



# HIGH TEMPERATURE HIGH BANDWIDTH AMPLIFIED GAS TURBINE IS® PRESSURE TRANSDUCER

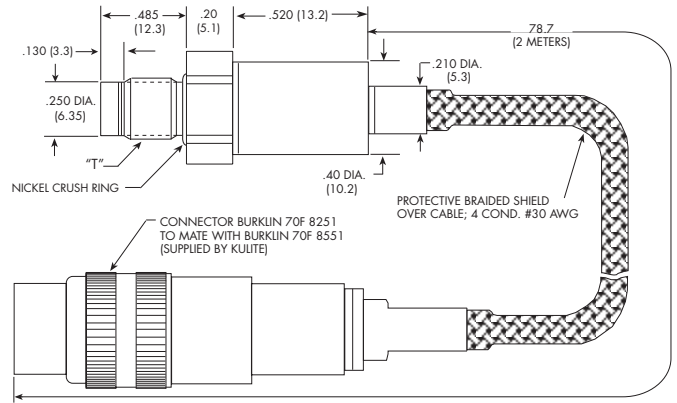
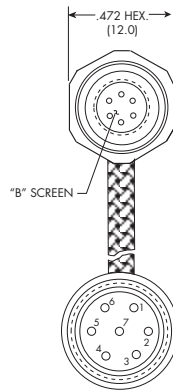
## ETL-GTS-X-312 (M) SERIES

- Miniature, Robust Construction
- High Temperature
- Acceleration & Vibration Insensitive
- High Bandwidth Amplifier
- Patented Leadless Technology
- Separate DC and AC Outputs
- Dynamic and Static Capability
- Excellent Long Term Stability Coupled with High Accuracy

The ETL-GTS Series are high temperature, extremely rugged pressure transducers which are ideal for the measurement of instabilities and steady pressures in gas turbine combustors and compressors. They use a patented acceleration insensitive leadless sensing element that is more than 1000 times less sensitive to vibration than other Kulite transducers. The front of the transducers can withstand temperatures of 1000°F (538°C)\* while the in-line amplifier can be placed in a cooler area. The amplifier is compatible with both existing and new data acquisition systems with a measurement bandwidth of up to 150KHz, specified by Option X.



CONSULT FACTORY FOR SPECS. ON SEALED GAGE  
\*NO SCREEN FOR 50 KHz (AND ABOVE) BANDWIDTH



PIN FUNCTIONS	
PIN	FUNCTION
1	VIN
2	RTN
3	OUT (DC/AC)
4	OUT (AC)
5	SPARE
6	SPARE
7	SPARE

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

	3.5	7	14	21	35	70 BAR
Pressure Range	50	100	200	300	500	1000 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 6000 PSI (420 BAR)					
Burst Pressure	3 Times Rated Pressure					
Pressure Media	All Nonconductive, Noncorrosive Liquids or Gases (Most Conductive Liquids and Gases - Please Consult Factory)					
<b>ELECTRICAL PERFORMANCE</b>						
Maximum Electrical Current	25 mA					
Rated Electrical Excitation	12 - 36 VDC					
Output Range	Output 1: 0.5V to 5V ± 3% (DC/AC)			Output 2: 0.5V to 9.5V ± 3% (AC)		
Output Impedance	200 Ohms (Typ.)					
Bandwidth (-3dB)	Output 1: DC to 5kHz (Option A), 50kHz* (Option B) or 150kHz* (Option C) Output 2: AC 10Hz to 5kHz (Option A), 50kHz* (Option B) or 150kHz* (Option C) (X10 Additional gain)					
Output Filter	Low Pass Filter Available per Customer Specification					
Residual Unbalance	Output 1: 500mV ± 50mV (DC/AC)			Output 2: 5.0V ± 0.5V (AC)		
<b>OUTPUT</b>						
Resolution	Infinitesimal					
Natural Frequency (KHz) (Typ.)	Greater Than 1000 KHz					
Insulation Resistance	100 Megohm Min. @ 50 VDC					
<b>ENVIRONMENTAL</b>						
Operating Temperature Range	-65°F to +1000°F (-55°C to +538°C) (Front End) -40°F to +185°F (-40°C to +85°C) (Connector and Amplifier) -65°F to 662°F (-55°C to 350°C) (Cable)					
Compensated Temperature Range	+80°F to +850°F (+25°C to +454°C)					
Thermal Zero Shift	± 1.5% FS/100°F (Typ.)					
Thermal Sensitivity Shift	± 1.5% /100°F (Typ.)					
Linear Vibration	50g Peak, Sine 10 to 2000 Hz					
Humidity	100% Relative Humidity					
Mechanical Shock	100g half Sine Wave 11 msec. Duration					
<b>PHYSICAL</b>						
Electrical Connection	Burklin 70F 8251 Connector (Mating Connector Supplied)					
Weight	10 Grams (Nom.) Excluding Cable and Connector					
Pressure Sensing Principle	Fully Active Four Arm Wheatstone Bridge Dielectrically Isolated Silicon on Silicon Patented Leadless Technology					
Mounting Torque	75 Inch-Pounds (Max.) 8.5 N-m					

\* Limited life above 850°F (454°C) dependent on operating conditions.  
Note: Custom pressure ranges, accuracies, amplifiers 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. (K)  
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