

# SAC-8P-M12MS/ 0,3-PUR/M12FR SH - Sensor/actuator cable



1523010

<https://www.phoenixcontact.com/au/products/1523010>

Please be informed that the data shown in this PDF document is generated from our online catalog. Please find the complete data in the user documentation. Our general terms of use for downloads are valid.



Sensor/actuator cable, 8-position, PUR halogen-free, black-gray RAL 7021, shielded, Plug straight M12, coding: A, on Socket angled M12, coding: A, cable length: 0.3 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                          | 1523010             |
| Packing unit                         | 1 pc                |
| Minimum order quantity               | 1 pc                |
| Sales key                            | AF1CMA              |
| Product key                          | AF1CMA              |
| Catalog page                         | Page 211 (C-2-2019) |
| GTIN                                 | 4017918957766       |
| Weight per piece (including packing) | 45.3 g              |
| Weight per piece (excluding packing) | 45.3 g              |
| Customs tariff number                | 85444290            |
| Country of origin                    | PL                  |

# SAC-8P-M12MS/ 0,3-PUR/M12FR SH - Sensor/actuator cable



1523010

<https://www.phoenixcontact.com/au/products/1523010>

## 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

# SAC-8P-M12MS/ 0,3-PUR/M12FR SH - Sensor/actuator cable



1523010

<https://www.phoenixcontact.com/au/products/1523010>

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

## Connection 2

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

## Cable/line

|              |       |
|--------------|-------|
| Cable length | 0.3 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)                                                           |

# SAC-8P-M12MS/ 0,3-PUR/M12FR SH - Sensor/actuator cable



1523010

<https://www.phoenixcontact.com/au/products/1523010>

|                                               |                                                                                                                                             |
|-----------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------|
| 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: $\pm 180^\circ/\text{m}$ , Torsion cycles: $\geq 1000000$ , 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 |

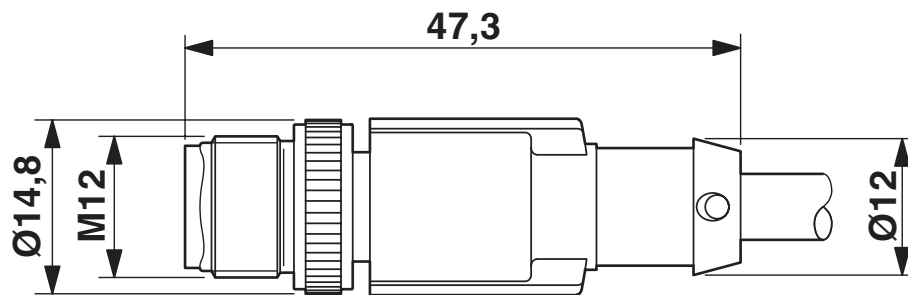
# SAC-8P-M12MS/ 0,3-PUR/M12FR SH - Sensor/actuator cable

1523010

<https://www.phoenixcontact.com/au/products/1523010>

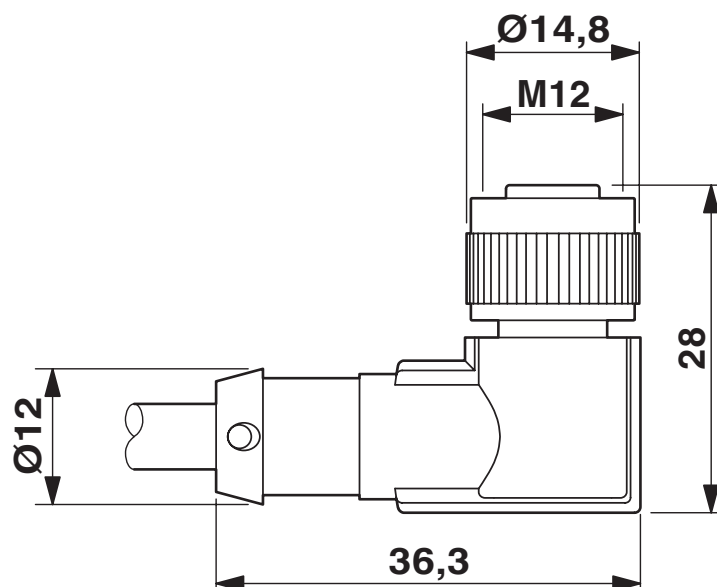
## Drawings

Dimensional drawing



Plug, M12 x 1, straight, shielded

Dimensional drawing



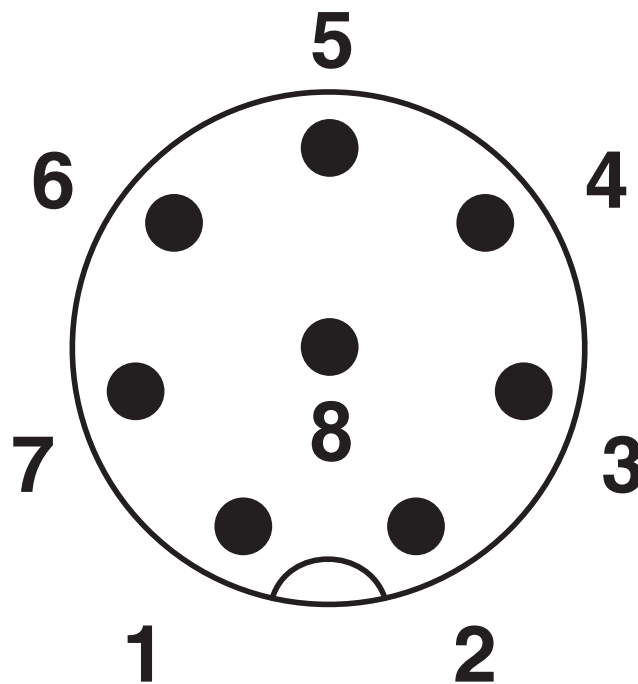
M12 x 1 socket, angled, shielded

# SAC-8P-M12MS/ 0,3-PUR/M12FR SH - Sensor/actuator cable

1523010

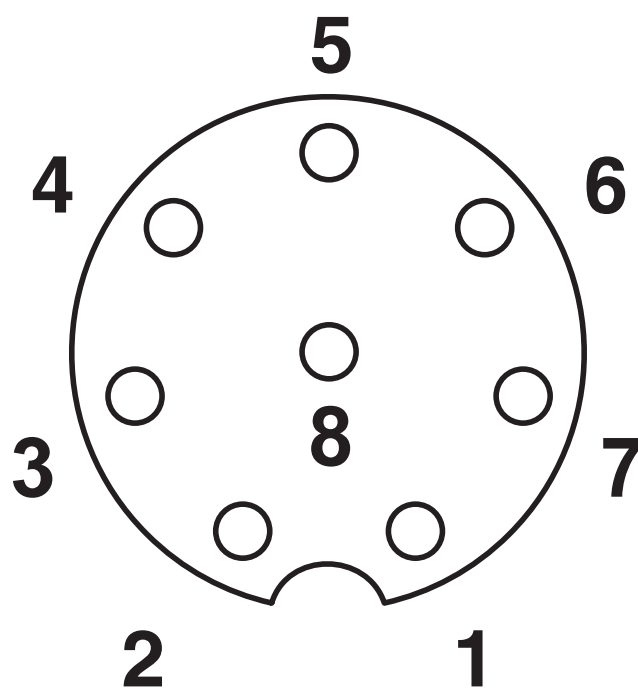
<https://www.phoenixcontact.com/au/products/1523010>

Schematic diagram



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

Schematic diagram



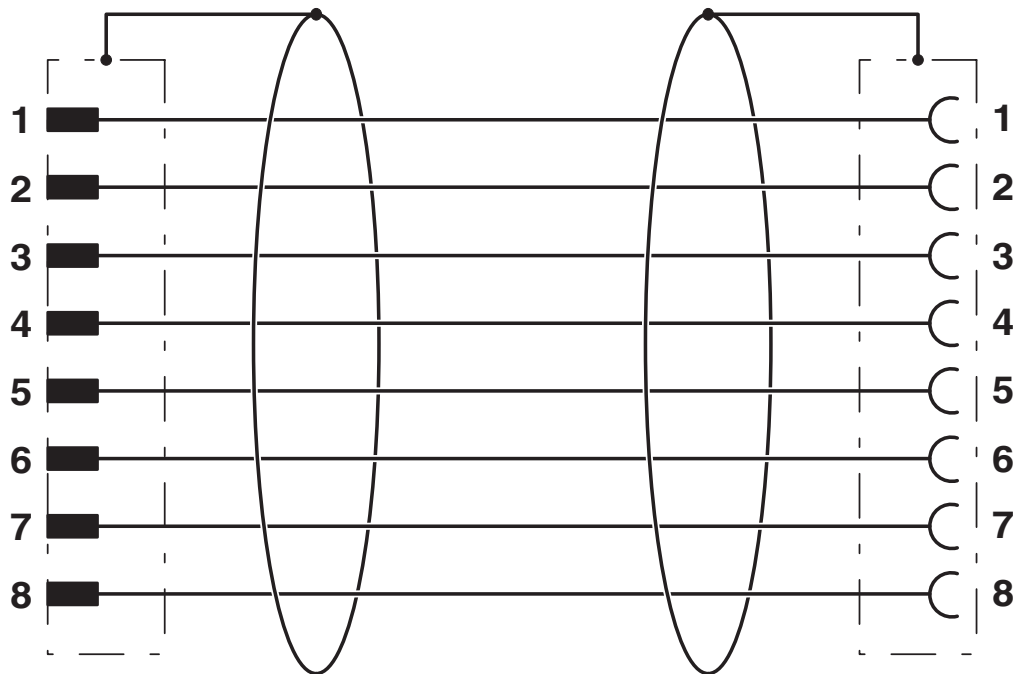
Pin assignment M12 socket, 8-pos., A-coded, view female side

# SAC-8P-M12MS/ 0,3-PUR/M12FR SH - Sensor/actuator cable

1523010

<https://www.phoenixcontact.com/au/products/1523010>

Circuit diagram



Contact assignment of the M12 plug and the M12 socket

# SAC-8P-M12MS/ 0,3-PUR/M12FR SH - Sensor/actuator cable



1523010

<https://www.phoenixcontact.com/au/products/1523010>

## Approvals

To download certificates, visit the product detail page: <https://www.phoenixcontact.com/au/products/1523010>

|  |                                                |                       |                   |                             |
|--|------------------------------------------------|-----------------------|-------------------|-----------------------------|
|  | <b>UL Listed</b><br>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                   | -                 | -                           |

|  |                                                 |                       |                   |                             |
|--|-------------------------------------------------|-----------------------|-------------------|-----------------------------|
|  | <b>cUL Listed</b><br>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                   | -                 | -                           |

|  |                                                      |  |  |  |
|--|------------------------------------------------------|--|--|--|
|  | <b>EAC-RoHS</b><br>Approval ID: RU D-DE.HB35.B.00387 |  |  |  |
|  |                                                      |  |  |  |



# SAC-8P-M12MS/ 0,3-PUR/M12FR SH - Sensor/actuator cable



1523010

<https://www.phoenixcontact.com/au/products/1523010>

## Classifications

### ECLASS

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

### ETIM

|          |          |
|----------|----------|
| ETIM 9.0 | EC001855 |
|----------|----------|

### UNSPSC

|             |          |
|-------------|----------|
| UNSPSC 21.0 | 26121600 |
|-------------|----------|

# SAC-8P-M12MS/ 0,3-PUR/M12FR SH - Sensor/actuator cable



1523010

<https://www.phoenixcontact.com/au/products/1523010>

## 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 | 1.244 kg CO2e |
|---------|---------------|

Phoenix Contact 2025 © - all rights reserved  
<https://www.phoenixcontact.com>

PHOENIX CONTACT PTY Ltd  
Unit 7, 2-8 South Street  
Rydalmere NSW 2116  
1300 786 411  
[customerservice@phoenixcontact.com.au](mailto:customerservice@phoenixcontact.com.au)