

# Columbia Research Laboratories, Inc. General Purpose Accelerometers

## Models 3024 & 3024-HT 3028 & 3028-HT

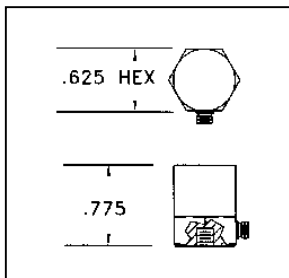
### \*Vibration & Shock

### \*Sensitivity 12 pC/g

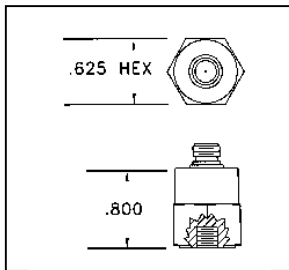
### \*Low Base Strain Sensitivity

### \*Top or Side Connector

### \*10-32 Mounting



Model 3024



Model 3028

### Accessories Supplied:

- (1) Miniature Cable Assy, 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 3024 and 3028 piezoelectric accelerometers exhibit a nominal transfer sensitivity of 12 picoCoulombs/g and are ideal for low to medium level vibration measurements. 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 units incorporate a shear crystal-mass assembly, which ensures that the sensor is insensitive to environmental inputs such as base bending and thermal transients. The units differ in their connector positions (side or top) and isolation resistance. Each model is supplied with a 10' low-noise coaxial cable. High temperature units will operate in environments up to +500 Deg. F. *Consult the factory for customized versions of these sensors.*

### Specifications

| Transfer / Electrical            | 3024 & 3024-HT   |  | 3028 & 3028-HT                                       |  |
|----------------------------------|--|--|--|--|
| Charge Sensitivity <sup>1</sup>  | 12 +/-10 pC/g  |  |  |  |
| Capacitance                      | 450 +/-50 pF   |  |  |  |
| Frequency Linearity <sup>2</sup> | +/-5% Max<br>2 Hz To 5,000 Hz  |  |  |  |
| Mounted Resonant Frequency       | 30 KHz, Nom.   |  |  |  |
| Transverse Sensitivity           | 5% Max   |  |  |  |
| Amplitude Linearity              | +/-1.0% (BFSL) / 500g  |  |  |  |
| Insulation Resistance            | 20,000 M Ohm Min, 50 VDC Test  |  |  |  |
| Isolation Resistance             | 0 (Case Grounded)  |  | 100M Ohm Min.  |  |
| <b>Environmental</b>             |  |  |  |  |
| Vibration Limit                  | 1,000 g Max (Sine)   |  |  |  |
| Shock Limit                      | 5,000 g Max  |  |  |  |
| Temperature Range                | -100 To +350 Deg F (-73 To +175 Deg C)<br>-100 To +500 Deg F (-73 To +260 Deg C) |  |  |  |
| Models 3024 & 3028               |  |  |  |  |
| Models 3024-HT & 3028-HT         |  |  |  |  |
| Humidity                         | 0 To 98% R.H. (Non-Condensing)   |  |  |  |
| Base Strain Sensitivity          | 0.01 g/uE Typical  |  |  |  |
| Electromagnetic Sensitivity      | 0.01 g (Equiv / 100 Gauss)   |  |  |  |
| <b>Physical</b>                  |  |  |  |  |
| Configuration                    | Shear  |  |  |  |
| Size                             | 0.625 In. Hex x 0.780 In. H<br>15.9 mm Hex x 19.8 mm H                           |  | 0.625 In. Hex x 0.820 In. H<br>15.9 mm Hex x 21 mm H |  |
| Weight                           | 0.8 (23 Gm)  |  | 0.9 Oz (26 Gm)                                       |  |
| Case Material                    | 18-8 Stainless Steel   |  |  |  |
| Electrical Interface             | Coaxial 10-32 Thread (Side)  |  | Coaxial 10-32 Thread (Top)                           |  |
| 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.

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