

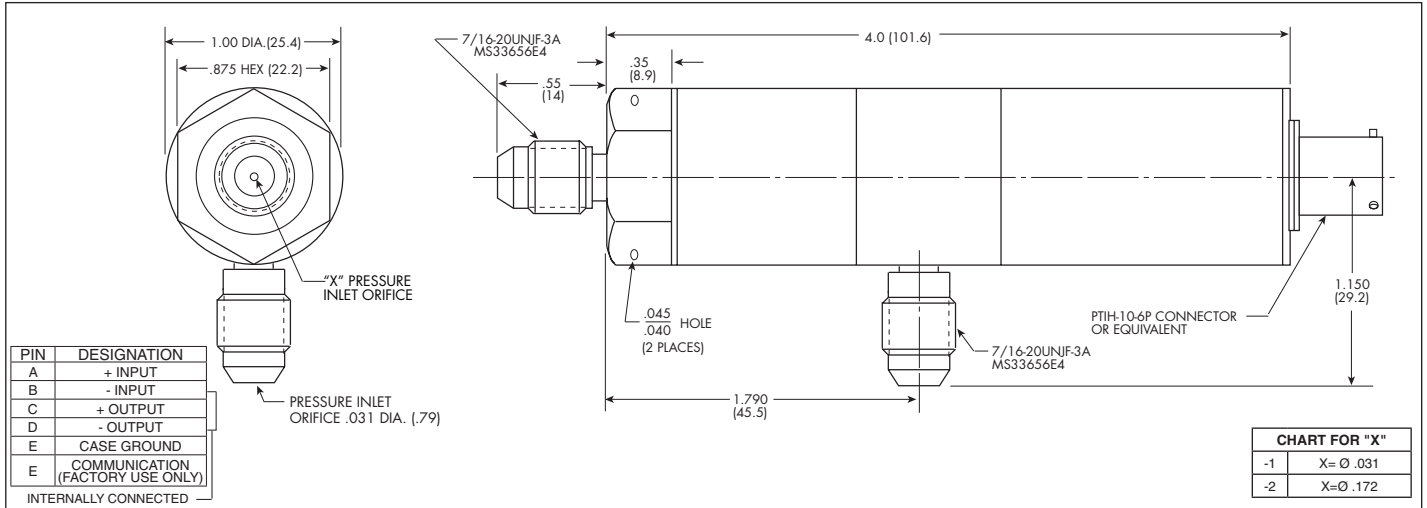


# VOLTAGE OUTPUT MICROPROCESSOR CORRECTED DIFFERENTIAL IS<sup>®</sup> PRESSURE TRANSDUCER

## BMDE-70-1000 SERIES

- Robust Construction
- Microprocessor Corrected
- High Accuracy

The BMDE-70-1000 microprocessor corrected transducer offers high accuracy with a total error band of  $\pm 0.25\%$  FSO, inclusive of all errors over a wide temperature range of  $-40^{\circ}\text{F}$  to  $+250^{\circ}\text{F}$ . The ingenious application of modern solid state technology to transducer sensing makes the BMDE-70-1000 Series the most advanced pressure transducer available. Designed to measure liquid or gas pressure, the transducer is of all-welded stainless steel construction, with integral pressure port and diaphragm.



<b>INPUT</b>										
Pressure Range	0.35	1.0	1.7	3.5	7	17	35	70	140	210 BAR
	5	15	25	50	100	250	500	1000	2000	3000 PSI
Operational Mode	Differential									
Over Pressure	2 Times Rated Pressure to a Maximum of 5000 PSI (350 BAR)									
Burst Pressure	3 Times Rated Pressure to a Maximum of 5000 PSI (350 BAR)									
Pressure Media	Any Media Compatible With 316 SS and 15-5 PH Stainless Steel									
Rated Electrical Excitation	8 - 32 VDC									
Maximum Electrical Current	25 mA (Max.)									
<b>OUTPUT</b>										
Output Impedance	750 Ohms (Max.)									
Full Scale Output (FSO) (Net)	$\pm 2.0$ VDC $\pm .025$ VDC									
Total Error Band (Excluding End Points)	$\pm 0.25\%$ FSO (Max.) (Combined Non-Linearity, Hysteresis, Repeatability and All Thermal Effects Included)									
Bandwidth (-3dB)	DC to 10 KHz									
Residual Unbalance	2.5 VDC $\pm .025$ VDC									
Resolution	Infinitesimal									
Acceleration Sensitivity % FS/g Perpendicular	$1.5 \times 10^{-3}$	$7.0 \times 10^{-4}$	$3.0 \times 10^{-4}$	$1.5 \times 10^{-4}$	$1.0 \times 10^{-4}$	$5.0 \times 10^{-5}$	$3.0 \times 10^{-5}$	$2.0 \times 10^{-5}$	$1.5 \times 10^{-5}$	$1.0 \times 10^{-5}$
Transverse	$2.2 \times 10^{-4}$	$9.0 \times 10^{-5}$	$6.0 \times 10^{-5}$	$3.0 \times 10^{-5}$	$2.0 \times 10^{-5}$	$1.0 \times 10^{-5}$	$6.0 \times 10^{-6}$	$4.0 \times 10^{-6}$	$3.0 \times 10^{-6}$	$2.0 \times 10^{-6}$
Insulation Resistance	100 Megohm Min. @ 50 VDC									
<b>ENVIRONMENTAL</b>										
Operating Temperature Range	$-40^{\circ}\text{F}$ to $+265^{\circ}\text{F}$ ( $-40^{\circ}\text{C}$ to $+130^{\circ}\text{C}$ )									
Compensated Temperature Range	$-40^{\circ}\text{F}$ to $+250^{\circ}\text{F}$ ( $-40^{\circ}\text{C}$ to $+120^{\circ}\text{C}$ )									
Linear Vibration	50g Peak, Sine 10 to 2000 Hz									
Altitude	$-150$ ft. to $+70,000$ ft. Will Not Damage Sensor									
Humidity	100% Relative Humidity									
Mechanical Shock	100g half Sine Wave 11 msec. Duration									
<b>PHYSICAL</b>										
Electrical Connection	PTIH-10-6P Connector or Equivalent									
Weight	270 Grams Approx.									
Pressure Sensing Principle	Fully Active Four Arm Wheatstone Bridge Dielectrically Isolated Silicon on Silicon									
Mounting Torque	100 Inch-Pounds (Max.)									

Note: Custom pressure ranges, accuracies and mechanical configurations available. Dimensions are in inches. Dimensions in parenthesis are in millimeters. Continuous development and refinement of our products may result in specification changes without notice - all dimensions nominal. (A)