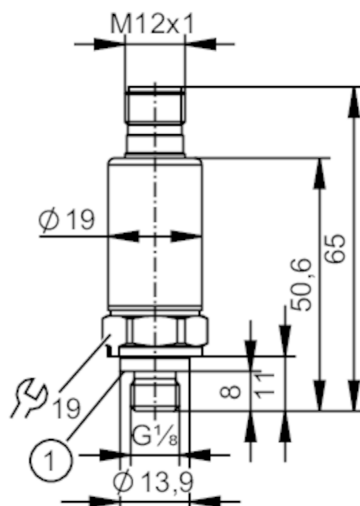


# PV2802



## Pressure switch with IO-Link

PV-100-SEG18-UFRVG/US/ I



1 sealing



### Product characteristics

|                              |                                                                                   |              |            |
|------------------------------|-----------------------------------------------------------------------------------|--------------|------------|
| Number of inputs and outputs | Number of digital outputs: 2                                                      |              |            |
| Measuring range              | 0...100 bar                                                                       | 0...1450 psi | 0...10 MPa |
| Process connection           | threaded connection G 1/8 external thread (DIN EN ISO 1179-2); Internal thread:M5 |              |            |

### Application

|                         |                             |           |         |
|-------------------------|-----------------------------|-----------|---------|
| Measuring element       | metallic thin film cell     |           |         |
| Application             | for industrial applications |           |         |
| Media                   | liquids and gases           |           |         |
| Medium temperature [°C] | -40...90                    |           |         |
| Min. burst pressure     | 1000 bar                    | 14500 psi | 100 MPa |
| Pressure rating         | 250 bar                     | 3625 psi  | 25 MPa  |
| Note on pressure rating | static                      |           |         |
| Vacuum resistance       | -1000 mbar                  | -0.1 MPa  |         |
| Type of pressure        | relative pressure           |           |         |

### Electrical data

|                                 |                 |  |  |
|---------------------------------|-----------------|--|--|
| Operating voltage [V]           | 18...30 DC      |  |  |
| Current consumption [mA]        | < 15            |  |  |
| Min. insulation resistance [MΩ] | 100; (500 V DC) |  |  |
| Protection class                | III             |  |  |
| Reverse polarity protection     | yes             |  |  |
| Power-on delay time [s]         | < 0.3           |  |  |

### Inputs / outputs

|                              |                              |
|------------------------------|------------------------------|
| Number of inputs and outputs | Number of digital outputs: 2 |
|------------------------------|------------------------------|

### Outputs

|                           |                                           |
|---------------------------|-------------------------------------------|
| Total number of outputs   | 2                                         |
| Output signal             | switching signal; IO-Link; (configurable) |
| Electrical design         | PNP/NPN                                   |
| Number of digital outputs | 2                                         |



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PV-100-SEG18-UFRVG/US/ /

|                                                      |                                        |  |  |
|------------------------------------------------------|----------------------------------------|--|--|
| Output function                                      | normally open / closed; (configurable) |  |  |
| Max. voltage drop switching output DC [V]            | 2                                      |  |  |
| Permanent current rating of switching output DC [mA] | 100                                    |  |  |
| Switching frequency DC [Hz]                          | < 170                                  |  |  |
| Short-circuit protection                             | yes                                    |  |  |
| Type of short-circuit protection                     | yes (non-latching)                     |  |  |
| Overload protection                                  | yes                                    |  |  |

| Measuring/setting range |                |                |                 |
|-------------------------|----------------|----------------|-----------------|
| Measuring range         | 0...100 bar    | 0...1450 psi   | 0...10 MPa      |
| Set point SP            | 1...100 bar    | 15...1450 psi  | 0.1...10 MPa    |
| Reset point rP          | 0.5...99.5 bar | 7...1433 psi   | 0.05...9.95 MPa |
| In steps of             | 0.05 bar       | 1 psi          | 0.005 MPa       |
| Factory setting         | SP1 = 65 bar   | rP1 = 60 bar   | ou1 = Hno;      |
|                         | SP2 = 4 bar    | rP2 = 2 bar    | ou2 = Hnc;      |
|                         | dS1/dS2 = 0 ms | dr1/dr2 = 0 ms |                 |
|                         | coF = 0 %      | P-n = PnP      | dAP= 60 ms      |

| Accuracy / deviations                                     |                                                                                                    |
|-----------------------------------------------------------|----------------------------------------------------------------------------------------------------|
| Switch point accuracy [% of the span]                     | < ± 0,5 (nach DIN EN 61298-2)                                                                      |
| Repeatability [% of the span]                             | < ± 0,05; (with temperature fluctuations < 10 K)                                                   |
| Characteristics deviation [% of the span]                 | < ± 0,5; (linearity incl. hysteresis and repeatability, limit value setting to DIN EN IEC 62828-1) |
| Linearity deviation [% of the span]                       | < ± 0,1 (BFSL) / < ± 0,2 (LS)                                                                      |
| Hysteresis deviation [% of the span]                      | < ± 0,2                                                                                            |
| Long-term stability [% of the span]                       | < ± 0,1; (per 6 months)                                                                            |
| Temperature coefficient zero point [% of the span / 10 K] | < 0,1 (-25...90 °C) / < 0,2 (-40...-25 °C)                                                         |
| Temperature coefficient span [% of the span / 10 K]       | < 0,1 (-25...90 °C) / < 0,2 (-40...-25 °C)                                                         |

| Reaction times     |     |
|--------------------|-----|
| Response time [ms] | < 3 |

| Software / programming    |                                                                                                   |
|---------------------------|---------------------------------------------------------------------------------------------------|
| Parameter setting options | hysteresis / window; normally open / closed; switching logic; switch-on/switch-off delay; Damping |

| Interfaces              |                   |
|-------------------------|-------------------|
| Communication interface | IO-Link           |
| Transmission type       | COM2 (38,4 kBaud) |
| IO-Link revision        | 1.1               |
| SDCI standard           | IEC 61131-9       |

# PV2802



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PV-100-SEG18-UFRVG/US/ /

|                              |                          |                         |
|------------------------------|--------------------------|-------------------------|
| Profiles                     | Smart Sensor - SSP 0     | Generic Profiled Sensor |
|                              | Function                 | Device identification   |
|                              | Function                 | Process data variable   |
|                              | Function                 | Device diagnosis        |
| SIO mode                     | yes                      |                         |
| Required master port class   | A                        |                         |
| Process data analog          | 2                        |                         |
| Process data binary          | 2                        |                         |
| Min. process cycle time [ms] | 5                        |                         |
| Supported DeviceIDs          | <b>Type of operation</b> | <b>DeviceID</b>         |
|                              | default                  | 1565                    |

| Operating conditions     |               |  |
|--------------------------|---------------|--|
| Ambient temperature [°C] | -40...90      |  |
| Storage temperature [°C] | -40...100     |  |
| Protection               | IP 67; IP 69K |  |

| Tests / approvals            |                                                                                       |                     |
|------------------------------|---------------------------------------------------------------------------------------|---------------------|
| EMC                          | DIN EN 61326-1                                                                        |                     |
| Shock resistance             | DIN EN 60068-2-27                                                                     | 500 g (1 ms)        |
| Vibration resistance         | DIN EN 60068-2-6                                                                      | 20 g (10...2000 Hz) |
| MTTF [years]                 | 667                                                                                   |                     |
| UL approval                  | UL approval number                                                                    | J016                |
|                              | File number UL                                                                        | E174189             |
| Pressure equipment directive | sound engineering practice; can be used for group 2 fluids; group 1 fluids on request |                     |

| Mechanical data               |                                                                                            |  |
|-------------------------------|--------------------------------------------------------------------------------------------|--|
| Weight [g]                    | 55.5                                                                                       |  |
| Housing                       | tubular                                                                                    |  |
| Dimensions [mm]               | Ø 19 / L = 65                                                                              |  |
| Material                      | stainless steel (630/1.4542/17-4 PH); stainless steel (1.4404 / 316L); PEI                 |  |
| Materials (wetted parts)      | stainless steel (1.4305 / 303); stainless steel (630/1.4542/17-4 PH)                       |  |
| Min. pressure cycles          | 60 million; (at 1.2 times nominal pressure)                                                |  |
| Tightening torque [Nm]        | 20...25; (recommended tightening torque; Depends on lubrication, seal and pressure rating) |  |
| Process connection            | threaded connection G 1/8 external thread (DIN EN ISO 1179-2); Internal thread:M5          |  |
| Process connection sealing    | FKM (DIN EN ISO 1179-2)                                                                    |  |
| Restrictor element integrated | yes                                                                                        |  |

| Remarks       |                               |  |
|---------------|-------------------------------|--|
| Remarks       | BFSL = Best Fit Straight Line |  |
|               | LS = limit value setting      |  |
| Pack quantity | 1 pcs.                        |  |

# PV2802

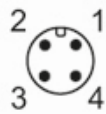


## Pressure switch with IO-Link

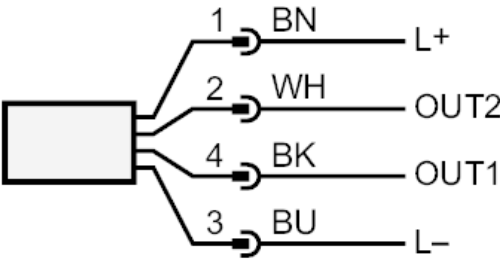
PV-100-SEG18-UFRVG/US/ /

### Electrical connection

Connector: 1 x M12; coding: A



### Connection



|      |                                                                 |
|------|-----------------------------------------------------------------|
| OUT1 | Switching output<br>IO-Link                                     |
| OUT2 | Switching output<br>Colors to DIN EN 60947-5-2<br>Core colors : |
| BK = | black                                                           |
| BN = | brown                                                           |
| BU = | blue                                                            |
| WH = | white                                                           |