


## SAC-5P- 1,5-PUR/M12FS

Order No.: 1669822



Sensor/Actuator cable, 5-position, PUR halogen-free, Black-gray RAL 7021, Free cable end, on Socket straight M12, A-coded, Cable length: 1.5 m

### Commercial data

|                          |  |
|--------------------------|--|
| EAN                      | <br>4 017918 134723 |
| Pack                     | 1  |
| Customs tariff           | 85444290   |
| Gross weight in pieces   | 64.00 g  |
| Country of Origin        | IN   |
| Catalog page information | Page 137 (PC-2011)   |

### Product notes

WEEE/RoHS-compliant since:  
01/08/2005



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### Technical data

#### General data

|                       |          |
|-----------------------|----------|
| Rated current at 40°C | 4 A      |
| Rated voltage         | 60 V     |
| Number of positions   | 5        |
| Volume resistance     | ≤ 5 mΩ   |
| Insulation resistance | ≥ 100 MΩ |

|  |                                  |
|--|----------------------------------|
| Length of cable                            | 1.5 m                            |
| Stripping length of the free conductor end | 50 mm                            |
| Ambient temperature (operation)            | -25 °C ... 90 °C (Plug / socket) |

#### General characteristics

|                             |   |
|-----------------------------|---|
| Standards/regulations       | M12 plug-in connector IEC 61076-2-101       |
| Coding                      | A - standard                                |
| Surge voltage category      | II  |
| Pollution degree            | 3   |
| Degree of protection        | IP65/IP68/IP69K                             |
| Insertion/withdrawal cycles | ≥ 100                                       |
| Torque                      | 0.4 Nm (M12 plug-in connector)              |
| 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   |
| Status display              | No  |

#### Conductor data

|   |   |
|---|---|
| Cable type                                    | PUR halogen-free black                  |
| Cable type (abbreviation)                     | PUR                                     |
| UL AWM style                                  | 20549                                   |
| Conductor cross section                       | 5x 0.34 mm <sup>2</sup> (signal line)   |
| AWG signal line                               | 22                                      |
| Conductor structure signal line               | 42x 0.10 mm                             |
| Core diameter including insulation            | 1.27 mm ±0.02 mm (signal line)          |
| Thickness, insulation                         | approx. 0.7 mm                          |
| Wire colors                                   | brown, white, blue, black, green-yellow |
| External sheath, color                        | Black-gray RAL 7021                     |
| External cable diameter D                     | 5 mm ±0.15 mm                           |
| Smallest bending radius, fixed installation   | 25 mm                                   |
| Smallest bending radius, movable installation | 50 mm                                   |
| Number of bending cycles                      | 4000000                                 |
| Bending radius                                | 50 mm                                   |

|                                 |   |
|---------------------------------|---|
| Traversing path                 | 10 m  |
| Traversing rate                 | 3 m/s   |
| Acceleration                    | 10 m/s <sup>2</sup>   |
| Cable weight                    | 35 kg/km  |
| Outer sheath, material          | PUR   |
| Conductor material              | Bare Cu litz wires  |
| Insulation resistance           | ≥ 16 GΩ*km (at 20 °C)   |
| Conductor resistance            | max. 58 Ω/km (at 20 °C)   |
| Nominal voltage, conductor      | 300 V   |
| Test voltage, conductor         | 3000 V  |
| Special properties              | Flexible cable conduit capable                                      |
|                                 | Silicone-free   |
|                                 | Free of substances which would hinder coating with paint or varnish |
|                                 | Flexible  |
| 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                | Highly resistant to acids, alkaline solutions and solvents          |
|                                 | hydrolysis and microbe resistant                                    |
|                                 | 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)                     |

## Certificates



Certification

cULus Listed, GOST

Certifications applied for:

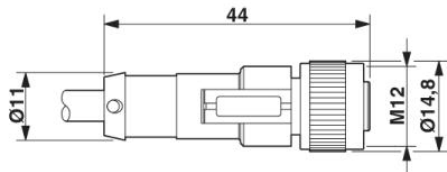
Certification Ex:

| <b>Accessories</b>                     |                       |   |
|--|-----------------------|---|
| Item                                   | Designation           | Description   |
| <b>Fuse</b>                            |                       |   |
| 1558991                                | SAC-M12-EXCLIP-F      | Fuse clip for the socket side of various M12 sensor/actuator connectors prevents plug-in connections being interrupted without using a tool           |
| <b>Marking</b>                         |                       |   |
| 1051993                                | B-STIFT               | Marker pen, for manual labeling of unprinted Zack strips, smear-proof and waterproof, line thickness 0.5 mm   |
| 1013944                                | PABA RD/15            | 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    |
| 1013151                                | PABA WH/15            | 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  |
| 1013698                                | PABA YE/15            | 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 |
| 1013850                                | PATG 2/23             | Conductor marker carrier, transparent, Unlabeled, Mounting type: Slide on, Cable diameter: 2-4 mm, Lettering field: 4 x 23 mm                         |
| 1013863                                | PATG 3/23             | Conductor marker carrier, transparent, Unlabeled, Mounting type: Slide on, Cable diameter: 4-7 mm, Lettering field: 4 x 23 mm                         |
| 0808011                                | PATG 4/23             | Conductor marker carrier, transparent, Unlabeled, Mounting type: Slide on, Cable diameter: 6-10 mm, Lettering field: 4 x 23 mm                        |
| <b>Protection and sealing elements</b> |                       |   |
| 1430899                                | PROT-M12 MS-PA-CHAIN  | M12 sealing cap with fixing band, for sensor cables, for free M12 sockets   |
| <b>Tools</b>                           |                       |   |
| 1212207                                | CUTFOX-S VDE          | Diagonal cutter for copper and aluminum conductors, VDE-tested  |
| 1208432                                | SAC BIT M12-D15       | Nut for assembling sensor/actuator cables with M12 connector and for M12 connectors with QUICKON fast connection technology, for 4 mm hexagonal drive |
| 1208429                                | TSD 04 SAC            | Torque screwdriver, with preset torque of 0.4 Nm and 4 mm hexagonal drive for M12 connectors  |
| 1212224                                | TSD-M 1,2NM           | Torque screw driver, accuracy as per EN ISO 6789 standard, adjustable from 0.3 - 1.2 Nm   |
| 1212600                                | TSD-M SAC-BIT ADAPTER | Adapter bit for TSD-M...torque tools, E6.3-1/4" drive with 4 mm hexagon to accommodate SAC bits   |

|         |             |  |
|---------|-------------|--|
| 1212150 | WIREFOX 10  | Stripping tool, for cables and conductors from 0.02 - 10 mm <sup>2</sup> , self-adjusting, stripping length of up to 18 mm, cutting capacity of up to 10 mm <sup>2</sup> stranded/1.5 mm <sup>2</sup> solid, replaceable stripping blade |
| 1212623 | WIREFOX SAC | Stripping pliers, for halogen-free sensor/actuator cables (SAC cables), with PUR and PVC insulation, from Ø of 4.4 to 7 mm, any stripping length   |

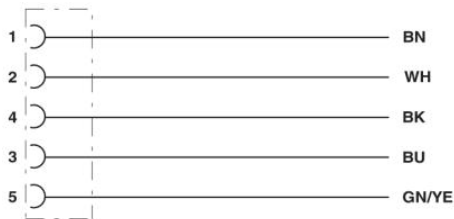
## Drawings

### Dimensioned drawing



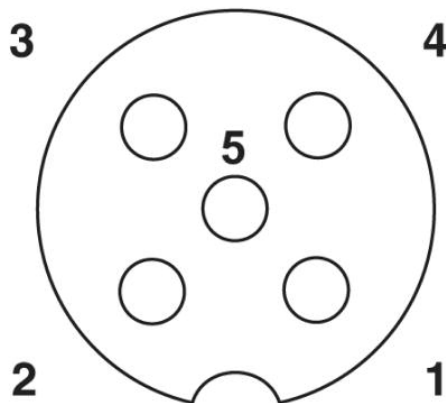
M12 x 1 female connector, straight

### Circuit diagram

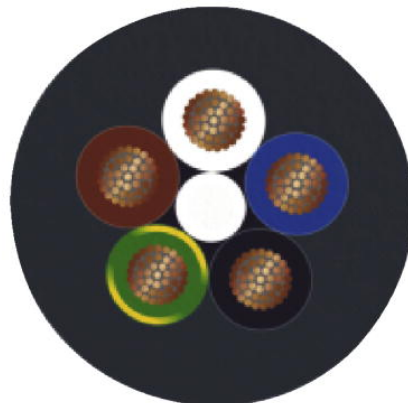


Contact assignment of the M12 sockets

### Schematic diagram



Pin assignment M12 female connector, 5-pos., B-coded, female side



PUR halogen-free black [PUR]

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