



HIGH TEMPERATURE 5 VDC OUTPUT PRESSURE TRANSDUCER

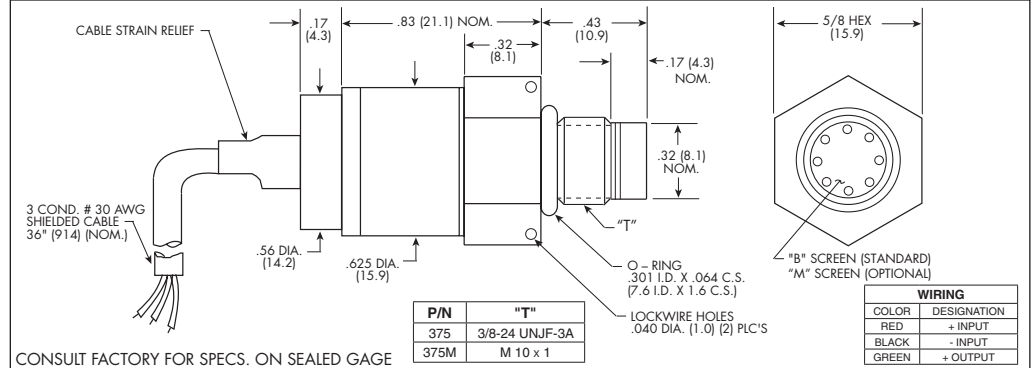
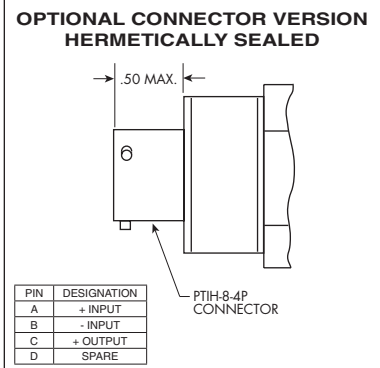
ETM-HT-375 (M) SERIES

- 5 VDC Output
- 350°F Temperature Capability
- Hybrid Microelectronic Regulator-Amplifier
- Flush Diaphragm
- Silicon on Silicon Integrated Sensor **VIS®**
- All Welded Construction
- Secondary Containment On Absolute And Sealed Gage Units
- Aerospace Quality Components
- 3/8-24 UNJF or M10 X 1 Thread
- 3 Wire



ETM-HT-375 series transducers are miniature, threaded flush diaphragm instruments. They utilize a flush metal diaphragm as a force collector. Force is transferred to a solid state piezoresistive sensing element via a thin intervening film of non-compressible silicone oil. This sensing sub-assembly is protected from mechanical damage by a solid screen which has been shown to have minimal

influence on the frequency response of the sensor. For applications where a true flush diaphragm is needed, Kulite will supply these transducers without the screen. Incorporation of a Kulite proprietary electronics module within the main body of this product allows for operation from an unregulated power supply of 12 ± 4 VDC or 28 ± 4 VDC. Standard output is a stable, low noise 0 to 5 VDC signal.



INPUT	35	70	170	350	700	1400 BAR
Pressure Range	500	1000	2500	5000	10000	20000 PSI
Operational Mode	Absolute, Sealed Gage					
Over Pressure	2 Times Rated Pressure to 1000 PSI (70 BAR) 1.5 Times Rated Pressure Above 1000 PSI to a Max. of 30000 PSI (2100 BAR)					
Burst Pressure	3 Times Rated Pressure to a Max. of 35000 PSI (2400 BAR)					
Pressure Media	Any Liquid or Gas Compatible With 15-5 PH or 316 Stainless Steel					
Maximum Electrical Current	25 mA					
Rated Electrical Excitation	12 ± 4 VDC or 28 ± 4 VDC					
OUTPUT						
Full Scale Reading	5 VDC \pm 150mV					
Output Impedance	200 Ohms (Max.)					
Bandwidth (-3dB)	DC to 3 KHz					
Residual Unbalance	200 mV \pm 50 mV					
Combined Non-Linearity, Hysteresis and Repeatability	$\pm 0.1\%$ FSO BFSL (Typ.), $\pm 0.5\%$ FSO (Max.)					
Resolution	Infinitesimal					
Natural Frequency (KHz) (Typ.)	Greater Than 400 KHz					
Acceleration Sensitivity % FS/g						
Perpendicular	1.1×10^{-4}	6.2×10^{-5}	2.6×10^{-5}	1.5×10^{-5}	1.3×10^{-5}	8.0×10^{-6}
Transverse	7.0×10^{-6}	4.3×10^{-6}	2.3×10^{-6}	1.5×10^{-6}	1.3×10^{-6}	1.0×10^{-6}
Insulation Resistance	100 Megohm Min. @ 50 VDC					
ENVIRONMENTAL						
Operating Temperature Range	-65°F to $+350^\circ\text{F}$ (-55°C to $+175^\circ\text{C}$)					
Compensated Temperature Range	-40°F to $+350^\circ\text{F}$ (-40°C to $+175^\circ\text{C}$) Other Ranges Quoted on Request					
Thermal Zero Shift	$\pm 1\%$ FS/100° F (Typ.)					
Thermal Sensitivity Shift	$\pm 1\%$ /100° F (Typ.)					
Linear Vibration	100g Peak, Sine up to 5000 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					
PHYSICAL						
Electrical Connection	3 Conductor 30 AWG Shielded Cable 36" Long					
Weight	24.5 Grams (Max.) Excluding Cable					
Pressure Sensing Principle	Fully Active Four Arm Wheatstone Bridge Dielectrically Isolated Silicon on Silicon					
Mounting Torque	80 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. (J)