



# MINIATURE 5 VDC OUTPUT PRESSURE TRANSDUCER

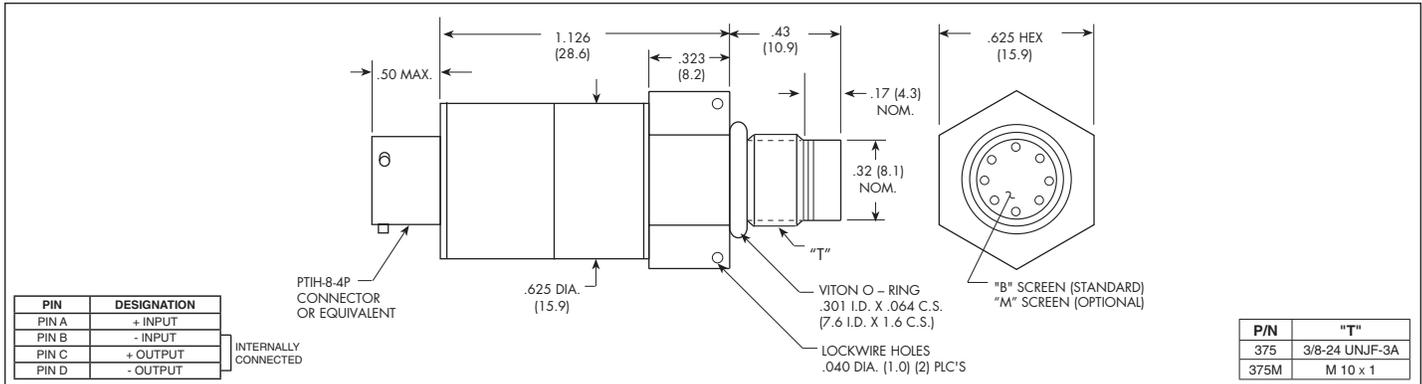
## ETQ-12-375(M) SERIES

- 5 VDC Output
- Hybrid Microelectronic Regulator-Amplifier
- Flush Diaphragm
- Hermetically Sealed All Welded Construction
- Silicon on Silicon Integrated Sensor **VIS**<sup>®</sup>
- Secondary Containment
- Single Ended Amplifier
- 3 Wire
- Intrinsically Safe Applications Available  
(i.e. IS-ETQ-12-375)



The ETQ-12-375 Series of miniature pressure transducers are flush diaphragm units utilizing a Kulite Piezoresistive Sensor as the sensing element.

Mounted within the body of the transducer is a 3 wire system hybrid regulator-amplifier which provides a stable, low noise 5VDC output, with a  $12 \pm 4$  VDC unregulated input. The flush diaphragm is protected against mechanical damage by a screen which is standard.



	3.5	7	17	35	70	140	210	350 BAR
	50	100	250	500	1000	2000	3000	5000 PSI
<b>INPUT</b>								
Pressure Range	Sealed Gage							
Operational Mode	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 30,000 PSI							
Pressure Media	Any Liquid or Gas Compatible With 15-5 PH or 316 SS (All Media May Not Be Suitable With O-Ring Supplied)							
Maximum Electrical Current	25 ma (Max.)							
Rated Electrical Excitation	8 - 16 VDC							
<b>OUTPUT</b>								
Full Scale Reading	5 V $\pm$ 150mV (3 Wire System)							
Output Impedance	200 Ohms (Typ.)							
Bandwidth (Flat $\pm$ 1dB)	DC to 3 KHz							
Residual Unbalance	200 mV $\pm$ 100 mV							
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	1.0x10 <sup>-3</sup>	5.2x10 <sup>-4</sup>	2.2x10 <sup>-4</sup>	1.1x10 <sup>-4</sup>	6.2x10 <sup>-5</sup>	3.5x10 <sup>-5</sup>	2.2x10 <sup>-5</sup>	1.5x10 <sup>-5</sup>
Insulation Resistance	100 Megohm Min. at 50 VDC							
<b>ENVIRONMENTAL</b>								
Operating Temperature Range	-65°F to +250°F (-55°C to +120°C)							
Compensated Temperature Range	-40°F to +250°F (-40°C to +120°C)							
Thermal Zero Shift	$\pm$ 2% FSO/100°F (Max.)							
Thermal Sensitivity Shift	$\pm$ 2% /100°F (Max.)							
Linear Vibration	10-2,000 Hz Sine, 100g (Max.)							
Humidity	100% Relative Humidity							
Mechanical Shock	20g half Sine Wave 11 msec. Duration							
<b>PHYSICAL</b>								
Electrical Connection	PTIH-8-4P or Equivalent							
Weight	35 Grams Approx.							
Sensing Principle	Fully Active Four Arm Wheatstone Bridge Dielectrically Isolated Silicon on Silicon							
Torque	80-120 Inch-Pounds							

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