Columbia Research Laboratories, Inc.

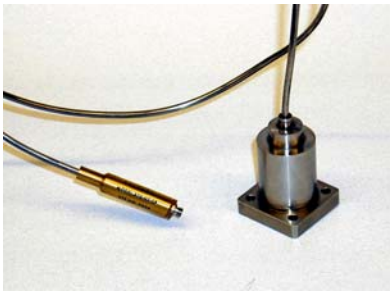
Ultra High Temperature Accelerometers

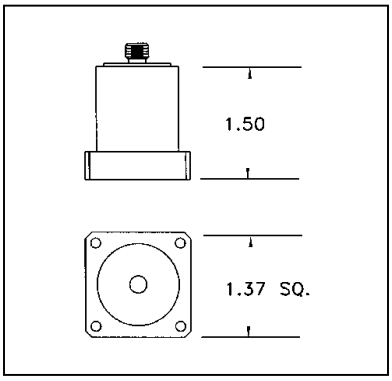
Models 378-HT-1XP & -2XP

- *Vibration & Shock
- *Extreme High Temperature (+750 Deg F)
- *Electrically Isolated
- *Hermetically Sealed
- *Integral SS Cable

The Series 378-HTXP Piezoelectric Accelerometers are precision manufactured sensors designed for use in extremely severe and volatile environments to measure shock and vibration of structures subject to very high temperatures. The unique design 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 are hermetically sealed, internally isolated electrically with an extremely rugged housing for prolonged use in adverse industrial environments of shock, vibration, temperature, humidity and excessive oil. The Series 378-HT-XP accelerometers are equipped with an integral stainless steel sheathed cable and supplied with a ¼-28 removable stud for mounting. ***Consult the factory for customized versions of these sensors.***





Specifications

Transfer / Electrical	378-HT-1XP	378-HT-2XP
Charge Sensitivity[1]	55 +/- 5 pC/g	5.5 +/-0.5 pC/g
Capacitance	1,100 +/-100 pF	
Frequency Linearity[2]	+/-5% Max 2 Hz to 2,000 Hz	+/-5% Max 2 Hz To 4,000 Hz
Mounted Resonant Frequency	10 KHz, Min.	25KHz, Min.
Transverse Sensitivity	5% Max	
Amplitude Linearity	+/-1.0% (BFSL)	
Insulation Resistance	10,000 M Ohm Min, 50 VDC Test	
Isolation Resistance	100M Ohm, Min.	
Environmental		
Vibration Limit	500 g Max (Sine)	
Shock Limit	1,000 g Max	
Temperature Range	-100 To +750 Deg F (-73 To +398 Deg C)	
Humidity[3]	0 To 100% R.H.	
Base Strain Sensitivity	0.05 g/uE Equiv, Typical	
Electromagnetic Sensitivity	0.005 g (Equiv / 100 Gauss)	
Acoustic Sensitivity	0.005 g RMS (Equiv @ 124 dB SPL)	
Physical		
Configuration	Single Ended Compression	
Size	1.37 In. Sq. x 1.50 In. H (34.8 mm Sq x 38.1 mm H)	
Weight	6.8 Oz (193 Gm)	
Case Material	18-8 Stainless Steel	
Electrical Interface	Stainless Steel Sheathed Cable (1 Meter Length Std, Longer Lengths Avail) with Industry Standard Coaxial 10-32 Adapter	
Mounting	¼ -28 Tapped Base; 4 Clearance Holes for 8-32 Screws	

NOTES:

[1] At +75 Deg F, 10g Peak, 100Hz; Lower Frequency Limit is Determined by Associated Electronics

[2] Referenced to Sensitivity @ 100 Hz.

[3] Unit is Hermetically Sealed

Accessories Supplied:

(1) Miniature Cable Assy, LNHT-3'
(1) ¼-28 x 0.5"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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