

# SAC-8P-M12MS/ 0,5-PUR SH - Sensor/actuator cable



1529962

<https://www.phoenixcontact.com/us/products/1529962>

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Sensor/actuator cable, 8-position, PUR halogen-free, black-gray RAL 7021, shielded, Plug straight M12, coding: A, on free cable end, cable length: 0.5 m

## Commercial data

|                                      |                                |
|--------------------------------------|--------------------------------|
| Item number                          | 1529962                        |
| Packing unit                         | 5 pc                           |
| Minimum order quantity               | 5 pc                           |
| Note                                 | Made to order (non-returnable) |
| Sales key                            | BF03                           |
| Product key                          | AF1CMA                         |
| GTIN                                 | 4017918989842                  |
| Weight per piece (including packing) | 52.16 g                        |
| Weight per piece (excluding packing) | 52.16 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  | 8                     |
| No. of cable outlets | 1                     |
| Shielded             | yes                   |
| 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 $I_N$ | 2 A                        |

### Mechanical properties

#### Mechanical data

|                             |            |
|-----------------------------|------------|
| Insertion/withdrawal cycles | $\geq 100$ |
|-----------------------------|------------|

### Signaling

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

### Connector

#### Connection 1

|                     |                   |
|---------------------|-------------------|
| Type                | Plug straight M12 |
| Number of positions | 8                 |
| Coding type         | A                 |

#### Connection 2

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

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## Cable/line

|   |  |
|---|--|
| Cable length                                  | 0.5 m  |
| PUR halogen-free black [PUR]                  |  |
| Dimensional drawing                           |  |
| Cable weight                                  | 53 kg/km   |
| UL AWM Style                                  | 20549 / 10493 (80°C/300 V)   |
| Number of positions                           | 8  |
| Shielded                                      | yes  |
| Cable type                                    | PUR halogen-free black [PUR]   |
| Conductor structure signal line               | 32x 0.10 mm  |
| AWG signal line                               | 24   |
| Conductor cross section                       | 8x 0.25 mm <sup>2</sup> (Signal line)  |
| Wire diameter incl. insulation                | 1.17 mm ±0.02 mm   |
| 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 wire insulation                      | PP   |
| Single wire, color                            | brown, white, green, yellow, gray, pink, blue, red   |
| Thickness, insulation                         | approx. 0.20 mm  |
| Thickness, outer sheath                       | approx. 0.50 mm  |
| Overall twist                                 | 8 wires around filler to the core  |
| Optical shield covering                       | 85 %   |
| 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)   |
| Test voltage Core/Shield                      | ≥ 2000.00 V AC (for 60 s)  |
| Minimum bending radius, fixed installation    | 5 x D  |
| Minimum bending radius, flexible installation | 10 x D   |
| Smallest bending radius, fixed installation   | 30 mm  |
| Smallest bending radius, movable installation | 59 mm  |
| Dynamic load capacity (bending)               | Max. bending cycles: 5000000, Bending radius: 10 x D, Traversing path: 10 m, Traversing rate: 3 m/s, Acceleration: 10 m/s <sup>2</sup> |
| Dynamic load capacity (torsion)               | Torsion: ±180 °/m, Torsion cycles: ≥1000000, Torsional   |

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|                                 |  |
|---------------------------------|--|
|                                 | frequency: 35 cycles/min.                                    |
| Halogen-free                    | in accordance with DIN VDE 0472 part 815                     |
|                                 | according to IEC 60754-1                                     |
| Flame resistance                | in acc. with UL FT-2   |
|                                 | according to UL 758/1581 (horizontal)                        |
|                                 | in accordance with UL 758/1581 FT2                           |
|                                 | According to DIN EN 60332-2-2 (20 s)                         |
| Resistance to oil               | in accordance with IEC 60811-404                             |
| Other resistance                | hydrolysis and microbe resistant                             |
|                                 | Resistant to salt water                                      |
|                                 | low-abrasion   |
|                                 | partly UV-resistant (in accordance with DIN EN ISO 4892-2-A) |
| Special properties              | Flexible cable conduit capable                               |
| Ambient temperature (operation) | -40 °C ... 80 °C (cable, fixed installation)                 |
|                                 | -25 °C ... 80 °C (Cable, flexible installation)              |

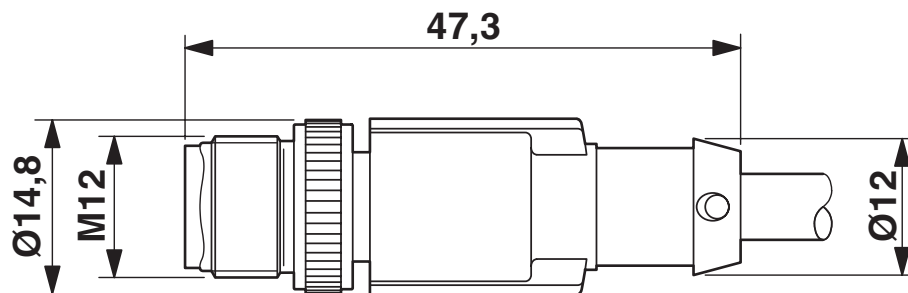
## Environmental and real-life conditions

### Ambient conditions

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

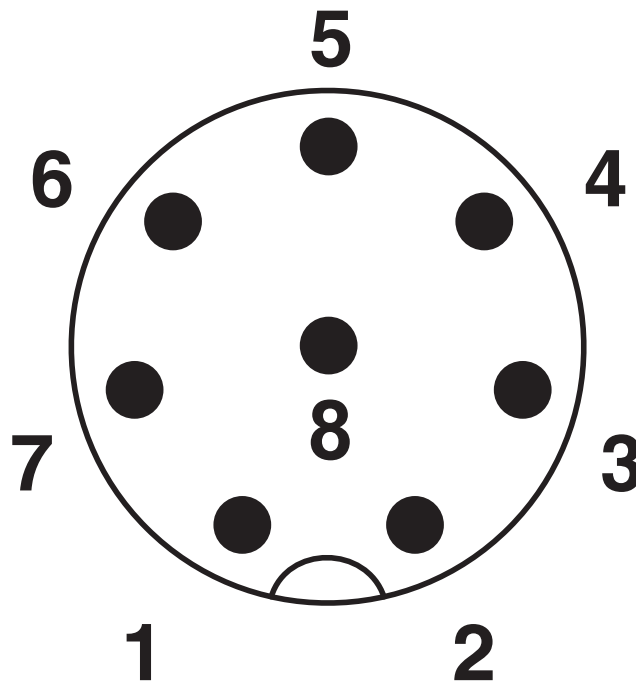
## Drawings

Dimensional drawing



Plug, M12 x 1, straight, shielded

Schematic diagram



Pin assignment M12 plug, 8-pos., A-coded, view plug side

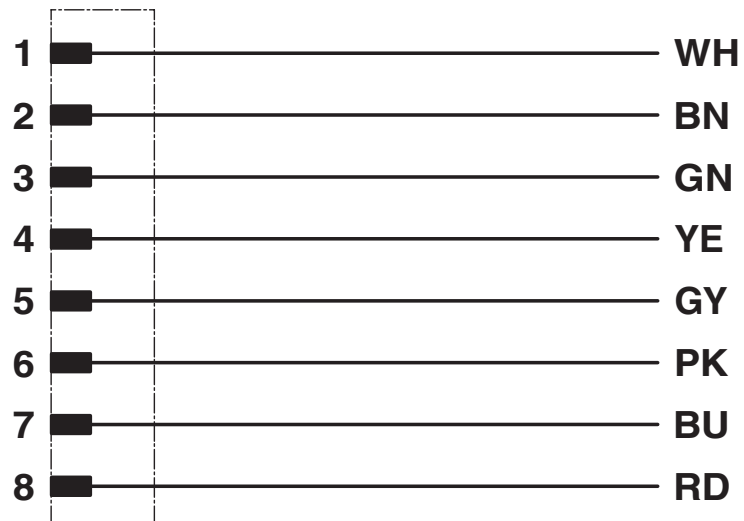
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Circuit diagram



Contact assignment of the M12 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 $\text{mm}^2$ |
|--|-----------------------|-----------------------|-------------------|-----------------------------|
|  | 30 V                  | 2 A                   | -                 | -                           |



### cUL Listed

Approval ID: FILE E 221474

|  | Nominal voltage $U_N$ | Nominal current $I_N$ | Cross section AWG | Cross section $\text{mm}^2$ |
|--|-----------------------|-----------------------|-------------------|-----------------------------|
|  | 30 V                  | 2 A                   | -                 | -                           |



### EAC-RoHS

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

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## Classifications

### ECLASS

|             |          |
|-------------|----------|
| ECLASS-13.0 | 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% |
|-------------------------------------|----------------------------|

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