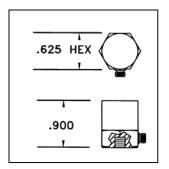
## **Columbia Research Laboratories, Inc.**

# **General Purpose Accelerometer**

Model 3023M1 & 3023M1-HT

- **\*Vibration & Shock**
- \*Sensitivity 13 pC/g
- \*Wide Temperature Range (-450 Deg F)
- \*Hermetically Sealed





#### **Accessories Supplied:**

- (1) Cable Assembly, LNHT-10'
- (1) 10-32 x 0.375"L Mounting Stud, St Stl
- (1) Hardwood Storage Case
- (1) Standard Calibration Data
- (1) Certificate of Calibration Traceable to N.I.S.T.

The Models 3023M1 and 3023M1-HT Piezoelectric Accelerometers exhibit a transfer sensitivity greater than 10 picoCoulombs/g. The high sensitivity, wide frequency response, and wide operating temperature range provides a device well suited to a broad spectrum of low to medium level vibration measurement applications. The internal construction of the piezoelectric seismic system ensures that the units have no discernible spurious response to mounting torque, body strains, cable vibration, cable whip, pressure variations and most heat transients.

The sensor's stainless steel housing provides an environmentally rugged unit, and the hermetically-sealed welded construction offers protection against high humidity environments. Signal ground is connected to the outer case of the unit. These accelerometers feature a 10-32 side connector and is provided with a 10' low-noise coaxial cable. The Model 3023M1-HT will operate in environments up to +500 Deg F. *Consult the factory for customized versions of this sensor.* 

### **Specifications**

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Transfer / Electrical	3023M1 & 3023M1-HT
Charge Sensitivity <sup>1</sup>	13 +/-3 pC/g
Capacitance	1,100 +/-100 pF
Frequency Linearity <sup>2</sup>	+/-5%, 1 Hz To 5,000 Hz +10%, 5,000 Hz To 6,000 Hz
Mounted Resonant Frequency	28 +/-3 KHz , Min.
Transverse Sensitivity	5% Max
Amplitude Linearity	+/-1.0% (BFSL) / 1,000 g
Insulation Resistance	20,000 M Ohm Min, 50 VDC Test
Isolation Resistance	0 (Case Grounded)
Environmental	
Vibration Limit	4 000 a May (Cira)
	1,000 g Max (Sine)
Shock Limit	1,000 g Max
Temperature Range	450 5 050 D 5 4005 5 455 D 0)
Model 3023M1	-450 To +350 Deg F (-267 To +175 Deg C)
Model 3023M1-HT	-450 To +500 Deg F (-267 To +260 Deg C)
Humidity <sup>3</sup>	0 To 100% R.H.
Base Strain Sensitivity	0.008 g/uE Equiv, Typical
Electromagnetic Sensitivity	0.02 g (Equiv / 100 Gauss)
Physical	
Configuration	Single-Ended Compression
Size	0.625 In. Hex x 0.900 In. H (15.9 mm Hex x 22.9 mm H)
Weight	1.23 Oz (35 Gm)
Case Material	18-8 Stainless Steel
Electrical Interface	Coaxial 10-32 Thread
Mounting	10-32 Tapped Base

#### NOTES

- <sup>1</sup> At +75 Deg F, 10g Peak, 100Hz; Lower Frequency Limit is Determined by Associated Electronics
- <sup>2</sup> Referenced to Sensitivity @ 100 Hz.
- <sup>3</sup> With Connector Protected or Sealed, Unit is Hermetically Sealed

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