

- *Vibration & Shock
- *Low Impedance Output
- *Sensitivity 100 mV/g
- *Small Size, Lightweight (29 Gm)
- *Electrically Isolated
- *Hermetically Sealed

The Model 8303 Piezoelectric Accelerometer is a completely self-contained vibration measuring system having a built-in amplifier within the housing. It is designed for the measurement of low to moderate level shock and vibrations.

The sensor incorporates a hybrid electronic assembly within a rugged, welded, double-wall stainless steel body to enhance its operation in humid and dirty environments. The double-wall, electrically isolated construction provides additional isolation from metallic structures, which aids in acquiring accurate, wideband shock and vibration data uncorrupted by electrical ground loop currents. The sensor module is bonded into the outer stainless steel body with a high performance epoxy. Internal electrical damping limits the resonant Q to less than 30 dB. Low impedance output of 100 ohms or less allows operation directly into standard readout equipment without auxiliary signal conditioning, and is capable of driving up to 1,000 feet of shielded cable. *Consult the factory for customized versions of this sensor.*



Specifications

Transfer / Electrical	8303
Voltage Sensitivity ¹	100 mv/g +/-5%
Range	+/-80 g Peak
Frequency Linearity ²	+/-10% Max, 1 Hz To 7,000 Hz +/-5% Max, 2 Hz To 4,000 Hz
Mounted Resonant Frequency	20KHz, Nom.
Resonance Amplitude (Q)	30 dB Max.
Transverse Sensitivity	5% Max, Typical
Amplitude Linearity	+/-1.0% (BFSL) / 50 g
Electrical Noise	0.0003 g RMS Equiv., Nom.
Avg Temp Coeff of Sensitivity	0.03% / Deg F
Output Bias Voltage	10.5 +/-1 VDC
Output Impedance	100 Ohms Max.
Isolation Resistance	100M Ohm Min.
Power Requirements	2 To 10 mA DC Constant Current with 20 To 30 VDC Compliance

Environmental

Vibration Limit	500 g Max. (Sine)
Shock Limit	1,000 g Max., 1.0 mSec
Temperature Range	-40 To +250 Deg F (-40 To +121 Deg C)
Humidity ³	0 To 100% R.H.
Base Strain Sensitivity	0.02 g/uE Equiv, Typical
Electromagnetic Sensitivity	0.01 g (Equiv / 100 Gauss)
Acoustic Sensitivity	0.02 g RMS (Equiv @ 150 dB SPL)

Physical

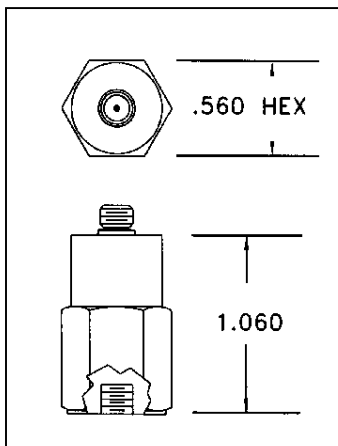
Configuration	Single-Ended Compression
Size	0.562 In. Hex. x 1.060 In. H (14.33 mm Hex x 27.0 mm H)
Weight	1.02 Oz (29 Gm)
Case Material	18-8 Stainless Steel
Electrical Interface	Coaxial 10-32 Thread
Mounting	10-32 Tapped Base

NOTES:

¹ At +75 Deg F, 10g Peak, 100Hz; Power Supply 2 To 10 mA DC Constant Current with 20 To 30 VDC Compliance

² Referenced to Sensitivity @ 100 Hz.

³ With Connector Protected or Sealed, Unit is Hermetically Sealed.



Accessories Supplied:

- (1) Low Noise Cable Assembly (2M) (200 pF)
- (1) #10-32 x 0.375"L Socket Hd Set Screw, 18-8 SS
- (1) Hardwood Storage Case
- (1) Standard Calibration Data
- (1) Certificate of Calibration Traceable to N.I.S.T.