

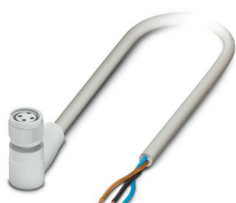
# SAC-3P- 5,0-600/M 8FR-2L FB - Sensor/actuator cable



1406488

<https://www.phoenixcontact.com/nl/products/1406488>

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Sensor/actuator cable, 3-position, PP-EPDM halogen-free, gray RAL 7035, free cable end, on Socket angled M8, coding: A, with 2 LEDs, cable length: 5 m, Hygienic design, with plastic knurl

## Your advantages

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

## Commercial data

|                                      |               |
|--------------------------------------|---------------|
| Item number                          | 1406488       |
| Packing unit                         | 1 pc          |
| Minimum order quantity               | 1 pc          |
| Sales key                            | AF1BBA        |
| Product key                          | AF1BBA        |
| GTIN                                 | 4046356780551 |
| Weight per piece (including packing) | 106,7 g       |
| Weight per piece (excluding packing) | 67,28 g       |
| Customs tariff number                | 85444290      |
| Country of origin                    | PL            |

## Technical data

### Product properties

|                      |                          |
|----------------------|--------------------------|
| Application          | Food processing industry |
| Number of positions  | 3                        |
| 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 | Polypropylene |

### 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         | 2 LEDs |
| Status display present | yes    |

### Connection data

#### Conductor connection

|                   |                        |
|-------------------|------------------------|
| Tightening torque | 0.2 Nm (M8 connectors) |
|-------------------|------------------------|

### Connector

#### Connection 1

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

#### Connection 2

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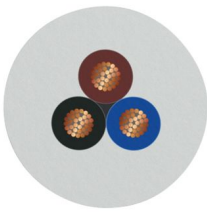
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|                     |                  |
|---------------------|------------------|
| Type                | Socket angled M8 |
| Number of positions | 3                |
| Coding type         | A                |

## Cable/line

|              |     |
|--------------|-----|
| Cable length | 5 m |
|--------------|-----|

Halogen-free PP gray [600]

|                                               |                                                                                                                                        |
|-----------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------|
| Dimensional drawing                           |                                                      |
| Cable weight                                  | 19 kg/km                                                                                                                               |
| Number of positions                           | 3                                                                                                                                      |
| Shielded                                      | no                                                                                                                                     |
| Cable type                                    | Halogen-free PP gray [600]                                                                                                             |
| Conductor structure signal line               | 32x 0.10 mm                                                                                                                            |
| AWG signal line                               | 24                                                                                                                                     |
| Conductor cross-section                       | 3x 0.25 mm <sup>2</sup> (Signal line)                                                                                                  |
| Wire diameter incl. insulation                | 1.17 mm ±0.02 mm (Signal line)                                                                                                         |
| External cable diameter                       | 4.20 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, blue, black                                                                                                                     |
| Thickness, insulation                         | ≥ 0.21 mm (Core insulation)                                                                                                            |
| Thickness, outer sheath                       | approx. 0.80 mm                                                                                                                        |
| Overall twist                                 | 3 wires, twisted                                                                                                                       |
| Length of twist, overall twist                | 40 mm                                                                                                                                  |
| Max. conductor resistance                     | 78 Ω/km (at 20 °C)                                                                                                                     |
| Insulation resistance                         | ≥ 1 GΩ*km (at 20 °C)                                                                                                                   |
| Nominal voltage, cable                        | ≤ 300 V AC                                                                                                                             |
| Test voltage                                  | ≥ 3000 V AC (Spark test)                                                                                                               |
| Minimum bending radius, fixed installation    | 5 x D                                                                                                                                  |
| Minimum bending radius, flexible installation | 10 x D                                                                                                                                 |
| Smallest bending radius, fixed installation   | 21 mm                                                                                                                                  |
| Smallest bending radius, movable installation | 42 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> |

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|                                 |                                                                                                         |
|---------------------------------|---------------------------------------------------------------------------------------------------------|
| Dynamic load capacity (torsion) | Torsion: $\pm 270$ °/m, Torsion cycles: $\geq 4000000$ , Torsional frequency: max.25 Torsion cycles/min |
| Halogen-free                    | in accordance with DIN VDE 0472 part 815                                                                |
|                                 | in accordance with DIN EN 50267-2-1                                                                     |
| Other resistance                | Resistant to cold bending and cold impacts (according to DIN EN 60811-1-4 (-40 °C))                     |
| Special properties              | FDA compliant according to FDA 21 CFR 177.2600                                                          |
|                                 | highly flexible                                                                                         |
|                                 | Flexible cable conduit capable                                                                          |
| 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) (male connector/female connector) | -40 °C ... 105 °C (Plug / socket) |

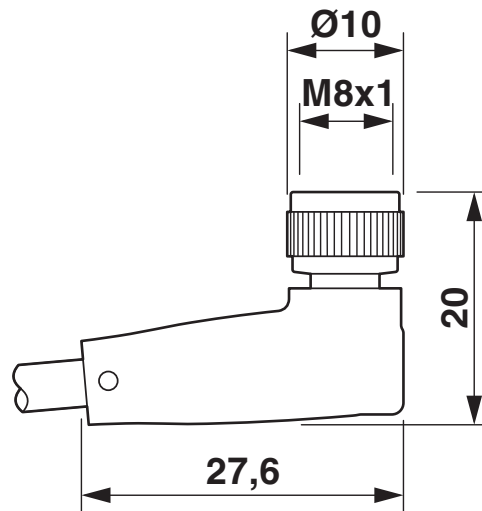
## Standards and regulations

### M8

|                          |                      |
|--------------------------|----------------------|
| Standard designation     | M8 connector         |
| Standards/specifications | IEC 61076-2-104      |
| Standard designation     | Material conformance |
| Standards/specifications | FDA 21 CFR 177.2600  |

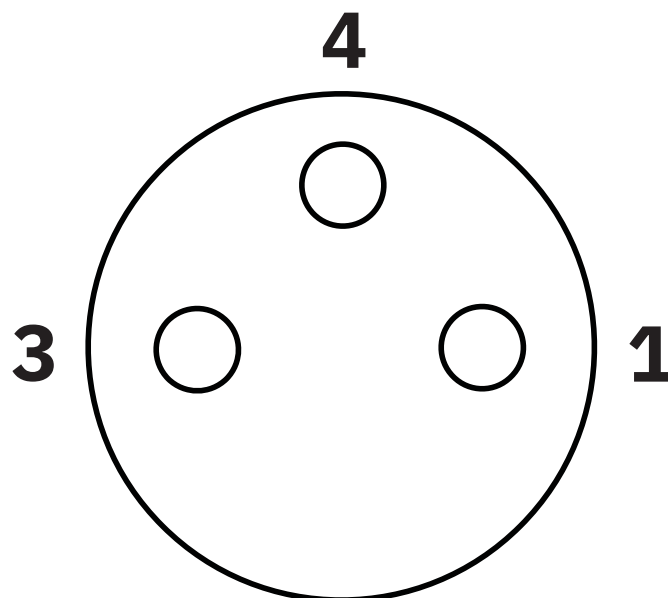
## Drawings

Dimensional drawing



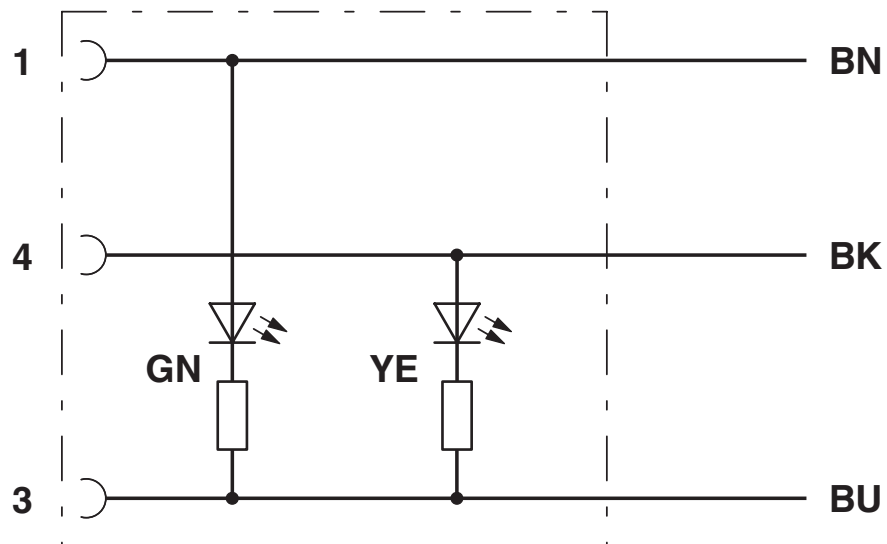
Socket M8 x 1, angled

Schematic diagram



Pin assignment M8 socket, 3-pos., view female side

Circuit diagram



Contact assignment of M8/M12 socket with two LEDs

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## Approvals

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**EAC-RoHS**

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

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## Classifications

### ECLASS

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

### ETIM

|           |          |
|-----------|----------|
| ETIM 10.0 | 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.) | No substance above 0.1 wt% |
|-------------------------------------|----------------------------|

### EF3.1 Climate Change

|         |              |
|---------|--------------|
| CO2e kg | 1,49 kg CO2e |
|---------|--------------|