PORTED SEMICONDUCTOR STRAIN GAGE PRESSURE TRANSDUCERS

HIGH OUTPUT
RUGGEDIZED
HIGH RELIABILITY
NO MOVING PARTS
LOW COST

Senso-Metrics SP 97 series economy pressure transducers utilize bulk type high reliability silicon semiconductor strain gages to obtain a high output signal level at a low cost. This solid state unit is specifically designed to meet the needs of industrial and commercial Original Equipment Manufacturers, as well as for general laboratory uses.

These rugged devices have no moving parts which may wear or produce errors under conditions of shock or vibration. When pressure is applied to the diaphragm the low level resulting strain is sensed by the strain gages which respond by a change in their resistance. The strain gages are bonded directly to the diaphragm and connected into a bridge configuration. When a voltage is used to excite the bridge, a signal voltage across the bridge is developed which is linear and proportional to pressure. The female threaded pressure port (7/16-20) allows the use of a variety of pressure adaptors.
TECHNICAL SPECIFICATIONS

ENVIRONMENTAL
Temperature Range (compensated) ........................................... 30-130°F std.
Operating With TFE Cable ...................................................... -65 to 300°F
Vibration & Shock ................................................................ 0.015% FS/g.

ELECTRICAL
Input Impedance .................................................................... 1500 ohms nominal
Output Impedance ................................................................. 450 ohms nominal
Material .................................................................................. 17-4 PH CRES

PERFORMANCE OPTIONS
Excitation - Volts D.C. ............................................................... SP 97 AFS SP 97 BFS SP 97 CFS SP 97 FFS SP 97 KFS SP 97 LFS
Output in MV at F.S. ................................................................. 10 10 10 10 5 10
Zero Balance (±) MV .............................................................. 4.0 4.0 4.0 4.0 5.0 10.0
Static Error Band (±) % F.S./BFSL ........................................... 0.5 0.25 0.13 0.10 0.25 0.10
Thermal Zero Shift (±) % F.S./°F ............................................... 0.02 0.02 0.01 0.005 0.02 0.01
Thermal Sens. Shift (±) % F.S./°F .............................................. 0.02 0.02 0.01 0.005 0.02 0.01
Lowest Available Press. Range ................................................. 50 50 100 100 50 100

MECHANICAL
Resolution ............................................................................. Infinite
Operating Life ........................................................................... Undamaged by 1x10⁷ full range cycles
Weight .................................................................................... Approximately 6 oz. less cable

OVER PRESSURE ................................................................... x2 (on 17-4 PH CRES)
Burst Pressure .......................................................................... x5 (on 17-4 PH CRES)

STANDARD PRESSURE RANGES (PSI)

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OTHER MATERIALS, NON-STANDARD PRESSURE RANGES AND CONSTANT CURRENT EXCITATION IS AVAILABLE ON ALL PERFORMANCE OPTIONS. FOR TECHNICAL AND ORDERING INFORMATION CONSULT FACTORY.

DWG. 601147

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