

SAC-8P-M 8MS/ 3,0-PUR SH - Sensor/actuator cable



1404140

<https://www.phoenixcontact.com/us/products/1404140>

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Sensor/actuator cable, 8-position, PUR halogen-free, black-gray RAL 7021, shielded, Plug straight M8, coding: A, on free cable end, cable length: 3 m

Your advantages

- Easy and safe: 100 % electrically tested plug-in components
- Save space – with high-pos. connectors
- Reliable signal transmission – 360° shielding in environments with electromagnetic interference

Commercial data

| | |
|--------------------------------------|--------------------------------|
| Item number | 1404140 |
| Packing unit | 1 pc |
| Minimum order quantity | 1 pc |
| Note | Made to order (non-returnable) |
| Sales key | BF01 |
| Product key | AF1BNA |
| GTIN | 4046356680592 |
| Weight per piece (including packing) | 148.5 g |
| Weight per piece (excluding packing) | 142 g |
| Customs tariff number | 85444290 |
| Country of origin | PL |

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Technical data

Product properties

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

Insulation characteristics

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

Material specifications

| | |
|--|---|
| Flammability rating according to UL 94 | HB |
| Seal material | NBR |
| 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 | $\geq 100 \text{ M}\Omega$ |
| 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 |

Connection data

Conductor connection

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

Connector

Connection 1

| | |
|------|------------------|
| Type | Plug straight M8 |
|------|------------------|

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| | |
|---------------------|---|
| Number of positions | 8 |
| Coding type | A |


Connection 2

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

Cable/line

| | |
|--------------|-----|
| Cable length | 3 m |
|--------------|-----|

PUR halogen-free black [PUR]

| | |
|---|--|
| Dimensional drawing |  |
| Cable weight | 45 kg/km |
| UL AWM Style | 20549 |
| Number of positions | 8 |
| Shielded | yes |
| 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 mm ² (Signal line) |
| Wire diameter incl. insulation | 1 mm ±0.02 mm (Signal line) |
| External cable diameter | 5.90 mm ±0.2 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 |
| Optical shield covering | 85 % |
| 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) |
| Test voltage Core/Shield | ≥ 2000.00 V AC (for 60 s) |
| Smallest bending radius, fixed installation | 29.5 mm |

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| | |
|---|---|
| Smallest bending radius, movable installation | 59 mm |
| Dynamic load capacity (bending) | Max. bending cycles: 2000000, Bending radius: 59 mm, Traversing path: 10 m, Traversing rate: 3 m/s, Acceleration: 10 m/s ² |
| Dynamic load capacity (torsion) | Torsion: $\pm 180^\circ/\text{m}$, Torsion cycles: ≥ 1000000 , Torsional frequency: 35 cycles/min. |
| 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 | in accordance with DIN EN 60811-2-1 |
| Other resistance | hydrolysis and microbe resistant |
| | Resistant to salt water |
| | Low adhesion |
| | abrasion-resistant |
| Ambient temperature (operation) | partly UV-resistant (in accordance with DIN EN ISO 4892-2-A) |
| | -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 |
| Ambient temperature (operation) (male connector/female connector) | -25 °C ... 85 °C (Plug / socket) |

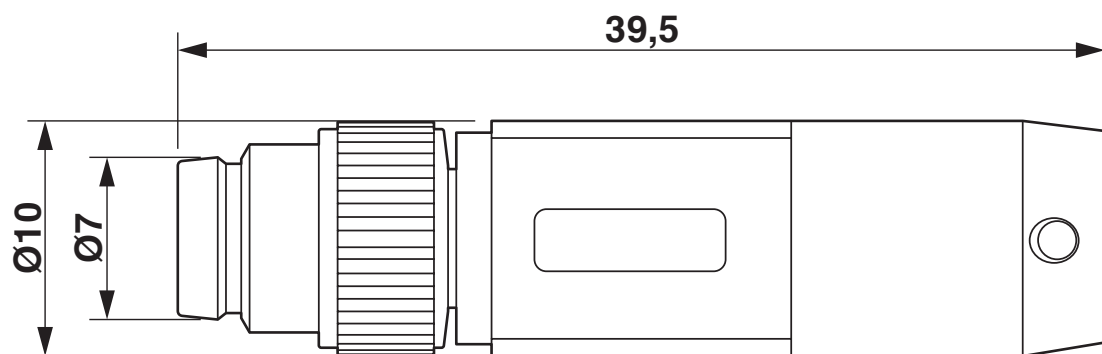
Standards and regulations

M8

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

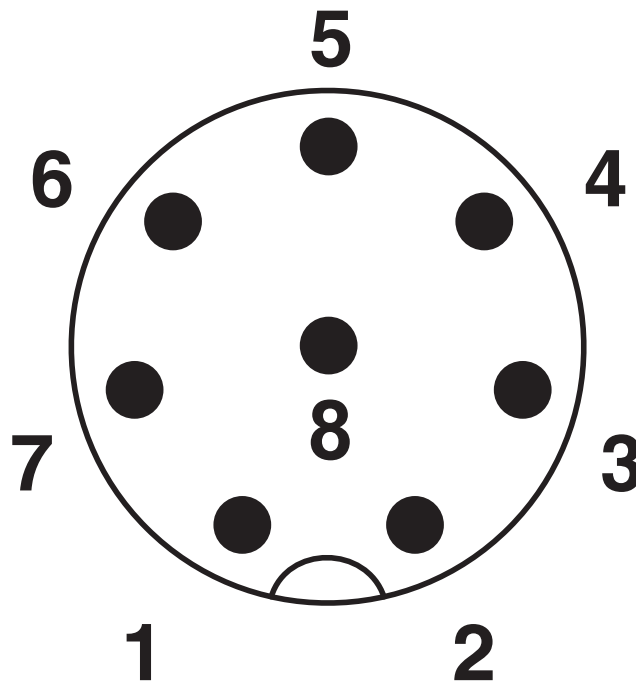
Drawings

Dimensional drawing



M8 x 1 male plug, straight version

Schematic diagram



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

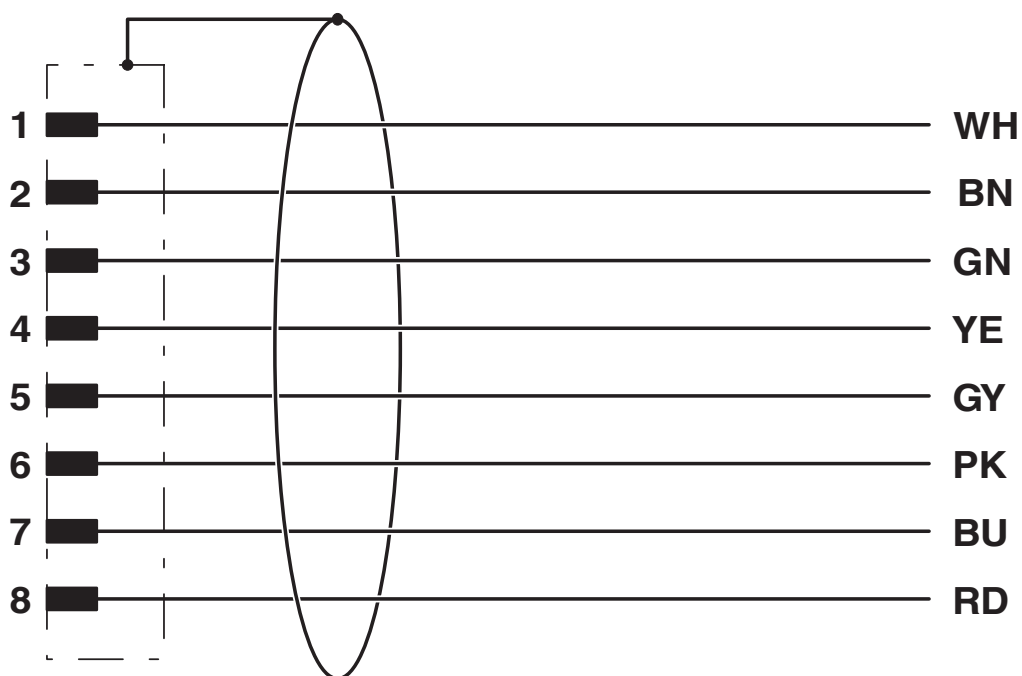
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Circuit diagram



Contact assignment of the M8 plug

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Approvals

To download certificates, visit the product detail page: <https://www.phoenixcontact.com/us/products/1404140>

|  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 | - | - |

|  cUL 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 | - | - |

|  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 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% |
|-------------------------------------|----------------------------|

EF3.0 Climate Change

| | |
|---------|---------------|
| CO2e kg | 2.594 kg CO2e |
|---------|---------------|

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