



ACCELEROMETER CALIBRATION SYSTEM

Manufacturer: The Modal Shop

Type/Model: 9155C

Frequency Range: 5Hz – 10kHz

Typical Measurement Uncertainty:

- 2.2% (5-10 Hz)
- 1.2% (10-100 Hz)
- 0.7% (100 Hz)
- 1.0% (100-1,000 Hz)
- 1.4% (1,000-5,000 Hz)
- 1.9% (5,000-10,000 Hz)

Calibration Method: Back-to-back comparison per ISO 16063-21

Measurements: Sensitivity, Amplitude, Phase, Bias, Resonance, Linearity,
Shock, DC Offset, Bridge Resistance, DC Sensitivity

Accelerometers Supported: ICP®, Charge, Voltage, Capacitive, Piezoresistive, CVLD

Sensors Supported: Acceleration, Velocity

TEDS Sensor Support: IEEE 1451.4, IEEE P1451.4

Excitation Type: Stepped Sine, Multi-sine

Acceleration Levels: 0.1 to 10 g_{pk}



The accelerometer calibration system is an important tool used to verify the accuracy of piezoelectric accelerometers. Piezoelectric transducers create a voltage output when stress is applied to the material. The voltage output is read and filtered by a computer to translate accelerometer output into a component of acceleration. Proper accuracy of accelerometers will provide reliable test data for experiments which analyze the frequency of structures. The Accelerometer calibration system vibrates the accelerometers at a known frequency/magnitude. The system compares the output of the accelerometer to these known values and determines if the output meets its accuracy parameters.