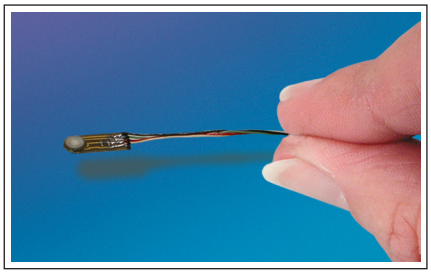
MICROLINE STRESS ISOLATED SURFACE MOUNT PRESSURE TRANSDUCER

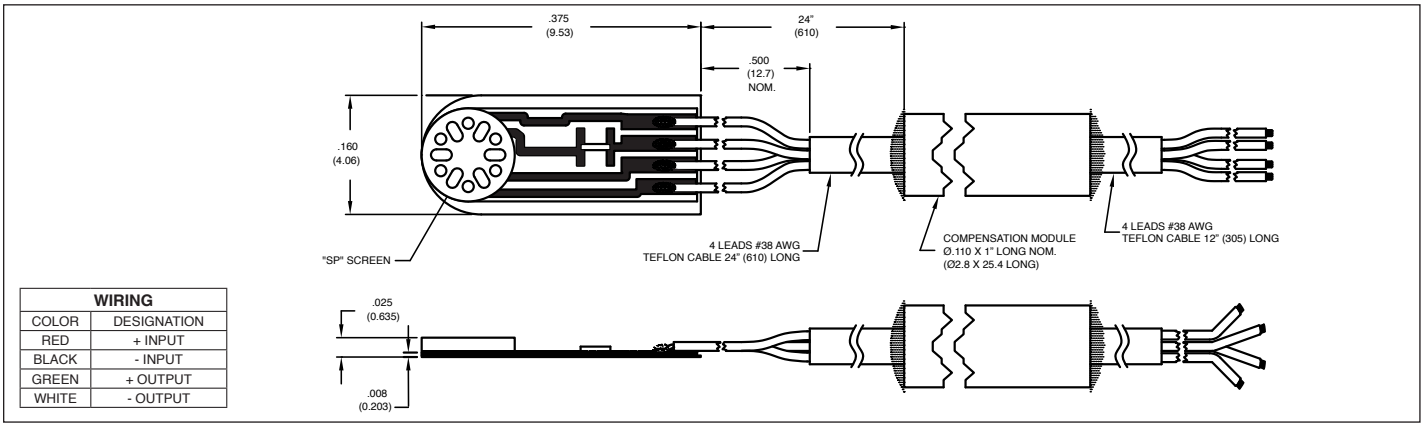
LQ-160 SERIES



- Designed For Direct Blade Surface Mounting
- Silicon on Silicon Integrated Sensor **VIS**®
- High G Loading
- Low Base Strain Sensitivity
- High Natural Frequency

The LQ-160 Series microline pressure transducer represents the latest build standard in a long line of sensors designed and developed for direct mounting onto engine blades. Using a unique isolation technique to reduce base strain sensitivity effects, the LQ-160 Series are the smallest, lightest units yet developed. With a maximum height of less than 0.025 inch, these units may be mounted in locations on the blade previously inaccessible with a packing density previously impossible.

Kulite recommends the KSC Series of signal conditioners to maximize the measurement capability of the LQ-160 transducer.



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

INPUT	Pressure Range	0.35 5	0.7 10	1 15	1.7 25	3.5 50	7 100	17 250	35 BAR 500 PSI
	Operational Mode	Absolute			Absolute, Sealed Gage				
	Over Pressure	2 Times Rated Pressure							
	Burst Pressure	3 Times Rated Pressure							
	Pressure Media	All Nonconductive, Noncorrosive Liquids or Gases							
	Rated Electrical Excitation	10 VDC							
	Maximum Electrical Excitation	12 VDC							
	Input Impedance	1000 Ohms (Min.)							
OUTPUT	Output Impedance	1000 Ohms (Nom.)							
	Full Scale Output (FSO)	100 mV (Nom.)							
	Residual Unbalance	± 5 mV (Typ.)							
	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.)	150	175	200	240	300	380	550	700
	Acceleration Sensitivity % FS/g Perpendicular	$1.5x10^{-3}$	$1.0x10^{-3}$	$6.5x10^{-4}$	$5.0x10^{-4}$	$3.0x10^{-4}$	$1.5x10^{-4}$	$1.0x10^{-4}$	$6.0x10^{-5}$
	Base Strain Sensitivity	Less Than 5% FSO for 1000 Microstrain							
	Insulation Resistance	100 Megohm Min. @ 50 VDC							
ENVIRONMENTAL	Operating Temperature Range	-65°F to +250°F (-55°C to +120°C)							
	Compensated Temperature Range	+80°F to +180°F (+25°C to +80°C) Any 100°F Range Within The Operating Range on Request							
	Thermal Zero Shift	± 2.0% FS/100°F (Typ.)							
	Thermal Sensitivity Shift	± 2.0% /100°F (Typ.)							
	Linear Vibration	10-2,000 Hz Sine, 100g. (Max.)							
	Mechanical Shock	20g half Sine Wave 11 msec. Duration							
PHYSICAL	Electrical Connection	4 Conductor # 38 AWG Shielded Teflon Cable 24" to Module, 12" After							
	Weight	.1 Gram (Nom.) Excluding Module and Leads							
	Pressure Sensing Principle	Fully Active Four Arm Wheatstone Bridge Dielectrically Isolated Silicon on Silicon							

Note: Custom pressure ranges, accuracies and mechanical configurations available. Dimensions are in inches. Dimensions in parenthesis are in millimeters. All dimensions nominal. (E) 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.*

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