Columbia Research Laboratories, Inc.

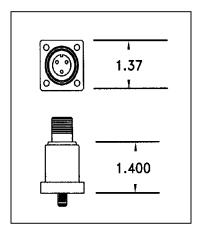
Industrial Accelerometers

Models 378 & 378-HT

*Vibration Monitoring & Process Controls

- *High Sensitivity (1,000 pC/g)
- *Electrically Isolated
- *3-Pin Connector





Output Connector Pin Functions: Pin A – Signal Pin B – Shield Pin C – Signal Return

Accessories Supplied:

(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.

The Models 378 and 378-HT Piezoelectric Accelerometers are designed for prolonged use in adverse industrial environments of shock, vibration, temperature, humidity and excessive oil. The high charge sensitivity of 1,000 pC/g and high mounted resonance of 10K Hz provide a wide dynamic range from 0.00001 to 500 g's. Their rugged

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. Internal electrical isolation minimizes ground loop problems from noise currents. The Models 378 and 378-HT accelerometers are equipped with a 3-pin top mounted output connector and a ¹/₄-28 removable stud for mounting. The Model 378-HT is designed to operate in environments up to +500 Deg. F. *Consult the factory for customized versions of these sensors.*

construction ensures long life and high performance stability and repeatability.

Specifications

Transfer / Electrical	378 & 378-HT
Charge Sensitivity ¹	1,050 +/-50 pC/g
Capacitance	13,000 +/-1,000 pF
Frequency Linearity ²	+/-5% Max
	1 Hz To 2,000 Hz
Mounted Resonant Frequency	10 KHz, Nom.
Transverse Sensitivity	5% Max
Amplitude Linearity	+/-1.0% (BFSL)
Insulation Resistance	10,000 M Ohm Min, 50 VDC Test
Isolation Resistance	100 M Ohm, Min.
Environmental	
Vibration Limit	500 g Max (Sine)
Shock Limit	1,000 g Max
Temperature Range	
Model 378 Std Temp.	-65 To +350 Deg F (-54 To +175 Deg C)
Model 378-HT High Temp.	-65 To +500 Deg F (-54 To +260 Deg C)
Humidity ³	0 To 95% R.H. (Non-Condensing)
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 1.40 In. H (34.8 mm Sq x 35.6 mm H)
Weight	6.8 Oz (193 Gm)
Case Material	18-8 Stainless Steel
Electrical Interface	3-Pin Connector, Amphenol 172-310SL-3P2
Mounting	1/4 -28 Tapped Base; 4 Clearance Holes for 8-32 Screws

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 Epoxy Sealed

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