DP9 MINIATURE VARIABLE RELUCTANCE

PRESSURE TRANSDUCER



FEATURES:

- ✓ Ranges of ±0.5 to ±500 PSI differential
- ✓ Low sensitivity to mechanical shock
- ✓ Wide dynamic response range
- ✓ Withstands extreme pressure overloads
- ✓ Accepts corrosive liquids and gases Both sides
- ✓ High natural frequency

DESCRIPTION

Model DP9 Miniature Differential Pressure Transducer offers the advantages of the Variable Reluctance transducers in a size that can be adapted to those applications where size and weight are critical. With its smallness come the features of low cavity volume and volumetric displacements along with the symmetrical construction, and corrosion resistance steel exposure found in the magnetic reluctance units of standard sizes. This instrument provides the high nominal output characteristic of variable reluctance type and will operate with most carrier systems including the Validyne Model CD16 Miniature Carrier Demodulator to furnish ± VDC for full span. Small tube pressure fitting is compatible with low pressure tubing and rubber or plastic hose.

SPECIFICATIONS

STANDARD RANGES:	±0.5, 1.0, 5, 10, 15, 20, 25, 50, 75, 100, 250 and 500 psid*
LINEARITY:	± ½ % best straight line
HYSTERESIS:	½ % pressure excursion
OVERPRESSURE:	To 200% of range in either direction with less than ½ % zero shift
LINE PRESSURE:	1000 PSIG operating
LINE PRESSURE EFFECT:	Less than 1% FS zero shift/1000 PSIG
OUTPUT:	25mV/V full scale nominal
INDUCTANCE:	20 mh nominal, each coil, zero balance within 10% full scale
EXCITATION:	1,000 to 20,000 Hz with 20 mh coils 30 volts max. at 3,000 Hz
PRESSURE MEDIA:	Corrosive liquids and gases, both sides
TEMPERATURE:	Operating - 65°F to 250°F, compensated range 0°F to 160°F. Nominal zero shift coefficient: 0.0% of full scale per °F and sensitivity coefficient 0.04% per °F
O-RINGS:	Buna N – other materials on special order
PRESSURE CAVITY VOLUME:	2.6×10^{-3} cubic inch
VOLUME DISPLACEMENT:	1.2×10^{-4} cubic inch
PRESSURE CONNECTION:	1/8 “O.D. x 1” stainless steel tubes. Internal volume 6.6×10^{-3} cubic inches each
SIZE:	1 1/8” x 1 3/4“x 3/4"
WEIGHT:	4 ounces avdp (93 gram)

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