# SAC-4P-M12MS/ 1,5-542/M8 FR BK - Sensor/actuator cable

1406217

https://www.phoenixcontact.com/us/products/1406217

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, 4-position, PVC, yellow, Plug straight M12, coding: A, on Socket angled M8, cable length: 1.5 m

## Commercial data

| | |
|---|---|
| Item number | 1406217 |
| Packing unit | 1 pc |
| Minimum order quantity | 1 pc |
| Note | Made to order (non-returnable) |
| Sales key | BF13 |
| Product key | BF1ICB |
| GTIN | 4046356798334 |
| Weight per piece (including packing) | 55.8 g |
| Weight per piece (excluding packing) | 22.22 g |
| Customs tariff number | 85444290 |
| Country of origin | US |

# SAC-4P-M12MS/ 1,5-542/M8 FR BK - Sensor/actuator cable

1406217

https://www.phoenixcontact.com/us/products/1406217

## 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 | PVC |

### Electrical properties

| | |
|---|---|
| Insulation resistance | ≥ 100 MΩ |
| Nominal voltage $U_N$ | 48 V AC |
| | 60 V DC |
| Nominal current $I_N$ | 4 A |

### Mechanical properties

#### Mechanical data

| | |
|---|---|
| Insertion/withdrawal cycles | ≥ 100 |

### Signaling

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

### Connection data

#### Conductor connection

| | |
|---|---|
| Tightening torque | 0.4 Nm (M12 connector) |
| | 0.2 Nm (M8 connectors) |

# SAC-4P-M12MS/ 1,5-542/M8 FR BK - Sensor/actuator cable

1406217

https://www.phoenixcontact.com/us/products/1406217

## Connector

### Connection 1

| | |
|---|---|
| Type | Plug straight M12 |
| Number of positions | 4 |
| Coding type | A |

### Connection 2

| | |
|---|---|
| Type | Socket angled M8 |
| Number of positions | 4 |

## Cable/line

| | |
|---|---|
| Cable length | 1.5 m |

### PVC yellow 105 °C [542]

| Dimensional drawing | |
|---|---|
| |  |
| Cable weight | 25 kg/km |
| UL AWM Style | 2517 (105 °C / 300 V) |
| Number of positions | 4 |
| Shielded | no |
| Cable type | PVC yellow 105 °C [542] |
| Conductor structure signal line | 32x 1.10 mm |
| AWG signal line | 24 |
| Wire diameter incl. insulation | 1.12 mm ±0.03 mm |
| External cable diameter | 4.40 mm ±0.2 mm |
| Outer sheath, material | PVC |
| External sheath, color | yellow |
| Conductor material | Tin-plated Cu litz wires |
| Material wire insulation | PVC |
| Single wire, color | brown, blue, black, white |
| Overall twist | 4 wires, twisted |
| Max. conductor resistance | max. 79.7 Ω/km (20 °C) |
| Insulation resistance | ≥ (550 M Ohms/m @ 500V) |
| Nominal voltage, cable | 300 V |
| Minimum bending radius, flexible installation | 8 x D |
| Smallest bending radius, movable installation | 36 mm |
| Flame resistance | FT4 |

# SAC-4P-M12MS/ 1,5-542/M8 FR BK - Sensor/actuator cable

1406217

https://www.phoenixcontact.com/us/products/1406217

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

## Environmental and real-life conditions

### Ambient conditions

| Degree of protection | IP65 |
|---|---|
| | IP67 |
| | IP68 |
| Ambient temperature (operation) | -25 °C ... 90 °C (Plug / socket) |
| | -40 °C ... 80 °C (cable, fixed installation) |
| | -5 °C ... 80 °C (Cable, flexible installation) |

## Standards and regulations

| Standard designation | M12 connector |
|---|---|
| Standards/specifications | IEC 61076-2-101 |
| Standard designation | M8 connector |
| Standards/specifications | IEC 61076-2-104 |

# SAC-4P-M12MS/ 1,5-542/M8 FR BK - Sensor/actuator cable
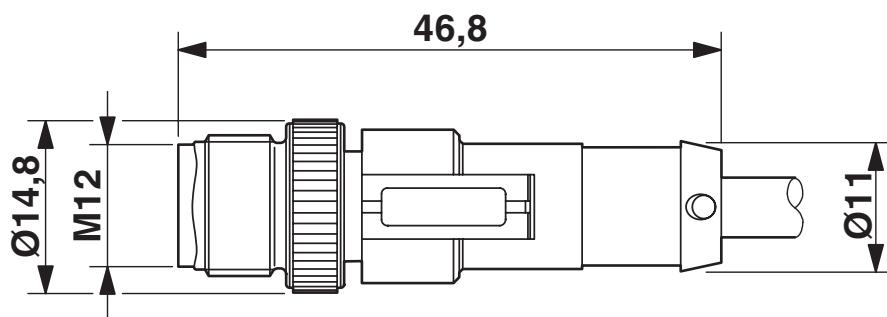
1406217

https://www.phoenixcontact.com/us/products/1406217

## Drawings

Dimensional drawing


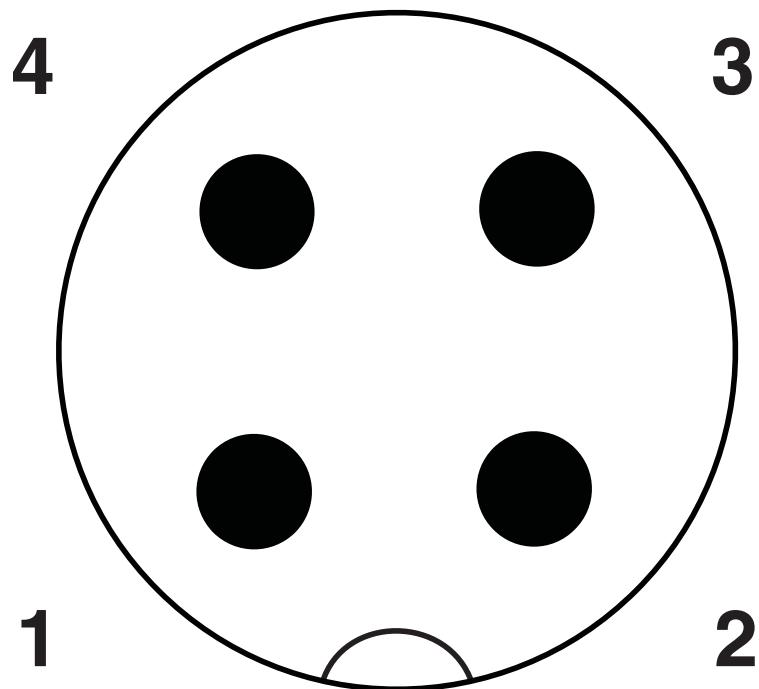
Plug, M12 x 1, straight, shielded

# SAC-4P-M12MS/ 1,5-542/M8 FR BK - Sensor/actuator cable

1406217

**PHŒNIX CONTACT**

Schematic diagram



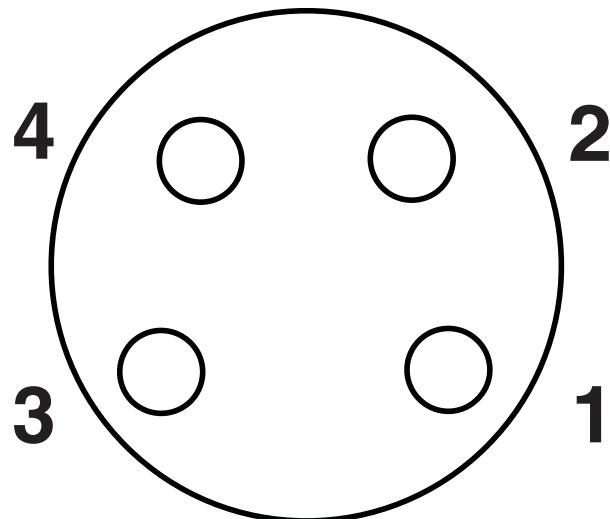Pin assignment M12 plug, 4-pos., A-coded, view plug side

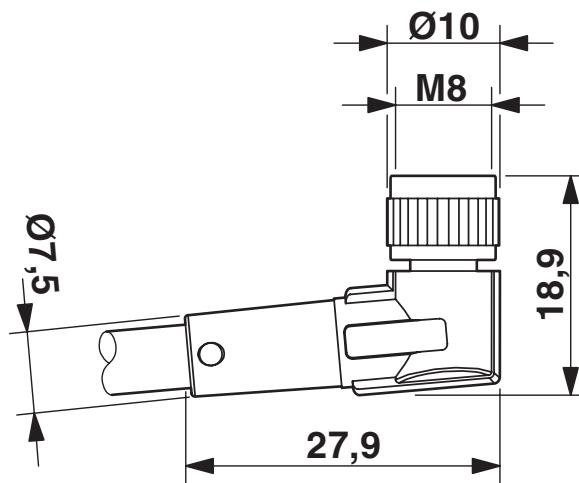# SAC-4P-M12MS/ 1,5-542/M8 FR BK - Sensor/actuator cable

## Schematic diagram



Pin assignment M8 socket, 4-pos., view female side
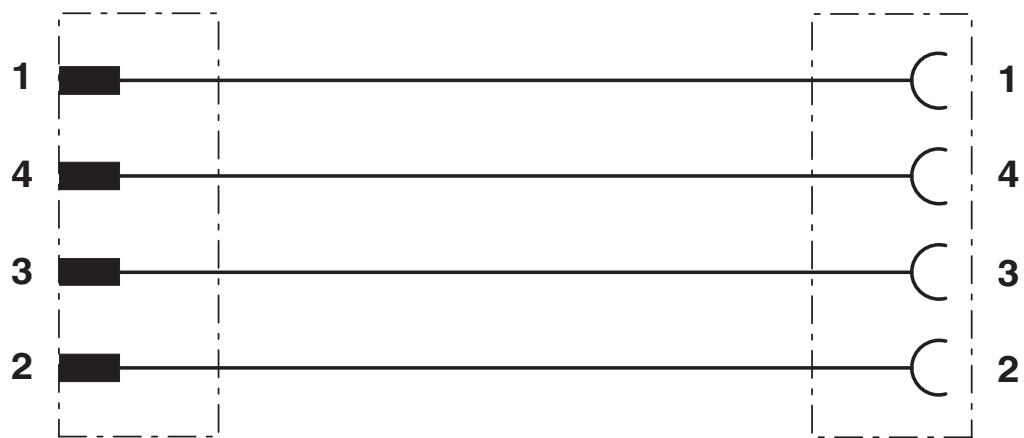
## Dimensional drawing



Socket M8 x 1, angled

# SAC-4P-M12MS/ 1,5-542/M8 FR BK - Sensor/actuator cable

1406217

https://www.phoenixcontact.com/us/products/1406217

Circuit diagram

# SAC-4P-M12MS/ 1,5-542/M8 FR BK - Sensor/actuator cable

1406217

https://www.phoenixcontact.com/us/products/1406217

## Approvals

💡 To download certificates, visit the product detail page: https://www.phoenixcontact.com/us/products/1406217

### UL Listed
Approval ID: FILE E 221474

| | Nominal voltage $U_N$ | Nominal current $I_N$ | Cross section AWG | Cross section $mm^2$ |
|---|---|---|---|---|
| | 30 V | 4 A | - | - |

### cUL Listed
Approval ID: FILE E 221474

| | Nominal voltage $U_N$ | Nominal current $I_N$ | Cross section AWG | Cross section $mm^2$ |
|---|---|---|---|---|
| | 30 V | 4 A | - | - |

### cULus Listed

# SAC-4P-M12MS/ 1,5-542/M8 FR BK - Sensor/actuator cable

1406217

https://www.phoenixcontact.com/us/products/1406217

## Classifications

### ECLASS

| | |
|---|---|
| ECLASS-11.0 | 27060311 |
| ECLASS-12.0 | 27060311 |
| ECLASS-13.0 | 27060311 |

### ETIM

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

### UNSPSC

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

# SAC-4P-M12MS/ 1,5-542/M8 FR BK - Sensor/actuator cable

1406217

https://www.phoenixcontact.com/us/products/1406217

## 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% |

# SAC-4P-M12MS/ 1,5-542/M8 FR BK - Sensor/actuator cable

1406217

https://www.phoenixcontact.com/us/products/1406217

## 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

### 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

# SAC-4P-M12MS/ 1,5-542/M8 FR BK - Sensor/actuator cable

1406217

https://www.phoenixcontact.com/us/products/1406217

## PROT-M 8 MS-PA-CHAIN - Screw plug

1430860

https://www.phoenixcontact.com/us/products/1430860

M8 sealing cap made of plastic with fixing band for sensor cables, for M8 sockets

## TSD 02 SAC - Torque screwdriver

1208487

https://www.phoenixcontact.com/us/products/1208487

Torque screwdriver, with preset torque of 0.2 Nm and 4 mm hexagonal drive for M8 connectors

# SAC-4P-M12MS/ 1,5-542/M8 FR BK - Sensor/actuator cable

1406217

https://www.phoenixcontact.com/us/products/1406217

## SAC BIT M8-D10 - Tool

1208461

https://www.phoenixcontact.com/us/products/1208461

Nut for assembling M8 connectors with longitudinal knurl and a knurl diameter of 10 mm, for 4 mm hexagonal drive

## 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

# SAC-4P-M12MS/ 1,5-542/M8 FR BK - Sensor/actuator cable

1406217

https://www.phoenixcontact.com/us/products/1406217

## 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

## 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

# SAC-4P-M12MS/ 1,5-542/M8 FR BK - Sensor/actuator cable

1406217

https://www.phoenixcontact.com/us/products/1406217

## 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