

SAC-6P-M8MS/3,7-PUR/M8FS OBS - Sensor/actuator cable



1415744

<https://www.phoenixcontact.com/us/products/1415744>

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Sensor/actuator cable, 6-position, PUR halogen-free, black-gray RAL 7021, Plug straight M8, coding: A, on Socket straight M8, cable length: 3.7 m

Commercial data

| | |
|--------------------------------------|--------------------------------|
| Item number | 1415744 |
| Packing unit | 1 pc |
| Minimum order quantity | 1 pc |
| Note | Made to order (non-returnable) |
| Sales key | BF19 |
| Product key | AF1BGA |
| GTIN | 4055626049625 |
| Weight per piece (including packing) | 130 g |
| Weight per piece (excluding packing) | 130 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 | 6 |
| No. of cable outlets | 1 |
| Shielded | no |
| Coding | A |

Insulation characteristics

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

Material specifications

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

Electrical properties

| | |
|-----------------------|----------------------------|
| Insulation resistance | $\geq 100 \text{ M}\Omega$ |
| 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 |

Connector

Connection 1

| | |
|---------------------|------------------|
| Type | Plug straight M8 |
| Number of positions | 6 |
| Coding type | A |

Connection 2

| | |
|---------------------|--------------------|
| Type | Socket straight M8 |
| Number of positions | 6 |


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Cable/line

| | |
|---|--|
| Cable length | 3.7 m |
| PUR halogen-free black [PUR] | |
| Dimensional drawing |  |
| Cable weight | 34 kg/km |
| Number of positions | 6 |
| Shielded | no |
| Cable type | PUR halogen-free black [PUR] |
| Conductor structure signal line | 32x 0.10 mm |
| AWG signal line | 24 |
| Conductor cross-section | 6x 0.25 mm ² (Signal line) |
| Wire diameter incl. insulation | 1.17 mm ±0.02 mm |
| External cable diameter | 5 mm 5.00 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 | brown, white, blue, black, gray, pink |
| Thickness, insulation | ≥ 0.21 mm (Core insulation) |
| Thickness, outer sheath | approx. 0.70 mm |
| Overall twist | Six cores around the filler to the core |
| Max. conductor resistance | 78 Ω/km (at 20 °C) |
| Insulation resistance | ≥ 100 MΩ*km (at 20 °C) |
| 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 | 25 mm |
| Smallest bending radius, movable installation | 50 mm |
| Dynamic load capacity (bending) | Max. bending cycles: 10000000, Bending radius: 50 mm, Traversing path: 10 m, Traversing rate: 3 m/s, Acceleration: 10 m/s ² |
| Dynamic load capacity (torsion) | Torsion: ±180 °/m, Torsion cycles: ≥5000000, Torsional frequency: 35 cycles/min. |

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| | |
|---------------------------------|---|
| Halogen-free | in accordance with DIN VDE 0472 part 815 |
| Flame resistance | in accordance with DIN UL-Style 20549 |
| Resistance to oil | in accordance with DIN EN 60811-2-1 |
| Other resistance | Highly resistant to acids, alkaline solutions and solvents |
| | hydrolysis and microbe resistant |
| | partly UV-resistant (in accordance with DIN EN ISO 4892-2-A) |
| Special properties | Flexible cable conduit capable |
| | Silicone-free |
| | Free of substances which would hinder coating with paint or varnish |
| Ambient temperature (operation) | -40 °C ... 80 °C (cable, fixed installation) |
| | -5 °C ... 80 °C (Cable, flexible installation) |

Environmental and real-life conditions

Ambient conditions

| | |
|---|--|
| Degree of protection | IP65 |
| | IP67 |
| Ambient temperature (operation) (male connector/female connector) | -25 °C ... 90 °C (Plug / socket) |
| Ambient temperature (operation) (Cable, fixed installation) | -40 °C ... 80 °C (cable, fixed installation) |
| Ambient temperature (operation) (Cable, flexible installation) | -5 °C ... 80 °C (Cable, flexible installation) |

Standards and regulations

M8

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

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Drawings

Dimensional drawing



M8 x 1 male plug, straight version

Schematic diagram



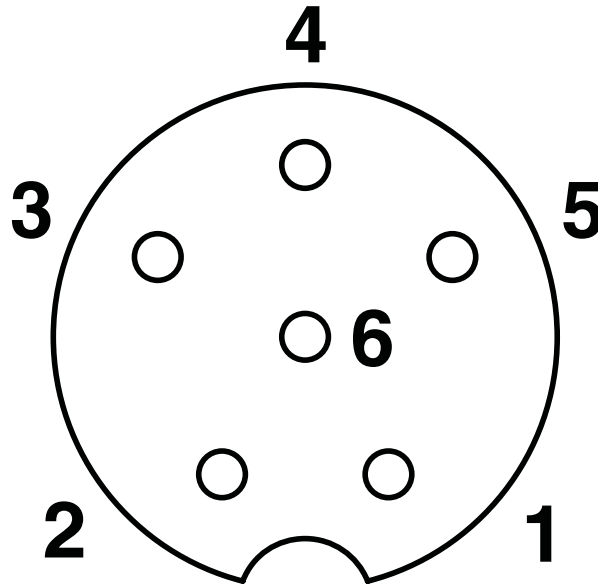
Pin assignment M8 plug, 6-pos., view male side

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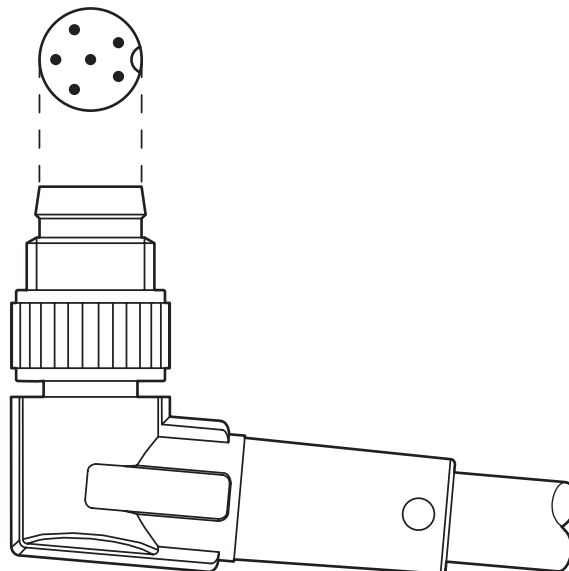
<https://www.phoenixcontact.com/us/products/1415744>

Schematic diagram



Pin assignment M8 socket, 6-pos.

Schematic diagram



Layout of connector pin assignments

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Circuit diagram



Contact assignment of the M8 plug

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Approvals

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|  UL Listed Approval ID: FILE E 221474 | | | | |
|--|-----------------------|-----------------------|-------------------|-----------------------------|
| | Nominal voltage U_N | Nominal current I_N | Cross section AWG | Cross section mm^2 |
| keine | | | | |
| | 125 V | 4 A | - | - |

|  cUL Listed Approval ID: FILE E 221474 | | | | |
|---|-----------------------|-----------------------|-------------------|-----------------------------|
| | Nominal voltage U_N | Nominal current I_N | Cross section AWG | Cross section mm^2 |
| keine | | | | |
| | 125 V | 4 A | - | - |

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Classifications

ECLASS

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

ETIM

| | |
|-----------|----------|
| ETIM 10.0 | 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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