

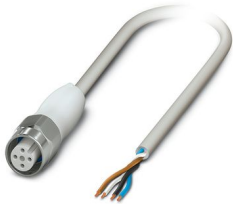
# SAC-4P-3,0-600/M12FS HD - Sensor/actuator cable



1403957

<https://www.phoenixcontact.com/be/products/1403957>

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Sensor/actuator cable, 4-position halogen-free, free cable end, on Socket straight M12, coding: A, cable length: 3 m, Hygienic design, with high-grade steel knurl

## Your advantages

- Easy and safe: 100 % electrically tested plug-in components
- Stainless steel type 1.4404 used to provide corrosion protection for all exposed metal parts
- Contamination can be detected quickly – thanks to the light color

## Commercial data

|                                      |                     |
|--------------------------------------|---------------------|
| Item number                          | 1403957             |
| Packing unit                         | 1 pc                |
| Minimum order quantity               | 1 pc                |
| Sales key                            | BF1CCA              |
| Product key                          | BF1CCA              |
| Catalog page                         | Page 142 (C-4-2013) |
| GTIN                                 | 4046356677134       |
| Weight per piece (including packing) | 101,2 g             |
| Weight per piece (excluding packing) | 97,6 g              |
| Customs tariff number                | 85444290            |
| Country of origin                    | PL                  |

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## Technical data

### Product properties

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

### Insulation characteristics

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

### Material specifications

|                               |                 |
|-------------------------------|-----------------|
| Seal material                 | FKM             |
| 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

|                       |                            |
|-----------------------|----------------------------|
| Contact resistance    | $\leq 5 \text{ m}\Omega$   |
| Insulation resistance | $\geq 100 \text{ M}\Omega$ |
| Nominal voltage $U_N$ | 250 V AC                   |
|                       | 250 V DC                   |
| Nominal current $I_N$ | 4 A                        |
| Protective circuit    | unwired                    |

### 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

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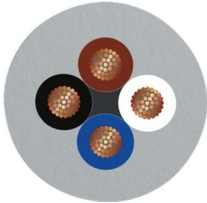
## Connection 1

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

## Connection 2

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

## Cable/line

|                                               |                                                                                     |
|-----------------------------------------------|-------------------------------------------------------------------------------------|
| Cable length                                  | 3 m                                                                                 |
| Dimensional drawing                           |  |
| Cable weight                                  | 30 kg/km                                                                            |
| Number of positions                           | 4                                                                                   |
| Shielded                                      | no                                                                                  |
| 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                | 1.27 mm ±0.02 mm (Signal line)                                                      |
| External cable diameter                       | 4.7 mm ±0.15 mm                                                                     |
| Outer sheath, material                        | PP-EPDM                                                                             |
| External sheath, color                        | gray RAL 7035                                                                       |
| Conductor material                            | Bare Cu litz wires                                                                  |
| Material wire insulation                      | PP                                                                                  |
| Single wire, color                            | brown, white, blue, black                                                           |
| Thickness, insulation                         | ≥ 0.21 mm                                                                           |
| Thickness, outer sheath                       | approx. 0.8 mm                                                                      |
| Overall twist                                 | 4 wires, twisted                                                                    |
| Length of twist, overall twist                | 48 mm                                                                               |
| Max. conductor resistance                     | approx. 58 MΩ/km                                                                    |
| Insulation resistance                         | ≥ 1 GΩ*km                                                                           |
| 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                                                                               |
| Max. bending cycles                           | 4000000                                                                             |

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|                                 |                                                                                     |
|---------------------------------|-------------------------------------------------------------------------------------|
| Torsional frequency             | Torsion cycles/min                                                                  |
| Halogen-free                    | in accordance with DIN VDE 0472 part 815                                            |
| Other resistance                | Resistant to cold bending and cold impacts (according to DIN EN 60811-1-4 (-40 °C)) |
| Special properties              | partly suitable for use with drag chain                                             |
| Ambient temperature (operation) | -40 °C ... 105 °C (cable, fixed installation)                                       |
|                                 | -25 °C ... 105 °C (Cable, flexible installation)                                    |

## Environmental and real-life conditions

### Ambient conditions

|                                 |                                   |
|---------------------------------|-----------------------------------|
| Degree of protection            | IP65                              |
|                                 | IP67                              |
|                                 | IP68                              |
|                                 | IP69K                             |
| Ambient temperature (operation) | -40 °C ... 105 °C (Plug / socket) |

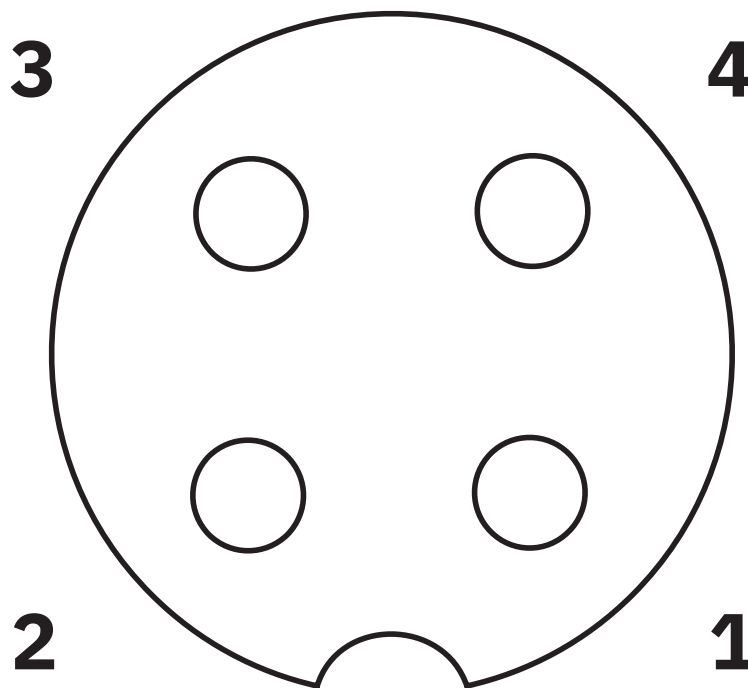
## Standards and regulations

### M12

|                          |                      |
|--------------------------|----------------------|
| Standard designation     | M12 connector        |
| Standards/specifications | IEC 61076-2-101      |
| Standard designation     | Material conformance |
| Standards/specifications | FDA 21 CFR 177.2600  |

## Drawings

Schematic diagram



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

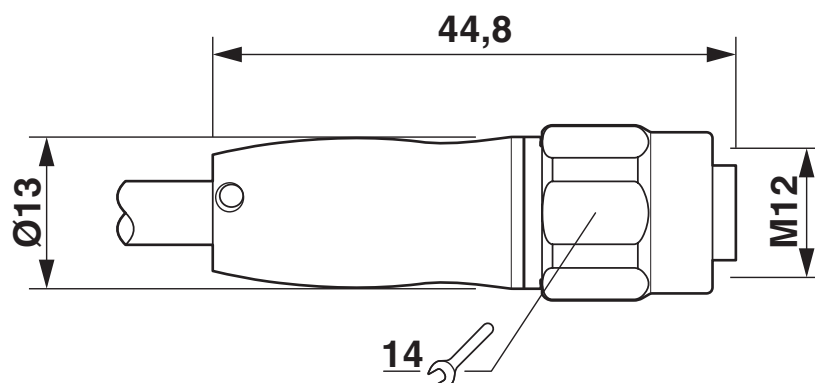
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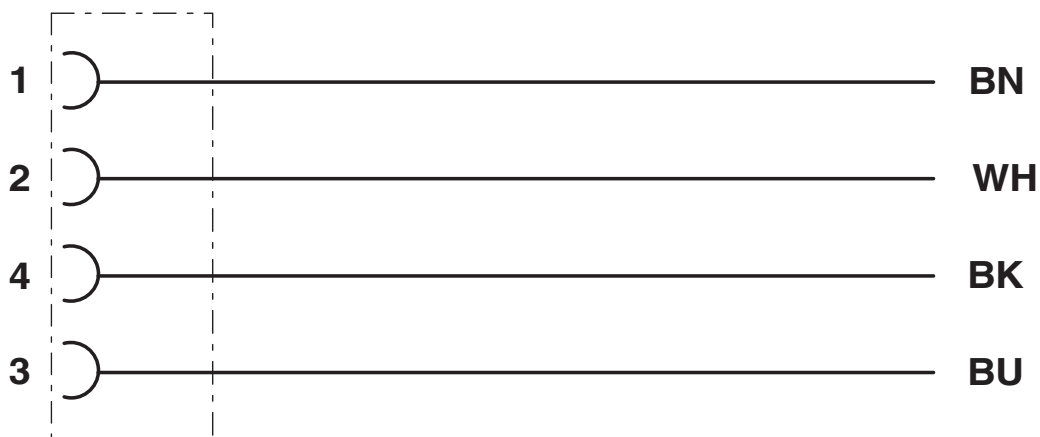
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Dimensional drawing



M12 x 1 socket, straight

Circuit diagram



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## Approvals

🔗 To download certificates, visit the product detail page: <https://www.phoenixcontact.com/be/products/1403957>



**EAC-RoHS**

Approval ID: RU D-DE.HB35.B.00387

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## Classifications

### ECLASS

|             |          |
|-------------|----------|
| ECLASS-11.0 | 27060311 |
| ECLASS-12.0 | 27060311 |
| ECLASS-13.0 | 27060311 |

### ETIM

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

### UNSPSC

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



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## Environmental product compliance

|            |                                                         |
|------------|---------------------------------------------------------|
| China RoHS | Environmentally friendly use period: unlimited = EFUP-e |
|            | No hazardous substances above threshold values          |

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