

SAC-4P-MRD/6,0-PUR/FRD SCO - Sensor/actuator cable



1405351  
<https://www.phoenixcontact.com/us/products/1405351>

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Sensor/actuator cable, 4-pos., PUR, halogen-free, RAL 7021 (black-gray), angled M12 SPEEDCON plug (D-coded) to angled M12 SPEEDCON socket (D-coded), cable length: 6 m

Commercial data

|                                      |               |
|--------------------------------------|---------------|
| Item number                          | 1405351       |
| Packing unit                         | 1 pc          |
| Minimum order quantity               | 50 pc         |
| Product key                          | AF1CCA        |
| GTIN                                 | 4046356741712 |
| Weight per piece (including packing) | 199.6 g       |
| Weight per piece (excluding packing) | 193.2 g       |
| Country of origin                    | PL            |

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## Technical data

### Product properties

|                      |                       |
|----------------------|-----------------------|
| Product type         | Sensor/actuator cable |
| Number of positions  | 4                     |
| No. of cable outlets | 1                     |
| Shielded             | no                    |
| Coding               | D                     |

### 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                |
| Outer sheath, material                 | PUR                                         |
| Conductor material                     | Bare Cu litz wires                          |

### Electrical properties

|                           |                            |
|---------------------------|----------------------------|
| Insulation resistance     | $\geq 100 \text{ M}\Omega$ |
| Nominal voltage $U_N$     | 250 V AC                   |
|                           | 250 V DC                   |
| Nominal current $I_N$     | 4 A                        |
| Max. conductor resistance | 58 $\Omega/\text{km}$      |

### Mechanical properties

#### Mechanical data

|                     |         |
|---------------------|---------|
| Max. bending cycles | 4000000 |
|---------------------|---------|

### Signaling

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

### Connector

#### Connection 1

|                     |                          |
|---------------------|--------------------------|
| Type                | Plug angled M12 SPEEDCON |
| Number of positions | 4                        |

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|              |          |
|--------------|----------|
| Locking type | SPEEDCON |
| Coding type  | D        |

## Connection 2

|                     |                            |
|---------------------|----------------------------|
| Type                | Socket angled M12 SPEEDCON |
| Number of positions | 4                          |
| Locking type        | SPEEDCON                   |
| Coding type         | D                          |

## Cable/line

|              |     |
|--------------|-----|
| Cable length | 6 m |
|--------------|-----|

## PUR halogen-free black [PUR]

|                                               |                                                                                     |
|-----------------------------------------------|-------------------------------------------------------------------------------------|
| Dimensional drawing                           |  |
| Cable weight                                  | 30 kg/km                                                                            |
| UL AWM Style                                  | 20549 / 10493 (80°C/300 V)                                                          |
| Number of positions                           | 4                                                                                   |
| Shielded                                      | no                                                                                  |
| Cable type                                    | PUR halogen-free black [PUR]                                                        |
| Conductor structure signal line               | 42x 0.10 mm                                                                         |
| AWG signal line                               | 22                                                                                  |
| Conductor cross section                       | 4x 0.34 mm² (Signal line)                                                           |
| Wire diameter incl. insulation                | 1.27 mm ±0.02 mm                                                                    |
| External cable diameter                       | 4.20 mm ±0.15 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                            | brown, white, blue, black                                                           |
| Thickness, insulation                         | ≥ 0.21 mm                                                                           |
| Thickness, outer sheath                       | approx. 0.50 mm                                                                     |
| Overall twist                                 | 4 wires, twisted                                                                    |
| Max. conductor resistance                     | ≤ 58 Ω/km                                                                           |
| Insulation resistance                         | ≥ 1 GΩ*km                                                                           |
| Nominal voltage, cable                        | ≤ 300 V                                                                             |
| Test voltage                                  | ≥ 3000 V                                                                            |
| Minimum bending radius, fixed installation    | 5 x D                                                                               |
| Minimum bending radius, flexible installation | 10 x D                                                                              |

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|                                               |                                                                                                                                                                |
|-----------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Smallest bending radius, fixed installation   | 21 mm                                                                                                                                                          |
| Smallest bending radius, movable installation | 42 mm                                                                                                                                                          |
| Dynamic load capacity (bending)               | Max. bending cycles: 10000000, Bending radius: 42 mm, Bending radius: 10 x D, Traversing path: 10 m, Traversing rate: 3 m/s, Acceleration: 10 m/s <sup>2</sup> |
| Dynamic load capacity (torsion)               | Torsion: ±180 °/m, Torsion cycles: ≥2000000, Torsional frequency: 35 cycles/min.                                                                               |
| Halogen-free                                  | in accordance with DIN VDE 0472 part 815                                                                                                                       |
|                                               | in accordance with DIN EN 50267-2-1                                                                                                                            |
| Flame resistance                              | in accordance with UL 758/1581 FT2                                                                                                                             |
|                                               | DIN EN 60332-2-2 (20 s)                                                                                                                                        |
| 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                                                                                                                               |
|                                               | partly UV-resistant (in accordance with DIN EN ISO 4892-2-A)                                                                                                   |
|                                               | Low adhesion                                                                                                                                                   |
| Special properties                            | abrasion-resistant                                                                                                                                             |
|                                               | Flexible cable conduit capable                                                                                                                                 |
|                                               | Silicone-free                                                                                                                                                  |
|                                               | Free of substances which would hinder coating with paint or varnish                                                                                            |
| Ambient temperature (operation)               | flexible                                                                                                                                                       |
|                                               | -40 °C ... 80 °C (cable, fixed installation)                                                                                                                   |
|                                               | -25 °C ... 80 °C (Cable, flexible installation)                                                                                                                |

## Environmental and real-life conditions

### 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) |

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## Drawings

Dimensional drawing



M12 x 1 male plug, angled

Dimensional drawing



M12 x 1 socket, angled

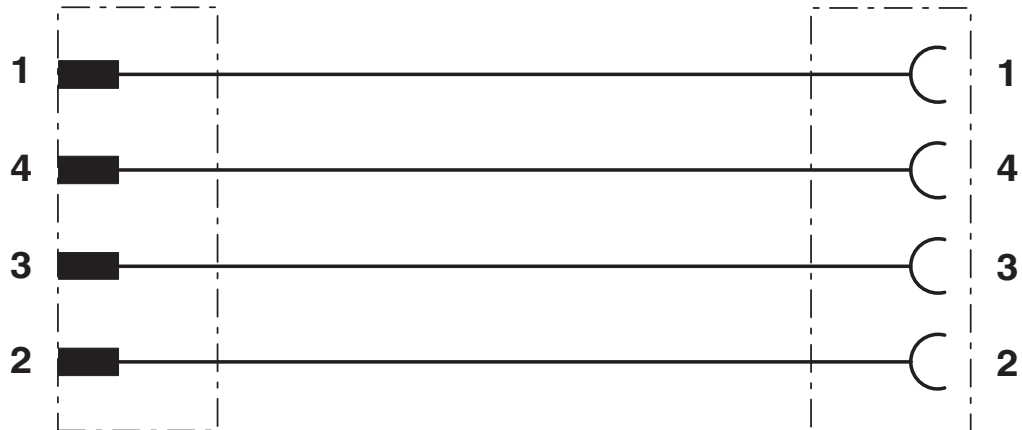
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Circuit diagram



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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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