



DESCRIPTION

The DP10 Pressure Transducer, is designed for low and medium pressure measurements, to laboratory accuracy, of corrosive liquids and gases. In typical AC excited bridge circuits, this transducer delivers a full-scale output of 30 mV per volt at 3kHz. The unit operates with carrier system including the Validyne CD15 sine wave carrier demodulator and CD16 miniature DC input DC output carrier demodulator.

The Pressure sensing element is a flat diaphragm of magnetic stainless steel, clamped between case halves of the same material, in a symmetrical assembly. Pickoff coils, embedded in the case halves, sense the diaphragm deflection.

The embedded coils are covered with a non-magnetic stainless steel exposure to the working media. These pressure chambers and the diaphragm utilize all-welded seals. No o'rings or gaskets are used in the unit.

ALL WELDED CONSTRUCTION

Features

- Ranges from ± 0.08 psid to ± 3200 psid
- Wet-Wet Differential
- Accepts corrosive liquids and gases
- Low acceleration sensitivity
- High natural frequency

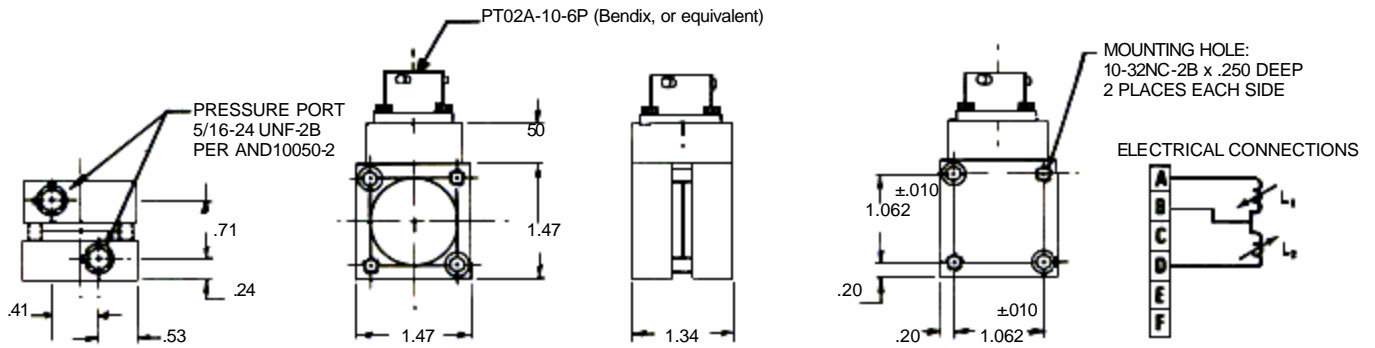
Specifications

Standard Ranges:	± 0.08 psid FS to ± 3200 psid FS See Pressure Range Selection Chart on reverse side
Linearity:	$\pm 1/2\%$ FS best straight line
Hysteresis:	$1/2\%$ pressure excursion
Overpressure:	200% FS up to 4000 PSI maximum, with less than 0.5% zero shift. *
Line Pressure:	3200 psig operating
Line Pressure Effect:	Less than 1% FA zero shift/1000 psig
Output:	30 mV/V full scale nominal
Inductance:	20 mH nominal, each coil
Zero Balance:	Within 5 mV/V
Excitation:	Rated: 5V rms, at 3kHz to 5kHz Limits: 30V rms, at 3kHz 1kHz to 20kHz with 20mH coils
Pressure Media:	Corrosive liquids and gases compatible with 410ss and Inconel**
Temperature:	Operating: -65°F to 250°F **
Thermal Zero Shift:	2%FS/100°F, 2 psi and above
Thermal Sensitivity Shift:	4%FS/100°F, below 2 psi
Pressure Cavity Volume:	4×10^{-3} cubic inch
Volumetric Displacement:	3×10^{-7} cubic inch for full scale
Pressure Connection:	5/16 – 24UNF – 2B, per AND 10050-2 ** (adapter, 5/16 to 1/8 NPT, male, furnished)
Electrical Connection:	Bendix PT02A -10-6P, or equivalent. Mating connector PT06A-10-6S (SR) not furnished. **
Weight:	11 ounces advp (.33 kg)

*Can be factory conditioned for higher overpressure on special order

**See Ordering Information section for available options.

Installation Drawing



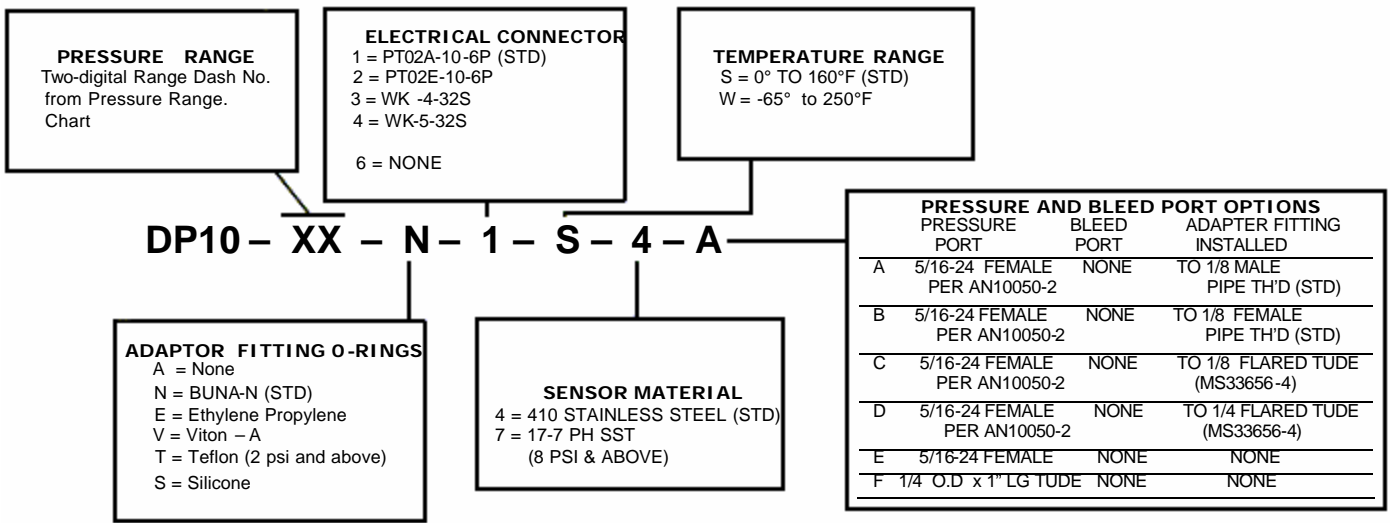
Pressure Range Selection Chart

RANGE DASH NO.	PSI	IN HG	IN H ₂ O	KPA	mmHG TORR	CM H ₂ O
20	0.08	0.16	2.22	0.55	4.14	5.60
22	0.125	0.25	3.5	0.86	6.5	8.80
24	0.20	0.41	5.5	1.40	10.3	14.0
26	0.32	0.65	8.9	2.2	16.5	22.5
28	0.50	1.02	14.0	3.5	25.8	35.0
30	0.80	1.6	22.2	5.5	41.4	56.0
32	1.25	2.5	35.0	8.6	65.0	88.0
34	2.0	4.1	55.0	14.0	103	140
36	3.2	6.5	90	22.0	165	225
38	5.0	10.2	140	35.0	258	350
40	8.0	16.0	222	55.0	414	560
42	12.5	25.0	350	86.0	650	880
44	20	41.0	550	140	1030	1400
46	32	65.0	890	220	1650	2250
48	50	102	1400	350	2580	3500
50	80	160	2220	550	4140	5600
52	125	250	3500	860	6500	8800
54	200	410	5500	1400	10300	14000
56	320	650	8900	2200	16500	22500
58	500	1020	14000	3500	25800	35000
60	800	1600	22200	5500	41400	56000
62	1250	2500	35000	8600	65000	88000
64	2000	4100	55000	14000	103000	140000
66	3200	6500	89000	22000	165000	225000

How to Use the Pressure Range Chart

First enter the chart by selecting the appropriate engineering units desired (PSI, IN H₂O, etc.). Move down this column until the desired full scale pressure range is located. Then, select the Range Dash Number that corresponds to the desired pressure range (number located in far left column). Should the pressure range desired fall between the ranges listed, use the Range Dash Number for the next higher range. Example: to obtain a 1 PSI transducer, select a -30 range. This transducer may then be calibrated for any full scale pressure range from 0.81 through 1.25 PSI. Should the pressure range desired fall on a range listed, then use the Range Dash Number in the left most column. Example: to obtain a 65.0 mmHg transducer, select a -30 range. This transducer may then be calibrated for any full scale pressure range from 41.5 to 65.0 mmHg. When this pressure range chart is so used, the transducer will meet all of the performance specifications for the model.

Ordering Information For transducers, specify part number as follows:



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