

PT5014



Pressure transmitter

PT-016-SEG14-A-ZVG/VE



1     sealing



Product characteristics

|                              |                                                               |             |             |
|------------------------------|---------------------------------------------------------------|-------------|-------------|
| Number of inputs and outputs | Number of analog outputs: 1                                   |             |             |
| Measuring range              | 0...16 bar                                                    | 0...232 psi | 0...1.6 MPa |
| Process connection           | threaded connection G 1/4 external thread (DIN EN ISO 1179-2) |             |             |

Application

|                         |                                                      |          |        |
|-------------------------|------------------------------------------------------|----------|--------|
| Measuring element       | metallic thin film cell                              |          |        |
| Application             | for mobile applications; for industrial applications |          |        |
| Media                   | liquids and gases                                    |          |        |
| Medium temperature [°C] | -40...125                                            |          |        |
| Min. burst pressure     | 450 bar                                              | 6525 psi | 45 MPa |
| Pressure rating         | 40 bar                                               | 580 psi  | 4 MPa  |
| Note on pressure rating | static                                               |          |        |
| Vacuum resistance       | -1000 mbar                                           | -0.1 MPa |        |
| Type of pressure        | relative pressure                                    |          |        |

Electrical data

|                                 |                 |  |  |
|---------------------------------|-----------------|--|--|
| Operating voltage [V]           | 8...36 DC       |  |  |
| Min. insulation resistance [MΩ] | 100; (500 V DC) |  |  |
| Protection class                | III             |  |  |
| Reverse polarity protection     | yes             |  |  |
| Power-on delay time [s]         | < 0.1           |  |  |

Inputs / outputs

|                              |                             |
|------------------------------|-----------------------------|
| Number of inputs and outputs | Number of analog outputs: 1 |
|------------------------------|-----------------------------|

Outputs

|                            |               |
|----------------------------|---------------|
| Output signal              | analog signal |
| Number of analog outputs   | 1             |
| Analog current output [mA] | 4...20        |

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|                     |     |                                                                                |
|---------------------|-----|--------------------------------------------------------------------------------|
| Max. load           | [Ω] | (U <sub>b</sub> - 8 V) / 21,5 mA ; @8V= 0 Ω ; @12V max. 200 Ω; @24V max. 750 Ω |
| Short-circuit proof |     | yes                                                                            |
| Overload protection |     | yes                                                                            |

### Measuring/setting range

|                 |            |             |             |
|-----------------|------------|-------------|-------------|
| Measuring range | 0...16 bar | 0...232 psi | 0...1.6 MPa |
|-----------------|------------|-------------|-------------|

### Accuracy / deviations

|                                    |                        |                                                                                                 |
|------------------------------------|------------------------|-------------------------------------------------------------------------------------------------|
| Repeatability                      | [% of the span]        | < ± 0,05; (with temperature fluctuations < 10 K)                                                |
| Characteristics deviation          | [% of the span]        | < ± 0,5; (incl. drift when overtightened, zero point and span error, non-linearity, hysteresis) |
| 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 (0...80 °C); < ± 0,2 (-40...0 °C / 80...125 °C)                                         |
| Temperature coefficient span       | [% of the span / 10 K] | < ± 0,1 (0...80 °C); < ± 0,2 (-40...0 °C / 80...125 °C)                                         |

### Reaction times

|                                  |      |   |
|----------------------------------|------|---|
| Step response time analog output | [ms] | 2 |
|----------------------------------|------|---|

### Operating conditions

|                     |      |           |
|---------------------|------|-----------|
| Ambient temperature | [°C] | -40...100 |
| Storage temperature | [°C] | -40...100 |
| Protection          |      | IP 67     |

### Tests / approvals

|                              |                                                                                       |                                        |
|------------------------------|---------------------------------------------------------------------------------------|----------------------------------------|
| EMC                          | Compliant with ECE R 10, rev. 5                                                       | (E1 compliant)                         |
|                              | DIN EN ISO 13766-1 : 2018                                                             | earth-moving and construction machines |
|                              | DIN EN ISO 14982 : 2009                                                               | agricultural and forestry machines     |
|                              | ISO 11452-2                                                                           | 100 V/m                                |
|                              | ISO 7637-2 : 2011 pulse 1                                                             | Test severity III. function state C    |
|                              | ISO 7637-2 : 2011 pulse 2b                                                            | test severity IV. function state C     |
|                              | 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]                                                                               | 715                                    |
| UL approval                  | UL approval number                                                                    | J078                                   |
|                              | 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]  | 67                                                                         |
| Housing    |      | tubular                                                                    |
| Dimensions | [mm] | Ø 19 / L = 71                                                              |
| Material   |      | stainless steel (630/1.4542/17-4 PH); stainless steel (1.4404 / 316L); PPS |

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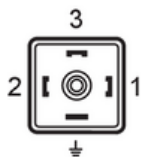
|                               |                                                                                               |
|-------------------------------|-----------------------------------------------------------------------------------------------|
| Materials (wetted parts)      | stainless steel (630/1.4542/17-4 PH); stainless steel (1.4305 / 303)                          |
| Min. pressure cycles          | 60 million; (at 1.2 times nominal pressure)                                                   |
| Tightening torque [Nm]        | 25...35; (recommended tightening torque;<br>Depends on lubrication, seal and pressure rating) |
| Process connection            | threaded connection G 1/4 external thread (DIN EN ISO 1179-2)                                 |
| Process connection sealing    | FKM (DIN EN ISO 1179-2)                                                                       |
| Restrictor element integrated | yes                                                                                           |

Remarks

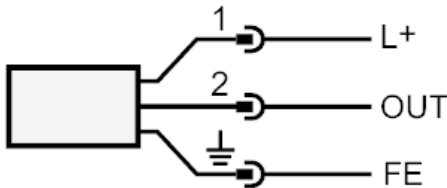
|               |                                                           |
|---------------|-----------------------------------------------------------|
| Remarks       | BFSL = Best Fit Straight Line<br>LS = limit value setting |
| Pack quantity | 1 pcs.                                          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

Electrical connection

Connector: 1 x valve plug type A DIN (EN175301-803-A); Contacts: 4



Connection



|     |                  |
|-----|------------------|
| OUT | analog output    |
| FE  | functional earth |

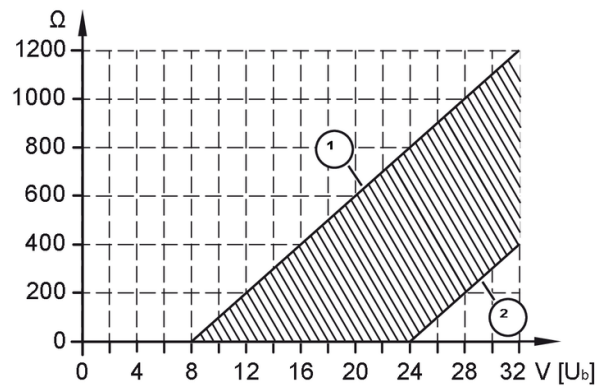


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### Diagrams and graphs

Characteristic load curve current output



1: Max. load

2: Min. load