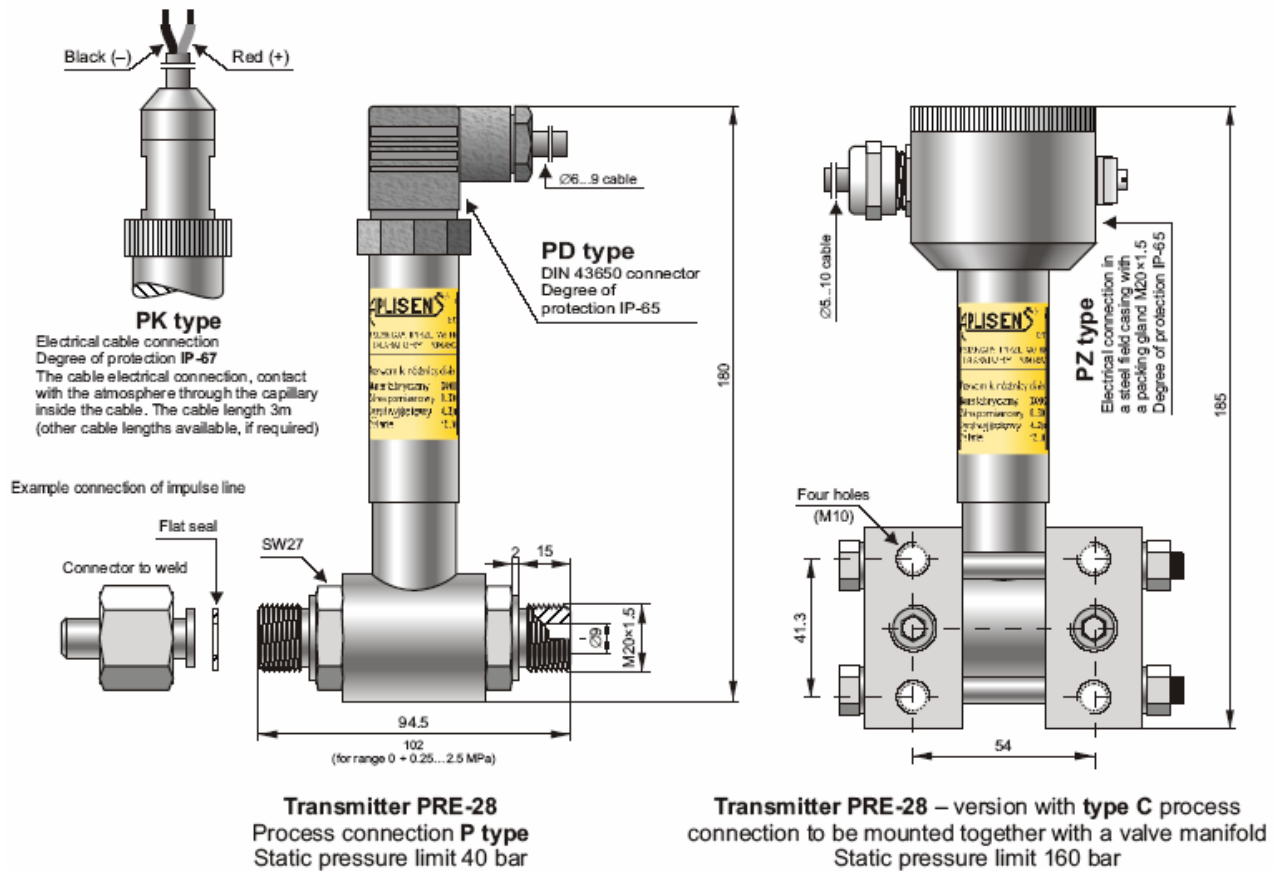


## DIFFERENTIAL PRESSURE TRANSMITTER PRE-28



- ✓ Any range from 0...16 mbar up to 0...25 bar
- ✓ ATEX Intrinsic safety
- ✓ Overloads up to 160 bar total static pressure
- ✓ Accuracy 0.25%

### Application

The PRE-28 transmitter is applicable to the measurement of differential pressure of gases, vapours and liquids.

### Construction

The active element is a piezoresistant silicon sensor separated from the medium by separating diaphragms and a specially selected type of manometric fluid. The special design of the active sensing element ensures withstanding the pressure surges and overloads of up to 160 bar. The electronics is placed in a casing with a degree of protection IP 65 or IP 67, depending on the type of electrical connection applied.

### Calibration

Potentiometers can be used to shift the zero position and the range by up to  $\pm 10\%$ , without altering the settings.

### Installation

The transmitter with P type process connection is not heavy, so it can be installed directly onto impulse lines. For fitting in any desired position on a  $\varnothing 25$  pipe the Aplsens mounting bracket ( $\varnothing 25$  mounting bracket, page 55) is recommended.

The version with C type process connection can be fitted directly to a 3- or 5-valve manifold. The factory-mounted transmitters with VM type valve manifold (page 52) are recommended. A transmitter without a valve manifold can be fitted in any position on a 2" pipe or on a wall using the C-2" mounting bracket (page 55).

When the special process connections are required for the measurement of levels and pressures (e.g. at food and chemical industries), the transmitter is provided with an Aplsens diaphragm seal. The differential pressure transmitters with diaphragm seals are described in detail in the further part of the catalogue.

## Technical data

Any measuring range 0...16 mbar + 0...16 bar

	Measuring Range			
	100 mbar	1 bar	2 bar	16 bar
Overpressure Limit Static Pressure Limit (repeated, without hysteresis)	160 bar (40 bar for P type process connection)			
Accuracy	0.4%	0.25%		
Long term stability	0.2% / year	0.1% / year		
Thermal error	Typically 0.3% / 10°C max 0.4% / 10°C	Typically 0.2% / 10°C max 0.3% / 10°C		
Zero shift error for static pressure*	0.1% / 10 bar			

\* Zeroing the transmitter in conditions of static pressure can eliminate this error.

**Hysteresis, repeatability** 0.05%  
**Thermal compensation range** 0 + 70°C  
**Operating temperature range (ambient temp.)** -25 + 80°C  
**Medium temperature range** -25 + 120°C – direct measurement  
 over 120°C – measurement with the use of impulse line or diaphragm seals

CAUTION: the medium must not be allowed to freeze in the impulse line or close to the process connection of the transmitter

**Output signal** 4...20 mA, two wire transmission  
 0...10 V, three wire transmission

$$\text{Load resistance (for current output)} R[\Omega] \leq \frac{U_{\text{sup}}[\text{V}] - 10.5\text{V}}{0.02\text{A}}$$

**Power supply** 10.5...36 V DC (Ex 12...28 V)  
 – two wire transmission  
 22...30 V DC – three wire transmission

$$\text{Load resistance (for supply output)} R \geq 5\text{ k}\Omega$$

**Error due to supply voltage changes** 0.005% (FSO) / V

### Materials:

**Wetted parts** 00H17N14M2 (316Lss)  
**Diaphragms** Hastelloy (C276)  
**Casing** 0H18N9 (304ss)

### Special versions, certificates:

**Ex** – Atex Intrinsic safety (only for output signal 4...20 mA)  
**Tlen** – transmitter designed for oxygen  
 (only type P process connection; for ranges ≥ 160 mba)

### Others

## Ordering procedure

PRE-28 / / ÷ / / / / /

Special versions: Ex, Tlen, others – description

Start of measuring range  
 – in relation to start of output signal

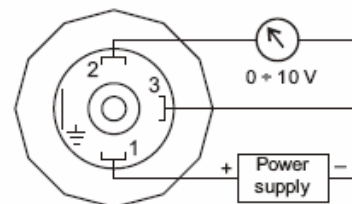
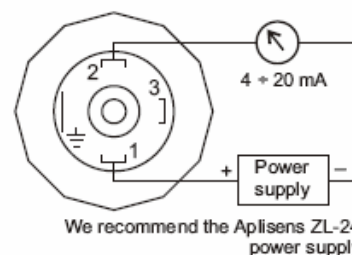
End of measuring range – in relation to end of output signal

Output signal: 4 + 20 mA, 0 + 10 V

Type of electrical connection: PD, PZ, PK

Process connection: type P, type C  
 or type of diaphragm seal according to the diaphragm seals sheets

## Electrical diagrams



**Example:** PRE-28 differential pressure transmitter / standard version / measuring range 0+160mbar / output signal 4 + 20mA / type PD electrical connection / type P connection shanks

**PRE-28 / 0 ÷ 160 mbar / 4 ÷ 20 mA / PD / P**