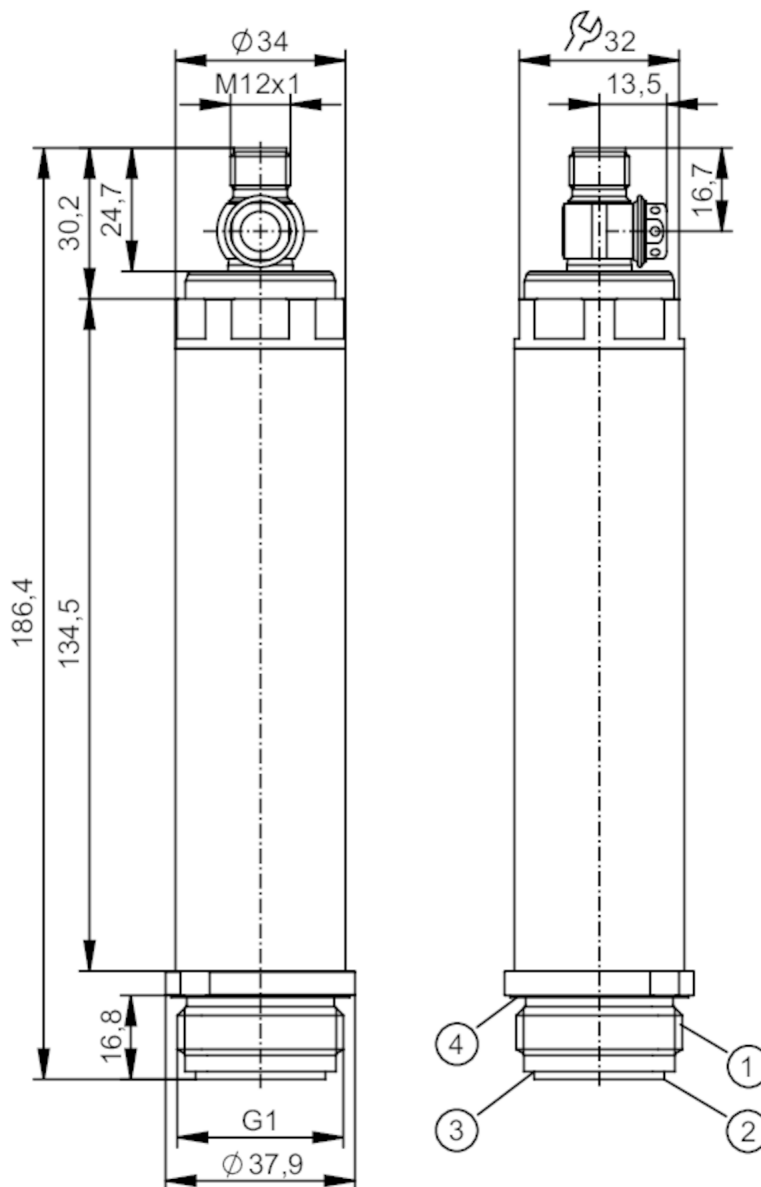




## Flush pressure sensor

PM-001BREA01 -E-ZVG/US



- 1 external thread G1 (Aseptoflex Vario)
- 2 area for metal sealing (Aseptoflex Vario)
- 3 groove for sealing ring (Aseptoflex Vario)
- 4 groove for sealing ring (DIN EN ISO 1179-2)



EC 1935/2004



### Product characteristics

|                              |                                                          |                  |              |
|------------------------------|----------------------------------------------------------|------------------|--------------|
| Number of inputs and outputs | Number of analogue outputs: 1                            |                  |              |
| Measuring range              | -50...1000 mbar                                          | -0.73...14.5 psi | -5...100 kPa |
| Process connection           | threaded connection G 1 external thread Aseptoflex Vario |                  |              |

### Application

|                         |                                                                       |
|-------------------------|-----------------------------------------------------------------------|
| Special feature         | Gold-plated contacts                                                  |
| Measuring element       | ceramic-capacitive pressure measuring cell                            |
| Application             | flush mountable for the food and beverage industry                    |
| Media                   | viscous media and liquids with suspended particles; liquids and gases |
| Medium temperature [°C] | -25...85; (125: < 1 h)                                                |



## Flush pressure sensor

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|                                                |                   |         |          |
|------------------------------------------------|-------------------|---------|----------|
| Min. bursting pressure                         | 30000 mbar        | 435 psi | 3000 kPa |
| Pressure rating                                | 10000 mbar        | 145 psi | 1000 kPa |
| Vacuum resistance [mbar]                       | -1000             |         |          |
| Type of pressure                               | relative pressure |         |          |
| No dead space                                  | yes               |         |          |
| MAWP (for applications according to CRN) [bar] | 10                |         |          |

### Electrical data

|                                 |                 |  |  |
|---------------------------------|-----------------|--|--|
| Operating voltage [V]           | 18...30 DC      |  |  |
| Min. insulation resistance [MΩ] | 100; (500 V DC) |  |  |
| Protection class                | III             |  |  |
| Reverse polarity protection     | yes             |  |  |
| Measuring principle             | hydrostatic     |  |  |
| Integrated watchdog             | yes             |  |  |

### 2-wire

|                          |            |  |  |
|--------------------------|------------|--|--|
| Current consumption [mA] | 3.5...21.5 |  |  |
| Power-on delay time [s]  | 1          |  |  |

### 3-wire

|                          |      |  |  |
|--------------------------|------|--|--|
| Current consumption [mA] | < 45 |  |  |
| Power-on delay time [s]  | 0.5  |  |  |

### Inputs / outputs

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

### Outputs

|                              |                                                                |  |  |
|------------------------------|----------------------------------------------------------------|--|--|
| Total number of outputs      | 1                                                              |  |  |
| Output signal                | analogue signal; (configurable)                                |  |  |
| Number of analogue outputs   | 1                                                              |  |  |
| Analogue current output [mA] | 4...20; (scalable)                                             |  |  |
| Max. load [Ω]                | 700; (U <sub>b</sub> = 24 V; (U <sub>b</sub> - 9 V) / 21.5 mA) |  |  |
| Short-circuit proof          | yes                                                            |  |  |
| Overload protection          | yes                                                            |  |  |

### Measuring/setting range

|                      |                 |                  |              |
|----------------------|-----------------|------------------|--------------|
| Measuring range      | -50...1000 mbar | -0.73...14.5 psi | -5...100 kPa |
| Analogue start point | -50...800 mbar  | -0.73...11.6 psi | -5...80 kPa  |
| Analogue end point   | 150...1000 mbar | 2.18...14.5 psi  | 15...100 kPa |
| In steps of          | 0.5 mbar        | 0.01 psi         | 0.05 kPa     |
| Factory setting      | ASP = 0.0 mbar  | AEP = 1000 mbar  |              |

### Accuracy / deviations

|                                           |                                                                                                    |  |  |
|-------------------------------------------|----------------------------------------------------------------------------------------------------|--|--|
| Repeatability [% of the span]             | < ± 0,1; (with temperature fluctuations < 10 K; Turn down 1:1)                                     |  |  |
| Characteristics deviation [% of the span] | < ± 0,2; (linearity incl. hysteresis and repeatability, limit value setting to DIN EN IEC 62828-1) |  |  |
| Linearity deviation [% of the span]       | < ± 0,15; (Turn down 1:1)                                                                          |  |  |
| Hysteresis deviation [% of the span]      | < ± 0,15; (Turn down 1:1)                                                                          |  |  |
| Long-term stability                       | < ± 0,1; (Turn down 1:1; per year)                                                                 |  |  |



## Flush pressure sensor

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|                                        |                                                                                                      |                                                       |
|----------------------------------------|------------------------------------------------------------------------------------------------------|-------------------------------------------------------|
| [% of the span]                        |                                                                                                      |                                                       |
| Total deviation over temperature range | Temperature range                                                                                    | total deviation                                       |
|                                        | -25...15 °C                                                                                          | Characteristics deviation ± 0,05 % of the span / 10 K |
|                                        | 15...80 °C                                                                                           | Characteristics deviation                             |
|                                        | 80...125 °C                                                                                          | Characteristics deviation ± 0,1 % of the span / 10 K  |
| Notes on the accuracy / deviation      | for further details see section Diagrams and graphs                                                  |                                                       |
| Response times                         |                                                                                                      |                                                       |
| Damping for the analogue output dAA    | [s]                                                                                                  | 0...4                                                 |
| 2-wire                                 |                                                                                                      |                                                       |
| Step response time analogue output     | [ms]                                                                                                 | 30                                                    |
| 3-wire                                 |                                                                                                      |                                                       |
| Step response time analogue output     | [ms]                                                                                                 | 7                                                     |
| Interfaces                             |                                                                                                      |                                                       |
| Communication interface                | IO-Link                                                                                              |                                                       |
| Transmission type                      | COM2 (38,4 kBaud)                                                                                    |                                                       |
| IO-Link revision                       | 1.1                                                                                                  |                                                       |
| Profiles                               | Digital Measuring Sensor (0x000A), Identification and Diagnosis (0x4000)                             |                                                       |
| SIO mode                               | no                                                                                                   |                                                       |
| Required master port type              | A                                                                                                    |                                                       |
| Process data analogue                  | 3                                                                                                    |                                                       |
| Min. process cycle time                | [ms]                                                                                                 | 3.2                                                   |
| Operating conditions                   |                                                                                                      |                                                       |
| Ambient temperature                    | [°C]                                                                                                 | -25...80                                              |
| Storage temperature                    | [°C]                                                                                                 | -40...100                                             |
| Protection                             | IP 67; IP 68; IP 69K                                                                                 |                                                       |
| Tests / approvals                      |                                                                                                      |                                                       |
| EMC                                    | DIN EN 61000-6-2                                                                                     |                                                       |
|                                        | DIN EN 61000-6-3                                                                                     |                                                       |
| Shock resistance                       | DIN EN 60068-2-27                                                                                    | 50 g (11 ms)                                          |
| Vibration resistance                   | DIN EN 60068-2-6                                                                                     | 20 g (10...2000 Hz)                                   |
| MTTF                                   | [years]                                                                                              | 364                                                   |
| UL approval                            | UL Approval no.                                                                                      | J025                                                  |
| Mechanical data                        |                                                                                                      |                                                       |
| Weight                                 | [g]                                                                                                  | 555.8                                                 |
| Materials                              | stainless steel (316L/1.4404); stainless steel (304/1.4301); PBT                                     |                                                       |
| Materials (wetted parts)               | ceramics (99.9 % Al2O3); stainless steel (316L/1.4435); surface characteristics: Ra 0,4 / Rz 4; PTFE |                                                       |
| Min. pressure cycles                   | 100 million                                                                                          |                                                       |
| Tightening torque                      | [Nm]                                                                                                 | 35                                                    |
| Process connection                     | threaded connection G 1 external thread Aseptoflex Vario                                             |                                                       |

# PY2007



## Flush pressure sensor

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### Remarks

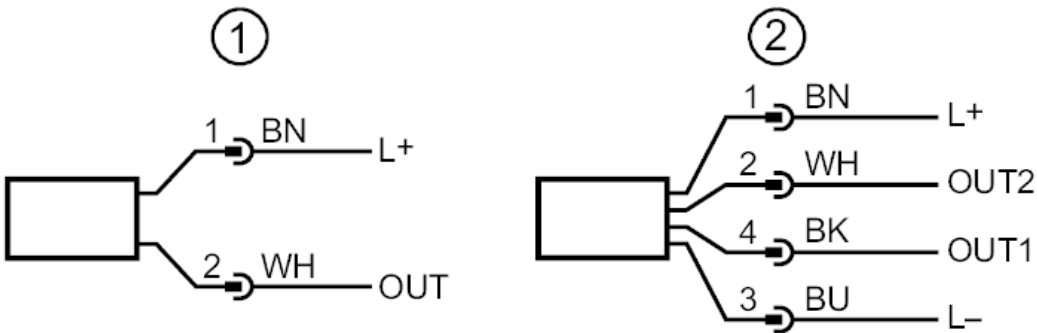
|               |        |
|---------------|--------|
| Pack quantity | 1 pcs. |
|---------------|--------|

### Electrical connection

Connector: 1 x M12; coding: A; Contacts: gold-plated



### Connection



- 1 connection for 2-wire operation ( analogue )
- 2 connection for 3-wire operation ( analogue / IO-Link )  
OUT1 : IO-Link  
OUT2 : analogue output

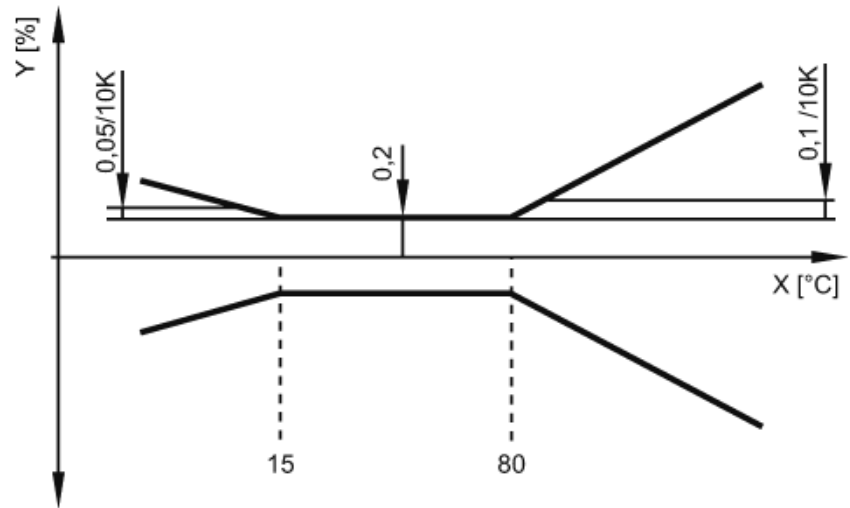


## Flush pressure sensor

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### Diagrams and graphs

ambient temperature influence on the accuracy



X temperature  
Y total deviation