

Sensor/Actuator cable - SAC-3P-M 8MS/ 1,5-PUR/M12FR-2L - 1693380

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's documentation. Our General Terms of Use for Downloads are valid (<http://download.phoenixcontact.com>)



Sensor/Actuator cable, 3-position, PUR halogen-free, Black-gray RAL 7021, Plug straight M8, on Socket angled M12, A-coded, with 2 LEDs, Cable length: 1.5 m

Why buy this product

- ✓ Easy and safe: 100% electrically tested plug-in components
- ✓ Our standard: robust halogen-free PUR cable
- ✓ Convenient: increased machine availability thanks to quick and easy diagnostics



Key commercial data

| | |
|--------------------------------------|---|
| Packing unit | 1 pc |
| GTIN |  4 017918 187842 |
| Weight per Piece (excluding packing) | 50.5 g |
| Custom tariff number | 85444290 |
| Country of origin | Poland |

Technical data

Dimensions

| | |
|-----------------|-------|
| Length of cable | 1.5 m |
|-----------------|-------|

Ambient conditions

| | |
|---------------------------------|----------------------------------|
| Ambient temperature (operation) | -25 °C ... 90 °C (Plug / socket) |
| Degree of protection | IP65 |
| | IP67 |
| | IP68 |

General

| | |
|-----------------------|----------|
| Rated current at 40°C | 4 A |
| Rated voltage | 24 V |
| Number of positions | 3 |
| Contact resistance | ≤ 5 mΩ |
| Insulation resistance | ≥ 100 MΩ |

Sensor/Actuator cable - SAC-3P-M 8MS/ 1,5-PUR/M12FR-2L - 1693380

Technical data

General

| | |
|------------------------------|-------------------------------|
| Coding | A - standard |
| Standards/regulations | M12 connector IEC 61076-2-101 |
| | M8 connector IEC 61076-2-104 |
| Status display | 2 LEDs |
| Protective circuit/component | Unwired |
| Surge voltage category | II |
| Pollution degree | 3 |
| Insertion/withdrawal cycles | ≥ 100 |
| Torque | 0.4 Nm (M12 connector) |
| | 0.2 Nm (M8 connectors) |

Material

| | |
|---|---|
| Inflammability class 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 |

Cable

| | |
|---|---------------------------------------|
| Cable type | PUR halogen-free black |
| Cable type (abbreviation) | PUR |
| Cable abbreviation | Li9Y11Y-HF |
| UL AWM style | 20549 |
| Conductor cross section | 3x 0.25 mm ² (signal line) |
| AWG signal line | 24 |
| Conductor structure signal line | 32x 0.10 mm |
| Core diameter including insulation | 1.17 mm ±0.02 mm (signal line) |
| Thickness, insulation | ≥ 0.38 mm (Core insulation) |
| | approx. 0.9 mm (Outer cable sheath) |
| Wire colors | brown, blue, black |
| Overall twist | 3 wires, twisted |
| Length of twist, overall twist | 40 mm |
| External sheath, color | Black-gray RAL 7021 |
| External cable diameter D | 4.4 mm ±0.15 mm |
| Smallest bending radius, fixed installation | 22 mm |
| Smallest bending radius, movable installation | 44 mm |
| Number of bending cycles | 4000000 |
| Bending radius | 44 mm |
| Traversing path | 10 m |
| Traversing rate | 3 m/s |

Sensor/Actuator cable - SAC-3P-M 8MS/ 1,5-PUR/M12FR-2L - 1693380

Technical data

Cable

| | |
|---------------------------------|---|
| Acceleration | 10 m/s ² |
| Cable weight | 24 kg/km |
| Outer sheath, material | PUR |
| Material conductor insulation | PP |
| Conductor material | Bare Cu litz wires |
| Insulation resistance | ≥ 100 GΩ*km (at 20 °C) |
| Conductor resistance | ≤ 78000000 Ω/km (at 20 °C) |
| Nominal voltage, cable | ≤ 300 V |
| Test voltage, cable | ≥ 3000 V |
| Special properties | Flexible cable conduit capable |
| | Silicone-free |
| | Free of substances which would hinder coating with paint or varnish |
| Flame resistance | in accordance with DIN UL-Style 20549 |
| Halogen-free | in accordance with DIN VDE 0472 part 815 |
| Resistance to oil | in accordance with DIN EN 60811-2-1 |
| Other resistance | hydrolysis and microbe resistant |
| | Highly resistant to acids, alkaline solutions and solvents |
| | Resistant to salt water |
| | partly UV-resistant in accordance with DIN EN ISO 4892-2-A |
| Ambient temperature (operation) | -40 °C ... 80 °C (cable, fixed installation) |
| | -25 °C ... 80 °C (cable, flexible installation) |

Classifications

eCl@ss

| | |
|------------|----------|
| eCl@ss 4.0 | 27060306 |
| eCl@ss 4.1 | 27060306 |
| eCl@ss 5.0 | 27061801 |
| eCl@ss 5.1 | 27061801 |
| eCl@ss 6.0 | 27061801 |
| eCl@ss 7.0 | 27061801 |
| eCl@ss 8.0 | 27061801 |

ETIM

| | |
|----------|----------|
| ETIM 2.0 | EC000830 |
| ETIM 3.0 | EC001855 |
| ETIM 4.0 | EC001855 |
| ETIM 5.0 | EC001855 |

UNSPSC

| | |
|-------------|----------|
| UNSPSC 6.01 | 31251501 |
|-------------|----------|

Sensor/Actuator cable - SAC-3P-M 8MS/ 1,5-PUR/M12FR-2L - 1693380

Classifications

UNSPSC

| | |
|---------------|----------|
| UNSPSC 7.0901 | 31251501 |
| UNSPSC 11 | 31251501 |
| UNSPSC 12.01 | 31251501 |
| UNSPSC 13.2 | 31251501 |

Approvals

Approvals


Approvals


UL Listed / cUL Listed / GOST / cULus Listed


Ex Approvals

Approvals submitted

Approval details

| | |
|---|------|
| UL Listed  | |
| Nominal current IN | 4 A |
| Nominal voltage UN | 24 V |

| | |
|--|------|
| cUL Listed  | |
| Nominal current IN | 4 A |
| Nominal voltage UN | 24 V |

| | |
|--|--|
| GOST  | |
|--|--|

| | |
|--|--|
| cULus Listed  | |
|--|--|

Sensor/Actuator cable - SAC-3P-M 8MS/ 1,5-PUR/M12FR-2L - 1693380

Accessories

Accessories

Conductor marking

Insert label - PABA WH/15 - 1013151



Insert label, Strip, white, Unlabeled, Can be labeled with: Plotter, Mounting type: Thread on, Cable diameter: 0.6-50 mm, Lettering field: 15 x 4 mm

Insert label - PABA YE/15 - 1013698



Insert label, Strip, yellow, Unlabeled, Can be labeled with: Plotter, Mounting type: Thread on, Cable diameter: 0.6-50 mm, Lettering field: 15 x 4 mm

Insert label - PABA RD/15 - 1013944



Insert label, Strip, red, Unlabeled, Can be labeled with: Plotter, Mounting type: Thread on, Cable diameter: 0.6-50 mm, Lettering field: 15 x 4 mm

Marker carrier cable

Conductor marker carrier - PATO 2/15 - 1013122



Conductor marker carrier, transparent, Unlabeled, Mounting type: Clip on, Cable diameter: 2.8-4.4 mm, Lettering field: 4 x 15 mm

Conductor marker carrier - PATO 3/15 - 1013135



Conductor marker carrier, transparent, Unlabeled, Mounting type: Clip on, Cable diameter: 4.4-6.7 mm, Lettering field: 4 x 15 mm

Sensor/Actuator cable - SAC-3P-M 8MS/ 1,5-PUR/M12FR-2L - 1693380

Accessories

Conductor marker carrier - PATO 4/15 - 1013148



Conductor marker carrier, transparent, Unlabeled, Mounting type: Clip on, Cable diameter: 6.7-10 mm, Lettering field: 4 x 15 mm

Marker pen

Marker pen - B-STIFT - 1051993



Marker pen, for manual labeling of unprinted Zack strips, smear-proof and waterproof, line thickness 0.5 mm

Protective cap

Sealing cap - PROT-M 8 FS-PA-CHAIN - 1430857

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



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

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



Safety locking

Fuse clip - SAC-M12-EXCLIP-F - 1558991



Fuse clip for the socket side of various M12 sensor/actuator connectors prevents plug-in connections being interrupted without using a tool

Screwdriver tools

Sensor/Actuator cable - SAC-3P-M 8MS/ 1,5-PUR/M12FR-2L - 1693380

Accessories

Tool - SAC BIT M8-D10 - 1208461



Nut for assembling sensor/actuator cables with M8 connector and for M8 connectors with QUICKON fast connection technology, for 4 mm hexagonal drive

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 for M12 connectors with QUICKON fast connection technology, for 4 mm hexagonal drive

Torque tool

Torque screwdriver - TSD 02 SAC - 1208487



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

Torque screwdriver - TSD 04 SAC - 1208429



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

Sensor/Actuator cable - SAC-3P-M 8MS/ 1,5-PUR/M12FR-2L - 1693380

Accessories

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



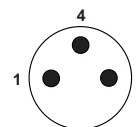
Torque screw driver, accuracy as per EN ISO 6789 standard, adjustable from 0.3 - 1.2 Nm

Drawings

Circuit diagram

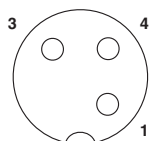
Contact assignment of M8 plugs / M12 sockets

Schematic diagram



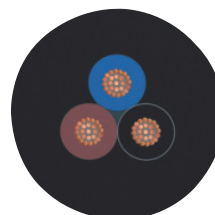
Pin assignment M8 plug, 3-pos., view male side

Schematic diagram



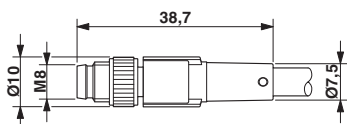
Pin assignment M12 socket, 3-pos., A-coded, view female side

Cable cross section



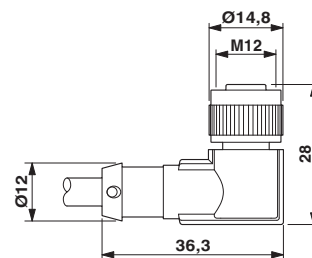
PUR halogen-free black [PUR]

Dimensioned drawing



M8 x 1 male plug, straight version

Dimensioned drawing



Socket M12 x 1, angled, with LED