Model 834 Accelerometer

Triaxial Piezoelectric Accelerometer
<4µA Current Consumption
Full Signal and Power Conditioning
Circuit Board Mountable

The Model 834 is a low cost, board mountable triaxial accelerometer designed for high amplitude embedded shock applications. The accelerometer features a maximum current consumption of 4 micro-amps and incorporates full power and signal conditioning. The model 834 is available in ±2000g to ±6000g ranges and provides a flat frequency response up to 2kHz. The model 834M1 provides an extended frequency range to 6kHz.

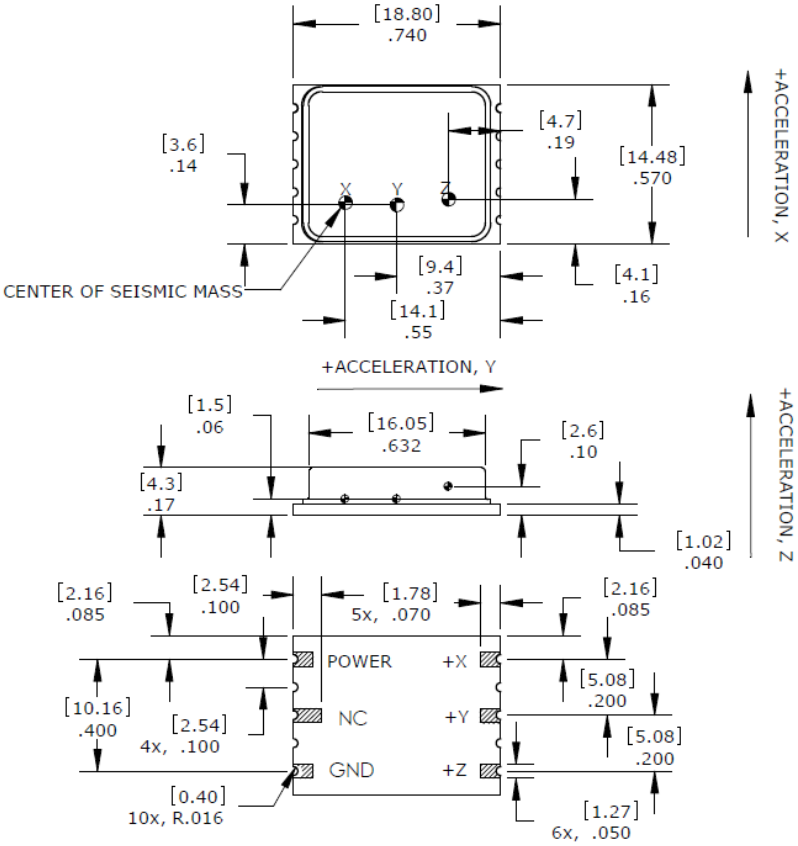
FEATURES

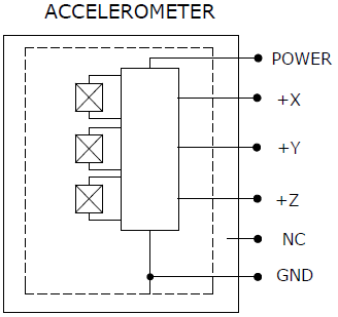
- ±2000g to ±6000g Dynamic Range
- Low Cost Triaxial
- Hermetically Sealed
- Piezo-ceramic Crystals
- -20° to +80°C Operating Range
- -40° to +125°C Available on 834M1
- Single Axis Configurations Available

APPLICATIONS

- Asset Monitoring
- Impact Testing
- System Wake-Up Switch
- Embedded Applications
- Instrumentation

dimensions





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performance specifications

All values are typical at +24°C, 80Hz and 3.3Vdc excitation unless otherwise stated. Measurement Specialties reserves the right to update and change these specifications without notice.

Parameters			
DYNAMIC			**Notes**
Range (g)	±2000	±6000	
Sensitivity (mV/g)	0.62	0.20	±30%
Frequency Response (Hz) [1]	2-2000	2-2000	±2dB
Natural Frequency (Hz)	>30000	>30000	
Non-Linearity (%FSO)	±2	±2	
Transverse Sensitivity (%)	<8	<8	
Shock Limit (g)	10000	10000	
ELECTRICAL			
Bias Voltage (Vdc)	Exc Voltage / 2	Exc Voltage / 2	
Total Supply Current (µA)	<4	<4	
Excitation Voltage (Vdc) [3]	3.0 to 5.5	3.0 to 5.5	
Output Impedance (Ω)	<100	<100	
Insulation Resistance (MΩ)	>100	>100	@100Vdc
Broadband Noise (µV)	140	120	0.1Hz-10kHz
Spectral Noise (mg/√Hz)	6.5	6.0	@ 10Hz
Spectral Noise (mg/√Hz)	1.3	2.0	@ 100Hz
Spectral Noise (mg/√Hz)	0.8	1.5	@ 1000Hz
Shielding	100%		
Ground Isolation	Isolated from Mounting Surface		
ENVIRONMENTAL			
Temperature Response (%)	-10/+20 from -20°C to +80°C		
Operating Temperature (°C)	-20 to +80		
Storage Temperature (°C)	-20 to +80		
Humidity	Hermetically Solder Sealed		
PHYSICAL			
Sensing Element	Ceramic (shear mode)		
Case Material	Ceramic Base, Nickel Silver Cover		
Weight (grams)	2.6		

[1] A wider frequency response of 2-6000Hz is available on model 834M1
[2] The model 834 is not to be reflow soldered, manual soldering is recommended. See application note.
[3] The model 834 can be operated with 2.8V excitation but the full-scale range will be limited.

Calibration supplied: CS-SENS-0100 NIST Traceable Amplitude Calibration at 100Hz

ordering info

PART NUMBERING Model Number+Range

834-GGGG
I
I_____ Range (2000 is 2000g)

Example: 834-2000
Model 834, 2000g

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