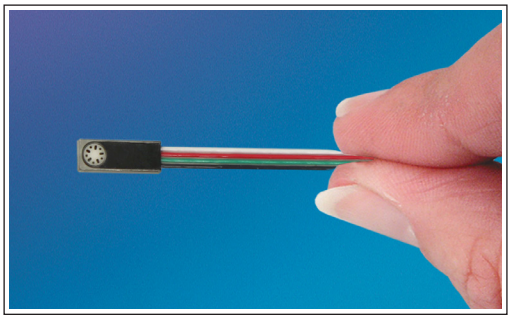
THIN LINE PRESSURE TRANSDUCER

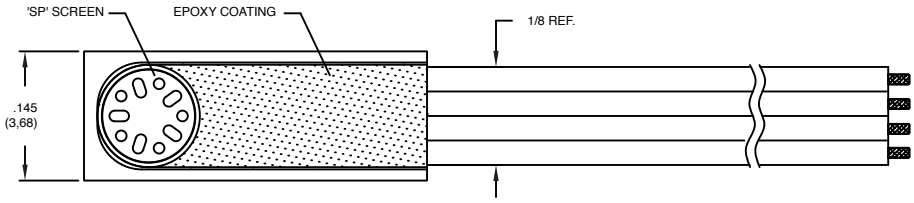
LPS-145D1 SERIES

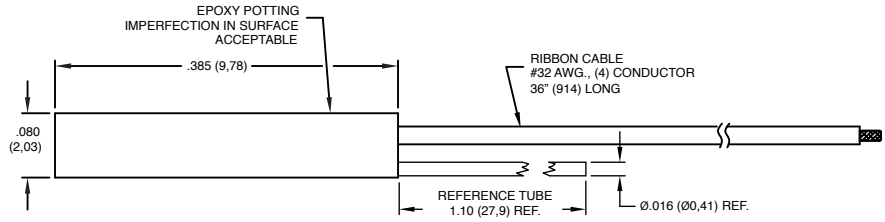
- High Natural Frequency
- Excellent Stability
- Ideal For Flight Test & Wind Tunnel Applications
- Silicon on Silicon Integrated Sensor **VIS**®



The LPS-145D1 Series demonstrates Kulite's ability to provide pressure transducers suited for adaptation into custom packages. These devices can be integrated into various test articles such as fan blades, engine nozzles of various types, etc. The features of these transducers include small foot print, high natural frequency, extreme resistance to vibration and shock, and wide temperature range.

Kulite recommends the KSC Series of signal conditioners to maximize the measurement capability of the LPS-145D1 transducer.





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

Optional Compensation Module may be needed for some modes and pressure ranges.

INPUT	Pressure Range	0.35 5	0.7 10	1 15	1.7 25	3.5 50	7 BAR 100 PSI
	Operational Mode	Gage, Differential					
	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
	Acceleration Sensitivity % FS/g Perpendicular	$1.5x10^{-3}$	$1.0x10^{-3}$	$6.5x10^{-4}$	$5.0x10^{-4}$	$3.0x10^{-4}$	$1.5x10^{-4}$
	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) Alternative Compensation Ranges are Available Upon Request					
	Thermal Zero Shift	± 3% FS/100°F (Typ.) (± 4% FS/100°F Max.)		± 2% FS/100°F (Typ.) (± 3% FS/100°F Max.)		± 1% FS/100°F (Typ.) (± 2% FS/100°F Max.)	
	Thermal Sensitivity Shift	± 3% /100°F (Typ.) (± 4% /100°F Max.)		± 2% /100°F (Typ.) (± 3% /100°F Max.)		± 1% /100°F (Typ.) (± 2% /100°F Max.)	
	Linear Vibration	20g Peak, Sine 10 to 2000 Hz					
	Mechanical Shock	20g half Sine Wave 11 msec. Duration					
PHYSICAL	Electrical Connection	4 Conductor 32 AWG Ribbon Cable 36" (914) Long					
	Weight	.2 Grams (Nom.) Excluding Cable					
	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. 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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