

VOLTAGE OUTPUT MICROPROCESSOR CORRECTED DIFFERENTIAL

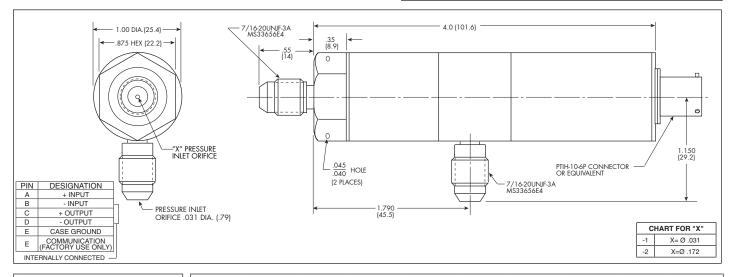
IS® PRESSURE TRANSDUCER

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°F to ± 250 °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.





	INPUT Pressure Range	0.35 5	1.0 15	1.7 25	3.5 50	7 100	17 250	35 500	70 1000	140 2000	210 BAR 3000 PSI	
## State Pressure	Operational Mode	Differential										
Rated Electrical Excitation	Over Pressure	2 Times Rated Pressure to a Maximum of 5000 PSI (350 BAR)										
Rated Electrical Excitation	Burst Pressure	3 Times Rated Pressure to a Maximum of 5000 PSI (350 BAR)										
Maximum Electrical Current OUTPUT Output Impedance OUTPUT Output Impedance OUTPUT Output Impedance Output Imped	Pressure Media	Any Media Compatible With 316 SS and 15-5 PH Stainless Steel										
Output Output Impedance 750 Ohms (Max.) Full Scale Output (FSO) (Net) ± 2.0 VDC ± .025 VDC Total Error Band (Excluding End Points) Excluding End Points) Bandwidth (-3dB) DC to 10 KHz Residual Unbalance FSV VDC ± .025 VDC Resolution Acceleration Sensitivity % FS/g Perpendicular Transverse Ferpendicular Transverse 1.5x10³ 7.0x10⁴ 3.0x10⁴ 3.0x10⁴ 1.5x10⁴ 1.0x10⁴ 5.0x10⁵ 3.0x10° 2.0x10⁵ 1.0x10⁵ 6.0x10˚ 3.0x10° 2.0x10⁵ 1.0x10⁵ 2.0x10˚ 1.0x10° 6.0x10˚ 3.0x10° 2.0x10° 1.0x10° 6.0x10˚ 3.0x10° 2.0x10° 3.0x10° 2.0x10° 1.0x10° 6.0x10° 3.0x10° 2.0x10° 3.0x10° 2.0x	Rated Electrical Excitation	8 - 32 VDC										
Total Error Band	Maximum Electrical Current	25 mA (Max.)										
Total Error Band (Excluding End Points)						750 Ohm	ns (Max.)					
(Combined Non-Linearity, Hysteresis, Repeatability and All Thermal Effects Included) Bandwidth (-3dB) Residual Unbalance Resolution Acceleration Sensitivity % FS/g Perpendicular Transverse Insulation Resistance ENVIRONMENTAL Operating Temperature Range Linear Vibration Altitude Humidity Mechanical Shock PHYSICAL Electrical Connection PHYSICAL Electrical Connection Weight Pressure Sensing Principle (Combined Non-Linearity, Hysteresis, Repeatability and All Thermal Effects Included) DC to 10 KHz 2.5 VDC ± .025 VDC Infinitesimal Acceleration Sensitivity % FS/g Perpendicular 1.5x10° 7.0x10° 3.0x10° 1.0x10° 5.0x10° 3.0x10° 2.0x10° 1.5x10° 1.0x10° 6.0x10° 3.0x10° 2.0x10° 1.0x10° 6.0x10° 4.0x10° 6.0x10° 4.0x10° 3.0x10° 2.0x10° 1.0x10° 6.0x10° 4.0x10° 6.0x10° 4.0x10° 6.0x10°	Full Scale Output (FSO) (Net)	± 2.0 VDC ± .025 VDC										
Residual Unbalance												
Resolution	Bandwidth (-3dB)	DC to 10 KHz										
Acceleration Sensitivity % FS/g Perpendicular Transverse 1.5x10³ 7.0x10⁴ 3.0x10⁴ 1.5x10⁴ 1.0x10⁴ 5.0x10⁵ 3.0x10⁵ 2.0x10⁵ 1.5x10⁵ 2.0x10⁵ 2.0x10⁵ 2.2x10⁴ 9.0x10⁵ 6.0x10⁵ 3.0x10⁵ 2.0x10⁵ 1.0x10⁵ 6.0x10⁶ 4.0x10⁶ 3.0x10⁶ 2.0x10⁶ ENVIRONMENTAL Operating Temperature Range Compensated Temperature Range Linear Vibration Altitude 1.5x10⁴ 1.0x10⁴ 5.0x10⁵ 6.0x10⁶ 6.0x10⁶ 4.0x10⁶ 3.0x10⁶ 2.0x10⁶ 1.0x10⁵ 6.0x10⁶ 6.0x10⁶ 4.0x10⁶ 3.0x10⁶ 2.0x10⁶ 1.0x10⁵ 6.0x10⁶ 6.0x10⁶ 4.0x10⁶ 3.0x10⁶ 2.0x10⁶ 1.0x10⁶ 6.0x10⁶ 6.0x10⁶ 4.0x10⁶ 3.0x10⁶ 2.0x10⁶ 1.0x10⁶ 6.0x10⁶ 6.0x10⁶ 4.0x10⁶ 3.0x10⁶ 2.0x10⁶ 1.0x10ց Megohm Min. @ 50 VDC ENVIRONMENTAL Operating Temperature Range 1.0x10ց Pack Sine 10 to 2000 Hz 1.0x10ց Pack Sine Wave 11 msec. Duration PHYSICAL Electrical Connection Weight 270 Grams Approx. Fully Active Four Arm Wheatstone Bridge Dielectrically Isolated Silicon on Silicon	Residual Unbalance	2.5 VDC ± .025 VDC										
Perpendicular Transverse	Resolution	Infinitesimal										
ENVIRONMENTAL Operating Temperature Range Compensated Temperature Range Linear Vibration Altitude Humidity Mechanical Shock PHYSICAL Electrical Connection Weight Pressure Sensing Principle Page -40°F to +265°F (-40°C to +130°C) 50g Peak, Sine 10 to 2000 Hz -150 ft. to +70,000 ft. Will Not Damage Sensor 100% Relative Humidity 100% Relative Humidity PTIH-10-6P Connector or Equivalent 270 Grams Approx. Fully Active Four Arm Wheatstone Bridge Dielectrically Isolated Silicon on Silicon	Perpendicular										1.0x10 ⁻⁵ 2.0x10 ⁻⁶	
Operating Temperature Range Compensated Temperature Range Linear Vibration Altitude Humidity Mechanical Shock PHYSICAL Electrical Connection Weight Pressure Sensing Principle Tune And Temperature Range -40°F to +265°F (-40°C to +120°C) 50g Peak, Sine 10 to 2000 Hz -150 ft. to +70,000 ft. Will Not Damage Sensor 100% Relative Humidity 100% Relative Humidity PTIH-10-6P Connector or Equivalent 270 Grams Approx. Fully Active Four Arm Wheatstone Bridge Dielectrically Isolated Silicon on Silicon	Insulation Resistance	100 Megohm Min. @ 50 VDC										
Linear Vibration Altitude Altitude -150 ft. to +70,000 ft. Will Not Damage Sensor Humidity Mechanical Shock PHYSICAL Electrical Connection Weight Pressure Sensing Principle Fully Active Four Arm Wheatstone Bridge Dielectrically Isolated Silicon on Silicon		-40°F to +265°F (-40°C to +130°C)										
Altitude -150 ft. to +70,000 ft. Will Not Damage Sensor Humidity 100% Relative Humidity Mechanical Shock 100g half Sine Wave 11 msec. Duration PHYSICAL 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	Compensated Temperature Range	-40°F to +250°F (-40°C to +120°C)										
Humidity Mechanical Shock PHYSICAL Electrical Connection Weight Pressure Sensing Principle 100% Relative Humidity 100% Relative Humidity PTIH-10-6P Connector or Equivalent 270 Grams Approx. Fully Active Four Arm Wheatstone Bridge Dielectrically Isolated Silicon on Silicon	Linear Vibration	50g Peak, Sine 10 to 2000 Hz										
Mechanical Shock PHYSICAL Electrical Connection Weight Pressure Sensing Principle 100g half Sine Wave 11 msec. Duration PTIH-10-6P Connector or Equivalent 270 Grams Approx. Fully Active Four Arm Wheatstone Bridge Dielectrically Isolated Silicon on Silicon	Altitude	-150 ft. to +70,000 ft. Will Not Damage Sensor										
PHYSICAL Electrical Connection Weight Pressure Sensing Principle PHYSICAL Electrical Connection PTIH-10-6P Connector or Equivalent 270 Grams Approx. Fully Active Four Arm Wheatstone Bridge Dielectrically Isolated Silicon on Silicon	Humidity	100% Relative Humidity										
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	Mechanical Shock	100g half Sine Wave 11 msec. Duration										
Pressure Sensing Principle Fully Active Four Arm Wheatstone Bridge Dielectrically Isolated Silicon on Silicon		PTIH-10-6P Connector or Equivalent										
	Weight		270 Grams Approx.									
Mounting Torque 100 Inch-Pounds (Max.)	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)