



5 VDC OUTPUT IS® PRESSURE TRANSDUCER ETM-375 (M) SERIES

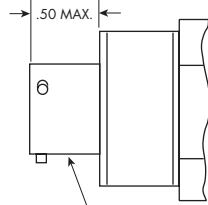
- 5 VDC Output
- Hybrid Microelectronic Regulator-Amplifier
- Flush Diaphragm
- All Welded Construction
- Secondary Containment On Absolute And Sealed Gage Units
- Aerospace Quality Components
- 3/8-24 UNJF or M10 X 1 Thread
- 4 Wire (ETM-375) 3 Wire (ETM-300-375)
- Intrinsically Safe Applications Available (i.e. IS-ETM-375)



ETM-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 of the frequency response of

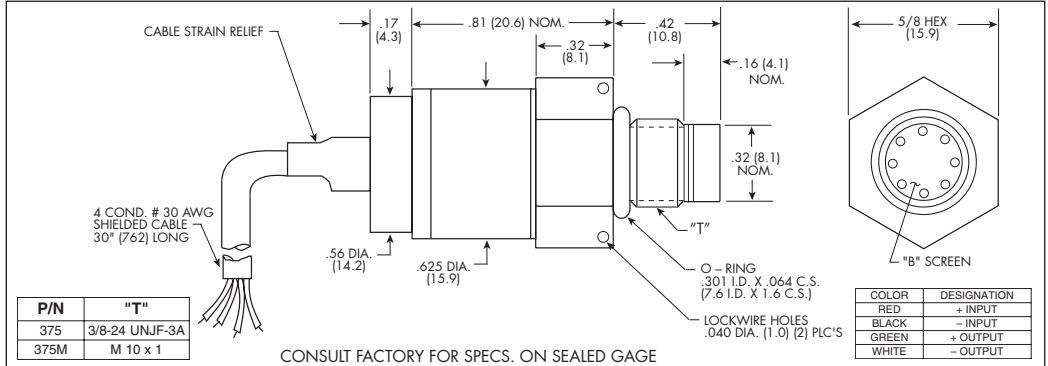
the sensor. For applications where a true flush diaphragm is needed, Kulite will supply these transducers without the screen. Incorporation of a Kulite proprietary electronics module within the main body of this product allows for operation from an unregulated power supply of 12 ± 4 VDC or 28 ± 4 VDC.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

OPTIONAL CONNECTOR VERSION HERMETICALLY SEALED



PIN	DESIGNATION
A	+ INPUT
B	- INPUT
C	+ OUTPUT
D	- OUTPUT

PT1H-8-4P
CONNECTOR



	17	35	70	170	350	700	1400 BAR
	250	500	1000	2500	5000	10000	20000 PSI
INPUT							
Pressure Range	Absolute, Gage, Sealed Gage						
Operational Mode	2 Times Rated Pressure to a Max. of 30000 PSI (2100 BAR)						
Over Pressure	3 Times Rated Pressure to a Max. of 35000 PSI (2400 BAR)						
Burst Pressure	Any Liquid or Gas Compatible With 15-5 PH or 316 Stainless Steel						
Pressure Media	12 \pm 4 VDC or 28 \pm 4 VDC						
Rated Electrical Excitation	25 mA						
Maximum Electrical Current	200 Ohms (Max.)						
OUTPUT	5 VDC \pm 150mV						
Output Impedance	DC to 5 KHz						
Full Scale Reading	0 to 100 mV (ETM-375) 200 mV \pm 50 mV (ETM-300-375)						
Bandwidth (-3dB)	\pm 0.1% FSO BFS (Typ.), \pm 0.5% FSO (Max.)						
Residual Unbalance	Infinitesimal						
Combined Non-Linearity, Hysteresis and Repeatability	Greater Than 400 KHz						
Resolution							
Natural Frequency (KHz) (Typ.)							
Acceleration Sensitivity % FS/g Perpendicular	2.2x10 ⁻⁴	1.1x10 ⁻⁴	6.2x10 ⁻⁵	2.6x10 ⁻⁵	1.5x10 ⁻⁵	1.3x10 ⁻⁵	8.0x10 ⁻⁶
Transverse	1.0x10 ⁻⁵	7.0x10 ⁻⁶	4.3x10 ⁻⁶	2.3x10 ⁻⁶	1.5x10 ⁻⁶	1.3x10 ⁻⁶	1.0x10 ⁻⁶
Insulation Resistance	100 Megohm Min. @ 50 VDC						
ENVIRONMENTAL							
Operating Temperature Range	-65°F to +250°F (-55°C to +120°C)						
Compensated Temperature Range	0°F to +212°F (-18°C to +100°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 1 msec. Duration						
PHYSICAL							
Electrical Connection	4 Conductor 30 AWG Shielded Cable 30" 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. (F)