

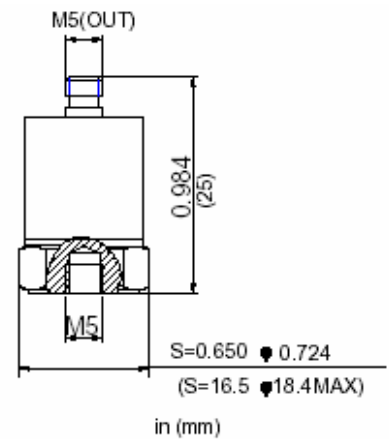
- + Measurement Range to 50 g**
- + Sensitivity at 100 mV/g**
- + Frequency response to 5 KHz**
- + Low Impedance Output**
- + Stud Mounted**



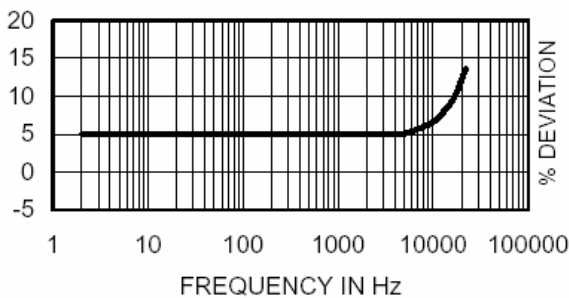
**Description**

The Sensors Model 185G is a stud mounted piezoelectric accelerometer designed for vibration measurements up to 50 g. It offers a sensitivity of 100 mV/g and a frequency response to 5 KHz. The accelerometer transmits its low impedance voltage output through the same cable that supplies the constant current power.

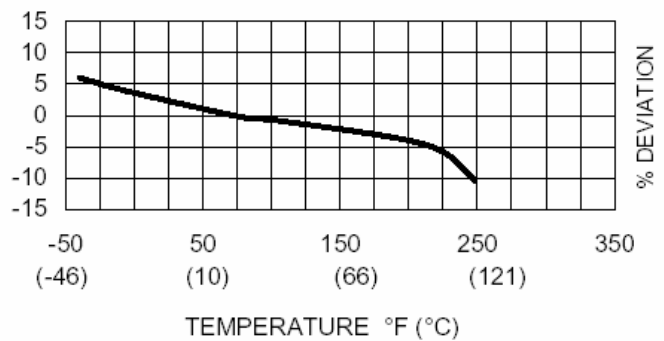
The Model 185G design is a welded stainless steel construction that is hermetically sealed against external contamination. Signal return is isolated from the outer case of the unit. The accelerometer features a M5 top connector that is used with coaxial cable for error-free operation.



**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	
<b>DYNAMIC CHARACTERISTICS</b>			
Range	g (m/s <sup>2</sup> )		50 (490.3)
Voltage Sensitivity, typical	mV/g (mV/m/s <sup>2</sup> )		100 (10.20)
Transverse Sensitivity	%		≤ 5
Frequency Response			See Typical Amplitude Response
Resonance Frequency	Hz		15,000
Amplitude Response			
± 5 %	Hz		2 – 4,000
± 1 dB	Hz		1 – 5,000
Temperature Response			See Typical Temperature Response
Amplitude Linearity	%		< 1
<b>ELECTRICAL CHARACTERISTICS</b>			
Output Polarity			Acceleration directed from base into the transducer defined as positive
Power Source Voltage (Constant Current)	VDC		+12 to +28
Supply Current	mA		2 to 10
Bias Voltage	V		7 ±1
Full Scale Output Voltage (peak)	Vp		≤ 5
Output Impedance	Ω		< 100
Noise	mg (mm/s <sup>2</sup> )		< 0.04 (<0.39)
Grounding			Signal return isolated from case
<b>ENVIRONMENTAL CHARACTERISTICS</b>			
Temperature Range			-4°F to 248°F (-20°C to +120°C)
Humidity			Hermetically sealed, welded construction
Shock Limit	g pk (m/s <sup>2</sup> pk)		2000 (19,613)
Base Strain	equiv. g /μstrain		0.0002
Magnetic Field Sensitivity	equiv. g rms /gauss (I/T)		1.5E-5 (1.5)
Thermal Transient Sensitivity	equiv. g /°C		0.008
<b>PHYSICAL CHARACTERISTICS</b>			
Weight	oz (grams)		0.8 (24)
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 Coaxial Cable M5/10-32, 10ft (3.3 m)  
 9504-1 M5/10-32 Mounting Stud  
 Calibration Sheet

#### Optional:

9013-120 Coaxial Cable M5/BNC, 10 ft (3.3 m)  
 9505-1 M5/10-32 Isolated Mounting Stud  
 9001-120 Coaxial Cable M5/M5, 10 ft (3.3 m)  
 9504-4 M5/M5 Mounting Stud

### NOTES

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