



MODEL 132B38

MICRO ICP[®] PRESSURE SENSOR

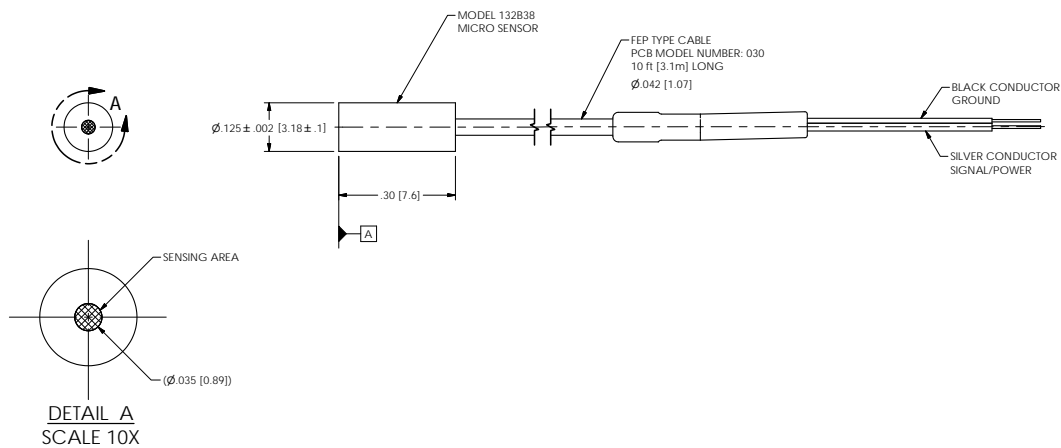


- Small size fits in wind tunnel models
- Very high frequency response
- Centered element improves accuracy

TYPICAL APPLICATIONS

- Explosives research
- Time of arrival measurements
- Targeting
- Wind tunnel boundary layer transition

For measurement of short wavelength pressure pulses, 132B38 piezoelectric ICP[®] micro pressure sensor features 0.5 microsecond response. The sensor's micro-second response time accurately measures pressure peaks from fast rising shock waves and very high frequency pressure phenomena. The 1mm diameter sensing element allows measurement of short wavelength incident pressure waves. A short time constant filters off the static component of wind tunnel pressure, allowing differentiation of consecutive pulses.



SPECIFICATIONS

	English	SI
Performance		
Measurement Range	50 psi	345 kPa
Sensitivity ($\pm 30\%$)	140 mV/ μE	20.3 mV/ μE
Maximum Pressure (Dynamic)	800 psi	5516 kPa
Resolution [2]	0.5-100000 Hz	0.5-100000 Hz
Rise Time (Incident) [1]	0.6 nE	5.0 nE
Rise Time (Reflected)	$\leq 1\%$	$\leq 1.5\%$
Low Frequency Response (-5 %)	11 kHz	11 kHz
High Frequency Response [3][2]	1 MHz	1 MHz
Environmental		
Temperature Range (Operating)	-13 to +175 °F	-25 to +79 °C
Electrical		
Output Polarity (Positive Pressure)	Positive	
Discharge Time Constant (at room temp) [4]	≥ 0.000045 sec	
Excitation Voltage	20 to 30 VDC	
Constant Current Excitation	2 to 20 mA	
Output Impedance	≤ 100 Ohm	
Output Bias Voltage	8 to 14 VDC	
Physical		
Sensing Element	Ceramic	
Housing Material	Stainless Steel	
Sealing	Epoxy	
Weight [5]	12.77 gm	
Cable Termination	10-32 Coaxial Jack	
Cable Type	030 Coaxial	

All specifications are at room temperature unless otherwise specified.

Product Notes

- [1] Rise time in air at Mach 1.
- [2] Typical.
- [3] High frequency response may be limited by supply current and output cable length.
- [4] Calculated.
- [5] Typical; with cable.