# SAC-4P-MS/1,5-600/M 8FR-2L FB - Sensor/actuator cable

1406868

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Sensor/actuator cable, 4-position, PP-EPDM halogen-free, gray RAL 7035, Plug straight M8, coding: A, with 2 LEDs, on Socket angled M8, coding: A, with 2 LEDs, cable length: 1.5 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 | 1406868 |
| Packing unit | 1 pc |
| Minimum order quantity | 1 pc |
| Sales key | BF01 |
| Product key | AF1BCA |
| GTIN | 4046356781909 |
| Weight per piece (including packing) | 47 g |
| Weight per piece (excluding packing) | 47 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 |

### Material specifications

| | |
|---|---|
| Material grommet GRP | 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 | ≥ 100 MΩ |
| Nominal voltage $U_N$ | 24 V DC |
| Nominal current $I_N$ | 4 A |

### Mechanical properties

Mechanical data

| | |
|---|---|
| Insertion/withdrawal cycles | ≥ 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 | Plug straight M8 |
| Number of positions | 4 |
| Coding type | A |

Connection 2

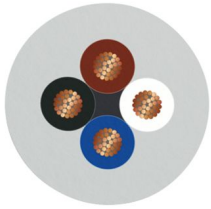
| | |
|---|---|
| Type | Socket angled M8 |

| | |
|---|---|
| Number of positions | 4 |
| Coding type | A |

## Cable/line

| | |
|---|---|
| Cable length | 1.5 m |

Halogen-free PP gray [600]

| | |
|---|---|
| Dimensional drawing |  |
| Cable weight | 23 kg/km |
| Number of positions | 4 |
| Shielded | no |
| Cable type | Halogen-free PP gray [600] |
| Conductor structure signal line | 32x 0.10 mm |
| AWG signal line | 24 |
| Conductor cross-section | 4x 0.25 mm² (Signal line) |
| Wire diameter incl. insulation | 1.17 mm ±0.02 mm (Signal line) |
| External cable diameter | 4.50 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 (Core insulation) |
| Thickness, outer sheath | approx. 0.80 mm |
| Overall twist | 4 wires, twisted |
| Length of twist, overall twist | 44 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 | 23 mm |
| Smallest bending radius, movable installation | 45 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/s² |
| Dynamic load capacity (torsion) | Torsion: ±270 °/m, Torsion cycles: ≥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) |

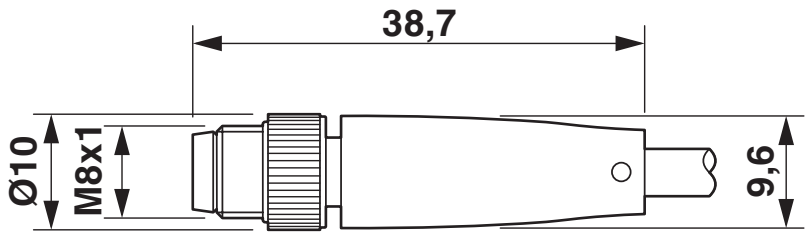
## Standards and regulations

M8

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

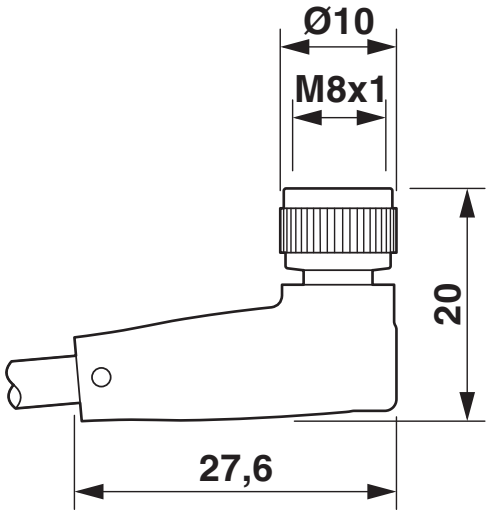
## Drawings

Dimensional drawing



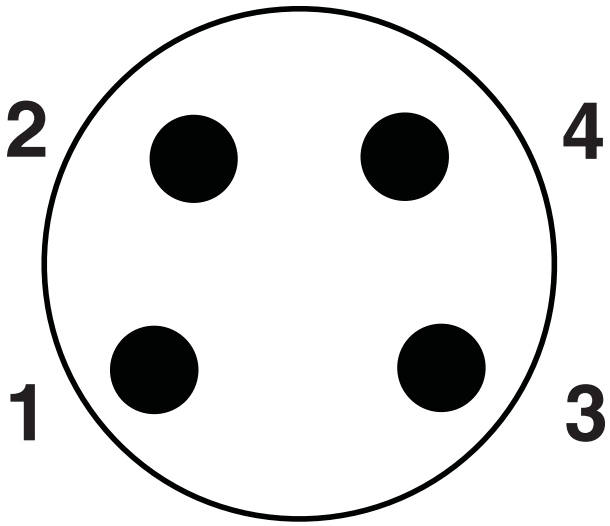

M8 x 1 male plug, straight version

Dimensional drawing



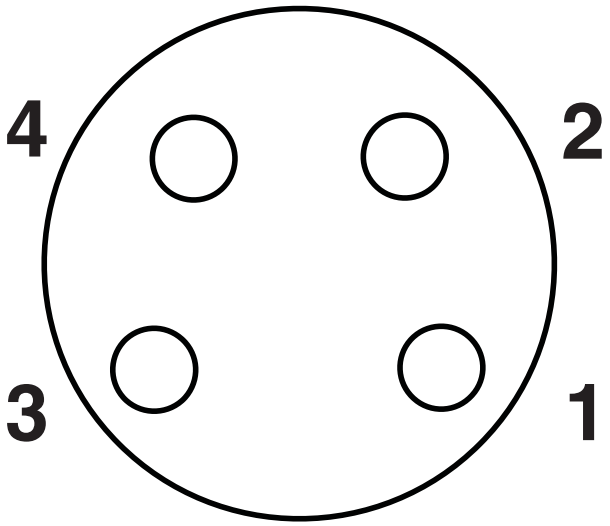

Socket M8 x 1, angled

Schematic diagram



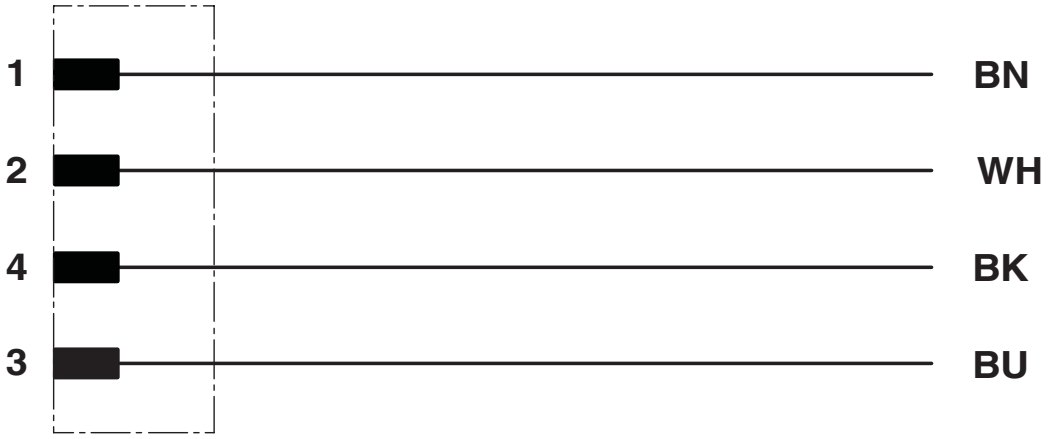

Pin assignment M8 plug, 4-pos., view male side

Schematic diagram



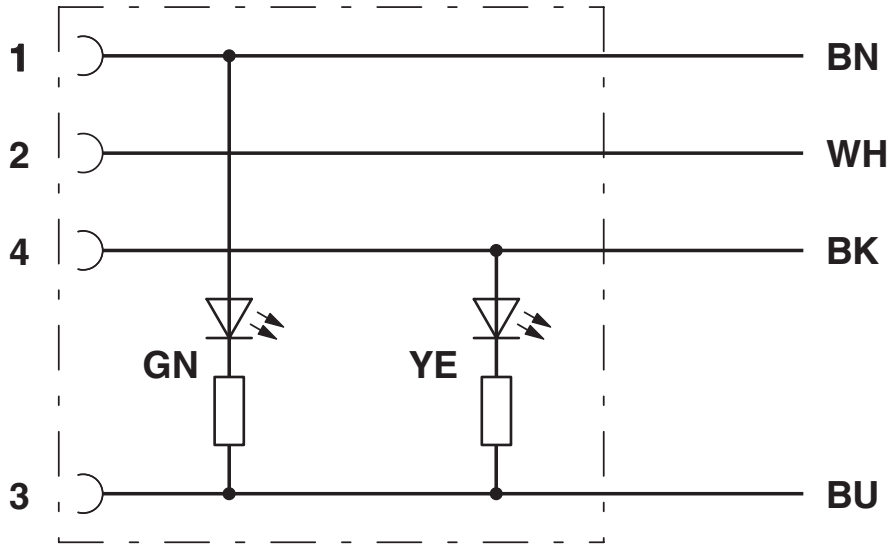

Pin assignment M8 socket, 4-pos., view female side

Circuit diagram




Contact assignment of the M12 plug

Circuit diagram




Contact assignment of the M8 socket with LED

## Approvals

To download certificates, visit the product detail page: https://www.phoenixcontact.com/us/products/1406868

**EAC-RoHS**
Approval ID: RU D-DE.HB35.B.00387

## 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 | 0.563 kg CO2e |


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Phoenix Contact USA
586 Fulling Mill Road
Middletown, PA 17057, United States
(+717) 944-1300
info@phoenixcon.com