

## Pressure sensors for industrial applications Model P3297

Non linearity 0.5% (option 0,25%)

Standard output:     4...20 mA; 2-wire  
                          or 0...5 VDC; 3-wire  
                          or 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 materials and technologies used make these sensors suitable for applications with aggressive media. Welded connections between pressure cell and process connection require no sealing 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

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

## Technical Data

<b>Model</b>	<b>P3297</b>	
Pressure type	positive gauge pressure absolut pressure on request	
- Measuring range [bar]	0...1 bar to 0...600 bar	
- overrange limit [bar]	x 2	
- burst pressure [bar]	x 6	
Sensor element	piezoresistive to 0..6 bar, thin film as of 0..10 bar	
Output signal	4...20 mA            2- wire 0...5 VDC            3- wire 1...5 VDC            3- wire 0...10 VDC           3- wire 0,5...4,5 VDC       3- wire 0,5...4,5 VDC       ratiometric	
Non linearity <sup>1)</sup>	≤ 0.5% of F. S.; option: 0.25% of F. S.	
Accuracy <sup>2)</sup>	≤ 1.0% of F. S.; option: 0.5% of F. S. <sup>3)</sup>	
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 medium wetted parts	Stainless steel 316L Stainless steel 316L (from 0...10 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 1/2 NPT other pressure connection on request	
Electrical connection	connector 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 4...20 mA 0...1...5 V 0...10 V 0.5 ... 4.5 V 0.5 ... 4.5 V ratiometric	8...30 VDC 8...30 VDC 14...30 VDC 8...30 VDC 5 VDC ± 10%	$R_A [\Omega] \leq (U_B [V] - 8V) / 0,02A$ $R_A > 5k\Omega$ $R_A > 10k\Omega$ $R_A > 4,5k\Omega$ $R_A > 4,5k\Omega$
Reponse time	≤ 4ms within 10% to 90% of F.S.	
RoHS-conformance	yes	
Approval according to	UL, CSA, GOST in preparation	
CE-conformance	89/336/EEG interference emission and interference resistance to EN 61 326 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 0...80°C	
Temperature ranges compansated range storage media ambient	0...80°C -30..100°C (-20..80°C) -30..100°C (0...80°C) -30..100°C (0...80°C)	
Load capacity shock (mechanical) vibration (under resonance)	500g acc. to IEC 60068-2-27 10g acc. to IEC 60068-2-6	
Weight	approx. 80g	

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

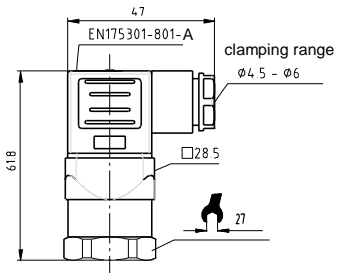
<sup>2)</sup> Including non linearity, hysteresis, non repeatability, variation of zero point and finale value (is equal to error according to IEC 61298-2).

<sup>3)</sup> By option: accuracy 0.5% and signal 0...5V is accuracy 0.6%

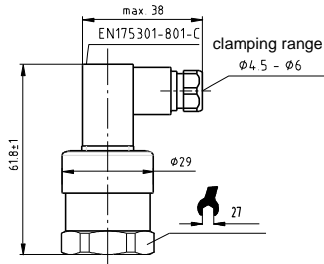
## Dimension (mm)

### Case

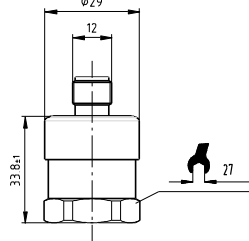
connector according to DIN  
EN 175301 – 803 Form A



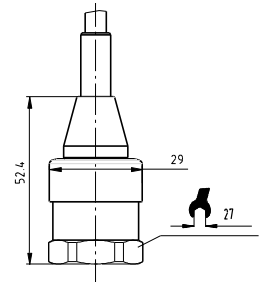
connector according to DIN  
EN 175301 – 803 Form C



circular plug-in connector  
M12x1

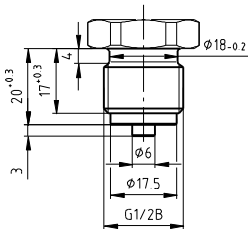


Cable outlet

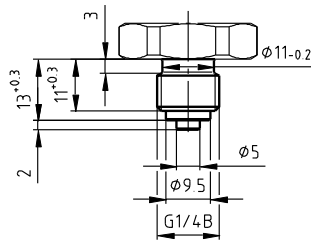


### Pressure connections

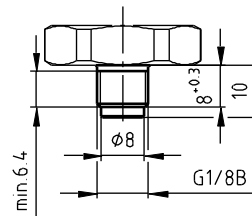
G 1/2 B



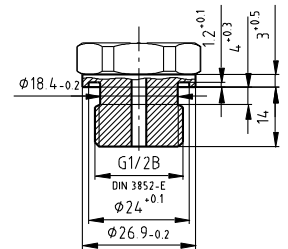
G 1/4 B



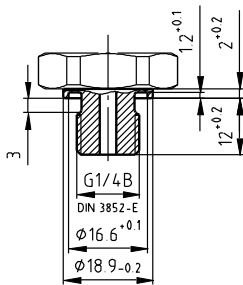
G 1/8 B



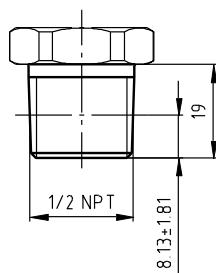
G 1/2 DIN 3852-E



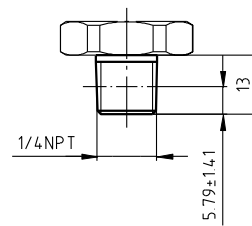
G 1/4 DIN 3852-E



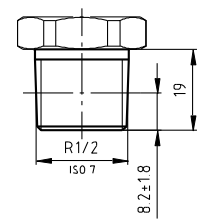
1/2 NPT



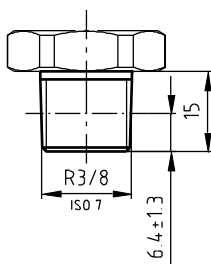
1/4 NPT



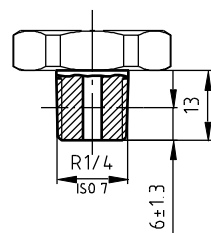
R 1/2



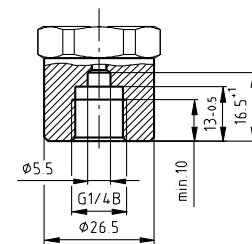
R 3/8



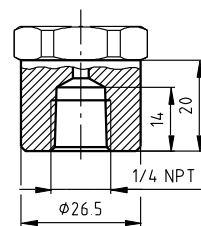
R 1/4



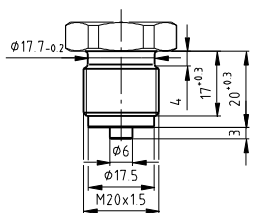
G 1/4 female



1/4 NPT female



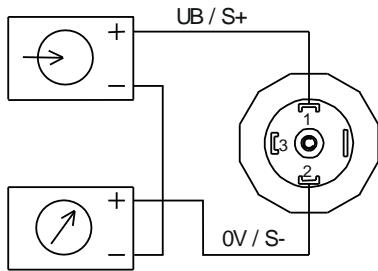
M20 x 1,5



# Electrical connector

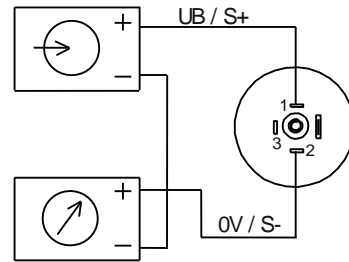
## Two-wire system

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



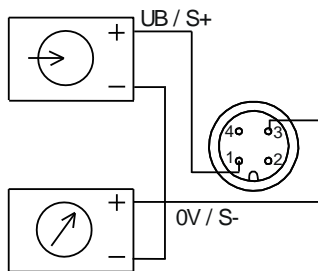
E-001

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



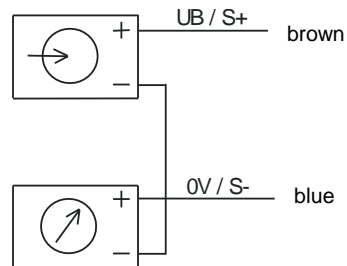
E-005

Circular plug-in connector M12x1



E-033

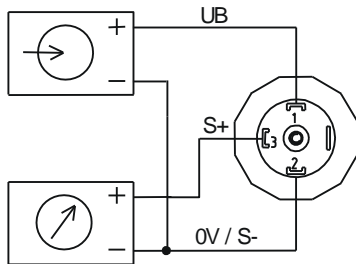
Cable outlet



E-015

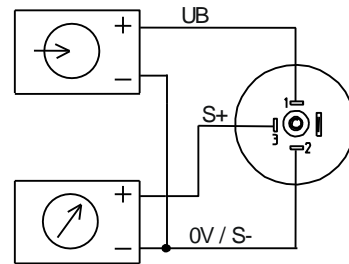
## Three-wire system

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



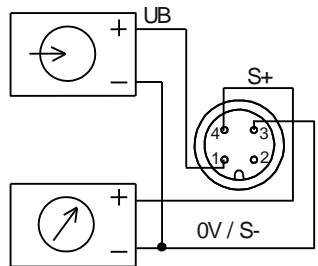
E-002

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



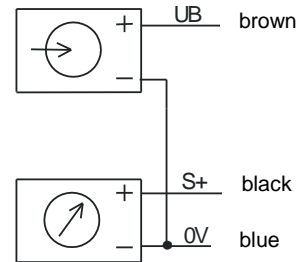
E-006

Circular plug-in connector M12x1



E-034

Cable outlet



E-017

Modifications reserved