# Columbia Research Laboratories, Inc.

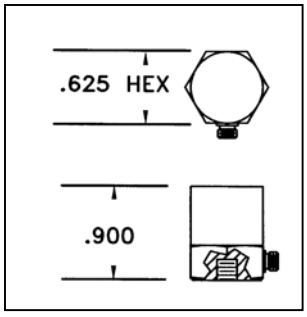
# General Purpose Accelerometer

## Model 3023M5

- *Vibration & Shock
- *Sensitivity 10 pC/g
- *High Temperature To +750 Deg F
- *Hermetically Sealed
- *Corrosion-Resistant Alloy C-276 Housing

The Model 3023M5 Piezoelectric Accelerometer exhibits a transfer sensitivity of 10 picoCoulombs/g and operation to +400 degrees C. The moderate sensitivity and wide frequency response provides a device well suited for a broad range of vibration monitoring and analysis applications in the most demanding environments. 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 Alloy C-276 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. This accelerometer features a 10-32 side connector and is provided with a 10' low-noise coaxial cable. ***Consult the factory for customized versions of this sensor.***




### Specifications

| Transfer / Electrical | 3023M5 |
|---|---|
| Charge Sensitivity[1] | 10 pC/g +/-10% |
| Capacitance | 1,200 pF +/-20% |
| Frequency Linearity[2] | +/-6%, 1 Hz To 5,000 Hz<br>+/-10%, 2 Hz To 6,000 Hz |
| Mounted Resonant Frequency | 28 +/-3 KHz, Min. |
| Transverse Sensitivity | 3% Max |
| Amplitude Linearity | +/-1.0% (BFSL) / 1,000 g |
| Insulation Resistance<br>@ 25 Deg C<br>@ 400 Deg C | <br>10,000 M Ohm Min, 50 VDC Test<br>25 M Ohm Min. |
| Isolation Resistance | 0 (Case Grounded) |
| **Environmental** | |
| Vibration Limit | 500 g Max (Sine) |
| Shock Limit | 3,000 g Max, 0.10 mSec |
| Temperature Range | -100 To +750 Deg F (-73 To +400 Deg C) |
| Humidity[3] | 0 To 100% R.H. |
| Base Strain Sensitivity | 0.003 g/uE Equiv, Typical |
| Electromagnetic Sensitivity | 0.005 g (Equiv / 100 Gauss) |
| **Physical** | |
| Configuration | Single-Ended Compression |
| Size | 0.625 In. Hex x 1.00 In. H (16.0 mm Hex x 25.4 mm H) |
| Weight | 1.00 Oz (28 Gm) |
| Case Material | Hastelloy® C-276 Alloy |
| Electrical Interface | Coaxial 10-32 Thread |
| Mounting | 10-32 Tapped Base |

**NOTES:**
[1] At +75 Deg F, 10g Peak, 100Hz; Lower Frequency Limit is Determined by Associated Electronics
[2] Referenced to Sensitivity @ 100 Hz.
[3] With Connector Protected or Sealed, Unit is 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.

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Columbia Research Laboratories, Inc. 1925 Mac Dade Blvd. Woodlyn, PA 19094
Phone: 1.800.813.8471 / Fax: 610.872.3882 / email: sales@columbiaresearchlab.com