

1435616

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Sensor/actuator cable, 3-position, PUR halogen-free, black-gray RAL 7021, Plug straight M12 SPEEDCON, coding: A, on Valve connector CI (9.4 mm), with 1 LED, Wiring: Z diode, cable length: 3 m

## Your advantages

- Easy and safe: 100 % electrically tested plug-in components
- · Save time, thanks to installation with SPEEDCON fast locking system
- · Convenient: increased machine availability thanks to guick and easy diagnostics
- · Our standard: robust halogen-free PUR cable

### Commercial data

| Item number                          | 1435616             |
|--------------------------------------|---------------------|
| Packing unit                         | 1 pc                |
| Minimum order quantity               | 1 pc                |
| Sales key                            | BF07                |
| Product key                          | BF1DOA              |
| Catalog page                         | Page 228 (C-2-2019) |
| GTIN                                 | 4046356413879       |
| Weight per piece (including packing) | 115.9 g             |
| Weight per piece (excluding packing) | 110.8 g             |
| Customs tariff number                | 85444290            |
| Country of origin                    | PL                  |



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## Technical data

### Product properties

| Product type               | Sensor/actuator cable with valve connector |
|----------------------------|--|
| Application                | Standard                                   |
| Number of positions        | 3  |
| No. of cable outlets       | 1  |
| Shielded                   | no   |
| Coding                     | A  |
| Insulation characteristics |  |
| Overvoltage category       | III  |
| Degree of pollution        | 3  |

### Material specifications

| Flammability rating according to UL 94 | НВ                           |
|--|------------------------------|
| Seal material                          | TPU                          |
| Material housing valve plug            | TPU                          |
| Material of grip body                  | TPU                          |
| Contact material                       | CuSn                         |
| Contact surface material               | Ni/Au                        |
| Contact carrier material               | TPU GF                       |
| Contact material                       | CuSn                         |
| Valve plug contact insert material     | PA 6.6                       |
| Contact surface material               | Sn                           |
| Material for screw connection          | Zinc die-cast, nickel-plated |

## Electrical properties

| Insulation resistance          | ≥ 100 MΩ |
|--------------------------------|----------|
| Nominal voltage U <sub>N</sub> | 24 V AC  |
|                                | 24 V DC  |
| Nominal current I <sub>N</sub> | 4 A      |

### Valve connector characteristics

| Fixing screws    | M3 x 29                            |
|------------------|------------------------------------|
| Pulse power      | 40 W (at 100 μs square-wave pulse) |
| Terminal voltage | 70 V (at 2 mA constant current)    |
| Reverse voltage  | 50 V                               |

### Mechanical properties

#### Mechanical data

| Insertion/withdrawal cycles | ≥ 100 (M12 connector) |
|-----------------------------|-----------------------|

## Signaling



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| Status display         | 1 LED |
|------------------------|-------|
| Status display present | Yes   |

### Connector

### Connection 1

| Туре         | Plug straight M12 SPEEDCON |
|--------------|----------------------------|
| Locking type | SPEEDCON                   |
| Coding type  | A                          |

#### Connection 2

| Туре     | Valve connector CI (9.4 mm) |
|----------|-----------------------------|
| Material | CuSn (Contact)              |
|          | Sn (Contact surface)        |
|          | PA 6.6 (Contact carriers)   |
|          | TPU (Housing)               |

### Cable/line

| Cable length | 3 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 mm²                     |
| 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        | РР                             |
| Single wire, color              | black 1, black 2, green/yellow |
| Overall twist                   | 3 wires, twisted               |



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| 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  |
| Max. bending cycles                           | 15000000   |
| Halogen-free                                  | in accordance with DIN VDE 0472 part 815                     |
| Flame resistance                              | according to DIN VDE 0482                                    |
|   | According to DIN EN 50265-2-1                                |
| Resistance to oil                             | in accordance with DIN EN 60811-2-1                          |
| Other resistance                              | largely oil-resistant  |
|   | partly UV-resistant (in accordance with DIN EN ISO 4892-2-A) |
| Ambient temperature (operation)               | -40 °C 80 °C (cable, fixed installation)                     |
|   | -20 °C 80 °C (Cable, flexible installation)                  |

### Environmental and real-life conditions

#### Ambient conditions

| Degree of protection            | IP65  |
|---------------------------------|---|
|                                 | IP67  |
| Ambient temperature (operation) | -25 °C 90 °C (Plug / socket)                |
|                                 | -20 °C 85 °C (valve plug)                   |
|                                 | -40 °C 80 °C (cable, fixed installation)    |
|                                 | -15 °C 80 °C (Cable, flexible installation) |

## Standards and regulations

## M12

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

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