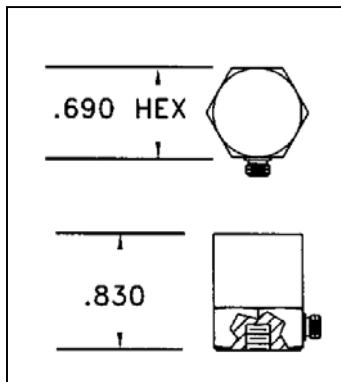


- *Vibration & Shock
- *Low Impedance Output
- *Choice of Sensitivities
- *Case Grounded
- *Hermetically Sealed

Columbia Series 8410 Piezoelectric Accelerometers are completely self-contained vibration measuring systems having a built-in amplifier within the housing. They are designed for the measurement of low level, broadband frequency vibrations.

The Series 8410 incorporates a hybrid electronic assembly within a rugged stainless steel body to enhance its operation in humid and dirty environments. Internal electrical damping limits the resonant Q to less than 20 dB. Signal ground is connected to the outer case of the unit. 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 these sensors.*



Specifications

Transfer / Electrical	8410-M50	8410-M100
Voltage Sensitivity ¹	50 mv/g +/-5%	100 mv/g +/-5%
Range	+/-100 g Peak	+/-50 g Peak
Frequency Linearity ²	+/-10% Max, 1 Hz To 7,500 Hz +/-5% Max, 3 Hz To 5,000 Hz	
Mounted Resonant Frequency	>25KHz	25KHz, Nom.
Resonance Amplitude (Q)	20 dB Max.	
Transverse Sensitivity	5% Max, Typical	
Amplitude Linearity	+/-1.0% (BFSL) / 50 g	
Electrical Noise	0.02 x 10 ⁻³ g Equiv., Nom.	
Avg Temp Coeff of Sensitivity	0.05% / Deg F	
Output Bias Voltage	10.25 +/-1.5 VDC	
Output Impedance	100 Ohms Max.	
Isolation Resistance	0 (Case Grounded)	
Power Requirements	2 To 10 mA DC Constant Current with 20 To 30 VDC Compliance	

Environmental

Vibration Limit	300 g Max. (Sine)
Shock Limit	500 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	0.08 g/uE Equiv, Typical
Electromagnetic Sensitivity	0.001 g (Equiv / 100 Gauss)
Acoustic Sensitivity	0.001 g RMS (Equiv @ 150 dB SPL)

Physical

Configuration	Single-Ended Compression
Size	0.690 In. Hex. x 0.830 In. H (15.9 mm Hex x 22.4 mm H)
Weight	1.11 Oz (31.5 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) Mating Low Noise Cable Assy (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.

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