



DESCRIPTION

The wide range of diaphragms furnished eliminates expensive stocking of several transducers and offers the versatility of the differential type bi-directional transducer at a very low cost. The broad line pressure capability of this unit makes it useful in almost every laboratory application from flow to level measurement, vacuum to 3,000 PSIG. The high output, when used with a carrier system such as the Model CD15 Sine Wave Carrier Demodulator or the CD12 Transducer Indicator, provides resolution equal to many secondary standard units.

The two symmetrical body parts are easily disassembled and reassembled with replacement diaphragm using wrench furnished. The DP15 design incorporates the vent valves for complete purging of liquid filled systems for dynamic measurements with corrosion resistant exposure to the media. Spare O-ring seals, bleed screws and gaskets are included in the handy storage box.

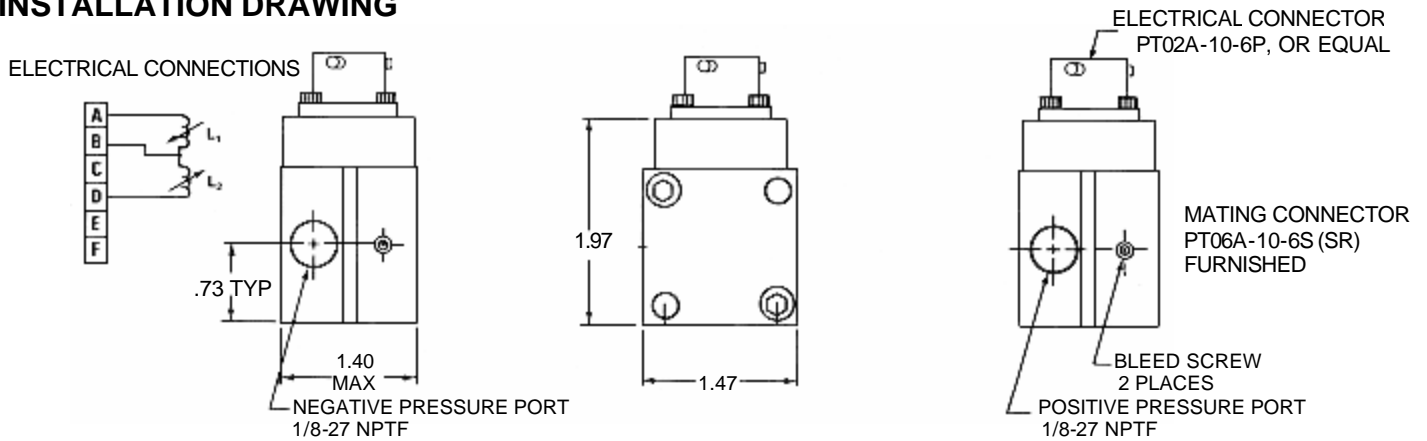
Features

- Ranges of ± 1 , ± 5 , ± 20 , ± 75 , ± 250 , ± 1000 , ± 3000 psid
- $\frac{1}{2}\%$ Accuracy
- Accepts corrosive liquids and gases, both sides
- High natural frequency
- Low sensitivity to line pressure

Specifications

Standard Ranges:	± 1 , ± 5 , ± 20 , ± 75 , ± 250 , ± 1000 , ± 3000 psid differential, see pressure range/diaphragm
Accuracy:	$\pm 0.5\%$ FS (including effects of linearity, hysteresis and repeatability)
Overpressure:	To 200% of range in either direction with less than $\frac{1}{2}\%$ FS zero shift
Line Pressure:	3000 psig operating
Line Pressure Effect:	Less than 1% FA zero shift/1000 psig
Output:	35 mV/V full scale nominal
Inductance:	20 mH nominal, each coil
Zero Balance:	Within 5 mV/V
Excitation:	Rated: 5V rms, 3kHz to 5kHz Limits: 30V rms, at 3kHz 1kHz to 20kHz with 20mH coils
Pressure Media:	Corrosive liquids and gases both sides, compatible with 410ss and Inconel and Buna N Operating: -65°F to 250°F 1%FS/100 $^{\circ}\text{F}$ Typical
Temperature Shift:	
Thermal Sensitivity Shift:	2%/100 $^{\circ}\text{F}$ Typical
"O" Rings:	Buna N
Pressure Cavity Volume:	4×10^{-3} cubic inch
Volumetric Displacement:	3×10^{-4} cubic inch for full scale
Pressure Connection:	1/8-27 NPTF
Electrical Connection:	PT02A-10-6P, Bendix or equal. Mating connector PT06A-10-6S (SR) not furnished.
Weight:	12 ounces advp (336 grams) total kit 11/2 pounds (.7kg)

INSTALLATION DRAWING



ACCESSORY AND SPARE PARTS LIST

- (1) Bleed Screw Wrench, (5/64" Hex Socket Wrench), P/N K950-0781
- (1) Body Bolt Wrench, (#S-183 Spline Socket Wrench), P/N K955-0183
- (2) BUNA-N O-rings (Parker, Compound N219-7), P/N 2773-0224
- (6) Diaphragm, Marked with Range Code*
- (2) Bleed Screw, P/N 7006
- (2) Bleed Screw Gasket, P/N 7007-1
- (1) Electrical Connector, PT06A-10-6S(SR), (Bendix or equal) P/N 1280-1002
- (4) Body Bolts, 10-32 x % Spline Socket Cap Screw, P/N H022-1012
- (5) Wooden Case, P/N 1050-3333

"See Pressure Range/Diaphragm Selection Chart for explanation of Flange Code markings

Pressure Range Selection Chart

DIAPH DASH NO.	PSI	IN HG	IN H2O	KPA	TORR	CM H2O
	.08	.16	2.22	.55	4.14	5.60
20	.125	.25	3.5	.86	6.5	8.80
22	.20	.41	5.5	1.40	10.3	14.0
24	.32	.65	8.9	2.2	16.5	22.5
26	.50	1.02	14.0	3.5	25.8	35.0
28	.80	1.6	22.2	5.5	41.4	56.0
30	1.25	2.5	35.0	8.6	65.0	88.0
32	2.0	4.1	55.0	14.0	103	140
34	3.2	6.5	90	22.0	165	225
36	5.0	10.2	140	35.0	258	350
38	8.0	16.0	222	55.0	414	560
40	12.5	25.0	350	86.0	650	880
42	20	41.0	550	140	1030	1400
44	32	65.0	890	220	1650	2250
46	50	102	1400	350	2580	3500
48	80	160	2220	550	4140	5600
50	125	250	3500	860	6500	8800
52	200	410	5500	1400	10300	14000
54	320	650	8900	2200	16500	22500
56	500	1020	14000	3500	25800	35000
58	800	1600	22200	5500	41400	56000
60	1250	2500	35000	8600	65000	88000
62	2000	4100	55000	14000	103000	140000
64	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, TORR, etc.). Move down this column until the desired full scale pressure range is located. Then, select the diaphragm dash number that corresponds the desired pressure range (number located in far left column.) Should the pressure range desired fall between their ranges, listed, use the diaphragm dash number for the next higher range. Example: to obtain a 100 PSI transducer, select a -50 diaphragm. This transducer may then be calibrated for any full scale pressure range from 81 through 125 PSI. Should the pressure range desired fall on a range listed, then use the diaphragm dash number in the left most column. Example: to obtain a 650 TORR transducer, select a -40 diaphragm. This transducer may then be calibrated for any full scale pressure range from 415 to 650 TORR. When this pressure range chart is so used, the transducer will meet all of the performance specifications for the model.



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