

# SAC-5P-P12MS/10,0-PUR SH - Sensor/actuator cable



1476900

<https://www.phoenixcontact.com/us/products/1476900>

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Sensor/actuator cable, 5-position, PUR halogen-free, black-gray RAL 7021, shielded (Advanced Shielding Technology), Plug straight M12 Push Pull, coding: A, on free cable end, cable length: 10 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                          | 1476900       |
| Packing unit                         | 1 pc          |
| Minimum order quantity               | 1 pc          |
| Sales key                            | BF06          |
| Product key                          | AF1CKE        |
| GTIN                                 | 4063151890933 |
| Weight per piece (including packing) | 459 g         |
| Weight per piece (excluding packing) | 22.22 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  | 5                     |
| 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 | V0                 |
| Outer sheath, material                 | PUR                |
| Conductor material                     | Bare Cu litz wires |

### Electrical properties

|                           |          |
|---------------------------|----------|
| Insulation resistance     | ≥ 100 MΩ |
| Nominal voltage $U_N$     | 48 V AC  |
|                           | 60 V DC  |
| Nominal current $I_N$     | 4 A      |
| Max. conductor resistance | 58 Ω/km  |

### Mechanical properties

#### Mechanical data

|                             |          |
|-----------------------------|----------|
| Insertion/withdrawal cycles | ≥ 100    |
| Max. bending cycles         | 10000000 |

### Signaling

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

### Connection data

#### Connection technology

|                   |           |
|-------------------|-----------|
| Connection method | Push-Pull |
|-------------------|-----------|

#### Conductor connection

|                   |           |
|-------------------|-----------|
| Connection method | Push-Pull |
|-------------------|-----------|

### Connector

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## Connection 1

|                     |                             |
|---------------------|-----------------------------|
| Type                | Plug straight M12 Push Pull |
| Number of positions | 5                           |
| Locking type        | Push Pull                   |
| Coding type         | A                           |

## Connection 2

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

## Cable/line

|              |      |
|--------------|------|
| Cable length | 10 m |
|--------------|------|

## PUR halogen-free black [PUR]

|                                 |   |
|---------------------------------|---|
| Dimensional drawing             |  |
| Cable weight                    | 43 kg/km  |
| UL AWM Style                    | 20549 / 10493 (80°C/300 V)  |
| Number of positions             | 5   |
| Shielded                        | yes   |
| Cable type                      | PUR halogen-free black [PUR]  |
| Conductor structure signal line | 42x 0.10 mm   |
| AWG signal line                 | 22  |
| Conductor cross-section         | 5x 0.34 mm <sup>2</sup> (Signal line)   |
| Wire diameter incl. insulation  | 1.27 mm ±0.02 mm (Signal line)  |
| External cable diameter         | 5.25 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, blue, black, gray   |
| Thickness, insulation           | ≥ 0.21 mm   |
| Thickness, outer sheath         | approx. 0.50 mm   |
| Overall twist                   | 5 wires around filler to the core   |
| Optical shield covering         | 80 %  |
| Max. conductor resistance       | max. 57 Ω/km (at 20 °C)   |
| Insulation resistance           | 70 GΩ*km (at 20 °C)   |
| Nominal voltage, cable          | 300 V (at 20 °C)  |
| Test voltage Core/Core          | 3000 V (at 20 °C)   |

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|   |  |
|---|--|
| Smallest bending radius, fixed installation   | 26 mm  |
| Smallest bending radius, movable installation | 52 mm (up to +60 °C)   |
| Dynamic load capacity (bending)               | Max. bending cycles: 10000000, Bending radius: 52 mm, 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: ≥5000000, 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                              | in accordance with UL 758/1581 FT2   |
|   | DIN EN 60332-2-2 (20 s)  |
| 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   |
|   | Resistant to salt water  |
|   | partly UV-resistant (in accordance with DIN EN ISO 4892-2-A)   |
|   | abrasion-resistant   |
| Special properties                            | Flexible cable conduit capable   |
|   | Silicone-free  |
|   | Free of substances which would hinder coating with paint or varnish  |
|   | Low adhesion surface   |
| 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 ... 85 °C (Plug / socket)                |
|                                 | -40 °C ... 80 °C (cable, fixed installation)    |
|                                 | -25 °C ... 80 °C (Cable, flexible installation) |

## Standards and regulations

|                          |                 |
|--------------------------|-----------------|
| Standard designation     | M12-Push-Pull   |
| Standards/specifications | IEC 61076-2-010 |

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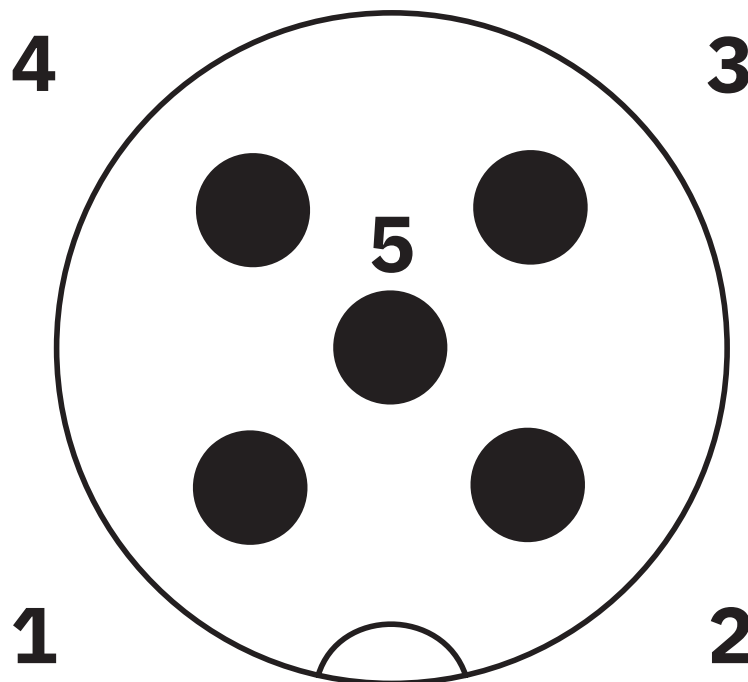
## Drawings

Dimensional drawing



M12 push-pull plug, straight, shielded

Schematic diagram



Pin assignment M12 male connector, 5-pos., A-coded, male side

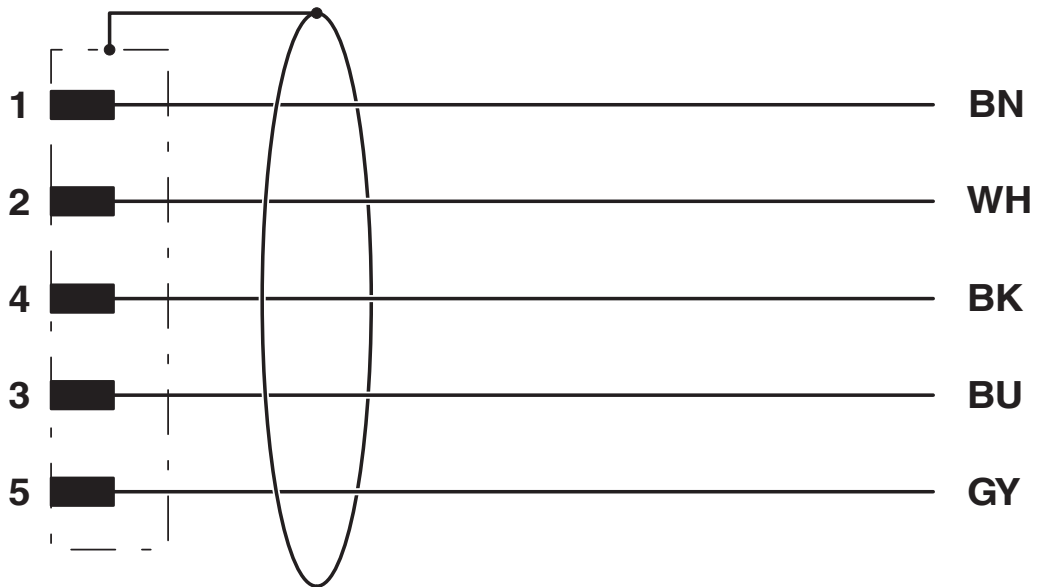
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Circuit diagram



Contact assignment of the M12 plug

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

### EF3.1 Climate Change

|         |               |
|---------|---------------|
| CO2e kg | 9.255 kg CO2e |
|---------|---------------|

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