



## Flush pressure sensor

PM-006-REZ01-E-ZVG/US



- 1 clamp DN25...DN40 (1...1.5") DIN 32676 (ISO 2852)  
the seal for the Triclamp process connection must have an inner diameter of at least 22 mm



### Product characteristics

|                              |                                                             |                |                |
|------------------------------|-------------------------------------------------------------|----------------|----------------|
| Number of inputs and outputs | Number of digital outputs: 1; Number of analogue outputs: 1 |                |                |
| Measuring range              | -1...6 bar                                                  | -14.5...87 psi | -100...600 kPa |
| Process connection           | Clamp DN25...DN40 (1...1.5") DIN 32676 (ISO 2852)           |                |                |

### Application

|                                                |                                                                                                 |          |           |
|------------------------------------------------|-------------------------------------------------------------------------------------------------|----------|-----------|
| Special feature                                | Gold-plated contacts                                                                            |          |           |
| Measuring element                              | ceramic-capacitive pressure measuring cell                                                      |          |           |
| Temperature monitoring                         | no                                                                                              |          |           |
| Application                                    | flush mountable for the food and beverage industry                                              |          |           |
| Media                                          | viscous media and liquids with suspended particles; liquids and gases                           |          |           |
| Medium temperature [°C]                        | -25...150                                                                                       |          |           |
| Min. bursting pressure                         | 100 bar                                                                                         | 1450 psi | 10000 kPa |
| Pressure rating                                | 30 bar                                                                                          | 435 psi  | 3000 kPa  |
| Note on pressure rating                        | take into account the pressure resistance of the bracket and the seal used for clamp connection |          |           |
| Vacuum resistance [mbar]                       | -1000                                                                                           |          |           |
| Type of pressure                               | relative pressure; vacuum                                                                       |          |           |
| No dead space                                  | yes                                                                                             |          |           |
| MAWP (for applications according to CRN) [bar] | 30                                                                                              |          |           |



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| 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 digital outputs: 1; Number of analogue outputs: 1                                        |                |
| Outputs                            |                        |                                                                                                    |                |
| Total number of outputs            |                        | 2                                                                                                  |                |
| Output signal                      |                        | analogue signal; IO-Link; (configurable)                                                           |                |
| Number of digital outputs          |                        | 1; (IO-Link)                                                                                       |                |
| Number of analogue outputs         |                        | 1                                                                                                  |                |
| Analogue current output            | [mA]                   | 4...20; (scalable)                                                                                 |                |
| Max. load                          | [Ω]                    | 700; (Ub = 24 V; (Ub - 9 V) / 21.5 mA)                                                             |                |
| Short-circuit proof                |                        | yes                                                                                                |                |
| Overload protection                |                        | yes                                                                                                |                |
| Measuring/setting range            |                        |                                                                                                    |                |
| Measuring range                    | -1...6 bar             | -14.5...87 psi                                                                                     | -100...600 kPa |
| Analogue start point               | -1...4.8 bar           | -14.5...69.6 psi                                                                                   | -100...480 kPa |
| Analogue end point                 | 0.2...6 bar            | 2.9...87 psi                                                                                       | 20...600 kPa   |
| In steps of                        | 0.02 bar               | 0.05 psi                                                                                           | 0.2 kPa        |
| Factory setting                    |                        | ASP = 0.0 bar                                                                                      | AEP = 6.0 bar  |
| 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)                                                                 |                |
| Temperature coefficient zero point | [% of the span / 10 K] | < ± 0,05                                                                                           |                |
| Temperature coefficient span       | [% of the span / 10 K] | < ± 0,15                                                                                           |                |



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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...150 °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                                                                                                                       |                                                       |
| SDCI standard                           | IEC 61131-9                                                                                                               |                                                       |
| 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                                                                                                                       |                                                       |
| IO-Link resolution pressure [bar]       | 0.002                                                                                                                     |                                                       |
| IO-Link process data (cyclical)         | function                                                                                                                  | bit length                                            |
|                                         | pressure                                                                                                                  | 16                                                    |
|                                         | device status                                                                                                             | 4                                                     |
| IO-Link functions (acyclical)           | application specific tag; internal temperature                                                                            |                                                       |
| Supported DeviceIDs                     | Type of operation                                                                                                         | DeviceID                                              |
|                                         | default                                                                                                                   | 663                                                   |
| 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                                                                                                                       |                                                       |
| Note on approval                        | factory certificate available as download at <a href="http://www.factory-certificate.ifm">www.factory-certificate.ifm</a> |                                                       |
| UL approval                             | UL Approval no.                                                                                                           | J055                                                  |
|                                         | File number UL                                                                                                            | E174189                                               |

PM1115



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| Mechanical data          |      |                                                                                                           |
|--------------------------|------|-----------------------------------------------------------------------------------------------------------|
| Weight                   | [g]  | 393.6                                                                                                     |
| Housing                  |      | cylindrical                                                                                               |
| Dimensions               | [mm] | Ø 30.2 / L = 111.4                                                                                        |
| Materials                |      | stainless steel (316L/1.4404); PBT                                                                        |
| Materials (wetted parts) |      | ceramics (99.9 % Al2O3); stainless steel (316L/1.4435);<br>surface characteristics: Ra < 0,4 / Rz 4; PTFE |
| Min. pressure cycles     |      | 100 million                                                                                               |
| Process connection       |      | Clamp DN25...DN40 (1...1,5") DIN 32676 (ISO 2852)                                                         |

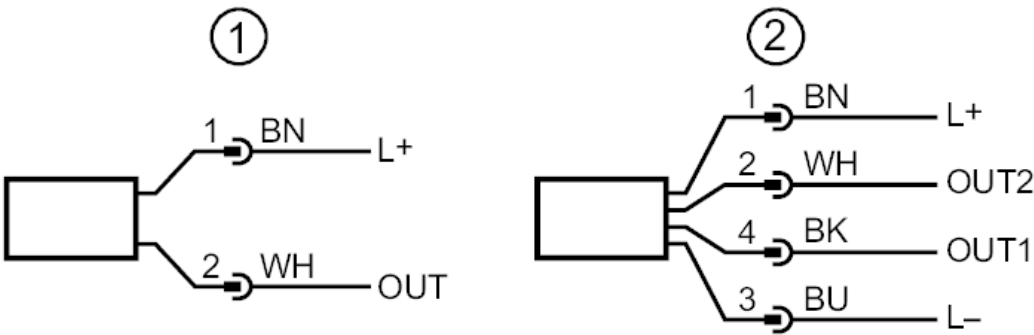
| Remarks       |        |
|---------------|--------|
| Pack quantity | 1 pcs. |

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



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### Diagrams and graphs

ambient temperature influence on the accuracy



X temperature  
Y total deviation