



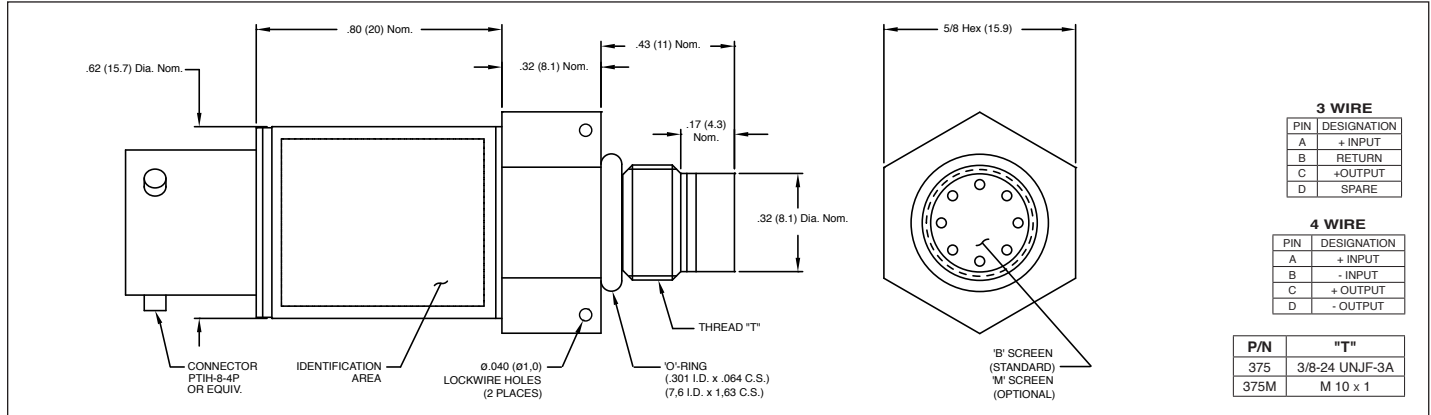
## 5 VDC OUTPUT PRESSURE TRANSDUCER ETM-375 (M) CO SERIES

- 5 VDC Output
- Hybrid Microelectronic Regulator-Amplifier
- Silicon on Silicon Integrated Sensor **VIS<sup>®</sup>**
- Flush Diaphragm
- All Welded Construction
- Secondary Containment On Absolute And Sealed Gage Units
- 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(M) CO 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  $12 \pm 4$  VDC or  $28 \pm 4$  VDC. Standard output is a stable, low noise 0 to 5 VDC signal.



	17	35	70	170	350	700	1400 BAR
<b>INPUT</b>	250	500	1000	2500	5000	10000	20000 PSI
Pressure Range							
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 25000 PSI (1724 BAR)						
Burst Pressure	3 Times Rated Pressure to a Max. of 25000 PSI (1724 BAR)						
Pressure Media	Any Liquid or Gas Compatible With 15-5 PH and 316 Stainless Steel or Inconel 625						
Maximum Electrical Current	25 mA						
Rated Electrical Excitation	8 - 16 VDC			13 - 32 VDC			
Full Scale Reading	5 VDC $\pm$ 150 mV			5 VDC $\pm$ 150 mV or 10 VDC $\pm$ 300 mV			
Output Impedance	200 Ohms (Max.)						
Bandwidth (-3dB)	DC to 5 KHz						
Residual Unbalance	0 to 100 mV (ETM-375)			200 mV $\pm$ 50 mV (ETM-300-375)			
Combined Non-Linearity, Hysteresis and Repeatability	$\pm$ 0.1% FSO BFSL (Typ.), $\pm$ 0.5% FSO (Max.)						
Resolution	Infinitesimal						
Natural Frequency of Sensor Without Screen (KHz) (Typ.)	Greater Than 400 KHz						
Acceleration Sensitivity % FS/g Perpendicular	$2.2 \times 10^{-4}$	$1.1 \times 10^{-4}$	$6.2 \times 10^{-5}$	$2.6 \times 10^{-5}$	$1.5 \times 10^{-5}$	$1.3 \times 10^{-5}$	$8.0 \times 10^{-6}$
Insulation Resistance	100 Megohm Min. @ 50 VDC						
<b>ENVIRONMENTAL</b>							
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						
Mechanical Shock	100g half Sine Wave 11 msec. Duration						
<b>PHYSICAL</b>							
Electrical Connection	PTIH-8-4P or Equivalent (Mating Connector Available Upon Request)						
Weight	24.5 Grams (Nom.)						
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. All dimensions nominal. (D) Continuous development and refinement of our products may result in specification changes without notice. Copyright © 2020 Kulite Semiconductor Products, Inc. All Rights Reserved. Kulite miniature pressure transducers are intended for use in test and research and development programs and are not necessarily designed to be used in production applications. For products designed to be used in production programs, please consult the factory.