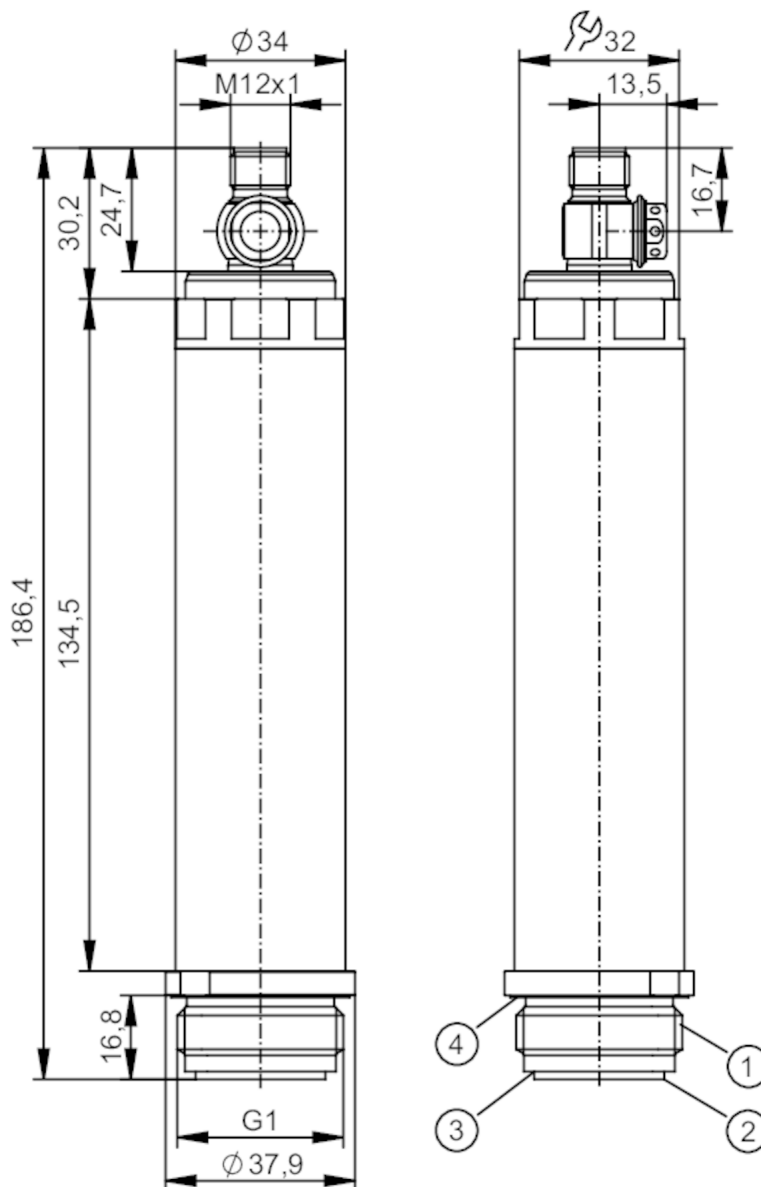




## Flush pressure sensor

PM-2,5-REA01-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              | -125...2500 mbar                                         | -1.82...36.26 psi | -12.5...250 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                         | 50000 mbar        | 725 psi | 5000 kPa |
| Pressure rating                                | 20000 mbar        | 290 psi | 2000 kPa |
| Vacuum resistance [mbar]                       | -1000             |         |          |
| Type of pressure                               | relative pressure |         |          |
| No dead space                                  | yes               |         |          |
| MAWP (for applications according to CRN) [bar] | 20                |         |          |

| Electrical data                 |                 |  |  |
|---------------------------------|-----------------|--|--|
| Operating voltage [V]           | 18...30 DC      |  |  |
| Min. insulation resistance [MΩ] | 100; (500 V DC) |  |  |
| Protection class                | III             |  |  |
| Reverse polarity protection     | yes             |  |  |
| 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         | -125...2500 mbar | -1.82...36.26 psi | -12.5...250 kPa |
| Analogue start point    | -125...2000 mbar | -1.82...29 psi    | -12.5...200 kPa |
| Analogue end point      | 375...2500 mbar  | 5.44...36.26 psi  | -37.5...250 kPa |
| In steps of             | 1 mbar           | 0.02 psi          | 0.1 kPa         |
| Factory setting         | ASP = 0.0 mbar   | AEP = 2500 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 [% of the span]       | < ± 0,1; (Turn down 1:1; per year)                                                                 |



## Flush pressure sensor

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|                                         |                                                                                                      |                                                       |
|-----------------------------------------|------------------------------------------------------------------------------------------------------|-------------------------------------------------------|
| 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                                                                                                  |                                                       |
| Supported DeviceIDs                     | Type of operation                                                                                    | DeviceID                                              |
|                                         | default                                                                                              | 1111                                                  |
| 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]                            | 323                                                                                                  |                                                       |
| UL approval                             | UL Approval no.                                                                                      | J025                                                  |
| Mechanical data                         |                                                                                                      |                                                       |
| Weight [g]                              | 554.7                                                                                                |                                                       |
| Housing                                 | cylindrical                                                                                          |                                                       |
| Dimensions [mm]                         | Ø 34 / L = 186.4                                                                                     |                                                       |
| 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                                                                                          |                                                       |

PY2006



Flush pressure sensor

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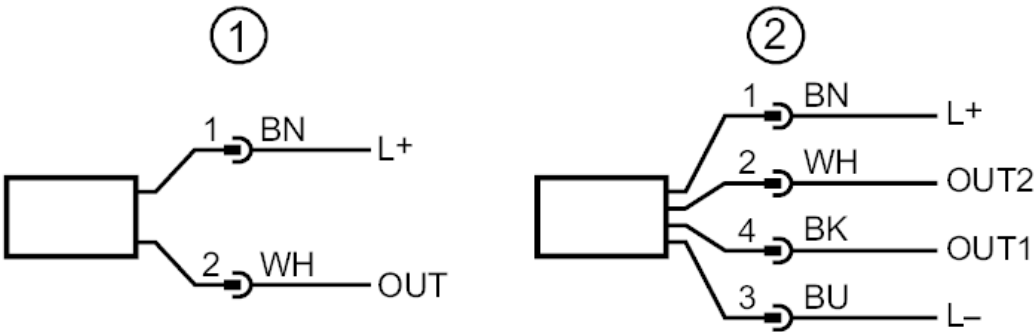
|                    |                                                          |    |
|--------------------|----------------------------------------------------------|----|
| Tightening torque  | [Nm]                                                     | 35 |
| Process connection | threaded connection G 1 external thread Aseptoflex Vario |    |
| Remarks            |                                                          |    |
| Pack quantity      | 1 pcs.                                                   |    |

Electrical connection

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



Connection



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

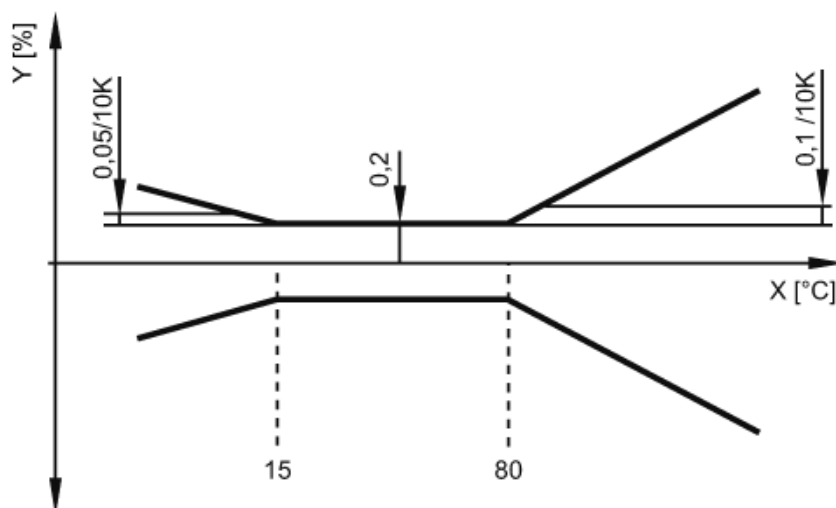


## Flush pressure sensor

PM-2,5-REA01-E-ZVG/US

### Diagrams and graphs

ambient temperature influence on the accuracy



X temperature  
Y total deviation