Columbia Research Laboratories, Inc.

Minature Integrated Accelerometers

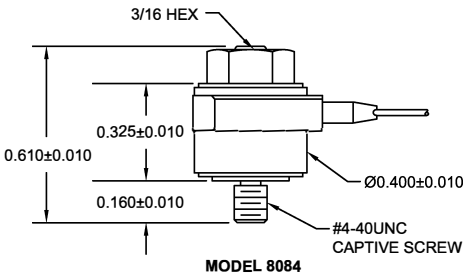
Models: 8084-1, 8084-2, 8084-3 & 8084-4
8084A-1, 8084A-2, 8084A-3 & 8084A-4

* Vibration & Shock
* Low Impedance Output
* Sensitivity 5,10 or 20mV/g
* 360 Deg Orientation
* Detachable Micro-Cable Assy
* Electrical Isolation
* Noise Monitor Version
* Two mounting stud Versions

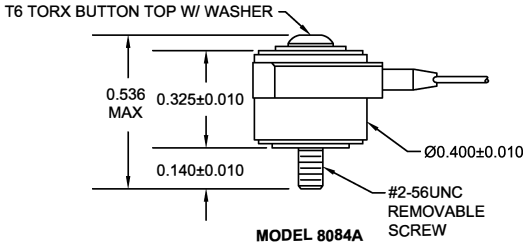
The Series 8084 Piezoelectric Accelerometers are small, completely self-contained vibration measuring systems having a built-in amplifier within the housing. These units are offered with sensitivities of 5, 10 or 20mV/g for the measurement of low to medium level broadband frequency vibrations. The Model 8084-4 utilizes a crystal that is insensitive to vibration connected to the standard integrated electronics rendering a **Noise Monitor Sensor** to evaluate downstream instrumentation noise and data connections.

All units incorporate an electrically isolated ring-shear mass assembly within a rugged stainless steel body to provide an extremely reliable sensor that is virtually insensitive to unwanted environmental inputs. Each sensor is provided with a micro-miniature detachable cable with it's length designated by the customer adding a dash number in inches after the model number designation. The standard length is 6 inches if not designated. A 4-40 captive or a 2-56 removable mounting screw is available.

Consult the factory for customized versions to meet your needs.



MODEL 8084



MODEL 8084A

Accessories Supplied:
(1) Micro-miniature Cable Assy., MMHR-6" Std
(1) Standard Calibration Data
(1) Certificate of Calibration Traceable to N.I.S.T.

Specifications

Transfer / Electrical	8084-1 8084A-1	8084-2 8084A-2	8084-3 8084A-3	8084-4 8084A-4
Voltage Sensitivity[1]	5.0mV/g +/-5%	10mV/g +/-5%	20mV/g +/-5%	N/A
Range	+/- 1000g Peak	+/-500 g Peak	+/- 250g Peak	+/- 1000g Peak
Frequency Linearity[2]	+/-5% Max, 2 Hz To 5,000 Hz ±8% @ 10,000 Hz 100Hz Ref.			NA
Mounted Resonant Frequency	40KHz, Nom.			NA
Transverse Sensitivity	5% Max, Typical			NA
Amplitude Linearity	+/-1.0% (BFSL) / 100 g			NA
Avg Temp Coeff of Sensitivity	+/-5% max	+/-10% max	+/-10% max	NA
Output Bias Voltage	8.0 VDC ±1.5VDC			
Output Impedance	100 Ohms Max.			
Isolation Resistance	100M Ohm Min.			
Power Requirements	3 To 10 mA DC Constant Current with 12 To 30 VDC Compliance			

Environmental

Vibration Limit	1000 g Max. (Sine)	
Shock Limit	1,000 g Max.	
Temperature Range	0 To +165 Deg F	
Humidity[3]	0 To 98% R.H. (Non-Condensing)	
Strain Sensitivity	<13 Equiv g @ 250 micro In. Strain	NA

Physical

Configuration	Ring Shear
Size	0.400 In. Dia.. x 0.325 In. H (10.2 mm Dia. x 8.26 mm H)
Weight	0.21 Oz (6 Gm)
Case Material	18-8 Stainless Steel
Electrical Interface	Miniature 2-56 Connector
Mounting	4-40 or 2-56 Screw @ 3.0 in -lbs Typical

NOTES:
[1] At +75 Deg F, 10g Peak, 100Hz; Power Supply 3 To 10 mA DC Constant Current with 12 To 30 VDC Compliance [2] Referenced to Sensitivity @ 100 Hz.
[3] With Connector Protected or Sealed, Unit is Epoxy Sealed.

Columbia Research Laboratories, Inc. 1925 MacDade Blvd. Woodlyn, PA 19094 USA
Phone: 1-800-813-8471 / Fax: 610-872-3882 / email: sales@crlsensors.com