

PIEZORESISTIVE PRESSURE TRANSMITTERS

SERIES 27 W

FOR LEVEL- AND HIGH PRECISION PRESSURE MEASUREMENTS

These pressure transducers use the Series 10 OEM pressure sensor fully compensated and calibrated for operation at 10 VDC.

The well proven core sensor is an integrated silicon strain gauge bridge, encapsulated within a stainless steel case with a welded, isolating diaphragm (for a more detailed description, see data sheet Series 10).

A G 1/4" male pressure port is welded as standard to give the very best in media compatibility and integrity – no "O"-rings or silicon are in contact with the media at all.

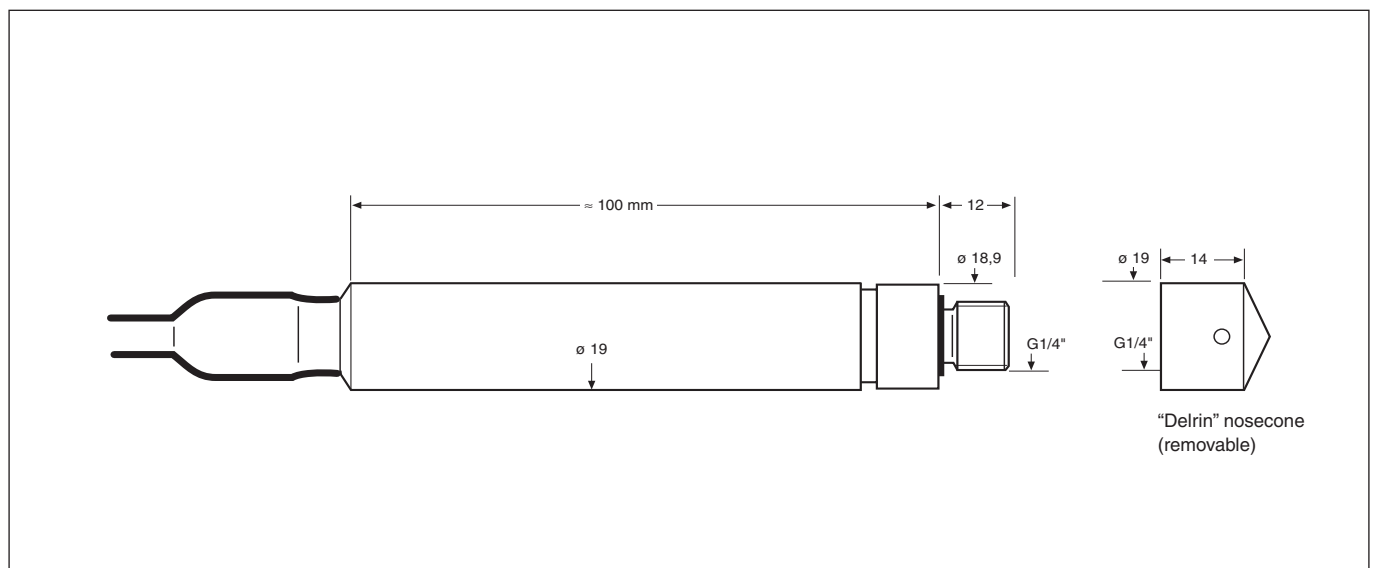
- Pressure ranges: 200 mbar to 100 bar
- Absolute, vented gauge or sealed gauge references
- All 316 L stainless steel welded pressure cavity
- Diameter 19 mm

Standard Pressure Ranges (other ranges on request)

PR 27 W: Vented Gauge. Zero at atmospheric pressure.
-0,5 / -1 / 0,2 / 0,5 / 1 / 2 / 5 / 10 / 20 bar

PAA 27 W: Absolute. Zero at vacuum.
0,2 / 0,5 / 1 / 2 / 10 / 20 bar abs.

PA 27 W: Sealed Gauge. Zero at atmospheric pressure (at calibration day).
1 / 2 / 5 / 10 / 20 / 50 / 100 / 200 bar





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Specifications

	Transmitter			Transducer	
Signal Output	4...20 mA	0...20 mA	± 0...10 VDC	0...100 mV	
Supply Voltage	8...28 VDC		13...28 VDC	8...28 VDC***	10 VDC**
Current required	up to 25 mA	up to 25 mA	4 mA max.	4 mA max.	4 mA max.
Configuration	2-Wire	3-Wire		4-Wire	
Electrical Connection: Cable 5 m, PE	OUT/GND: Red	GND: White		-Vcc: White	
		+OUT: Red		+OUT: Red	
	+Vcc: Black	+Vcc: Black		+Vcc: Black	
				-OUT: Blue	
Load (Ω)	< (U-8 V) / 0,02 A	< (U-7 V) / 0,02 A	> 5 k	> 10 M	
Linearity	± 0,2% typ. / ± 0,5% max.				
Total Error Band* + 18...+ 22 °C	± 0,3% typ. / ± 0,5% max.				
Total Error Band* 0...+ 50 °C	± 0,6% typ. / ± 1,0% max.				
Total Error Band* -10...+ 80 °C	± 2,5% typ. / ± 4,0% max.				
Stability	200 mbar / 500 mbar:		2 mbar typ.	4 mbar max.	
	≥ 2 bar:		0,1 %FS typ.	0,2 %FS max.	

* Total error band includes linearity, hysteresis, repeatability, zero and span offsets, temperature effects.

** As a standard, the transducers are calibrated to 0...100 mV (≥ 0,5 bar) at 10 VDC, and require a stable voltage supply. They can be operated at 5 VDC to give 0...50 mV signal or 20 VDC to give 0...200 mV signal. Bridge resistance is 3,5 kΩ nominal. The 8...28 V supply transducer is fitted with an internal regulator. The G 1/4" pressure connection has an integral Viton® seal at the shoulder. Alternatively it may be sealed using a face seal on the flat nose of the pressure port.

*** Minimal supply depending on output signal and sensitivity of the transducer.

Compensated Temperature Range	0...50 °C (on demand -10...80 °C)
Storage-/Operating Temperature	-45...100 °C
Pressure Port	G 1/4 male with removable "Delrin" nosecone
Materials in Contact with Media	Stainless steel AISI 316 L, Viton®
Volumetric Change	< 10 ⁻³ mm ³
Vibration	10 g (20...2000 Hz)
Endurance	> 10 ⁶ FS cycles at 25 °C
Weight	≈ 120 g (without cable)
Electromagnetic Compatibility	EN 61000-6-1 through -4
Enclosure Protection	IP 68
Insulation	Greater than 100 MΩ @ 500 VDC