

# **OEM Pressure sensors** Model P3297

Non linearity 0.5% (option 0,25%)

Standard output: 4...20 mA; 2-wire

> 0...5 VDC; 3-wire 0...10 VDC; 3-wire or 0.5...4.5 VDC; 3-wire

or 0.5...4.5 VDC ratiometric



## **Description**

Robustness and long-term stability during operation are the strengths of this compact pressure sensor for general industrial applications. The technical specifications and attractive price level of these sensors make them ideal for OEM applications.

The materials and technologies used make these sensors suitable for applications with aggerssive media. Welded connections between pressure cell and process connection require no elements and make the measuring system particularly resistant to mechanical shock and vibration. The compact design makes these sensors interesting for room critical applications.

A wide variety of electrical connections and pressure ports simplifies the adaptation to different applications. The pressure sensor is internationally certified and ready for global deployment.

The pressure sensors comply with electromagnetic compatibility requirements (EMC) as per EN 61326.

### **Features**

- O Measuring range from 0...1 bar to 0...600 bar
- O Medium wetted parts of stainless steel
- O High EMV-protection according to EN 61 326
- O Compact instrument size
- O No internal sealing elements
- O Highly resistance to shock and vibration
- O For dynamic or static measurements

# Measuring range

Gauge pressure 0...1 bar to 0...600 bar

# **Applications**

Hydraulics and pneumatics

Pumps and compressors

**Building automation** 

Test stand construction

Machine and apparatus construction

Model: P3297

DE 708 e

# **Technical Data**

| Model   | P3297   |   |  |
|---|---|---|--|
| Pressure type   | positive gauge pressure   |   |  |
|   | absolut pressure o  | n request                               |  |
| - Measuring range [bar]   | 01 bar to 0600 bar  |   |  |
| - overrange limit [bar]   | x 2   |   |  |
| - burst pressure [bar]  | x 6   |   |  |
| Sensor element  | piezoresistive to 06 bar, thin film as of 010 bar                         |   |  |
| Output signal   | 420 mA  | 2- wire                                 |  |
|   | 05 VDC<br>15 VDC  | 3- wire<br>3- wire                      |  |
|   | 010 VDC   | 3- wire                                 |  |
|   | 0,54,5 VDC  | 3- wire                                 |  |
|   | 0,54,5 VDC  | ratiometric                             |  |
| Non linearity <sup>1)</sup>   | ≤ 0.5% of F. S.; option: 0.25% of F. S.                                   |   |  |
| Accuracy 2)   | $\leq$ 1.0% of F. S.; option: 0.5% of F. S. $^{3)}$                       |   |  |
| Hysteresis  | ≤ 0.16% of F. S.  |   |  |
| Non repeatability   | ≤ 0.1% of F. S.   |   |  |
| Stability annual  | ≤ 0.2% of F. S. (by reference conditions)                                 |   |  |
| Material  |   | ,                                       |  |
| case  | Stainless steel 316L  |   |  |
| medium wetted parts   | Stainless steel 316L (from 010 bar rel. 13-8PH)                           |   |  |
| Pressure connection   | G 1/4 according to DIN 3852-E   |   |  |
|   | G 1/4 according to EN 837   |   |  |
|   | G 1/2 according to EN 837   |   |  |
|   | 1/4 NPT<br>1/2 NPT  |   |  |
|   | other pressure connection on request                                      |   |  |
| Electrical connection connection DIN EN 175301-803 Form A with junction box (IP 65) |   |   |  |
|   | connector DIN EN 175301-803 Form C with junction box (IP 65)              |   |  |
|   | circular plug-in connector M12x1 (4-pin) (IP 67)                          |   |  |
|   |   | cable outlet: 2m (IP 67)                |  |
|   | other electrical connection on request                                    |   |  |
| Power supply / load   | 0.001/20  |   |  |
| 420 mA  | 830 VDC   | $R_A[\Omega] \le (U_B[V] - 8V) / 0.02A$ |  |
| 015 V<br>010 V  | 830 VDC<br>1430 VDC   | $R_A > 5k\Omega$                        |  |
| 0 10 V<br>0.5 4.5 V   | 830 VDC   | $R_A > 10k\Omega$                       |  |
| 0.5 4.5 V ratiometric   | 5 VDC ± 10%   | $R_A > 4.5k\Omega$                      |  |
| Reponse time  | $R_A > 4,5kΩ$<br>≤ 4ms within 10% to 90% of F.S.                          |   |  |
| RoHS-conformance  | ≤ 4ms within 10% to 90% of F.S.  Ves                                      |   |  |
| Approval according to   | UL, CSA, GOST in preparation  |   |  |
| CE-conformance  | 89/336/EWG interference emission and interference resistance to EN 61 326 |   |  |
| on something  | interference emission limit class B                                       |   |  |
|   | 97/23/EG pressure gauge code  |   |  |
| Electrical protections  | Polarity, overvoltage and short-circuit protection                        |   |  |
| Temperature influence   | ≤ 1% typ ≤ 2,5% max.in range 080°C  |   |  |
| Temperature ranges  |   |   |  |
| compansated range   | 080°C   |   |  |
| storage   | -30100°C (-2080°C)  |   |  |
| media   | -30100°C (080°C)<br>-30100°C (080°C)                                      |   |  |
| ambient   | -30100°C (080°C   | v)                                      |  |
| Load capacity shock (mechanical)  | 500g acc. to IEC 60068-2-27   |   |  |
| vibration (under resonance)   | 10g acc. to IEC 60068-2-6   |   |  |
| Weight  | approx. 80g   |   |  |
| ,.g   |   |   |  |

<sup>1)</sup> According to IEC 61298-2

<sup>&</sup>lt;sup>2)</sup> Including non linearity, hysteresis, non repeatability, variation of zero point and finale value (is equal to error according to IEC 61298-2).

 $<sup>^{3)}</sup>$  By option: accuracy 0.5% and signal  $\,\,0...5V$  is accuracy 0.6%

# **Dimension (mm)**

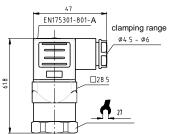
### Case

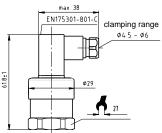
connector according to DIN EN 175301 – 803 Form A

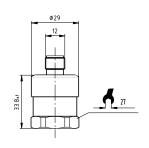
connector according to DIN EN 175301 – 803 Form C

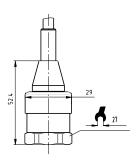
circular plug-in connector M12x1

Cable outlet



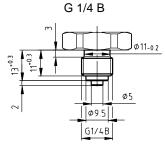


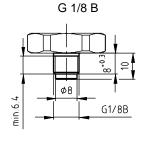


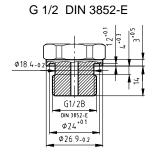


#### **Pressure connections**

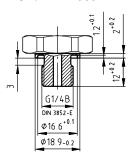
G 1/2 B

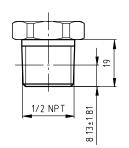




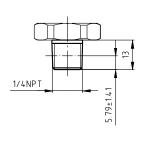


G 1/4 DIN 3852-E

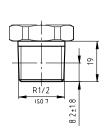




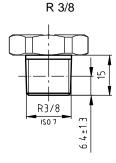
1/2 NPT

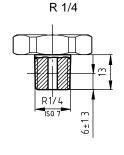


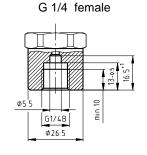
1/4 NPT

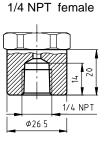


R 1/2

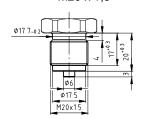








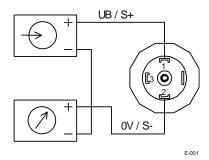
M20 x 1,5



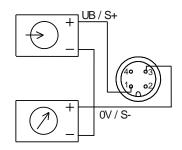
## **Electrical connector**

## Two-wire system

Connector according to DIN EN 175301-803 Form A with junction box

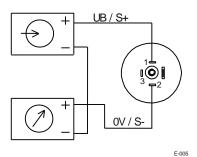


Circular plug-in connector M12x1

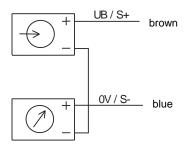


E-033

Connector according to DIN EN 175301-803 Form C with junction box



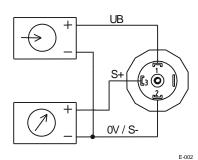
Cable outlet



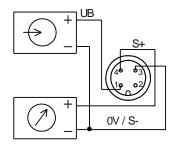
E-015

### Three-wire system

Connector according to DIN EN 175301-803 Form A with junction box

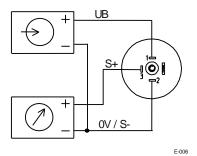


Circular plug-in connector M12x1

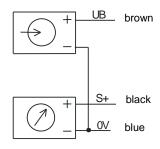


E-034

Connector according to DIN EN 175301-803 Form C with junction box



Cable outlet



E-017