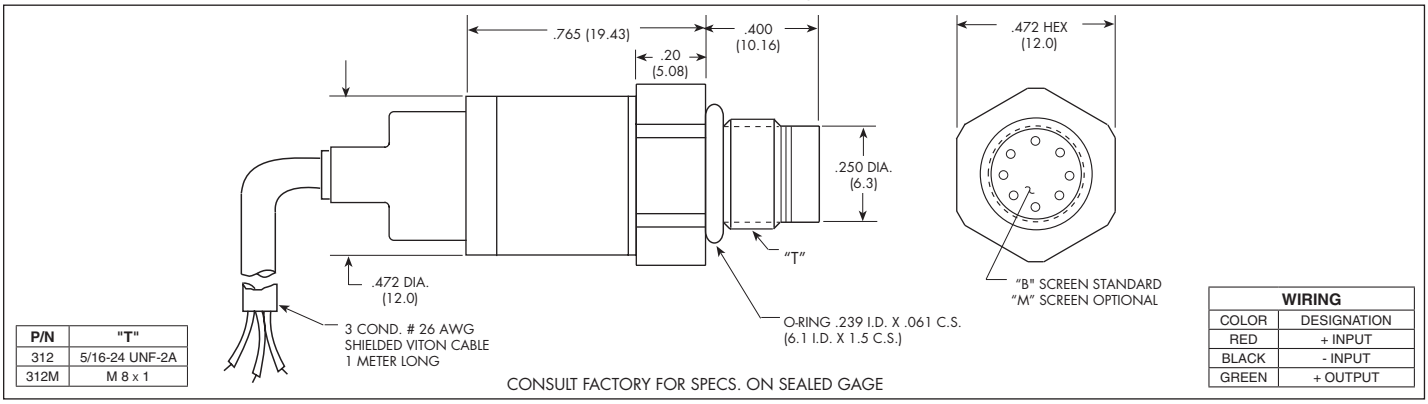
MINIATURE 5VDC OUTPUT IS® PRESSURE TRANSDUCER

ETL/ETM-634(X)-312(M)

- Smallest High Performance Amplified Transducer Worldwide
- High Temperature Electronics 365°F (185°C)
- Rugged Design Provides Compatibility With Most Corrosive and Conductive Media
- Patented Leadless Technology **VIS**® (ETL Series)
- High Over Pressure Capability
- Aerospace Quality Components
- Designed and Engineered For Severe Environmental Conditions
- Intrinsically Safe Applications Available (i.e. IS-ETM-634-312)

The ETL/ETM-634X-312M is one of the newest generation of Kulite standard, smallest miniature amplified transducer currently available. The metal flush diaphragm is used as a force collector. Force is transferred to a solid-state piezoresistive sensing element via thin intervening film of non-compressible silicone oil. This sensing sub-assembly is protected from mechanical damage by a protective screen, which has been shown to have minimal influence of the frequency response of the sensor.

Incorporation of Kulite proprietary high temperature 365°F (185°C) electronics within the main body allows for operation from an unregulated power supply of 8 to 16VDC.



P/N	"T"
312	5/16-24 UNF-2A
312M	M 8 x 1

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

	ETL					ETM			
INPUT Pressure Range	1 15	2 29	5 73	10 145	15 218	80 1160	140 2030	210 3045	275 BAR 3988 PSI
Operational Mode	Absolute, Sealed Gage								
Over Pressure	2 Times Rated Pressure < 35 BAR, 1.5 Times Rated Pressure ≥ 35 BAR								
Burst Pressure	3 Times Rated Pressure								
Pressure Media	Any Liquid or Gas Compatible With 15-5 PH, 316 SS or SiO_2								
Rated Electrical Excitation	12 ± 4 VDC								
Maximum Electrical Current	25 mA (Max.)								
OUTPUT Output Impedance	200 Ohms (Typ.)								
Full Scale Reading (X)	4.9V ± 2% (A)	4.5V ± 1.5% (B)	4.5V ± 1% (C)	4.9V ± 1.5% (D)	4.75V ± 1% (E)	4.7V ± 1% (F)			
Bandwidth (-3dB)	DC to 5 KHz								
Residual Unbalance (X)	350 ± 50 mV (A)	500 ± 75 mV (B)	300 ± 45 mV (C)	300 ± 75 mV (D)	300 ± 50 mV (E)	300 ± 50 mV (F)			
Combined Non-Linearity, Hysteresis and Repeatability	± 0.1% FSO BFSL (Typ.), ± 0.25% FSO (Max.)								
Resolution	Infinitesimal								
Acceleration Sensitivity % FS/g Perpendicular Transverse	 $6.5x10^{-4}$ $1.0x10^{-4}$	 $4.2x10^{-4}$ $6.0x10^{-5}$	 $2.3x10^{-4}$ $3.0x10^{-5}$	 $1.4x10^{-4}$ $2.0x10^{-5}$	 $1.1x10^{-4}$ $1.0x10^{-5}$	 $3.6x10^{-5}$ $4.0x10^{-6}$	 $2.5x10^{-5}$ $2.7x10^{-6}$	 $1.9x10^{-5}$ $2.0x10^{-6}$	 $1.6x10^{-5}$ $2.4x10^{-6}$
Insulation Resistance	> 100 Megohm Min. @ 50 VDC								
ENVIRONMENTAL Operating Temperature Range	-65°F to +365°F (-55°C to +185°C)								
Compensated Temperature Range	+68°F to +350°F (+20°C to +175°C) Other Ranges Quoted on Request								
Total Error Band (Excluding End Points)	± 2% FS/100°C ≤ 217.5 PSI (15 BAR), ± 1% FS/100°C ≥ 217.5 PSI (15 BAR)								
Linear Vibration	100g Peak, Sine up to 5000 Hz								
Altitude	-150 ft. to +70,000 ft. Will Not Damage Sensor								
Humidity	100% Relative Humidity								
Mechanical Shock	100g half Sine Wave 11 msec. Duration								
PHYSICAL Electrical Connection	3 Conductor 26 AWG Cable 1 Meter Long								
Weight	15 Grams (Max.) Excluding Cable								
Pressure Sensing Principle	Fully Active Four Arm Wheatstone Bridge Dielectrically Isolated Silicon on Silicon (Patented Leadless Technology ETL Series)								
Mounting Torque	50 Inch-Pounds (Max.) 6Nm								

(X) Denotes FSR and Residual Unbalance Options (A), (B), (C), (D), (E) or (F).
Note: Custom pressure ranges, accuracies and mechanical configurations available. Dimensions are in inches. Dimensions in parenthesis are in millimeters.
Continuous development and refinement of our products may result in specification changes without notice - all dimensions nominal. (I)

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