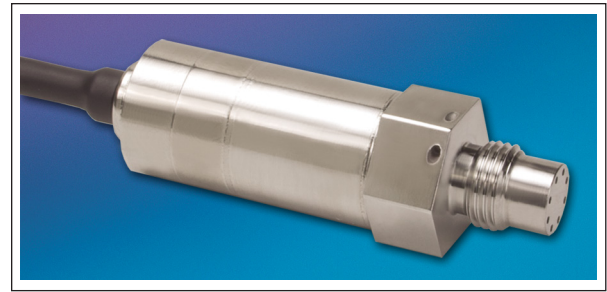




5 VDC OUTPUT PRESSURE TRANSDUCER ETM/ETL-422(X)-375 (M) SERIES

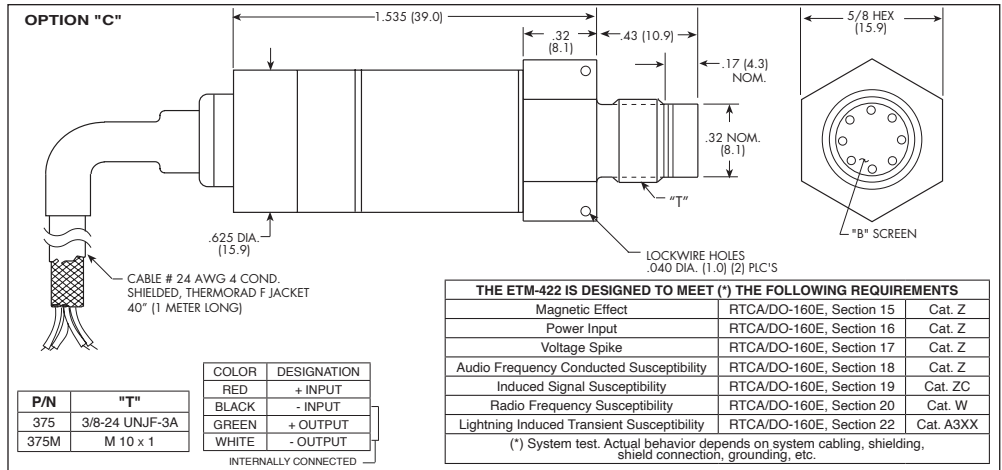
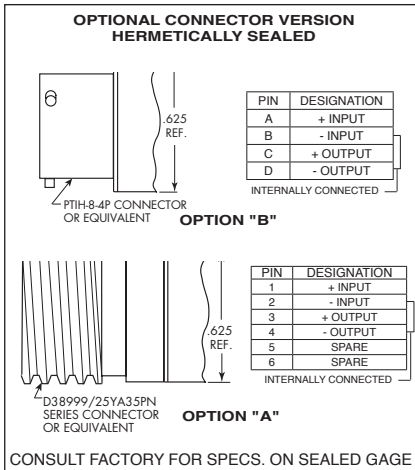
- 5 VDC Output
- Hybrid Microelectronic Regulator-Amplifier
- All Welded Construction
- Hermetic Sealed Package
- Aerospace Quality Components
- "X" Identifies Electrical Connection Option
- Thermorad Jacket Compatible With Most Aircraft Fluids
- Patented Leadless Technology **VIS[®]** (ETL Series)
- Intrinsically Safe Applications Available (i.e. IS-ETM-422(X)-375)



The ETM/ETL-422(X)-375 is a miniature threaded pressure transducer. The hexagonal head and o-ring seal make it easy to mount and simple to apply. The ETM-422(X)-375 utilizes a flush metal diaphragm as a force collector. A solid state piezoresistive sensing element is located immediately behind this metal diaphragm which is protected by a metal screen. Force transfer is accomplished via an intervening film of non-compressible silicone oil. This sensing sub assembly is welded to a stainless steel body. The ETL-422(X)-375 utilizes Kulite's Patented Leadless Technology. A solid state piezoresistive sensing element is protected by a metal screen. This sensing sub assembly is welded to a stainless steel body. This advanced construction results in a highly stable, reliable and rugged instrument with all the advantages

of microcircuitry: significant miniaturization, excellent repeatability, low power consumption, etc. The miniaturization process also yields a marked increase in the natural frequencies of the transducers, making them suitable for use even in shock pressure measurements. Incorporation of a Kulite proprietary electronics module within the main body of this product allows for operation from an unregulated power supply of 18 to 36 VDC. Standard output is a stable, low noise 0.25 to 5 VDC signal.

Part performance not guaranteed if used in water (ETL only).



THE ETM-422 IS DESIGNED TO MEET (*) THE FOLLOWING REQUIREMENTS		
Magnetic Effect	RTCA/DO-160E, Section 15	Cat. Z
Power Input	RTCA/DO-160E, Section 16	Cat. Z
Voltage Spike	RTCA/DO-160E, Section 17	Cat. Z
Audio Frequency Conducted Susceptibility	RTCA/DO-160E, Section 18	Cat. Z
Induced Signal Susceptibility	RTCA/DO-160E, Section 19	Cat. ZC
Radio Frequency Susceptibility	RTCA/DO-160E, Section 20	Cat. W
Lightning Induced Transient Susceptibility	RTCA/DO-160E, Section 22	Cat. A3XX

(*) System test. Actual behavior depends on system cabling, shielding, shield connection, grounding, etc.

	ETL	ETM
Pressure Range	1.7 25	3.5 BAR 50 PSI
Operational Mode	Absolute	Absolute, Sealed Gage
Over Pressure	2 Times Rated Pressure to a Max. of 25000 PSI (1724 BAR)	
Burst Pressure	3 Times Rated Pressure to a Max. of 25000 PSI (1724 BAR)	
Pressure Media	All Nonconductive, Noncorrosive Liquids or Gases (Most Conductive Liquids and Gases-Consult Factory)	Any Liquid or Gas Compatible With 15-5 PH and 316 Stainless Steel
Rated Electrical Excitation	16 to 32 VDC	
Maximum Electrical Current	25 mA	
Output Impedance	200 Ohms (Max.)	
Full Scale Reading	5 VDC	
Bandwidth (-3dB)	DC to 5 KHz	
Residual Unbalance	250 mV	
Resolution	Infinitesimal	
Insulation Resistance	100 Megohm Min. @ 50 VDC	
Operating Temperature Range	-65°F to +275°F (-55°C to +135°C)	
Compensated Temperature Range	-65°F to +250°F (-55°C to +120°C)	
Total Error Band	± 2% FSO +32°F to 180°F (0°C to +85°C) Increasing to ± 3% At All Other Temperatures Within The Compensated Range (TEB Includes: Non-linearity, Non-repeatability, Hysteresis, End Point Settings, Temperature Effects on Zero and Span Within the Compensated Range)	
Linear Vibration	20g Peak, Sine 10 to 2000 Hz	
Altitude	Unaffected	
Humidity	100% Relative Humidity	
Mechanical Shock	20g half Sine Wave 11 msec. Duration	
Electrical Connection	OPTION A: D38999/25YA35PN Connector or Equivalent, OPTION B: PTH-8-4P Connector or Equivalent, OPTION C: 4 Conductor 24 AWG Shielded, Thermorad F Jacketed Cable, 40" (1 Meter)	
Weight	80 Grams (Max.) Including Cable or Connector	
Pressure Sensing Principle	Fully Active Four Arm Wheatstone Bridge Dielectrically Isolated Silicon on Silicon (Patented Leadless Technology ETL Series)	
Mounting Torque	80 Inch-Pounds (Max.)	

Note: Custom pressure ranges, accuracies and mechanical configurations available. Dimensions in parenthesis are in millimeters. All dimensions nominal. (V) Continuous development and refinement of our products may result in specification changes without notice. Copyright © 2014 Kulite Semiconductor Products, Inc. All Rights Reserved.
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