



# MINIATURE 5 VDC OUTPUT PRESSURE TRANSDUCER

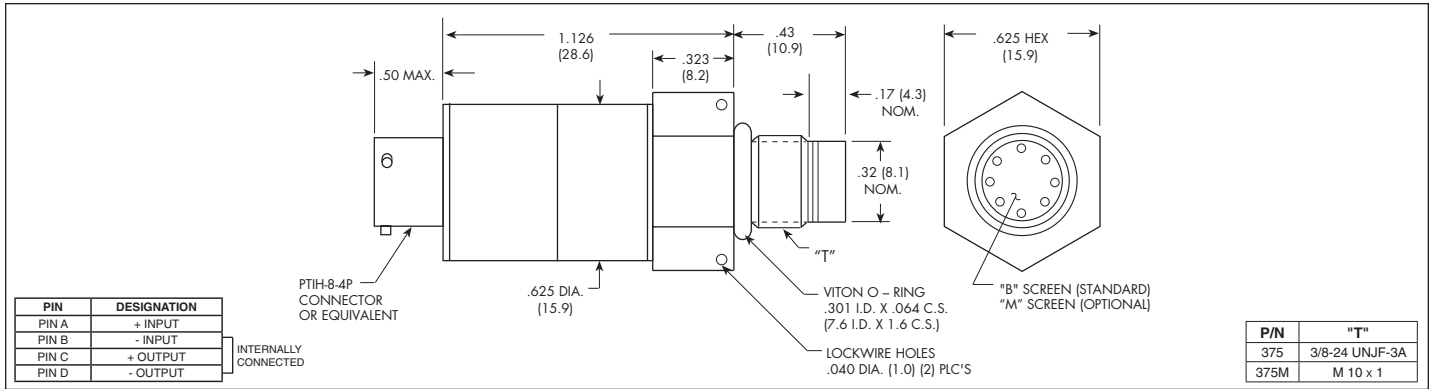
## ETQ-12-375(M) SERIES

- 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.



	Pressure Range	3.5 50	7 100	17 250	35 500	70 1000	140 2000	210 3000	350 BAR 5000 PSI
INPUT	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							
OUTPUT	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>
ENVIRONMENTAL	Insulation Resistance	100 Megohm Min. at 50 VDC							
	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.)							
PHYSICAL	Humidity	100% Relative Humidity							
	Mechanical Shock	20g half Sine Wave 11 msec. Duration							
	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							

