

# SAC-8P- 1,5-PUR/M12FS SH - Sensor/actuator cable



1522862

<https://www.phoenixcontact.com/us/products/1522862>

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Sensor/actuator cable, 8-position, PUR halogen-free, black-gray RAL 7021, shielded (Advanced Shielding Technology), free cable end, on Socket straight M12, coding: A, cable length: 1.5 m

## Your advantages

- Easy and safe: 100 % electrically tested plug-in components
- Reliable signal transmission – 360° shielding in environments with electromagnetic interference

## Commercial data

|                                      |               |
|--------------------------------------|---------------|
| Item number                          | 1522862       |
| Packing unit                         | 1 pc          |
| Minimum order quantity               | 1 pc          |
| Sales key                            | BF03          |
| Product key                          | AF1CMA        |
| GTIN                                 | 4017918957643 |
| Weight per piece (including packing) | 98.9 g        |
| Weight per piece (excluding packing) | 95.1 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

|                      |    |
|----------------------|----|
| Overvoltage category | II |
| 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                       | 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 |

### Connection data

#### Conductor connection

|                   |                        |
|-------------------|------------------------|
| Tightening torque | 0.4 Nm (M12 connector) |
|-------------------|------------------------|

### Connector

#### Connection 1

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

## Connection 2

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

## Cable/line

|              |       |
|--------------|-------|
| Cable length | 1.5 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 mm² (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                                                                              |

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|                                               |                                                                                                                                             |
|-----------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------|
| 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 frequency: 35 cycles/min.                                                            |
| Halogen-free                                  | in accordance with DIN VDE 0472 part 815<br>according to IEC 60754-1                                                                        |
| Flame resistance                              | in acc. with UL FT-2<br>according to UL 758/1581 (horizontal)<br>in accordance with UL 758/1581 FT2<br>According to DIN EN 60332-2-2 (20 s) |
| Resistance to oil                             | in accordance with IEC 60811-404                                                                                                            |
| Other resistance                              | hydrolysis and microbe resistant<br>Resistant to salt water<br>low-abrasion<br>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)<br>-25 °C ... 80 °C (Cable, flexible installation)                                             |

## Environmental and real-life conditions

### Ambient conditions

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

## Standards and regulations

|                          |                 |
|--------------------------|-----------------|
| Standard designation     | M12 connector   |
| Standards/specifications | IEC 61076-2-101 |

## Drawings

Dimensional drawing



M12 x 1 socket, straight, shielded

Schematic diagram



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

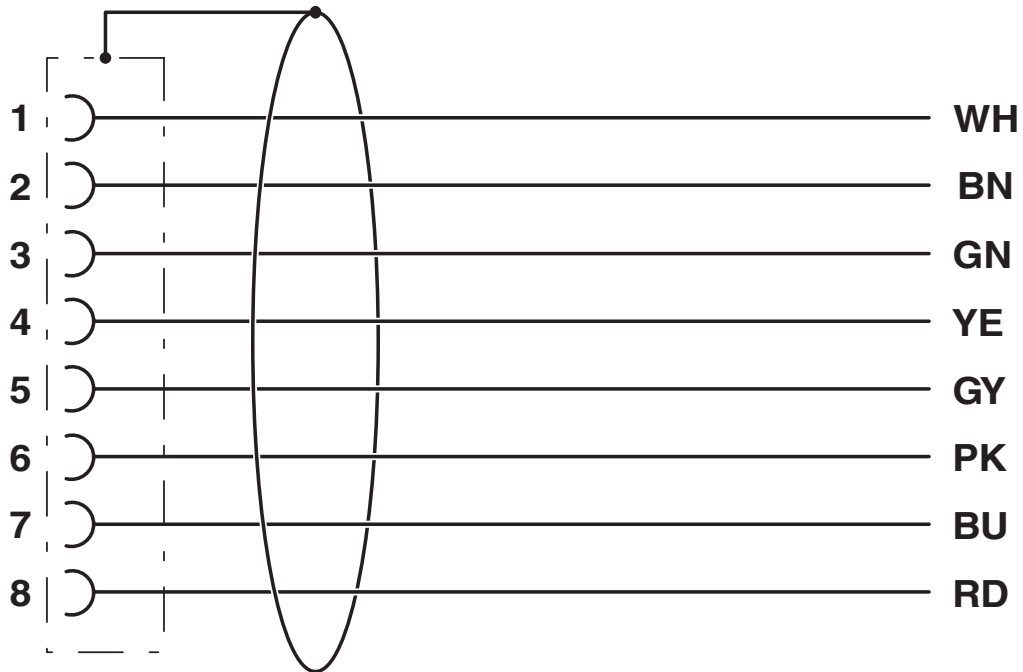
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Circuit diagram



Contact assignment of the M12 socket

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## Approvals

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|                                                                                                                                  |                                |                                |                   |                               |
|----------------------------------------------------------------------------------------------------------------------------------|--------------------------------|--------------------------------|-------------------|-------------------------------|
|  <b>UL Listed</b><br>Approval ID: FILE E 221474 |                                |                                |                   |                               |
|                                                                                                                                  | Nominal voltage U <sub>N</sub> | Nominal current I <sub>N</sub> | Cross section AWG | Cross section mm <sup>2</sup> |
| keine                                                                                                                            |                                |                                |                   |                               |
|                                                                                                                                  | 30 V                           | 2 A                            | -                 | -                             |

|                                                                                                                                   |                                |                                |                   |                               |
|-----------------------------------------------------------------------------------------------------------------------------------|--------------------------------|--------------------------------|-------------------|-------------------------------|
|  <b>cUL Listed</b><br>Approval ID: FILE E 221474 |                                |                                |                   |                               |
|                                                                                                                                   | Nominal voltage U <sub>N</sub> | Nominal current I <sub>N</sub> | Cross section AWG | Cross section mm <sup>2</sup> |
| keine                                                                                                                             |                                |                                |                   |                               |
|                                                                                                                                   | 30 V                           | 2 A                            | -                 | -                             |

|                                                                                                                                          |  |  |  |  |
|------------------------------------------------------------------------------------------------------------------------------------------|--|--|--|--|
|  <b>EAC-RoHS</b><br>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 | 1.925 kg CO2e |
|---------|---------------|

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