

1413114

<https://www.phoenixcontact.com/us/products/1413114>

Please be informed that the data shown in this PDF document is generated from our online catalog. Please find the complete data in the user documentation. Our general terms of use for downloads are valid.



Sensor/actuator cable, 3-position, PUR halogen-free, black-gray RAL 7021, free cable end, on Valve connector A, with 1 LED, Wiring: Freewheeling diode with holding current limiting device, cable length: 3 m, with holding current limiting device for energy reduction

Commercial data

|                                      |                     |
|--------------------------------------|---------------------|
| Item number                          | 1413114             |
| Packing unit                         | 1 pc                |
| Minimum order quantity               | 1 pc                |
| Sales key                            | NULL                |
| Product key                          | BF1DAA              |
| Catalog page                         | Page 234 (C-2-2019) |
| GTIN                                 | 4046356994941       |
| Weight per piece (including packing) | 120.8 g             |
| Weight per piece (excluding packing) | 114.3 g             |
| Customs tariff number                | 85444290            |
| Country of origin                    | DE                  |

1413114

<https://www.phoenixcontact.com/us/products/1413114>

## 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                                         |

### Material specifications

|                                    |        |
|------------------------------------|--------|
| Seal material                      | TPU    |
| Material housing valve plug        | TPU    |
| Contact material                   | CuSn   |
| Valve plug contact insert material | PA 6.6 |
| Contact surface material           | Ag     |

### Electrical properties

|                       |                            |
|-----------------------|----------------------------|
| Insulation resistance | $\geq 100 \text{ M}\Omega$ |
| Nominal voltage $U_N$ | 24 V DC $\pm 20 \%$        |
| Nominal current $I_N$ | 1 A                        |

### Valve connector characteristics

|                     |                                                   |
|---------------------|---------------------------------------------------|
| Switch-over time    | approx. 200 ms (Initial operating time)           |
| Clock frequency     | approx. 2500 Hz (Holding current limiting device) |
| Switching frequency | max. 5 Hz (Connected valve)                       |
| Fixing screws       | M3 x 28                                           |

### Signaling

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

### Connector

#### Connection 1

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

#### Connection 2

|                     |                        |
|---------------------|------------------------|
| Type                | Valve connector A      |
| Number of positions | 3                      |
| Material            | CuSn (Contact)         |
|                     | Ag (Contact surface)   |
|                     | PBT (Contact carriers) |
|                     | TPU (Housing)          |

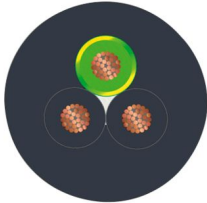
### Cable/line

# SAC-3P- 3,0-PUR/A-1L-R-ES - Sensor/actuator cable



1413114

<https://www.phoenixcontact.com/us/products/1413114>

|                                               |                                                                                    |
|-----------------------------------------------|------------------------------------------------------------------------------------|
| 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 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                                                                              |
| 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                                                          |
|                                               | According to DIN EN 50265-2-1                                                      |
| Resistance to oil                             | in accordance with DIN EN 60811-2-1                                                |

# SAC-3P- 3,0-PUR/A-1L-R-ES - Sensor/actuator cable



1413114

<https://www.phoenixcontact.com/us/products/1413114>

|                                 |                                                              |
|---------------------------------|--------------------------------------------------------------|
| 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            | IP67                          |
| Ambient temperature (operation) | -25 °C ... 80 °C (valve plug) |

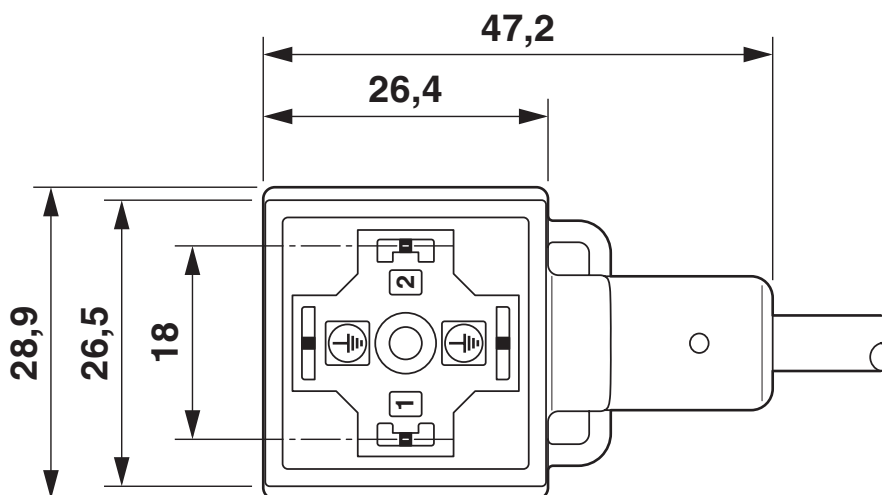
## Standards and regulations

### Valve connector

|                          |                 |
|--------------------------|-----------------|
| Standard designation     | Valve connector |
| Standards/specifications | EN 175301-803   |

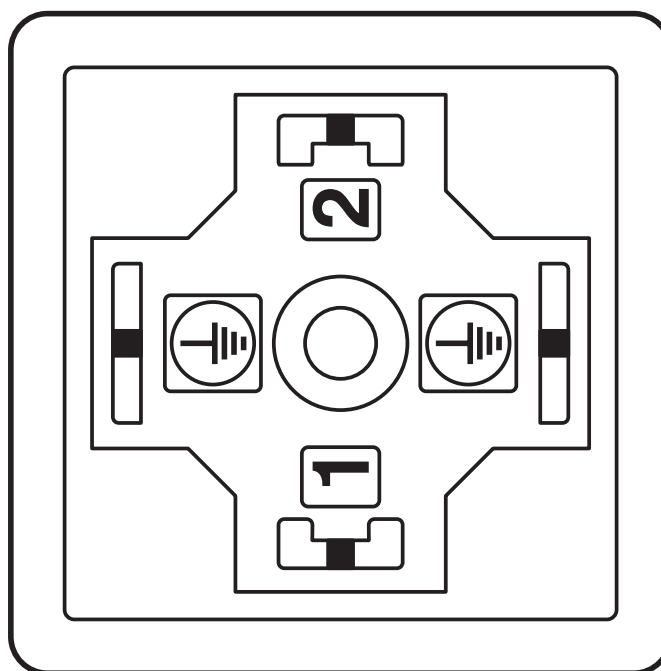
## Drawings

Dimensional drawing

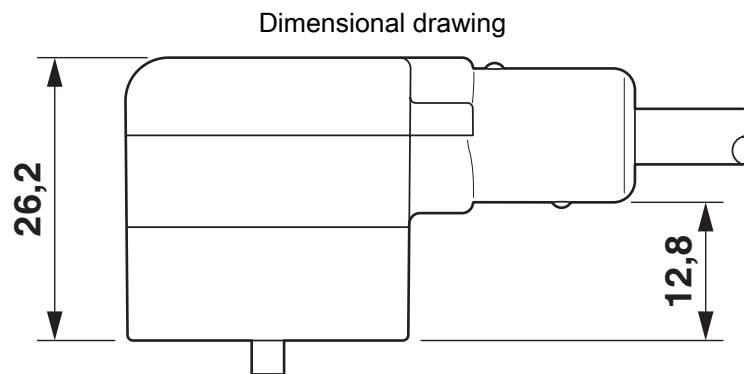
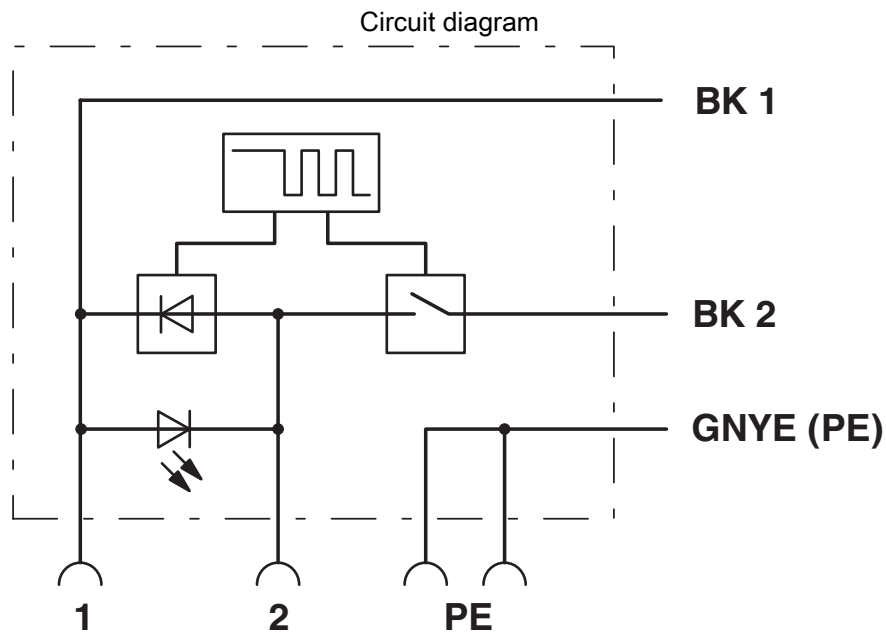


Valve connector, type A

Schematic diagram



Valve connector pin assignment, type A



Valve connector, type A, side view

# SAC-3P- 3,0-PUR/A-1L-R-ES - Sensor/actuator cable



1413114

<https://www.phoenixcontact.com/us/products/1413114>

## Approvals

🔗 To download certificates, visit the product detail page: <https://www.phoenixcontact.com/us/products/1413114>



**EAC-RoHS**

Approval ID: RU D-DE.HB35.B.00387

# SAC-3P- 3,0-PUR/A-1L-R-ES - Sensor/actuator cable



1413114

<https://www.phoenixcontact.com/us/products/1413114>

## Classifications

### ECLASS

|             |          |
|-------------|----------|
| ECLASS-11.0 | 27060312 |
| ECLASS-12.0 | 27060312 |
| ECLASS-13.0 | 27060312 |

### ETIM

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

### UNSPSC

|             |          |
|-------------|----------|
| UNSPSC 21.0 | 31251500 |
|-------------|----------|

# SAC-3P- 3,0-PUR/A-1L-R-ES - Sensor/actuator cable



1413114

<https://www.phoenixcontact.com/us/products/1413114>

## 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%               |

Phoenix Contact 2024 © - all rights reserved  
<https://www.phoenixcontact.com>

Phoenix Contact USA  
586 Fulling Mill Road  
Middletown, PA 17057, United States  
(+717) 944-1300  
[info@phoenixcon.com](mailto:info@phoenixcon.com)