM

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

### UNSPSC

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

# SAC-4P-10,0-500/M12FR-3L FB - Sensor/actuator cable



1420977

<https://www.phoenixcontact.com/us/products/1420977>

## 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.) | 6,6'-di-tert-butyl-2,2'-methylenedi-p-cresol(CAS: 119-47-1) |
| SCIP                                | 4cd9424a-a1df-4bff-b2a7-5e50b24034f9                        |

### EF3.1 Climate Change

|         |               |
|---------|---------------|
| CO2e kg | 3.356 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](mailto:info@phoenixcon.com)