

# SAC-4P-25,0-600/M12FR HD - Sensor/actuator cable



1410118

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Sensor/actuator cable, 4-position, PP-EPDM, gray RAL 7035, free cable end, on Socket angled M12, coding: A, cable length: 25 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                          | 1410118       |
| Packing unit                         | 1 pc          |
| Minimum order quantity               | 1 pc          |
| Sales key                            | AF1CCA        |
| Product key                          | AF1CCA        |
| GTIN                                 | 4046356890908 |
| Weight per piece (including packing) | 672 g         |
| Weight per piece (excluding packing) | 666.8 g       |
| Customs tariff number                | 85444290      |
| Country of origin                    | PL            |

## 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

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

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

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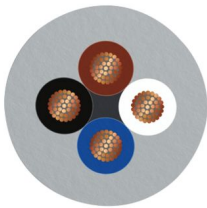
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## Connection 2

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

## Cable/line

|                                               |                                                                                                                                        |
|-----------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------|
| Cable length                                  | 25 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                       | 4.70 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. 0.80 mm                                                                                                                        |
| Overall twist                                 | 4 wires, twisted                                                                                                                       |
| Length of twist, overall twist                | 48 mm                                                                                                                                  |
| Max. conductor resistance                     | approx. 58 Ω/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                                                                                                                                  |
| Dynamic load capacity (bending)               | Max. bending cycles: 4000000, Bending radius: 10 x D, Traversing path: 10 m, Traversing rate: 3 m/s, Acceleration: 10 m/s <sup>2</sup> |
| Dynamic load capacity (torsion)               | Torsion: ±270 °/m, Torsion cycles: ≥4000000, Torsional                                                                                 |

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|                                 |                                                                                     |
|---------------------------------|-------------------------------------------------------------------------------------|
|                                 | frequency: $\leq 25$ 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) |

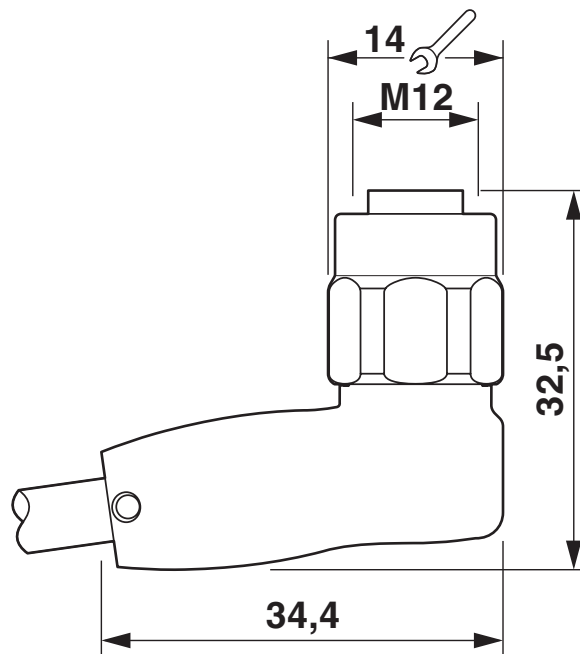
## Standards and regulations

### M12

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

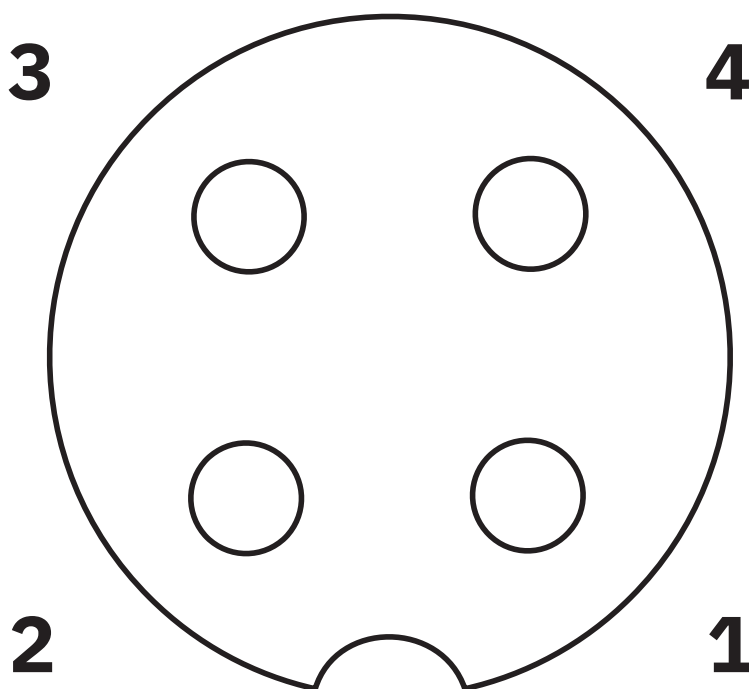
## Drawings

Dimensional drawing



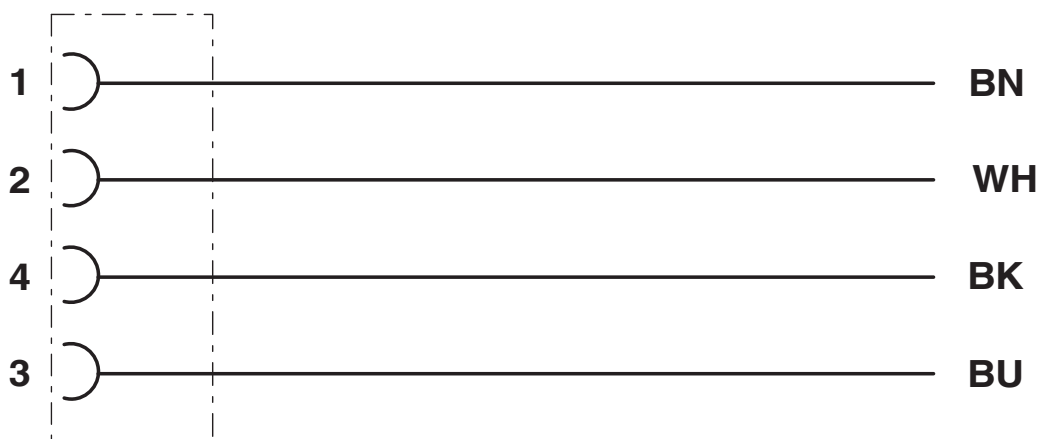
M12 x 1 socket, angled

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

### 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.) | No substance above 0.1 wt% |
|-------------------------------------|----------------------------|

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