# Sensor/actuator cable - SAC-4P-10,0-680/M12FS FDP

1096026

https://www.phoenixcontact.com/us/products/1096026

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Sensor/actuator cable, 4-position, PVC, gray, shielded, free cable end, on Socket straight M12, coding: A, cable length: 10 m, Foil shielding plus drain wire

## Commercial Data

| | |
|---|---|
| Item number | 1096026 |
| Packing unit | 1 pc |
| Note | Made to Order (non-returnable) |
| Sales Key | B22 |
| Product Key | BF1IEB |
| GTIN | 4055626929774 |
| Weight per Piece (including packing) | 22.22 g |
| Weight per Piece (excluding packing) | 22.22 g |
| Country of origin | US |

# Technical Data

## Product properties

| | |
|---|---|
| Product type | Sensor/actuator cable |
| Number of positions | 4 |
| Application | Standard, U.S. cables |
| No. of cable outlets | 1 |
| Shielded | yes |
| Coding | A - standard |

### Insulation characteristics

| | |
|---|---|
| Overvoltage category | II |
| Degree of pollution | 3 |

## Material specifications

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

## Electrical properties

| | |
|---|---|
| Contact resistance | ≤ 5 mΩ |
| Insulation resistance | ≥ 10 MΩ |
| Nominal voltage $U_N$ | 250 V AC |
| | 250 V DC |
| Nominal current $I_N$ | 4 A |
| Protective circuit | unwired |

## LED signaling

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

## Connection data

### Conductor connection

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

## Connector

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

### Connection 1

| | |
|---|---|
| Head design | free cable end |

Connection 2

| | |
|---|---|
| Head design | Socket |
| Head cable outlet | straight |
| Head thread type | M12 |
| Coding | A |

## Cable / line

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

PVC, gray, 105°C [680]

| | |
|---|---|
| Cable weight | 35.4 kg/km |
| UL AWM Style | 2517 (105 °C / 300 V) |
| Number of positions | 3 |
| Shielded | yes |
| Cable type | PVC, gray, 105°C [680] |
| AWG signal line | 22 |
| Wire diameter incl. insulation | 1.27 mm ±0.03 mm |
| External cable diameter | 4.75 mm ±0.2 mm |
| Outer sheath, material | PVC |
| External sheath, color | gray |
| Conductor material | Tin-plated Cu litz wires |
| Material wire insulation | PVC (Signal line) |
| Single wire, color | brown, blue, black |
| Type of pair shielding | Plastic-coated aluminum foil, aluminum side inside |
| Overall twist | Conductors, fillers, and drain wire are twisted with left-hand lay |
| Max. conductor resistance | max. 51.1 Ω/km (20 °C) |
| Insulation resistance | ≥ (550 M Ohms/m @ 500V) |
| Nominal voltage, cable | 300 V |
| Minimum bending radius, flexible installation | 8 x D |
| Flame resistance | FT4 |
| Other resistance | UV resistant |
| Special properties | UL standards PLTC and ITC |
| Ambient temperature (operation) | -30 °C ... 105 °C (cable, fixed installation) |

## Ambient conditions

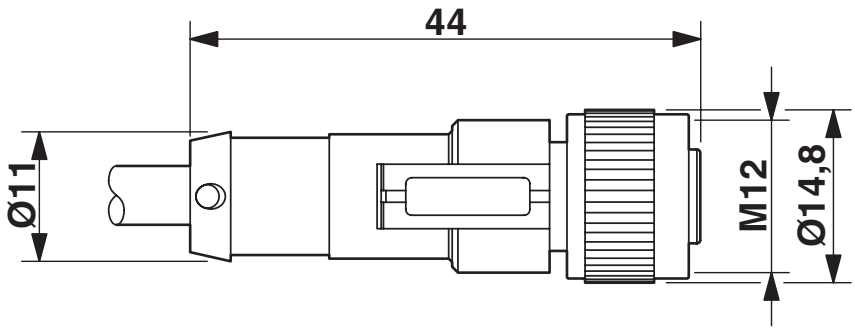
| | |
|---|---|
| Degree of protection | IP65 |
| | IP67 |
| | IP68 |
| Ambient temperature (operation) | -25 °C ... 90 °C (Plug / socket) |
| | -40 °C ... 80 °C (cable, fixed installation) |
| | -5 °C ... 80 °C (Cable, flexible installation) |

## Standards and regulations

| | |
|---|---|
| Standards/specifications | IEC 61076-2-101 |

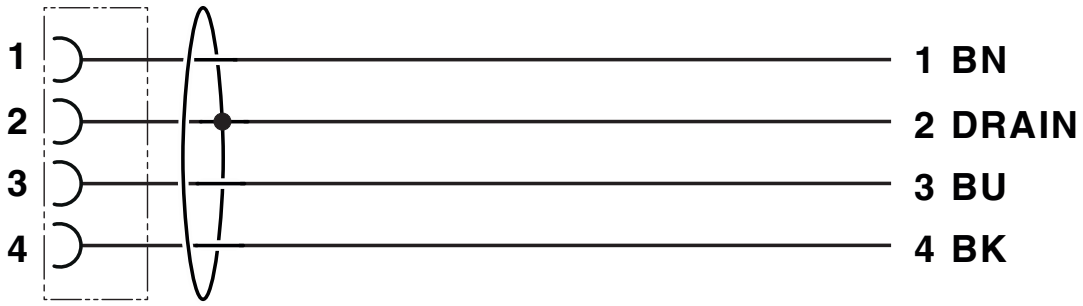
## Drawings

Dimensional drawing

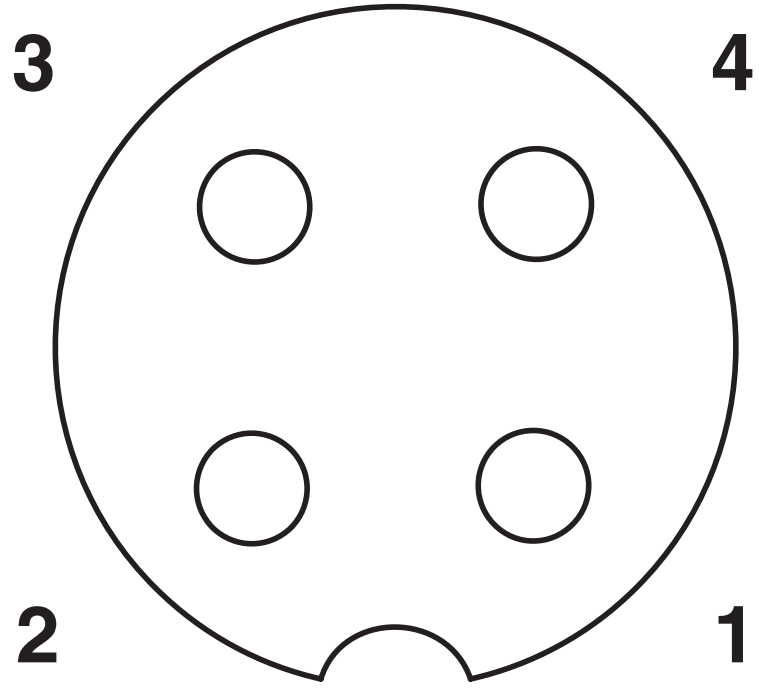



M12 x 1 socket, straight

Circuit diagram



Schematic diagram




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

## Approvals

**UL Listed**
Approval ID: FILE E 221474

| | Nominal Voltage $U_N$ | Nominal Current $I_N$ | Cross Section AWG | Cross Section $mm^2$ |
|---|---|---|---|---|
| | 300 V | 4 A | - | - |

**cUL Listed**
Approval ID: FILE E 221474

| | Nominal Voltage $U_N$ | Nominal Current $I_N$ | Cross Section AWG | Cross Section $mm^2$ |
|---|---|---|---|---|
| | 300 V | 4 A | - | - |

**cULus Listed**

## Classifications

### ECLASS

| | |
|---|---|
| ECLASS-9.0 | 27060311 |
| ECLASS-10.0.1 | 27060311 |
| ECLASS-11.0 | 27060311 |

### UNSPSC

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

## Accessories

### Sealing cap

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

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

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



### Locking clip

Locking clip - SAC-M12-EXCLIP-M - 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



## Screw plug

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

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

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



## Locking clip

Locking clip - SAC-M12-EXCLIP-F - 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

## Torque screwdriver

Torque screwdriver - TSD 04 SAC - 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

## Torque screwdriver

Torque screwdriver - TSD-M 1,2NM - 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

## Adapter insert

Adapter insert - TSD-M SAC-BIT ADAPTER - 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

## Tool

Tool - SAC BIT M12-D15 - 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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