

SAC-4P-MR/3,0-647/FS SCO BK - Sensor/actuator cable



1415140  
<https://www.phoenixcontact.com/us/products/1415140>

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Sensor/actuator cable, 4-position, TPE, yellow, Plug angled M12 SPEEDCON, coding: A, on Socket straight M12 SPEEDCON, coding: A, cable length: 3 m

Commercial data

|                                      |                                |
|--------------------------------------|--------------------------------|
| Item number                          | 1415140                        |
| Packing unit                         | 1 pc                           |
| Note                                 | Made to order (non-returnable) |
| Sales key                            | BF13                           |
| Product key                          | BF1IFB                         |
| GTIN                                 | 4055626048918                  |
| Weight per piece (including packing) | 22.22 g                        |
| Weight per piece (excluding packing) | 22.22 g                        |
| Customs tariff number                | 85444290                       |
| Country of origin                    | US                             |

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## Technical data

### Product properties

|                      |                       |
|----------------------|-----------------------|
| Product type         | Sensor/actuator cable |
| Application          | Standard, U.S. cables |
| Number of positions  | 4                     |
| No. of cable outlets | 1                     |
| Shielded             | no                    |
| 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                       | CuSn                                        |
| Contact surface material               | Ni/Au                                       |
| Contact carrier material               | TPU GF                                      |
| Material for screw connection          | Zinc die-cast, nickel-plated                |
| Outer sheath, material                 | TPE                                         |

### Electrical properties

|                       |          |
|-----------------------|----------|
| Nominal voltage $U_N$ | 250 V AC |
|                       | 250 V DC |
| Nominal current $I_N$ | 4 A      |

### Signaling

|                        |    |
|------------------------|----|
| Status display         | No |
| Status display present | No |

### Connection data

#### Conductor connection

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

### Connector

#### Connection 1

|                     |                          |
|---------------------|--------------------------|
| Type                | Plug angled M12 SPEEDCON |
| Number of positions | 4                        |
| Locking type        | SPEEDCON                 |
| Coding type         | A                        |

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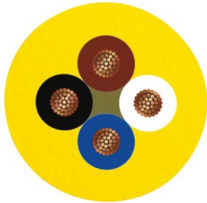
## Connection 2

|                     |                              |
|---------------------|------------------------------|
| Type                | Socket straight M12 SPEEDCON |
| Number of positions | 4                            |
| Locking type        | SPEEDCON                     |
| Coding type         | A                            |

## Cable/line

|              |     |
|--------------|-----|
| Cable length | 3 m |
|--------------|-----|

## TPE yellow 105 °C [647]

|                                 |                                                                                     |
|---------------------------------|-------------------------------------------------------------------------------------|
| Dimensional drawing             |  |
| Cable weight                    | 31 kg/km                                                                            |
| UL AWM Style                    | 20327 (105 °C / 300 V)                                                              |
| Number of positions             | 4                                                                                   |
| Shielded                        | no                                                                                  |
| Cable type                      | TPE yellow 105 °C [647]                                                             |
| Conductor structure signal line | 41x 0.16 mm                                                                         |
| AWG signal line                 | 18                                                                                  |
| Wire diameter incl. insulation  | 1.8 mm                                                                              |
| External cable diameter         | 6.00 mm ±0.25 mm                                                                    |
| Outer sheath, material          | TPE                                                                                 |
| External sheath, color          | yellow                                                                              |
| Material wire insulation        | PVC                                                                                 |
| Thickness, insulation           | 0.23 mm                                                                             |
| Thickness, outer sheath         | 0.89 mm                                                                             |
| Overall twist                   | 4 wires, twisted                                                                    |
| Nominal voltage, cable          | 300 V                                                                               |
| Flame resistance                | According to FT1                                                                    |
| Resistance to oil               | OIL RES I according to UL 2256                                                      |
| Other resistance                | UV resistant (720 h) (to UL 2256)                                                   |
| Ambient temperature (operation) | -30 °C ... 105 °C (cable, fixed installation)                                       |

## Environmental and real-life conditions

### Ambient conditions

|                      |      |
|----------------------|------|
| Degree of protection | IP65 |
|                      | IP67 |

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|                                 |                                  |
|---------------------------------|----------------------------------|
|                                 | IP68                             |
| Ambient temperature (operation) | -25 °C ... 90 °C (Plug / socket) |

## Standards and regulations

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

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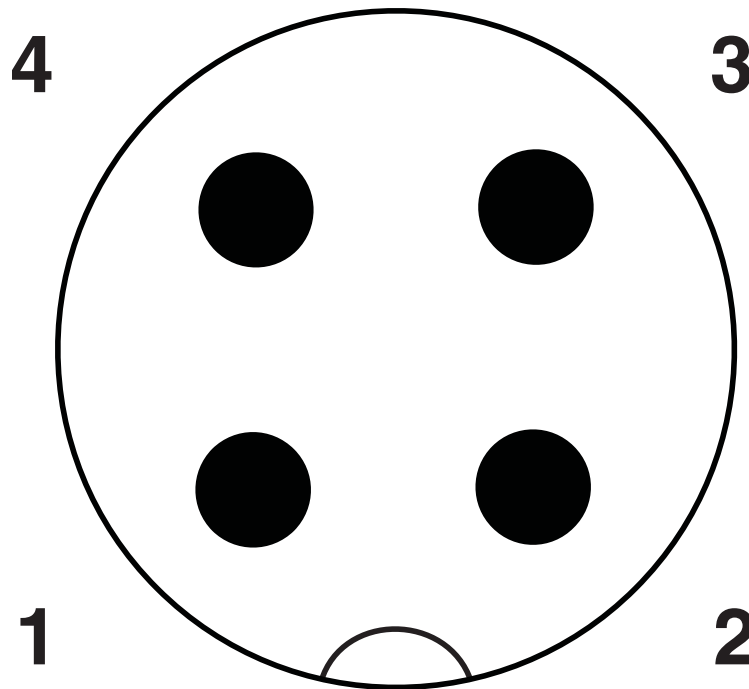


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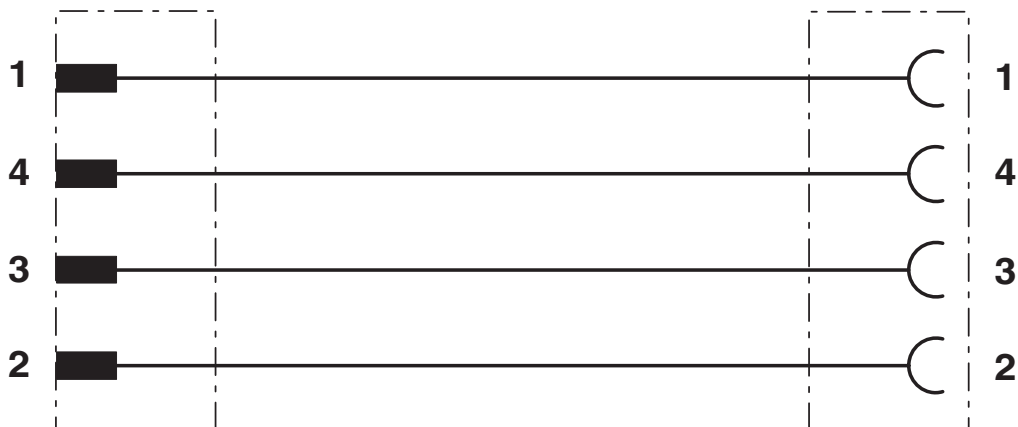
## Drawings

Schematic diagram



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

Circuit diagram



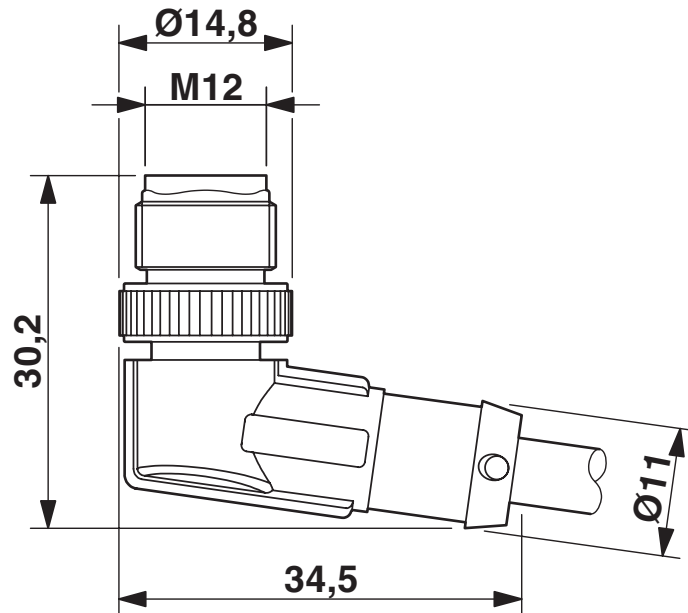
# SAC-4P-MR/3,0-647/FS SCO BK - Sensor/actuator cable



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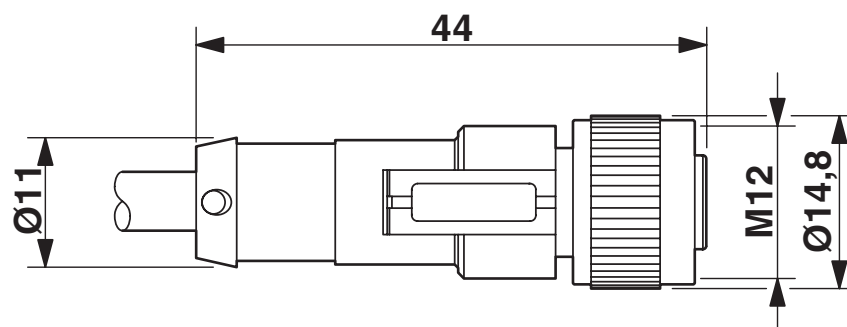
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Dimensional drawing



M12 x 1 male plug, angled

Dimensional drawing



M12 x 1 socket, straight

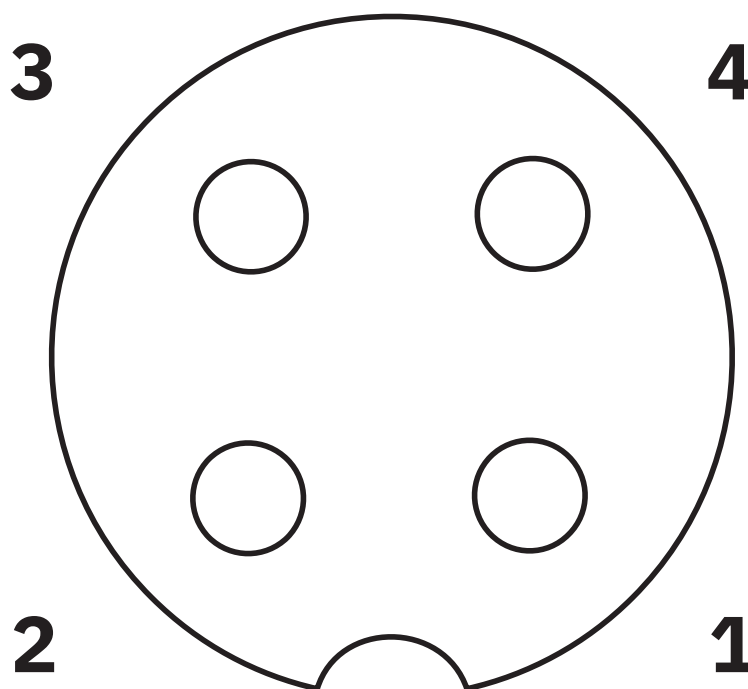
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Schematic diagram



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

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## Classifications

### ECLASS

|             |          |
|-------------|----------|
| ECLASS-11.0 | 27060311 |
| ECLASS-13.0 | 27060311 |

### UNSPSC

|             |          |
|-------------|----------|
| UNSPSC 21.0 | 31251501 |
|-------------|----------|

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## Environmental product compliance

|                                        |                                                                                                                                                                                                                                                  |
|----------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| China RoHS                             |                                                                                                                                                                                                                                                  |
| Environment friendly use period (EFUP) | EFUP-50<br><br>An article-related China RoHS declaration table can be found in the download area for the respective article under "Manufacturer declaration". For all articles with EFUP-E, no China RoHS declaration table issued and required. |
| EU REACH SVHC                          |                                                                                                                                                                                                                                                  |
| REACH candidate substance (CAS No.)    | No substance above 0.1 wt%                                                                                                                                                                                                                       |

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## Accessories

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

1430873

<https://www.phoenixcontact.com/us/products/1430873>

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



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### SAC-M12-EXCLIP-M - Locking clip

1558988

<https://www.phoenixcontact.com/us/products/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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## PROT-M12 MS-PA-CHAIN - Screw plug

1430899

<https://www.phoenixcontact.com/us/products/1430899>

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



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## SAC-M12-EXCLIP-F - Locking clip

1558991

<https://www.phoenixcontact.com/us/products/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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## TSD 04 SAC - Torque screwdriver

1208429

<https://www.phoenixcontact.com/us/products/1208429>



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

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

1212224

<https://www.phoenixcontact.com/us/products/1212224>



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

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

1212600

<https://www.phoenixcontact.com/us/products/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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## SAC BIT M12-D15 - Tool

1208432

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