

# PUM02

## Pressure Transmitter for General Industrial Applications

- Accuracy class 0.5
- Stainless steel pressure port
- Sturdy, heavy-duty design
- High precision and linearity
- Compatible with a wide range of media
- Adjustable zero-point and measuring range



### Description:

Model series PUM02 pressure sensors are high-quality, accurate and reliable transmitters. Depending on the pressure range, the PUM02 measures the applied pressure by means of a piezo-resistive cell or a thin-film cell. The combination of these two technologies covers all DIN measuring ranges from -1/0 bar to 0/2500 bar with consistent accuracy. The pressure-dependent resistance signal transmitted by these cells is converted by an amplifier to a current signal or voltage signal. The transmitter can be configured to output either a current signal of 4 to 20 mA in two-wire circuitry or a voltage signal of 0 to 10 V in three-wire circuitry. Other output signals are available upon request. PUM02 pressure sensors with flush-mounted stainless-steel diaphragms are especially suited for use with sticky or viscous fluids since such media cannot enter the device and damage or clog it. For difficult measuring tasks, such as level measurements with hydrostatic columns, two potentiometers allow the zero-point and the measuring range to be set as required.

### Fields of Application:

PUM02 pressure transmitters are used to measure the pressure of liquid or gaseous media. All transmitter parts coming in contact with the pressurized media are made of stainless steel. This construction allows it to be used with a wide variety of media. For media that are particularly difficult to handle (caustic, corrosive, viscous, high-temperature), we recommend fitting the PUM02 with a diaphragm seal (commercially available models available upon request), so that flange connections, milk-pipe threaded fittings or Tri-Clamp connections can be used. The compact design, accuracy and material combination of PUM02 devices allow them to be used in numerous applications such as in the chemical or food industries.

## Designs:

### PUM02 Pressure Transmitters, Class 0.5

**Output signal:** possible output signals are: Current signal 4 to 20 mA in two-wire circuitry or voltage signal 0 to 10 V in three-wire circuitry (other outputs available upon request)

**Calibration:** If desired, these devices can be calibrated from a measuring range of 0 to 0.25 bar up to a measuring range of 0 to 16 bar at absolute pressure.

**Electrical connection:** standard DIN EN 175301-803 plug connector, model A with cable box. Permanently attached connection cable optional, standard length of 1m

**Process connection:** If desired, these devices can be supplied with a flush-mounted stainless-steel diaphragm for a measuring range of 0 to 0.1 bar up to a measuring range of 0 to 600 bar. This will be necessary for use with viscous or sticky fluids.

## Technical details:

**Process connection:** G1/2 B male thread, with flush-mounted G1 B diaphragm for measuring range of 0 to 1.6 bar  
M16x1.5 female thread for measuring range > 1600 bar

**Optional connections:** G1/4, 1/4" NPT and 1/2" NPT

**Parts in contact with media:** stainless steel 1.4571 and 1.4542 (with flush-mounted diaphragm, 1.4571 only)

**Max. pressure:** 3.5 times the upper range value for measuring range up to 16 bar  
2 times the upper range value for measuring range to 600 bar  
1.5 times the upper range value for measuring range > 600 bar  
1.2 times the upper range value for measuring range = 1600 bar  
1.2 times the upper range value for measuring range = 2500 bar

**Max. media temp.:** -30...+100°C

**Max. ambient temp.:** -20...+80°C

**Max. storage temp.:** -40...+100°C

**Compensated range:** 0...80°C

**Housing:** stainless steel, European standard no. 1.4301

**Weight:** approx. 0.2 kg

**Accuracy:** class 0.5

**Reproducibility:** < ± 0.05% f. s.

**Response time:** 1 ms (between 10%...90% f. s.)

**Adjustability:** zero-point and measuring range up to 10%

## Ordering Code:

order number: PUM02. 2. 1. 2. 1. 1. R78

Pressure transmitter, class 0.5

**Output signal:**

1 = 4 to 20 mA, 2-wire  
2 = 0 to 10 V, 3-wire

**Calibration:**

1 = Relative pressure  
2 = Absolute pressure

**Electrical connection:**

1 = Plug connector  
2 = Permanently attached connection cable

**Process connection:**

1 = G1/2 B  
2 = G1 B (with flush-mounted diaphragm for measuring range of 0 to 1.6 bar)  
3 = M16 x 1.5 female thread (for measuring range > 1600 bar)  
4 = Special thread (G1/4, 1/4" NPT, 1/2" NPT)

**Design:**

1 = Internal diaphragm  
2 = Flush-mounted diaphragm

**Measuring range:**

R = relative

A = absolute

R11 = -0.1 - 0 bar (without flush-mounted diaphragm)  
R12 = -0.16 - 0 bar (without flush-mounted diaphragm)  
R13 = -0.25 - 0 bar  
R14 = -0.4 - 0 bar  
R15 = -0.6 - 0 bar  
R16 = -1 - 0 bar  
R43 = -1 - 1.5 bar  
R45 = -1 - 5 bar  
R63 = 0 - 0.1 bar  
R64 = 0 - 0.16 bar  
R65 = 0 - 0.25 bar  
R66 = 0 - 0.4 bar  
R67 = 0 - 0.6 bar  
R69 = 0 - 1 bar  
R70 = 0 - 1.6 bar  
R72 = 0 - 2.5 bar  
R73 = 0 - 4 bar  
R74 = 0 - 6 bar  
R75 = 0 - 10 bar  
R76 = 0 - 16 bar  
R78 = 0 - 25 bar  
R79 = 0 - 40 bar  
R80 = 0 - 60 bar  
R81 = 0 - 100 bar  
R82 = 0 - 160 bar  
R84 = 0 - 250 bar  
R85 = 0 - 315 bar  
R86 = 0 - 400 bar  
R87 = 0 - 600 bar  
R88 = 0 - 1000 bar (without flush-mounted diaphragm)  
R89 = 0 - 1600 bar (without flush-mounted diaphragm)  
R90 = 0 - 2500 bar (without flush-mounted diaphragm)

A65 = 0 - 0.25 bar  
A66 = 0 - 0.4 bar  
A67 = 0 - 0.6 bar  
A69 = 0 - 1 bar  
A70 = 0 - 1.6 bar  
A72 = 0 - 2.5 bar  
A73 = 0 - 4 bar  
A74 = 0 - 6 bar  
A75 = 0 - 10 bar  
A76 = 0 - 16 bar

## Electrical specifications:

**Supply voltage:** 10 to 30 VDC for current output  
14 to 30 VDC for voltage output

**Power consumption max.:** 20 mA

**Output:** voltage output Load ≥ 5 kΩm  
Current output Load ≤ (U-10 V) / 0.02 A

**Interference**

**emission:** as per EN 61326

**Noise immunity:** as per EN 61326

**Protection type:** IP65 EN 60 529/IEC 529

**Electrical**

**protection types:** incorrect polarity, overvoltage, and short-circuit protection

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