



## Features

**RANGES of  $\pm 0.5$  to  $\pm 500$  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 CD 16 Miniature Carrier Demodulator to furnish  $\pm$  VDC for full span. Small tube pressure fitting are compatible with low pressure tubing and rubber or plastic hose.

## Specifications

<b>Standard Ranges:</b>	$\pm 0.5, 1.0, 5, 10, 15, 20, 25, 50, 75, 100, 250$ and $500$ psid*
<b>Linearity:</b>	$\pm \frac{1}{2}$ % best straight line
<b>Hysteresis:</b>	$\frac{1}{2}$ % pressure excursion
<b>Overpressure:</b>	To 200% of range in either direction with less than $\frac{1}{2}$ % zero shift
<b>Line Pressure:</b>	1000 PSIG operating
<b>Line Pressure Effect:</b>	Less than 1% FS zero shift/1000 PSIG
<b>Output:</b>	25mV/V full scale nominal
<b>Inductance:</b>	20 mh nominal, each coil, zero balance within 10% full scale
<b>Excitation:</b>	1,000 to 20,000 Hz with 20 mh coils 30 volts max. at 3,000 Hz.
<b>Pressure Media:</b>	Corrosive liquids and gases, both sides.
<b>Temperature:</b>	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
<b>"O" Rings:</b>	Buna N – other materials on special order
<b>Pressure Cavity Volume:</b>	$2.6 \times 10^{-3}$ cubic inch
<b>Volume Displacement:</b>	$1.2 \times 10^{-4}$ cubic inch
<b>Pressure Connection:</b>	$\frac{1}{8}$ "O.D. x 1" stainless steel tubes. Internal volume $6.6 \times 10^{-3}$ cubic inches each
<b>Size:</b>	1 $\frac{1}{8}$ " x 1 $\frac{3}{4}$ " x $\frac{3}{4}$ "
<b>Weight:</b>	4 ounces avdp (93 gram)

\* Other ranges available – consult factory