

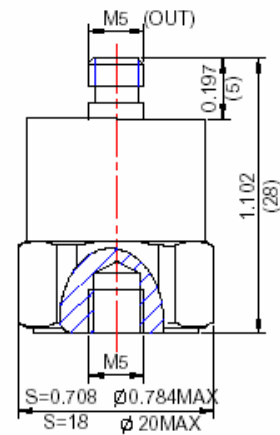
- ✚ **High Sensitivity at 150 pC/g**
- ✚ **Frequency Response to 5 KHz**
- ✚ **Resonance Frequency at 15 KHz**
- ✚ **Top Connector**
- ✚ **Stud Mounted**



Description

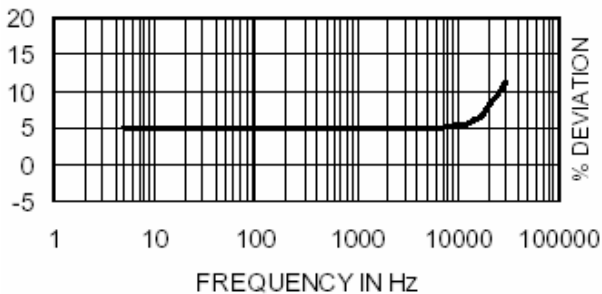
The Sensors Model 127A is a stud mounted piezoelectric accelerometer designed for general vibration measurement on structures and objects. The high sensitivity (150 picocoulombs per g) makes it very useful low-g measurement applications. The accelerometer is a self-generating device that requires no external power source for operation.

The Model 127A design is sealed against external contamination. Signal ground is connected to the outer case of the unit. When used with an isolated mounting stud, the accelerometer is electrically isolated from ground. The accelerometer features a M5 top connector that is used with low-noise coaxial cable for error-free operation.

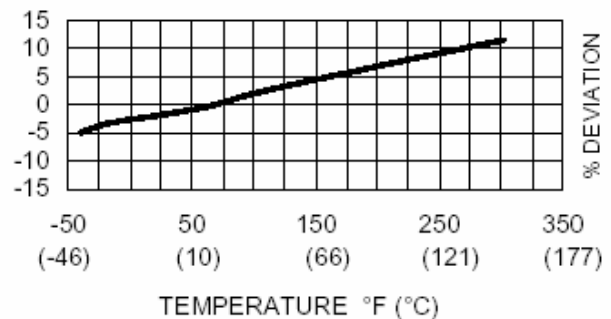


in (mm)

Typical Amplitude Response



Typical Temperature Response



SPECIFICATIONS

The following performance specifications conform to ISA-RP-37.2 (1964) and are typical values, referenced at +75°F (+24°C) and 100 Hz, unless otherwise noted. Calibration data, traceable to National Institute of Standards and Technology (NIST), is supplied.

| | UNITS | |
|--------------------------------------|-------------------------|--|
| DYNAMIC CHARACTERISTICS | | |
| Axial Sensitivity | pC/g | 150 (130 minimum) |
| Transverse Sensitivity | % | ≤ 5 |
| Frequency Response | | See Typical Amplitude Response |
| Resonance Frequency | Hz | 15,000 |
| Amplitude Response [1] | | |
| ± 5 % | Hz | 1 – 4,000 |
| ± 1 dB | Hz | 0.3 – 5,000 |
| Temperature Response | | See Typical Temperature Response |
| Amplitude Linearity | % | < 1 |
| ELECTRICAL CHARACTERISTICS | | |
| Output Polarity | | Acceleration directed from the base into the transducer is defined as positive |
| Resistance | GΩ | >1 |
| Capacitance | pF | 2,000 |
| Grounding | | Signal ground connected to case |
| ENVIRONMENTAL CHARACTERISTICS | | |
| Temperature Range | | -40°F to 302°F (-40°C to +150°C) |
| Humidity | | Epoxy sealed |
| Shock Limit | g pk | 600 |
| Base Strain | equiv. g pk/μ strain | 0.0002 |
| Magnetic Field Sensitivity | equiv. g rms/gauss (°T) | 2E-5 (2) |
| Thermal Transient Sensitivity | equiv. g pk/°F (°C) | 0.0072 (0.004) |
| PHYSICAL CHARACTERISTICS | | |
| Weight | oz (grams) | 1.34 (38) |
| Case Material | | Stainless Steel |
| Mounting | | M5, torque 2 N-m (18 lbf-in) |
| Piezoelectric Material | | PZT-5 |
| Structure | | Annular Shear |
| Output Connector | | M5 receptacle, top mounting |

ACCESSORIES

Included:

9002-120 Low Noise, Coaxial M5/10-32, 10ft (3.3 m)
 9504-1 M5/10-32 Mounting Stud
 Calibration Certificate

Optional:

9001-120 Low Noise, Coaxial M5/M5, 10 ft (3.3 m)
 9504-4 M5/M5 Mounting Stud
 9505-1 M5/10-32 Isolated Mounting Stud

NOTES

1. Low end response of the transducer is a function of its electronics.