# Sensor/Actuator cable - SAC-5P-MS/0,5-647/FR SCO BK - 1413842

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Sensor/Actuator cable, 5-position, TPE, Plug straight M12 SPEEDCON, A-coded, on Socket angled M12 SPEEDCON, A-coded, Cable length: 0.5 m

## Key Commercial Data

| | |
|---|---|
| Packing unit | 1 pc |
| Weight per Piece (excluding packing) | 1.0 g |
| Country of origin | United States |

## 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

| | |
|---|---|
| Rated current at 40°C | 4 A |
| Rated voltage | 60 V |
| Number of positions | 5 |
| Coding | A - standard |
| Standards/regulations | M12 connector IEC 61076-2-101 |
| Status display | No |
| Protective circuit/component | Unwired |
| Overvoltage category | II |
| Degree of pollution | 3 |
| Torque | 0.4 Nm (M12 connector) |

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## Technical data

### 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 |
| Sealing material | NBR |

### Standards and Regulations

| | |
|---|---|
| Standard designation | M12 connector |
| Standards/regulations | IEC 61076-2-101 |
| Flammability rating according to UL 94 | HB |

### Cable

| | |
|---|---|
| Cable type | TPE yellow 105 °C |
| Cable type (abbreviation) | 647 |
| UL AWM style | 20327 (105°C/300 V) |
| AWG signal line | 18 |
| Conductor structure signal line | 41x 0.16 mm |
| Core diameter including insulation | 1.8 mm |
| Thickness, insulation | 0.23 mm |
| Overall twist | 5 wires around filler to the core |
| External sheath, color | yellow |
| Outer sheath thickness | 0.89 mm |
| External cable diameter D | 6.6 mm ±0.25 mm |
| Cable weight | 39 kg/km |
| Outer sheath, material | TPE |
| Material conductor insulation | PVC |
| 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) |

## Classifications

### eCl@ss

| | |
|---|---|
| eCl@ss 5.1 | 27061801 |

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## Classifications

### eCl@ss

| | |
|---|---|
| eCl@ss 6.0 | 27061801 |
| eCl@ss 8.0 | 27279218 |
| eCl@ss 9.0 | 27060311 |

### ETIM

| | |
|---|---|
| ETIM 5.0 | EC002585 |

## Accessories

### Accessories

### Protective cap

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

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



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

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



### 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



# Sensor/Actuator cable - SAC-5P-MS/0,5-647/FR SCO BK - 1413842

## Accessories

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

### 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

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

### Torque tool

Torque screwdriver - TSD 04 SAC - 1208429



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

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



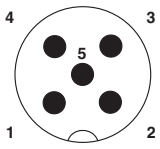
Torque screw driver, accuracy as per EN ISO 6789 standard, adjustable from 0.3 - 1.2 Nm

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## Accessories

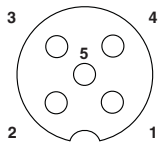
## Drawings

Schematic diagram




Pin assignment M12 male connector, 5-pos., A-coded, male side

Schematic diagram



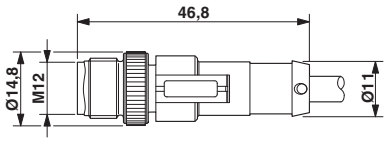

Pin assignment M12 socket, 5-pos., A-coded, socket side view

Cable cross section



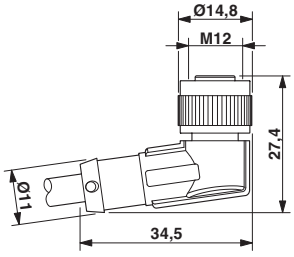
TPE yellow 105 °C [647]

Dimensional drawing




M12 x 1 plug, straight

Dimensional drawing




M12 x 1 socket, angled

Circuit diagram




Contact assignment of the M12 plug and the M12 socket

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