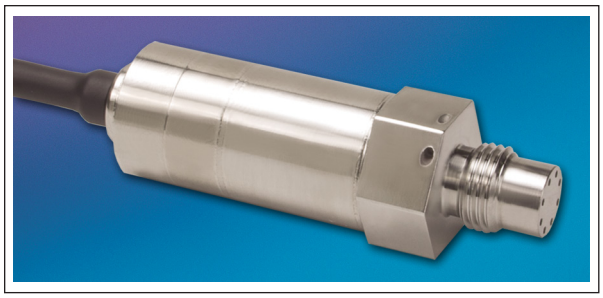
5 VDC OUTPUT PRESSURE TRANSDUCER

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)



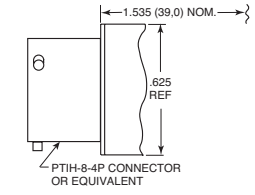
The ETM/ETL-422(X)-375 is a miniature threaded pressure transducer. The hexagonal head and o-ring seal make it easy to mount and simple to apply.

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 16 to 32 VDC. Standard output is a stable, low noise 0.25 to 5 VDC signal.

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

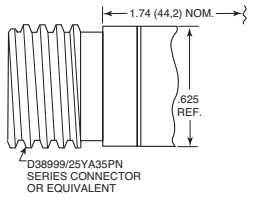
OPTIONAL CONNECTOR VERSION HERMETICALLY SEALED



OPTION "B"

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

INTERNALLY CONNECTED



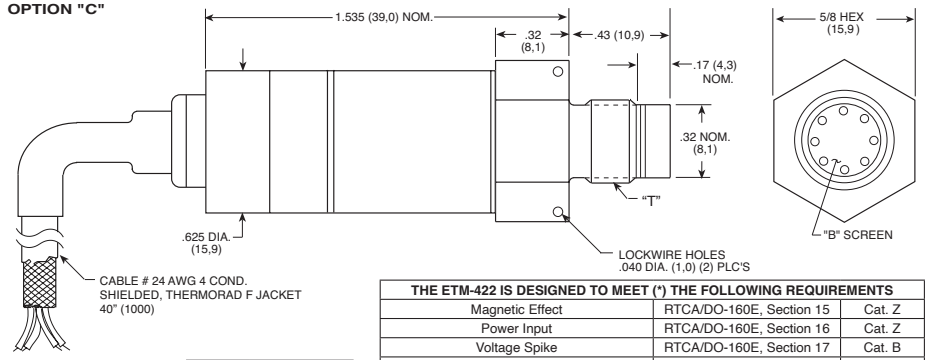
OPTION "A"

PIN	DESIGNATION
1	+ INPUT
2	- INPUT
3	+ OUTPUT
4	- OUTPUT
5	SPARE
6	SPARE

INTERNALLY CONNECTED

CONSULT FACTORY FOR SPECS. ON SEALED GAGE

OPTION "C"



P/N	"T"
375	3/8-24 UNJF-3A
375M	M 10 x 1

COLOR	DESIGNATION
RED	+ INPUT
BLACK	- INPUT
GREEN	+ OUTPUT
WHITE	- OUTPUT

INTERNALLY CONNECTED

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. B
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	7 100	17 250	35 500	70 1000	140 2000	210 3000	350 BAR 5000 PSI
INPUT	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	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								
ENVIRONMENTAL	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								
PHYSICAL	Electrical Connection	*OPTION A:* D38999/25YA35PN Connector or Equivalent, *OPTION B:* PTIH-8-4P Connector or Equivalent, *OPTION C:* 4 Conductor 24 AWG Shielded, Thermorad F Jacketed Cable, 40" (1000)								
	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 are in inches. Dimensions in parenthesis are in millimeters. All dimensions nominal. (Y) Continuous development and refinement of our products may result in specification changes without notice.

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