

# SAC-2P- 5,0-PVC/BI-1L-Z 180 - Sensor/actuator cable



1413091

<https://www.phoenixcontact.com/us/products/1413091>

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Sensor/actuator cable, 3-position, PVC, black, free cable end, on Valve connector BI (11 mm), with 1 LED, Wiring: Z diode, cable length: 5 m

## Your advantages

- Easy and safe: 100 % electrically tested plug-in components
- Convenient: increased machine availability thanks to quick and easy diagnostics
- Our standard: robust halogen-free PUR cable

## Commercial data

|                                      |                                |
|--------------------------------------|--------------------------------|
| Item number                          | 1413091                        |
| Packing unit                         | 1 pc                           |
| Minimum order quantity               | 50 pc                          |
| Note                                 | Made to order (non-returnable) |
| Product key                          | AF1DDA                         |
| GTIN                                 | 4046356984300                  |
| Weight per piece (including packing) | 186.2 g                        |
| Weight per piece (excluding packing) | 181 g                          |
| Country of origin                    | PL                             |

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## Technical data

### Product properties

|                      |  |
|----------------------|--|
| Product type         | Sensor/actuator cable with valve connector |
| Number of positions  | 3  |
| No. of cable outlets | 1  |
| Shielded             | no   |

### Insulation characteristics

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

### Material specifications

|  |        |
|--|--------|
| Flammability rating according to UL 94 | V0     |
| Seal material                          | TPU    |
| Material housing valve plug            | TPU    |
| Contact material                       | CuSn   |
| Valve plug contact insert material     | PA 6.6 |
| Contact surface material               | Sn     |

### Electrical properties

|                       |          |
|-----------------------|----------|
| Insulation resistance | ≥ 100 MΩ |
| Nominal voltage $U_N$ | 24 V AC  |
|                       | 24 V DC  |
| Nominal current $I_N$ | 4 A      |

### Signaling

|                        |       |
|------------------------|-------|
| Status display         | 1 LED |
| Status display present | yes   |

### Connector

#### Connection 1

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

#### Connection 2

|                     |                            |
|---------------------|----------------------------|
| Type                | Valve connector BI (11 mm) |
| Number of positions | 3                          |
| Material            | CuSn (Contact)             |
|                     | Sn (Contact surface)       |
|                     | PA 6.6 (Contact carrier)   |
|                     | TPU (Housing)              |
| Protective circuit  | Z diode                    |

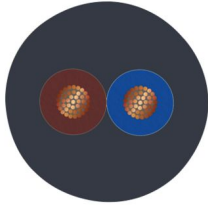
### Cable/line

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|   |  |
|---|--|
| Cable length                                | 5 m  |
| PVC black [PVC]                             |  |
| Dimensional drawing                         |              |
| Cable weight                                | 34.9 kg/km   |
| UL AWM Style                                | 2464   |
| Number of positions                         | 2  |
| Shielded                                    | no   |
| Cable type                                  | PVC black [PVC]  |
| Conductor structure signal line             | 16x 0.20 mm  |
| AWG signal line                             | 20   |
| Conductor cross-section                     | 2x 0.5 mm <sup>2</sup>   |
| Wire diameter incl. insulation              | 1.5 mm ±0.05 mm  |
| External cable diameter                     | 4.80 mm ±0.2 mm  |
| Outer sheath, material                      | PVC  |
| External sheath, color                      | black  |
| Conductor material                          | Bare Cu litz wires   |
| Material wire insulation                    | PVC  |
| Single wire, color                          | brown, blue  |
| Max. conductor resistance                   | 39 Ω/km (at 20 °C)   |
| Insulation resistance                       | ≥ 20 MΩ*km   |
| Nominal voltage, cable                      | 300 V  |
| Test voltage                                | 1200 V   |
| Minimum bending radius, fixed installation  | 5 x D  |
| Smallest bending radius, fixed installation | 24 mm  |
| Flame resistance                            | according to DIN VDE 0482<br>According to DIN EN 50265-2-1                                     |
| Resistance to oil                           | largely oil-resistant  |
| Ambient temperature (operation)             | -40 °C ... 80 °C (cable, fixed installation)<br>-5 °C ... 80 °C (Cable, flexible installation) |

## Environmental and real-life conditions

### Ambient conditions

|   |  |
|---|--|
| Degree of protection  | IP65<br>IP67                                 |
| Ambient temperature (operation) (Valve connector)           | -20 °C ... 85 °C (Valve connector)           |
| Ambient temperature (operation) (Cable, fixed installation) | -40 °C ... 80 °C (cable, fixed installation) |

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1413091

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Ambient temperature (operation) (flexible installation)

-15 °C ... 80 °C (Cable, flexible installation)

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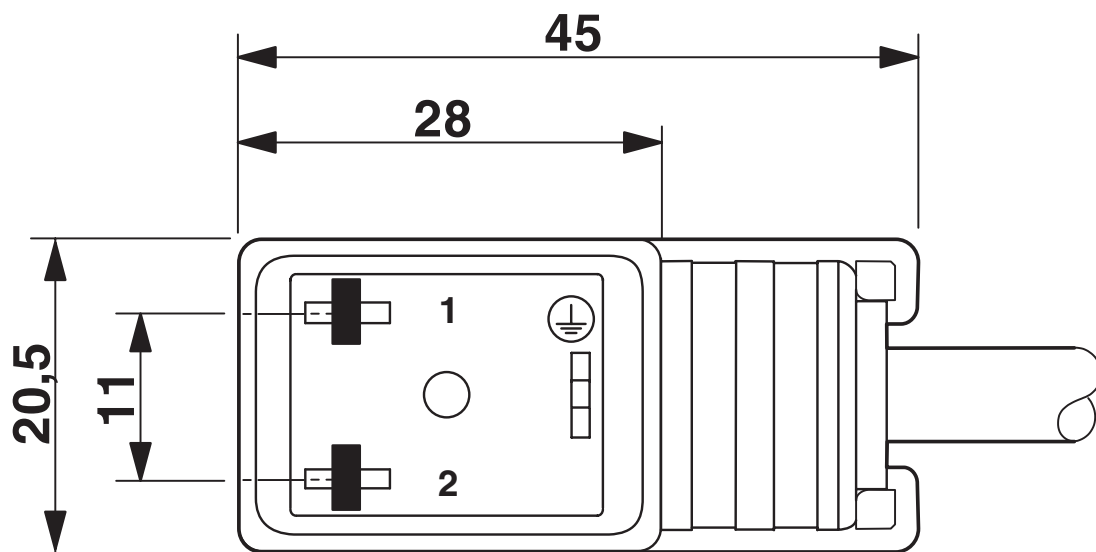


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## Drawings

Dimensional drawing



Valve connector, type BI

Dimensional drawing



Valve connector, type BI, side view

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Schematic diagram



Valve connector pin assignment, type BI

Circuit diagram



Contact assignment of the valve plug

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## Approvals

To download certificates, visit the product detail page: <https://www.phoenixcontact.com/us/products/1413091>



**EAC-RoHS**

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



**CSAus**

Approval ID: 13631

|       | Nominal voltage $U_N$ | Nominal current $I_N$ | Cross section AWG | Cross section $\text{mm}^2$ |
|-------|-----------------------|-----------------------|-------------------|-----------------------------|
| keine |                       |                       |                   |                             |
|       | 24 V                  | 6 A                   | -                 | -                           |

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## Classifications

### ECLASS

|             |          |
|-------------|----------|
| ECLASS-13.0 | 27060312 |
| ECLASS-15.0 | 27060312 |

### ETIM

|           |          |
|-----------|----------|
| ETIM 10.0 | EC001855 |
|-----------|----------|

### UNSPSC

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

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## Environmental product compliance

### EU RoHS

|   |        |
|---|--------|
| Fulfills EU RoHS substance requirements | Yes    |
| Exemption                               | 7(c)-I |

### China RoHS

|  |   |
|--|---|
| Environment friendly use period (EFUP) | EFUP-50   |
|  | An article-related China RoHS declaration table can be found in the download area for the respective article under "Manufacturer declaration". For all articles with EFUP-E, no China RoHS declaration table issued and required. |

### EU REACH SVHC

|                                     |  |
|-------------------------------------|--|
| REACH candidate substance (CAS No.) | Diboron trioxide(CAS: 1303-86-2)           |
|                                     | Lead monoxide (lead oxide)(CAS: 1317-36-8) |

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