

# SAC-3P-MR/ 1,7-PUR/FS SCO VC - Sensor/actuator cable



1410049

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Sensor/actuator cable, 3-position, PUR halogen-free, black-gray RAL 7021, Plug angled M12 SPEEDCON, coding: A, on Socket straight M12 SPEEDCON, coding: A, cable length: 1.7 m

## Commercial data

|                                      |               |
|--------------------------------------|---------------|
| Item number                          | 1410049       |
| Packing unit                         | 1 pc          |
| Minimum order quantity               | 40 pc         |
| Product key                          | AF1CBA        |
| GTIN                                 | 4046356888622 |
| Weight per piece (including packing) | 69.4 g        |
| Weight per piece (excluding packing) | 69.4 g        |
| Country of origin                    | PL            |

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## Technical data

### Product properties

|                      |                       |
|----------------------|-----------------------|
| Product type         | Sensor/actuator cable |
| Number of positions  | 3                     |
| No. of cable outlets | 1                     |
| 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                |

### Electrical properties

|                       |                            |
|-----------------------|----------------------------|
| Insulation resistance | $\geq 100 \text{ M}\Omega$ |
| Nominal voltage $U_N$ | 250 V AC<br>250 V DC       |
| Nominal current $I_N$ | 4 A                        |

### Mechanical properties

#### Mechanical data

|                             |            |
|-----------------------------|------------|
| Insertion/withdrawal cycles | $\geq 100$ |
|-----------------------------|------------|

### Signaling

|                        |    |
|------------------------|----|
| Status display         | no |
| Status display present | no |

### Connector

#### Connection 1

|                     |                          |
|---------------------|--------------------------|
| Type                | Plug angled M12 SPEEDCON |
| Number of positions | 3                        |
| Locking type        | SPEEDCON                 |
| Coding type         | A                        |

#### Connection 2

|      |                              |
|------|------------------------------|
| Type | Socket straight M12 SPEEDCON |
|------|------------------------------|

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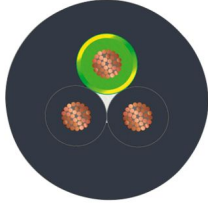
<https://www.phoenixcontact.com/us/products/1410049>

|                     |          |
|---------------------|----------|
| Number of positions | 3        |
| Locking type        | SPEEDCON |
| Coding type         | A        |

## Cable/line

|              |       |
|--------------|-------|
| Cable length | 1.7 m |
|--------------|-------|

### PUR halogen-free black [PUR]

|   |   |
|---|---|
| Dimensional drawing                           |   |
| Cable weight                                  | 30 kg/km  |
| UL AWM Style                                  | 20549   |
| Number of positions                           | 3   |
| Shielded                                      | no  |
| Cable type                                    | PUR halogen-free black [PUR]  |
| Conductor structure signal line               | 28x 0.15 mm   |
| AWG signal line                               | 20  |
| Conductor cross-section                       | 3x 0.5 mm <sup>2</sup>  |
| Wire diameter incl. insulation                | 1.5 mm ±0.05 mm (Signal line)   |
| External cable diameter                       | 4.50 mm ±0.2 mm   |
| Outer sheath, material                        | PUR   |
| External sheath, color                        | black-gray RAL 7021   |
| Conductor material                            | Bare Cu litz wires  |
| Material wire insulation                      | PP  |
| Single wire, color                            | black 1, black 2, green/yellow  |
| Overall twist                                 | 3 wires, twisted  |
| Max. conductor resistance                     | 39 Ω/km (at 20 °C)  |
| Insulation resistance                         | min. 20 MΩ*km   |
| Nominal voltage, cable                        | ≤ 300 V   |
| Test voltage                                  | ≥ 1200 V  |
| Minimum bending radius, fixed installation    | 5 x D   |
| Minimum bending radius, flexible installation | 10 x D  |
| Smallest bending radius, fixed installation   | 22.5 mm   |
| Smallest bending radius, movable installation | 45 mm   |
| Dynamic load capacity (bending)               | Max. bending cycles: 15000000, Bending radius: 50 mm, Traversing path: 0.9 m, Traversing rate: 5 m/s, Acceleration: 30 m/s <sup>2</sup> |
| Halogen-free                                  | in accordance with DIN VDE 0472 part 815  |
| Flame resistance                              | according to DIN VDE 0482   |

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|                                 |   |
|---------------------------------|---|
|                                 | According to DIN EN 50265-2-1   |
| Resistance to oil               | in accordance with DIN EN 60811-2-1   |
| Other resistance                | largely oil-resistant<br>partly UV-resistant (in accordance with DIN EN ISO 4892-2-A)           |
| Ambient temperature (operation) | -40 °C ... 80 °C (cable, fixed installation)<br>-20 °C ... 80 °C (Cable, flexible installation) |

## Environmental and real-life conditions

### Ambient conditions

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

## Standards and regulations

|                      |               |
|----------------------|---------------|
| Standard designation | M12 connector |
|----------------------|---------------|

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## Drawings

Dimensional drawing



M12 x 1 male plug, angled

Dimensional drawing



M12 x 1 socket, straight

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Schematic diagram



Pin assignment M12 plug, 3-pos., A-coded, view male side

Schematic diagram



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

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## Classifications

### ECLASS

|             |          |
|-------------|----------|
| ECLASS-13.0 | 27060311 |
| ECLASS-15.0 | 27060311 |

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## 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% |
|-------------------------------------|----------------------------|

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