# SAC-8P-M 8MS/ 1,5-PUR - Sensor/actuator cable

1404178

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Sensor/actuator cable, 8-position, PUR halogen-free, black-gray RAL 7021, Plug straight M8, coding: A, on free cable end, cable length: 1.5 m

## Your advantages

- Easy and safe: 100 % electrically tested plug-in components
- Save space – with high-pos. connectors

## Commercial data

| | |
|---|---|
| Item number | 1404178 |
| Packing unit | 1 pc |
| Minimum order quantity | 1 pc |
| Sales key | BF01 |
| Product key | AF1BGA |
| GTIN | 4046356680912 |
| Weight per piece (including packing) | 54.9 g |
| Weight per piece (excluding packing) | 52.8 g |
| Customs tariff number | 85444290 |
| Country of origin | PL |

# Technical data

## Product properties

| | |
|---|---|
| Product type | Sensor/actuator cable |
| Application | Standard |
| Number of positions | 8 |
| No. of cable outlets | 1 |
| Shielded | no |
| Coding | A |

### Insulation characteristics

| | |
|---|---|
| Degree of pollution | 3 |

## Material specifications

| | |
|---|---|
| Flammability rating according to UL 94 | HB |
| Material of grip body | TPU, hardly inflammable, self-extinguishing |
| Contact material | CuSn |
| Contact surface material | Ni/Au |
| Contact carrier material | TPU GF |
| Material for screw connection | Zinc die-cast, nickel-plated |

## Electrical properties

| | |
|---|---|
| Insulation resistance | ≥ 100 MΩ |
| Nominal voltage $U_N$ | 30 V AC |
| | 30 V DC |
| Nominal current $I_N$ | 1.5 A |

## Mechanical properties

### Mechanical data

| | |
|---|---|
| Insertion/withdrawal cycles | ≥ 100 |

## Signaling

| | |
|---|---|
| Status display | no |
| Status display present | no |

## Connection data

### Conductor connection

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

## Connector

### Connection 1

| | |
|---|---|
| Type | Plug straight M8 |
| Number of positions | 8 |

| | |
|---|---|
| Coding type | A |

Connection 2

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

## Cable/line

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

PUR halogen-free black [PUR]

| | |
|---|---|
| Dimensional drawing |  |
| Cable weight | 31.4 kg/km |
| UL AWM Style | 20549 |
| Number of positions | 8 |
| Shielded | no |
| Cable type | PUR halogen-free black [PUR] |
| Conductor structure signal line | 18x 0.10 mm |
| AWG signal line | 26 |
| Conductor cross-section | 8x 0.14 mm² (Signal line) |
| Wire diameter incl. insulation | 1 mm ±0.02 mm (Signal line) |
| External cable diameter | 5.10 mm ±0.15 mm |
| Outer sheath, material | PUR |
| External sheath, color | black-gray RAL 7021 |
| Conductor material | Bare Cu litz wires |
| Material, filler | PE |
| Material wire insulation | PP |
| Single wire, color | white, brown, green, yellow, gray, pink, blue, red |
| Thickness, insulation | ≥ 0.21 mm (Signal line) |
| | ≥ 0.38 mm (Outer cable sheath) |
| Overall twist | 8 wires around filler to the core |
| Length of twist, overall twist | 58 mm |
| Max. conductor resistance | 139 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 | 25.5 mm |
| Smallest bending radius, movable installation | 51 mm |

| | |
|---|---|
| Dynamic load capacity (bending) | Max. bending cycles: 10000000, Bending radius: 51 mm, Traversing path: 10 m, Traversing rate: 3 m/s, Acceleration: 10 m/s² |
| Halogen-free | in accordance with DIN VDE 0472 part 815 |
| | in accordance with DIN EN 50267-2-1 |
| Flame resistance | according to UL 758/1581 (horizontal) |
| | in accordance with UL 758/1581 FT2 |
| Resistance to oil | According to DIN EN 60811-2-1, 168 h at 100°C |
| Other resistance | hydrolysis and microbe resistant |
| | Resistant to salt water |
| | Low adhesion |
| | abrasion-resistant |
| | partly UV-resistant (in accordance with DIN EN ISO 4892-2-A) |
| Ambient temperature (operation) | -40 °C ... 80 °C (cable, fixed installation) |
| | -25 °C ... 80 °C (Cable, flexible installation) |

## Environmental and real-life conditions

Ambient conditions

| | |
|---|---|
| Degree of protection | IP65 |
| | IP67 |
| | IP68 |
| Ambient temperature (operation) (male connector/female connector) | -25 °C ... 85 °C (Plug / socket) |

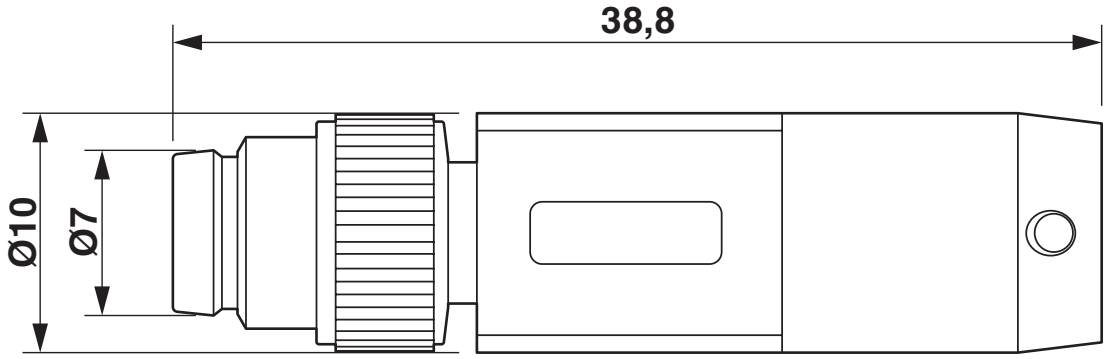
## Standards and regulations

M8

| | |
|---|---|
| Standard designation | M8 connector |
| Standards/specifications | IEC 61076-2-104 |

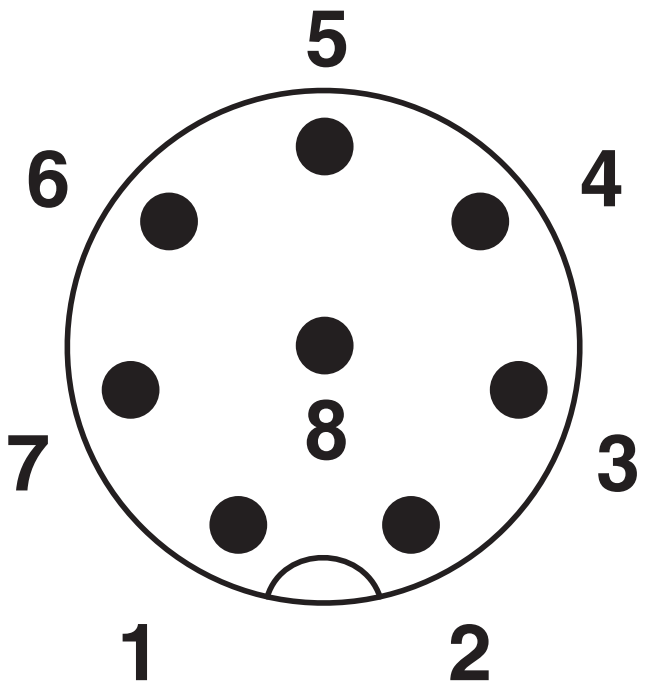
## Drawings

Dimensional drawing



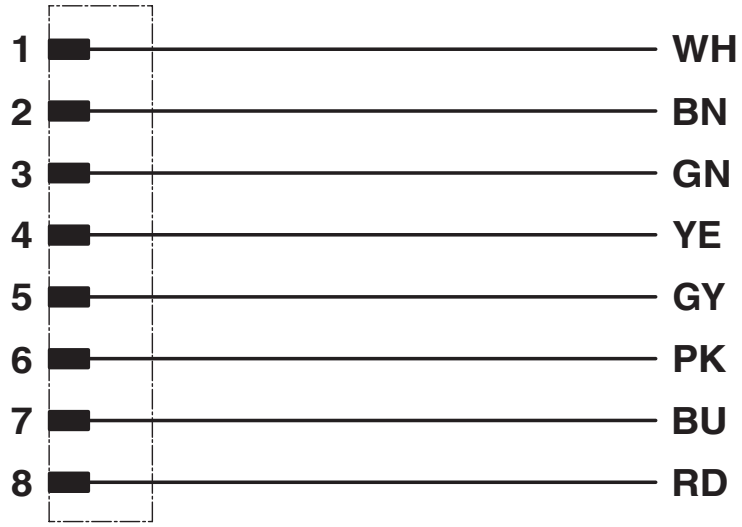

M8 x 1 male plug, straight version

Schematic diagram




M8 plug pin assignment, 8-pos., view of pin side

Circuit diagram




Contact assignment of the M8 plug

## Approvals

To download certificates, visit the product detail page: https://www.phoenixcontact.com/us/products/1404178

**UL Listed**
Approval ID: FILE E 221474

| | Nominal voltage $U_N$ | Nominal current $I_N$ | Cross section AWG | Cross section $mm^2$ |
|---|---|---|---|---|
| keine | | | | |
| | 30 V | 1.5 A | - | - |

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|---|---|---|---|---|
| keine | | | | |
| | 30 V | 1.5 A | - | - |

**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% |

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