

1442382

<https://www.phoenixcontact.com/us/products/1442382>

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Sensor/actuator cable, 4-position, PUR halogen-free, black-gray RAL 7021, Plug straight M12, coding: A, on free cable end, cable length: 10 m, with plastic knurl

Your advantages

- Easy and safe: 100 % electrically tested plug-in components
- Save weight – our connectors with light plastic knurl

Commercial data

|                                      |                    |
|--------------------------------------|--------------------|
| Item number                          | 1442382            |
| Packing unit                         | 1 pc               |
| Minimum order quantity               | 1 pc               |
| Sales key                            | BF03               |
| Product key                          | BF1CCA             |
| Catalog page                         | Page 132 (PC-2011) |
| GTIN                                 | 4046356534963      |
| Weight per piece (including packing) | 263.3 g            |
| Weight per piece (excluding packing) | 253 g              |
| Customs tariff number                | 85444290           |
| Country of origin                    | PL                 |

## Technical data

### Product properties

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

### Insulation characteristics

|                      |    |
|----------------------|----|
| Overvoltage category | II |
| Degree of pollution  | 3  |

### Material specifications

|  |   |
|--|---|
| Flammability rating according to UL 94 | HB  |
| 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          | PA  |

### Electrical properties

|                       |          |
|-----------------------|----------|
| Insulation resistance | ≥ 100 MΩ |
| Nominal voltage $U_N$ | 250 V AC |
|                       | 250 V DC |
| Nominal current $I_N$ | 4 A      |

### Mechanical properties

#### Mechanical data

|                             |       |
|-----------------------------|-------|
| Insertion/withdrawal cycles | ≥ 100 |
|-----------------------------|-------|

### Signaling

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

### Connection data

#### Conductor connection

|                   |                        |
|-------------------|------------------------|
| Tightening torque | 0.4 Nm (M12 connector) |
|-------------------|------------------------|

### Connector

#### Connection 1

|      |                   |
|------|-------------------|
| Type | Plug straight M12 |
|------|-------------------|

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|                     |   |
|---------------------|---|
| Number of positions | 4 |
| Coding type         | A |

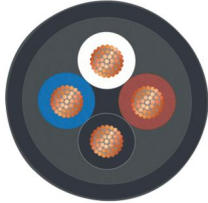
## Connection 2

|      |                |
|------|----------------|
| Type | free cable end |
|------|----------------|

## Cable/line

|              |      |
|--------------|------|
| Cable length | 10 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 mm <sup>2</sup> (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   |
| Smallest bending radius, fixed installation   | 21 mm  |
| Smallest bending radius, movable installation | 42 mm  |
| Dynamic load capacity (bending)               | Max. bending cycles: 10000000, Bending radius: 10 x D,                             |

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|                                 |  |
|---------------------------------|--|
|                                 | Traversing path: 10 m, Traversing rate: 3 m/s, Acceleration: 10 m/s <sup>2</sup> |
| 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   |
|                                 | abrasion-resistant   |
| Special properties              | Flexible cable conduit capable   |
|                                 | Silicone-free  |
|                                 | Free of substances which would hinder coating with paint or varnish              |
|                                 | flexible   |
| Ambient temperature (operation) | -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) |

## Standards and regulations

|                          |                 |
|--------------------------|-----------------|
| Standard designation     | M12 connector   |
| Standards/specifications | IEC 61076-2-101 |

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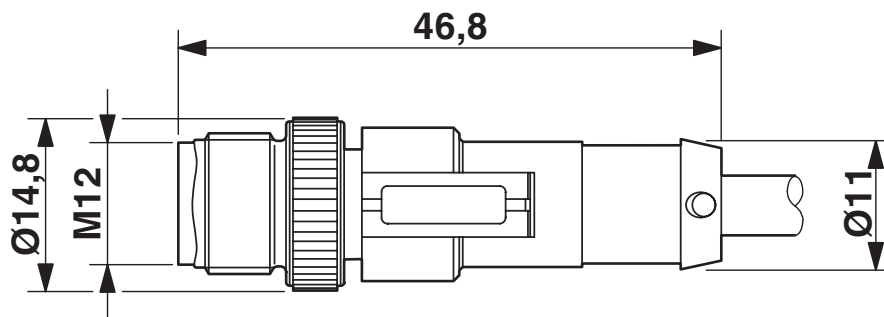


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## Drawings

Dimensional drawing



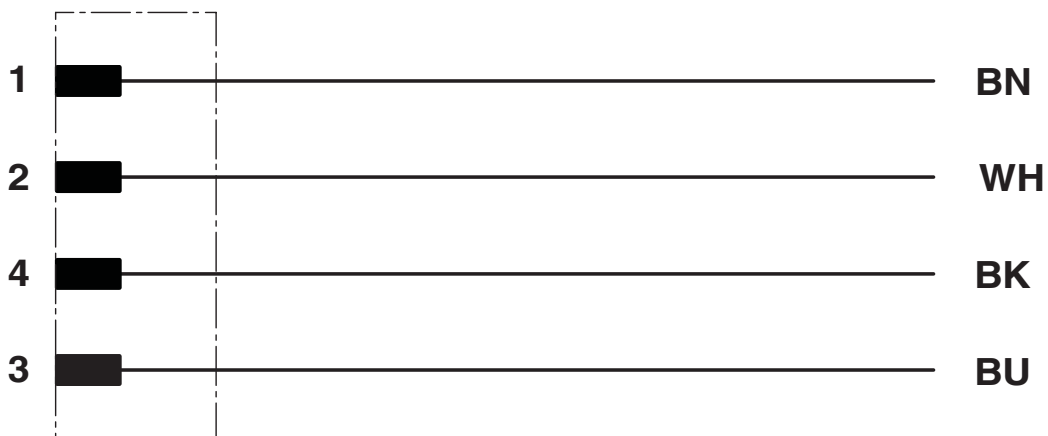
Plug, M12 x 1, straight, shielded

Schematic diagram




Pin assignment M12 plug, 4-pos., A-coded, view plug side


Circuit diagram




Approvals

To download certificates, visit the product detail page: <https://www.phoenixcontact.com/us/products/1442382>

|   |  |                                |                   |                               |
|---|--|--------------------------------|-------------------|-------------------------------|
|  | <b>UL Listed</b><br>Approval ID: FILE E 221474 |                                |                   |                               |
|   | Nominal voltage U <sub>N</sub>                 | Nominal current I <sub>N</sub> | Cross section AWG | Cross section mm <sup>2</sup> |
|   | 300 V  | 4 A                            | -                 | -                             |

|   |   |                                |                   |                               |
|---|---|--------------------------------|-------------------|-------------------------------|
|  | <b>cUL Listed</b><br>Approval ID: FILE E 221474 |                                |                   |                               |
|   | Nominal voltage U <sub>N</sub>                  | Nominal current I <sub>N</sub> | Cross section AWG | Cross section mm <sup>2</sup> |
|   | 300 V   | 4 A                            | -                 | -                             |

|  |  |  |  |  |
|--|--|--|--|--|
|  | <b>EAC-RoHS</b><br>Approval ID: RU D-DE.HB35.B.00387 |  |  |  |
|  |  |  |  |  |

|                     |
|---------------------|
| <b>cULus Listed</b> |
|---------------------|

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## Classifications

### ECLASS

|             |          |
|-------------|----------|
| ECLASS-11.0 | 27060311 |
| ECLASS-12.0 | 27060311 |
| ECLASS-13.0 | 27060311 |

### ETIM

|          |          |
|----------|----------|
| ETIM 9.0 | EC001855 |
|----------|----------|

### UNSPSC

|             |          |
|-------------|----------|
| UNSPSC 21.0 | 26121600 |
|-------------|----------|



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%               |
| EF3.0 Climate Change                    |  |
| CO2e kg                                 | 5.117 kg CO2e                            |