

Model 254

Bonded Strain Gage Pressure Transducer

Specifications:

<i>Measurand Fluids</i>	All fluids compatible with Carpenter 20 and 347 stainless steel.	
<i>Full Scale Output</i>	3.00 ±0.015 mV open circuit per volt excitation. Calibrated at 10.00 Vdc excitation.	
<i>Zero Balance</i>	0.00 ±0.03 mV per volt at +70°F (+21°C).	
<i>End Point Linearity</i>	Within ±0.25% FSO.	
<i>Hysteresis</i>	Within 0.25% FSO.	
<i>Repeatability</i>	Within 0.10% FSO.	
<i>Resolution</i>	Infinite.	
<i>Natural Frequency</i>	Range (PSI)	Frequency (Hz)
	0-3	175.0
	0-5	200.0
	0-7.5	350.0
	0-10	500.0
	0-15	1000.0
	0-20	1200.0
	0-25	1300.0
	0-30	1400.0
	0-50	2000.0
	0-75	2500.0
	0-100	3000.0

Proof Pressure Rating 0-3 thru 0-10 PSI ranges: 300 PSI.
0-15 thru 0-100 PSI ranges: 500 PSI.
Application of proof pressure will not cause any change in performance characteristics.

Burst Pressure Rating 0-3 thru 0-10 PSI ranges: greater than 1000 PSI.
0-15 thru 0-100 PSI ranges: greater than 1500 PSI.

Compensated Temperature Range -30°F to +170°F (-34°C to +77°C). Options available.

Operating Temperature Range -100°F to +300°F (-73°C to 149°C).

Thermal Sensitivity Shift Less than ±0.005% FSO per °F over compensated temperature range (±0.009% FSO per °C).

Thermal Zero Shift Less than ±0.010% FSO per °F over compensated temperature range (±0.018% FSO per °C).

Triaxial Mechanical Shock 30 G's applied for 11 milliseconds will not cause change in performance characteristics.

Acceleration Error Along most sensitive axis:
0-3 PSI range ±0.40% FSO/G
0-5 PSI range ±0.30% FSO/G
0-7.5 PSI range ±0.25% FSO/G
0-10 PSI range ±0.20% FSO/G
0-15 PSI range ±0.16% FSO/G
0-20 PSI range ±0.12% FSO/G
0-25 PSI range ±0.09% FSO/G
0-30 PSI range ±0.08% FSO/G
0-50 PSI range ±0.04% FSO/G
0-75 PSI range ±0.03% FSO/G
0-100 PSI range ±0.02% FSO/G

Excitation 10 volts dc or ac rms recommended. 15 volts dc or ac maximum.

Input Resistance 350 ±3.5 ohms at +70°F (+21°C). Input circuitry symmetrical.

Output Resistance 350 ±5.0 ohms at +70°F (+21°C).

Insulation Resistance Greater than 10k megohms at 50 Vdc between all terminals in parallel and case at +70°F (+21°C).

Pressure Connection 7/16-20 internal thread per MS33649-4 is standard. Options available.

Pressure Cavity Volume 0-3 thru 0-10 PSI: 0.04 in³ (0.66 ml) excluding MS33649-4 fitting.
0-15 thru 0-100 PSI: 0.08 in³ (1.31 ml) excluding MS33649-4 fitting.

Electrical Receptacle Stainless steel receptacle to mate with MS3106-14-2S.
Standard wiring:
Excitation +A, -D; Signal +B, -C.
Options available.

Enclosure Entire housing and pressure cavity of stainless steel. All electrical components sealed against adverse environment conditions.

Weight Approximately 45 ounces (1.3 kg).

