

## Sensor/actuator cable - SAC-HZ-4P-MR/0,5-542/ FRSHSCOBK - 1409548

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Sensor/actuator cable, 4-position, PVC, yellow, shielded, Plug angled M12 SPEEDCON, coding: A, on Socket angled M12 SPEEDCON, coding: A, cable length: 0.5 m



### Key Commercial Data

|                        |                                                                                                         |
|------------------------|---------------------------------------------------------------------------------------------------------|
| Packing unit           | 1 pc                                                                                                    |
| Minimum order quantity | 10 pc                                                                                                   |
| GTIN                   | <br>4 055626 018041 |
| GTIN                   | 4055626018041                                                                                           |

### Technical data

#### Dimensions

|                 |       |
|-----------------|-------|
| Length of cable | 0.5 m |
|-----------------|-------|

#### Ambient conditions

|                                 |                                  |
|---------------------------------|----------------------------------|
| Ambient temperature (operation) | -25 °C ... 90 °C (Plug / socket) |
| Degree of protection            | IP65                             |
|                                 | IP67                             |

#### General

|                       |                                                                                                     |
|-----------------------|-----------------------------------------------------------------------------------------------------|
| Note                  | These cable assemblies are UL/cUL listed for use in Class I, Division 2 (CID2) hazardous locations. |
| Rated current at 40°C | 4 A                                                                                                 |
| Rated voltage         | 48 V AC                                                                                             |
|                       | 60 V DC                                                                                             |
| Number of positions   | 4                                                                                                   |
| Insulation resistance | ≥ 100 MΩ                                                                                            |
| Coding                | A - standard                                                                                        |
| Standards/regulations | M12 connector IEC 61076-2-101                                                                       |

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## Technical data

### General

|                              |                        |
|------------------------------|------------------------|
| Status display               | No                     |
| Protective circuit/component | unwired                |
| Overvoltage category         | II                     |
| Degree of pollution          | 3                      |
| Torque                       | 0.4 Nm (M12 connector) |

### Material

|                                        |                                             |
|----------------------------------------|---------------------------------------------|
| Flammability rating according to UL 94 | HB                                          |
| Contact material                       | CuSn                                        |
| Contact surface material               | Ni/Au                                       |
| Contact carrier material               | TPU GF                                      |
| Material of grip body                  | TPU, hardly inflammable, self-extinguishing |
| Material, knurls                       | Zinc die-cast, nickel-plated                |

### Standards and Regulations

|                                        |                                    |
|----------------------------------------|------------------------------------|
| Standards/specifications               | M12 connector IEC 61076-2-101      |
| Flammability rating according to UL 94 | HB                                 |
| UL, USA/Canada                         | Class I, Div. 2, Groups A, B, C, D |

### Cable

|                                               |                              |
|-----------------------------------------------|------------------------------|
| Cable type                                    | PVC yellow 105 °C            |
| Cable type (abbreviation)                     | 542                          |
| UL AWM style                                  | 2517 (105 °C / 300 V)        |
| AWG signal line                               | 22                           |
| Conductor structure signal line               | 30x 1.30 mm                  |
| Core diameter including insulation            | 1.27 mm ±0.03 mm             |
| Wire colors                                   | brown, blue, black, white    |
| Overall twist                                 | 4 wires, twisted             |
| Shielding                                     | Tinned copper braided shield |
| Optical shield covering                       | 85 %                         |
| External sheath, color                        | yellow                       |
| External cable diameter D                     | 5.5 mm ±0.2 mm               |
| Minimum bending radius, flexible installation | 12 x D                       |
| Cable weight                                  | 48 kg/km                     |
| Outer sheath, material                        | PVC                          |
| Material conductor insulation                 | PVC                          |
| Conductor material                            | Tin-plated Cu litz wires     |
| Insulation resistance                         | ≥ (550 M Ohms/m @ 500V)      |
| Conductor resistance                          | max. 50.5 Ω/km (20 °C)       |
| Nominal voltage, cable                        | 300 V                        |
| Special properties                            | UL standards PLTC and ITC    |

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### Technical data

#### Cable

|                                 |                                                 |
|---------------------------------|-------------------------------------------------|
| Flame resistance                | FT4                                             |
| Other resistance                | UV resistant                                    |
| Ambient temperature (operation) | -30 °C ... 105 °C (cable, fixed installation)   |
|                                 | -5 °C ... 105 °C (cable, flexible installation) |

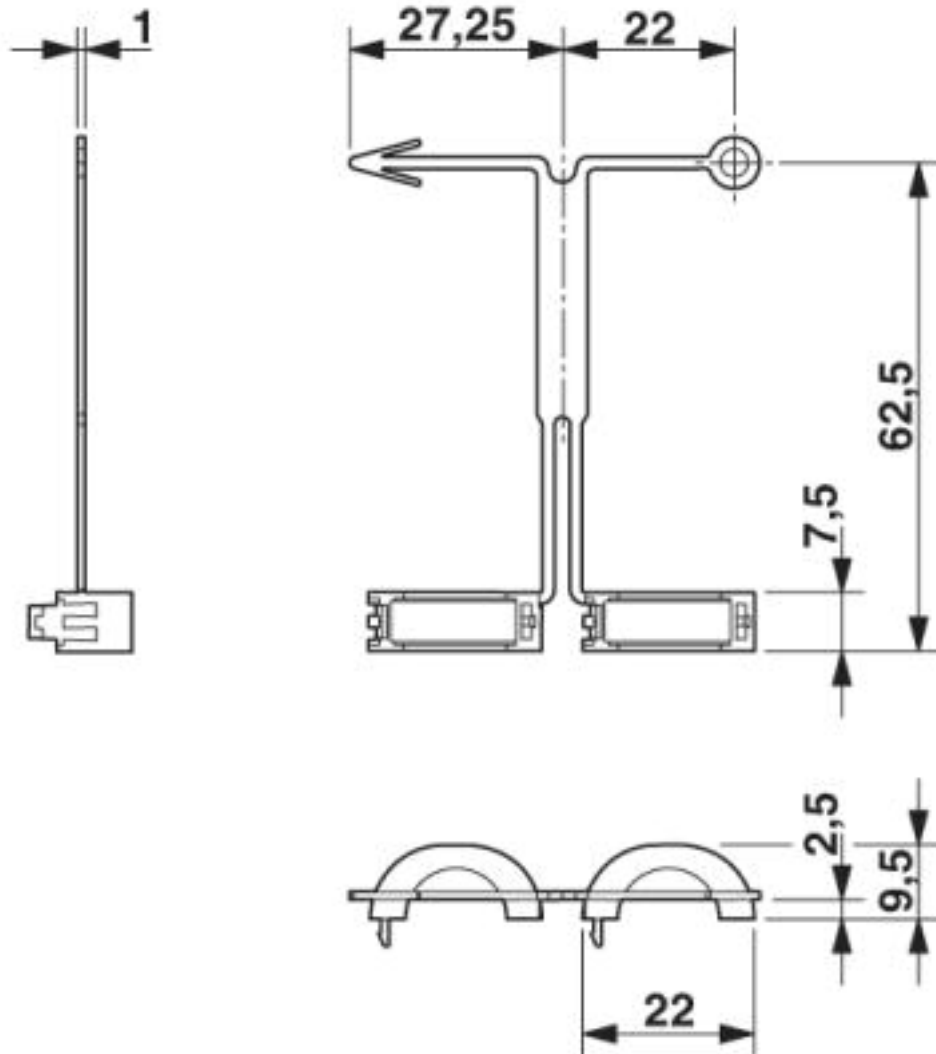
#### Environmental Product Compliance

|            |                                                         |
|------------|---------------------------------------------------------|
| China RoHS | Environmentally friendly use period: unlimited = EFUP-e |
|            | No hazardous substances above threshold values          |

### Drawings

# Sensor/actuator cable - SAC-HZ-4P-MR/0,5-542/ FRSHSCOBK - 1409548

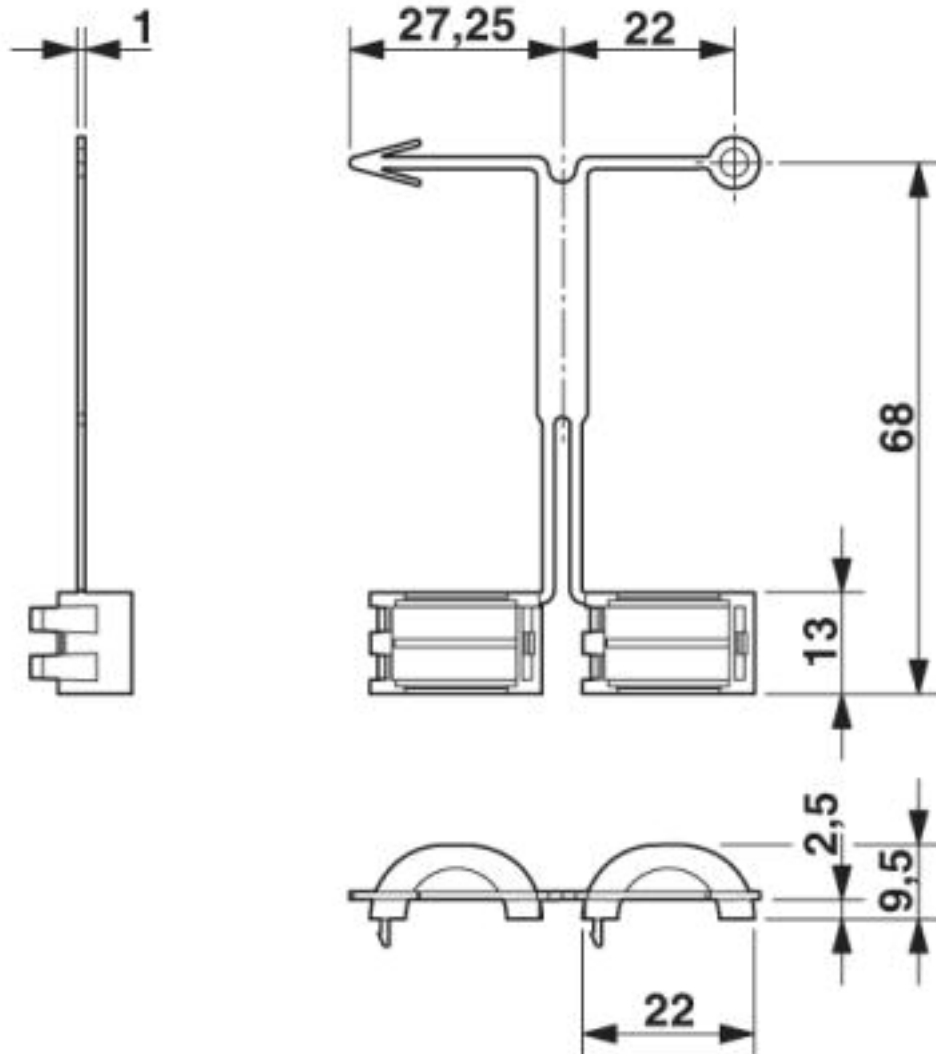
Dimensional drawing



EXCLIP plug

# Sensor/actuator cable - SAC-HZ-4P-MR/0,5-542/ FRSHSCOBK - 1409548

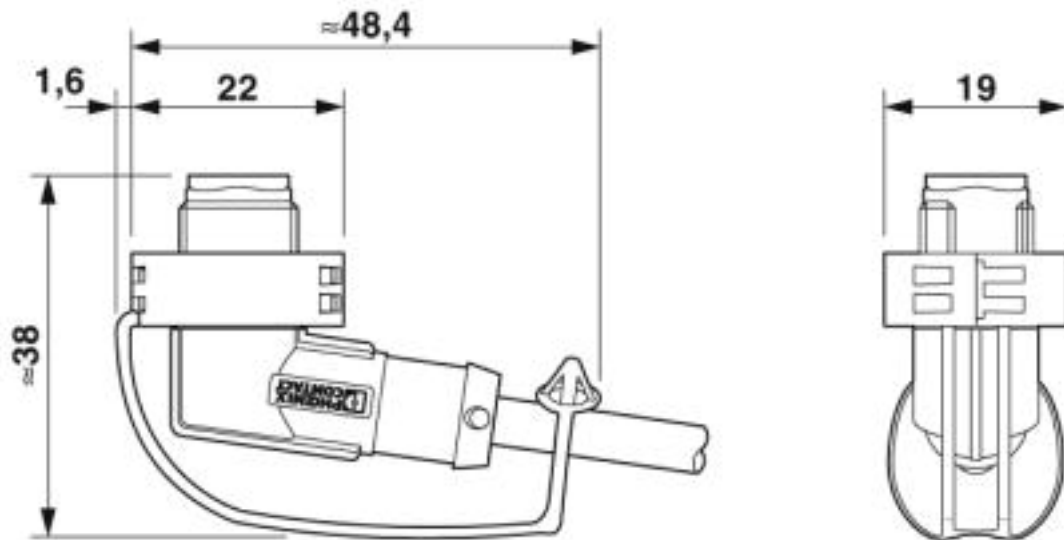
Dimensional drawing



EXCLIP socket

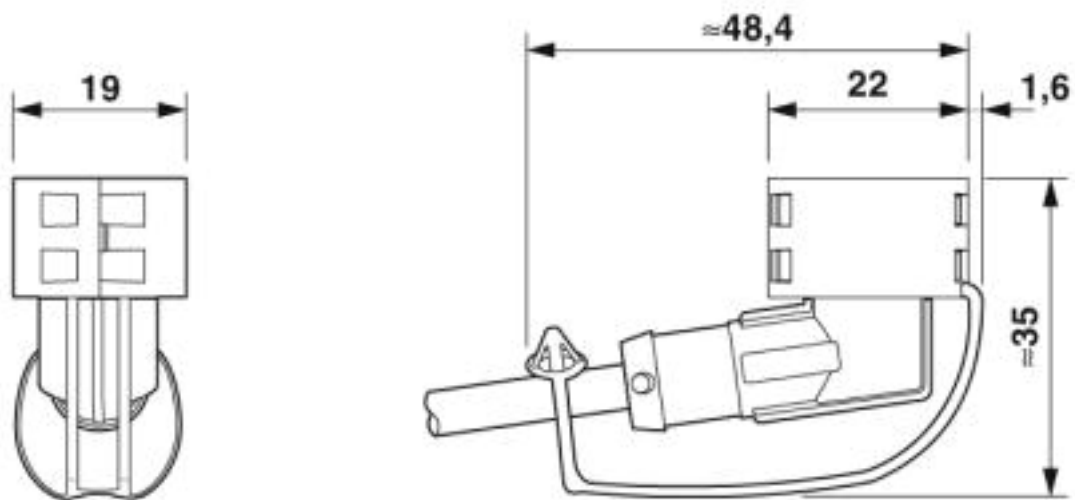
## Sensor/actuator cable - SAC-HZ-4P-MR/0,5-542/ FRSHSCOBK - 1409548

Dimensional drawing



EXCLIP mounted plug

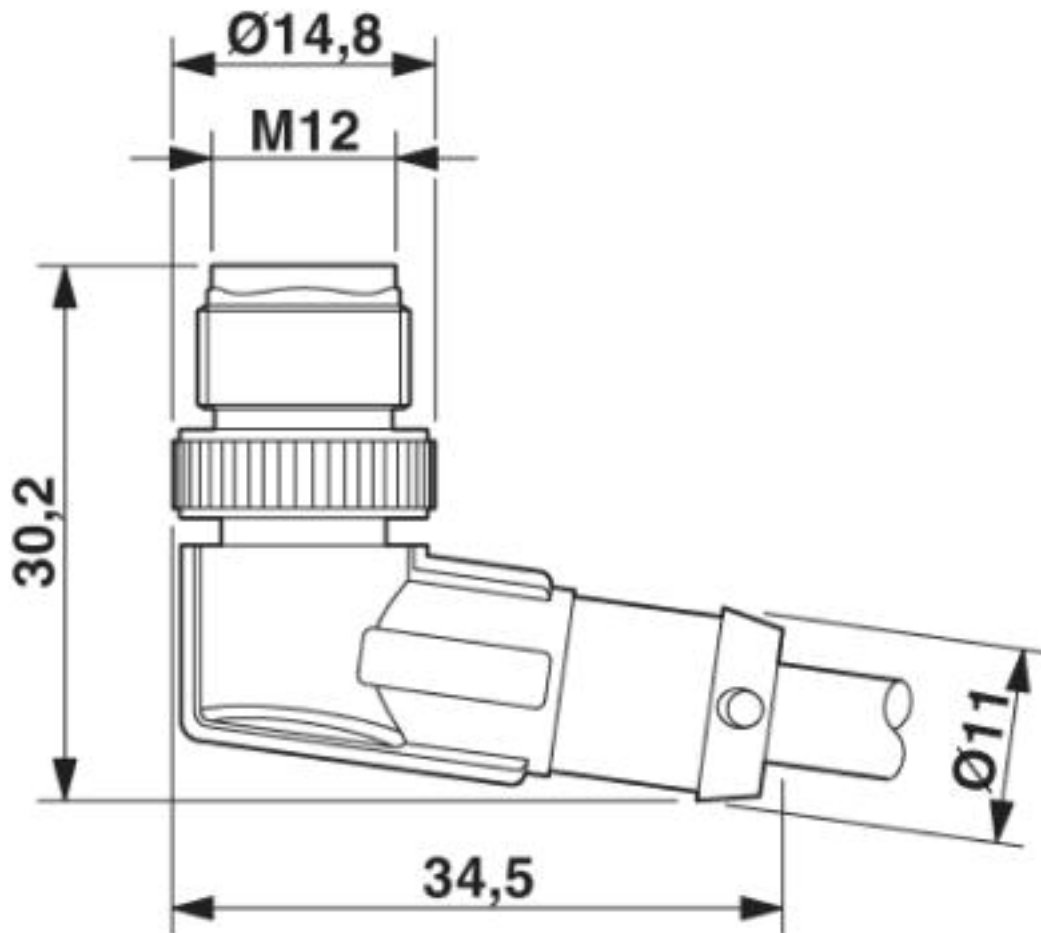
Dimensional drawing



EXCLIP mounted plug

Sensor/actuator cable - SAC-HZ-4P-MR/0,5-542/  
FRSHSCOBK - 1409548

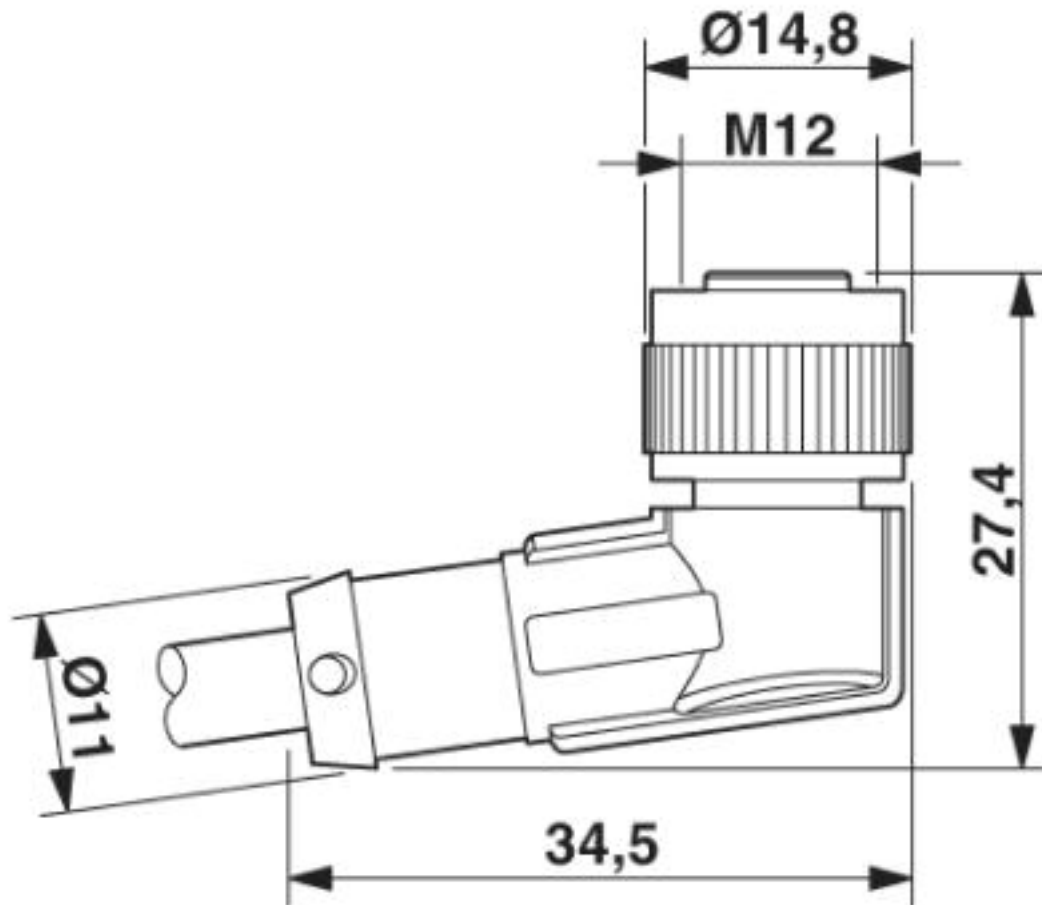
Dimensional drawing



M12 x 1 male plug, angled

Sensor/actuator cable - SAC-HZ-4P-MR/0,5-542/  
FRSHSCOBK - 1409548

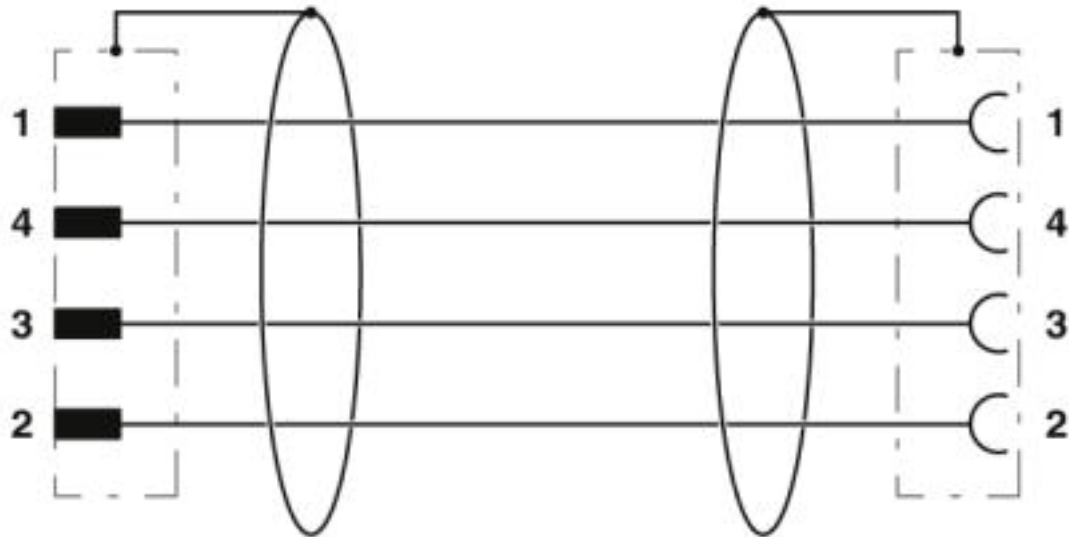
Dimensional drawing



M12 x 1 socket, angled

## Sensor/actuator cable - SAC-HZ-4P-MR/0,5-542/ FRSHSCOBK - 1409548

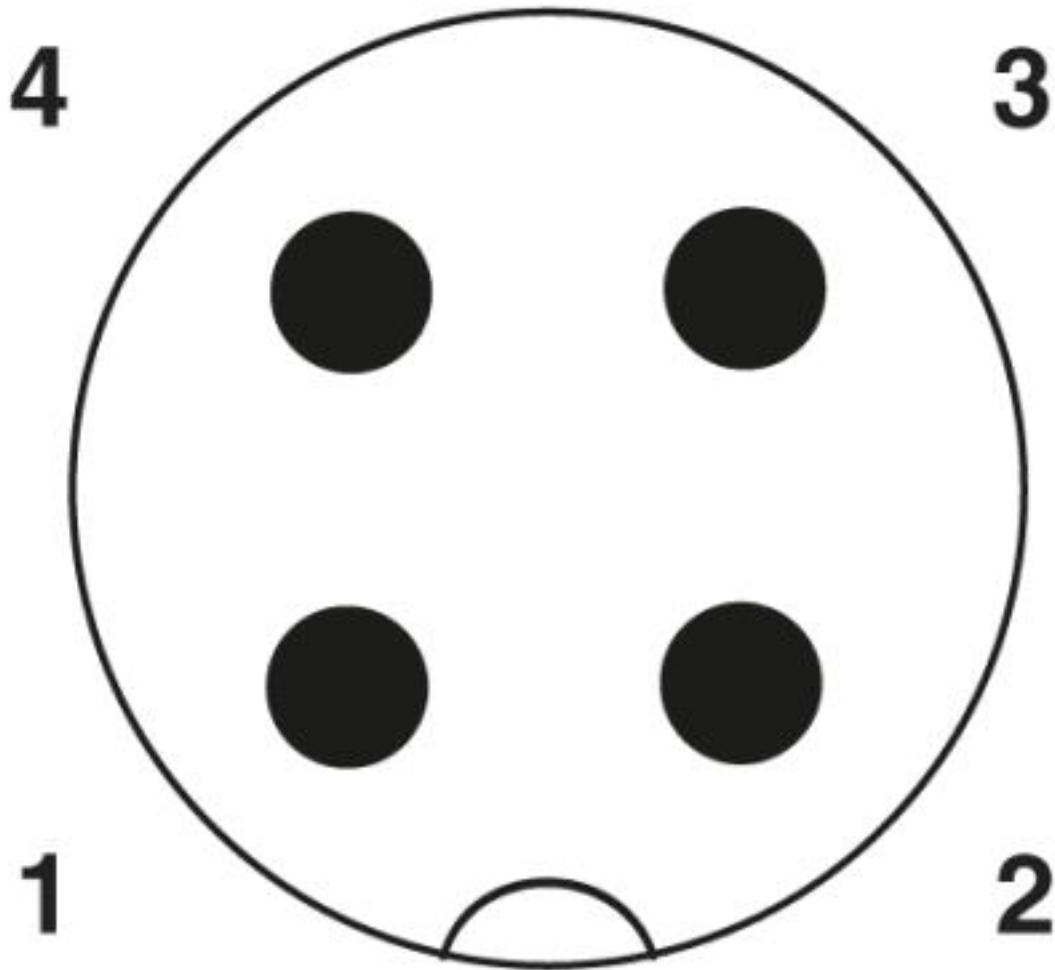
Circuit diagram



Contact assignment of M8 plugs / M12 sockets

Sensor/actuator cable - SAC-HZ-4P-MR/0,5-542/  
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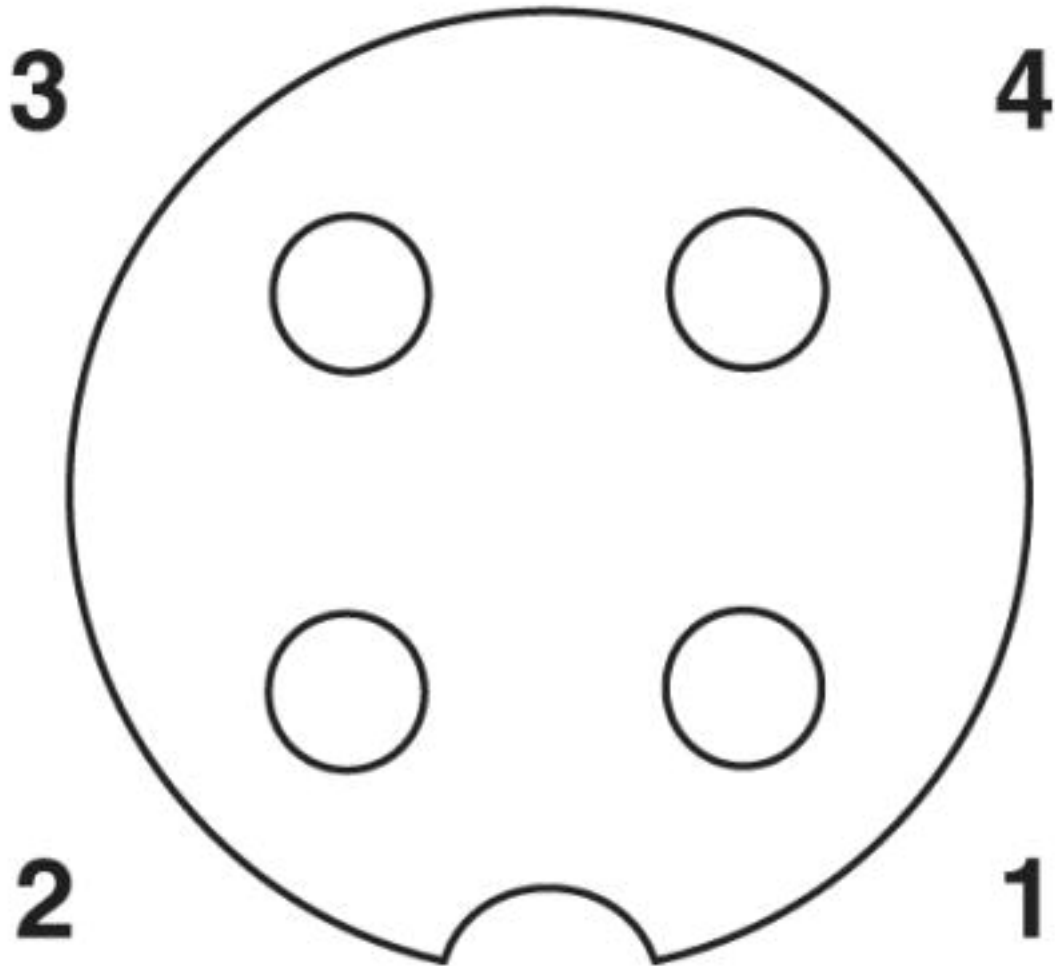
Schematic diagram



Pin assignment M12 plug, 4-pos., A-coded, view plug side

Sensor/actuator cable - SAC-HZ-4P-MR/0,5-542/  
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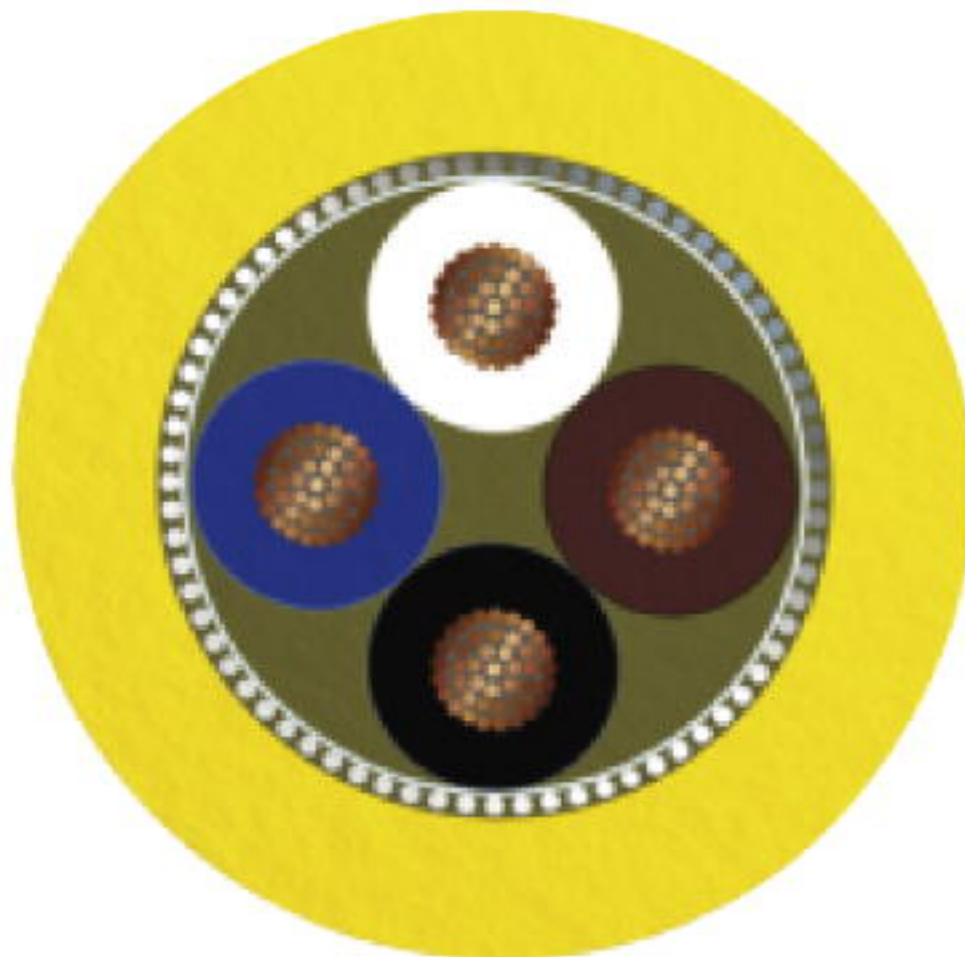
Schematic diagram



Pin assignment M12 socket, 4-pos., A-coded, view female side

## Sensor/actuator cable - SAC-HZ-4P-MR/0,5-542/ FRSHSCOBK - 1409548

Cable cross section



PVC yellow 105 °C [542]

### Classifications

eCl@ss

|               |          |
|---------------|----------|
| eCl@ss 10.0.1 | 27060311 |
| eCl@ss 4.0    | 27060300 |
| eCl@ss 4.1    | 27060300 |
| eCl@ss 5.0    | 27061800 |
| eCl@ss 5.1    | 27061800 |
| eCl@ss 6.0    | 27279200 |
| eCl@ss 7.0    | 27279218 |
| eCl@ss 8.0    | 27279218 |
| eCl@ss 9.0    | 27060311 |

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### Classifications

#### ETIM

|          |          |
|----------|----------|
| ETIM 4.0 | EC001855 |
| ETIM 5.0 | EC001855 |
| ETIM 6.0 | EC001855 |
| ETIM 7.0 | EC001855 |

#### UNSPSC

|             |          |
|-------------|----------|
| UNSPSC 13.2 | 31251501 |
| UNSPSC 19.0 | 31251501 |
| UNSPSC 20.0 | 31251501 |
| UNSPSC 21.0 | 31251501 |

### Approvals

#### Approvals

#### Approvals

#### EAC

#### Ex Approvals

#### UL Listed / cUL Listed / cULus Listed

#### Approval details

|     |                                                                                     |                          |
|-----|-------------------------------------------------------------------------------------|--------------------------|
| EAC |  | RU D-<br>DE.HB35.B.00387 |
|-----|-------------------------------------------------------------------------------------|--------------------------|

### Accessories

#### Accessories

#### Plug for cable screw gland

#### Screw plug - PROT-M12 MS-PA-CHAIN - 1430899

M12 sealing cap with fixing band, for sensor cables, for free M12 sockets



#### Protective cap

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### Accessories

Sealing cap - PROT-M12 FS-PA-CHAIN - 1430873

M12 sealing cap made of plastic with fixing band, for sensor cables, for free M12 plugs



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### Safety locking

Locking clip - SAC-M12-EXCLIP-M - 1558988



Locking clip for the pin side of sensor/actuator cables with M12 connector and M12 connectors for assembly, for knurl diameter: 15 mm or for Allen key with a wrench size of 14 mm, prevents the disconnection of plug-in connections without tools

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Locking clip - SAC-M12-EXCLIP-F - 1558991



Locking clip for the socket side of sensor/actuator cables with M12 connector and M12 connectors for assembly, for knurl diameter: 15 mm or for Allen key with a wrench size of 14 mm, prevents the disconnection of plug-in connections without tools

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### Screwdriver tools

Adapter insert - TSD-M SAC-BIT ADAPTER - 1212600



Adapter bit for TSD-M...torque tools, E6.3-1/4" drive with 4 mm hexagon to accommodate SAC bits

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Tool - SAC BIT M12-D15 - 1208432



Nut for assembling sensor/actuator cables with M12 connector and M12 connectors for assembly, with a knurl diameter of 15 mm, for 4 mm hexagonal drive

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### Torque tool

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### Accessories

Torque screwdriver - TSD 04 SAC - 1208429



Torque screwdriver, with preset torque of 0.4 Nm and 4 mm hexagonal drive for M12 connectors

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Torque screwdriver - TSD-M 1,2NM - 1212224



Torque screw driver, accuracy as per EN ISO 6789 standard, adjustable from 0.3 - 1.2 Nm

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