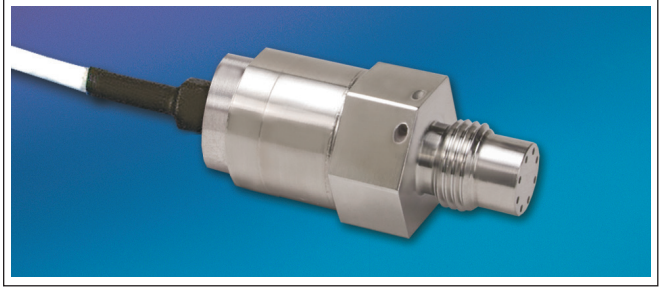
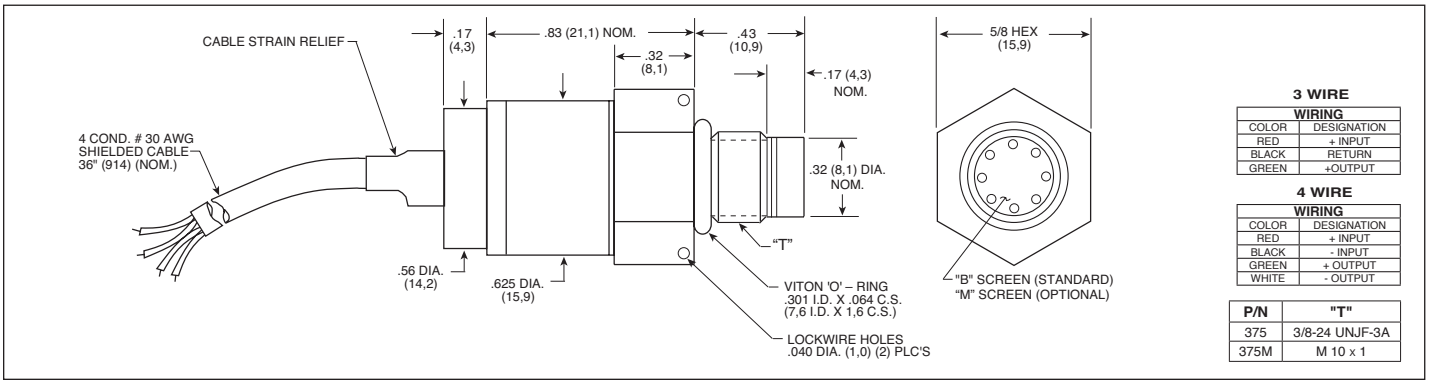
5 VDC OUTPUT PRESSURE TRANSDUCER

ETM-375 (M) SERIES

- 5 VDC Output
- Hybrid Microelectronic Regulator-Amplifier
- Silicon on Silicon Integrated Sensor **VIS**®
- 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 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 ± 4 VDC or 28 ± 4 VDC. Standard output is a stable, low noise 0 to 5 VDC signal.



3 WIRE

WIRING	
COLOR	DESIGNATION
RED	+ INPUT
BLACK	RETURN
GREEN	+OUTPUT

4 WIRE

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

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

INPUT	Pressure Range	7 100	17 250	35 500	70 1000	170 2500	350 5000	700 10000	1400 BAR 20000 PSI
	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 (All Media May Not Be Suitable With O-Ring Supplied)							
	Maximum Electrical Current	25 mA							
	Rated Electrical Excitation	8 - 16 VDC				13 - 32 VDC			
OUTPUT	Full Scale Reading	5 VDC ± 150 mV				5 VDC ± 150 mV or 10 VDC ± 300 mV			
	Output Impedance	200 Ohms (Max.)							
	Bandwidth (-3dB)	DC to 5 KHz							
	Residual Unbalance	0 to 100 mV (ETM-375)				200 mV ± 50 mV (ETM-300-375)			
	Combined Non-Linearity, Hysteresis and Repeatability	± 0.1% FSO BFSL (Typ.), ± 0.5% FSO (Max.)							
	Resolution	Infinitesimal							
	Natural Frequency of Sensor Without Screen (KHz) (Typ.)	Greater Than 400 KHz							
	Acceleration Sensitivity % FS/g Perpendicular	$2.0x10^{-4}$	$2.2x10^{-4}$	$1.1x10^{-4}$	$6.2x10^{-5}$	$2.6x10^{-5}$	$1.5x10^{-5}$	$1.3x10^{-5}$	$8.0x10^{-6}$
	Insulation Resistance	100 Megohm Min. @ 50 VDC							
ENVIRONMENTAL	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	± 1% FS/100° F (Typ.)							
	Thermal Sensitivity Shift	± 1% /100° F (Typ.)							
	Linear Vibration	20g Peak, Sine 10 to 2000 Hz							
	Mechanical Shock	20g Half Sine Wave 11 msec. Duration							
PHYSICAL	Electrical Connection	4 Conductor 30 AWG Shielded Cable 36" (914) Long							
	Weight	24.5 Grams (Max.) Excluding Cable							
	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. (W) Continuous development and refinement of our products may result in specification changes without notice. *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.*

KULITE SEMICONDUCTOR PRODUCTS, INC. • One Willow Tree Road • Leonia, New Jersey 07605 • Tel: 201 461-0900 • Fax: 201 461-0990 • http://www.kulite.com