



Precise Sensors

"Defining Higher Expectations"

Flush Diaphragm Pressure Transducer

Model 7820

Description

Model 7820 bonded strain gage transducer is designed for accurate static and dynamic (micro second rise time) pressure measurements where size limitations and/or pressure media dictates use of a small, flush diaphragm style pressure transducer. Welded construction throughout those areas common with the pressure media. If cavity style sensor is preferred, see Model 7810. For high level signal current (mA) or voltage (VDC) see Model 7821 or 7823.



Performance Specifications @ 72°F (22°C)

Non-Linearity & Hysteresis	Less than $\pm 0.35\%$ B.F.S.L. ($\pm 0.20\%$ typical)	Supply Voltage	1 to 10 VDC regulated, 350 ohm 1 to 24 VDC regulated, 5000 ohm (Note: calibration at 10 VDC)
Repeatability	Within $\pm 0.08\%$ F.S.O.	Full Scale Output (Sensitivity).....	2.0 mV/V nominal, 2.0 mV/V $\pm 1\%$, Option E
Resolution	Infinite	Zero Balance.....	$\pm 2\%$ F.S.O.
Operating Temperature Range	-65°F(-54°C) to 300°F(149°C)	Shunt Calibration	80% $\pm 5\%$ F.S.O. (specific value noted on calibration sheet)
Compensated Temperature Range	0°F(-18°C) to +250°F(121°C)	Resistance to Ground	1000 Megohms minimum @ 50 VDC
Thermal Zero Shift	Less than $\pm 0.01\%$ F.S.O./°F (Less than $\pm 0.018\%$ F.S.O./°C)	CE Marked	Conforms with EN 55011:1991 Class A, & with applicable RF immunity requirements of EN 50082-2:1995 when used with CE approved equipment
Thermal Sensitivity Shift.....	Less than $\pm 0.01\%$ F.S.O./°F (Less than $\pm 0.018\%$ F.S.O./°C)		
Resonant frequency.....	See Pressure Table		
Acceleration Effect	Less than $\pm 0.01\%$ F.S.O. per "G" all planes		

Electrical Specifications

Bridge.....	Four active arm bonded strain gage
Input & Output Resistance	350 Ohms nominal, Bridge A 5000 Ohms nominal, Bridge C

Mechanical Specifications

Pressure range	See Pressure Table
Negative Pressure.....	Usable to full vacuum
Pressure Limit	150% F.S. without calibration shift
Burst Pressure	Greater than 300% F.S.
Wetted Material.....	15-5 PH S.ST. heat treated
Weight	3 ounces (approx.)

