Model 834M1 Accelerometer

Triaxial Piezoelectric Accelerometer
<22μA Current Consumption
Wide Bandwidth to 6kHz
Circuit Board Mountable

The Model 834M1 is a low cost, board mountable triaxial accelerometer designed for high amplitude embedded shock applications. The accelerometer features a maximum current consumption of 22 micro-amps and incorporates full power and signal conditioning. The model 834M1 is available in ±2000g to ±6000g ranges and provides a flat frequency response up to greater than 6kHz. The standard model 834 offers the same envelope with a lower maximum current consumption of 4 micro-amps.

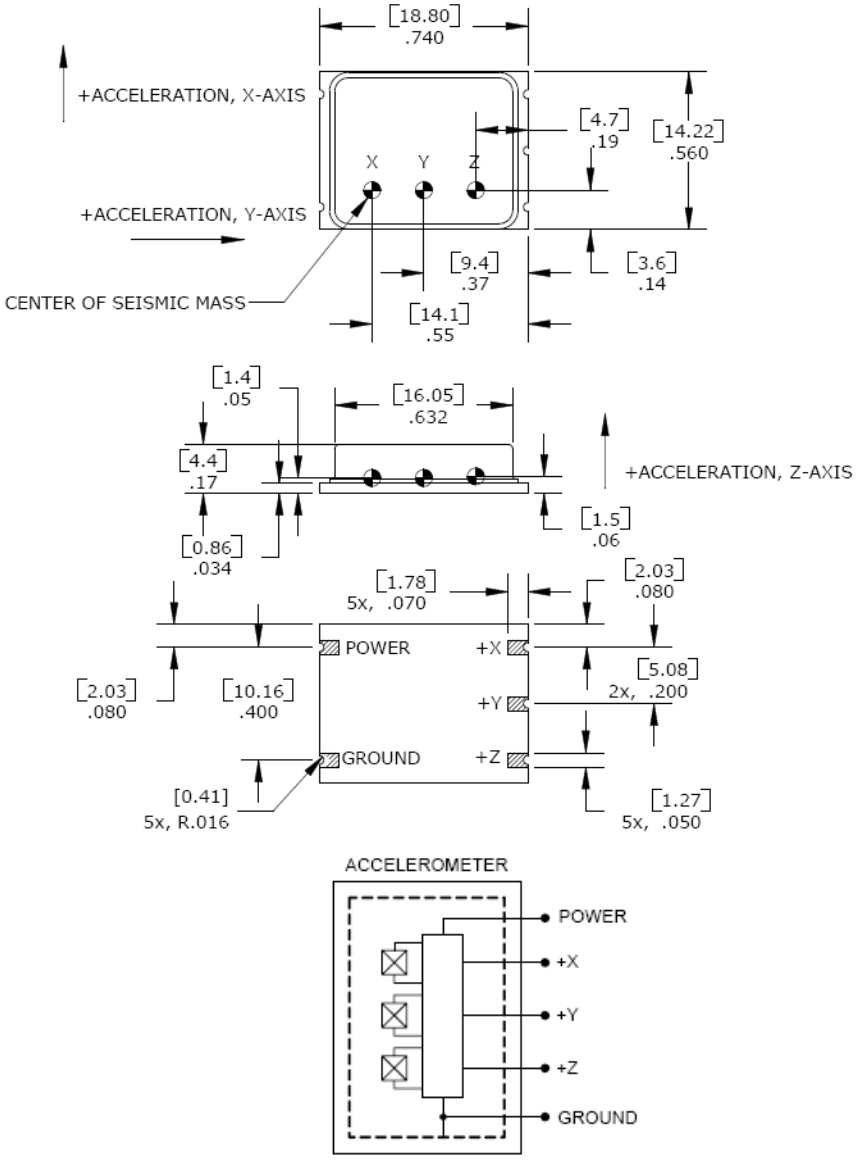
FEATURES

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

APPLICATIONS

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

dimensions



32 Journey Ste. 150 Aliso Viejo, CA 92656 949-716-5377 t&m@meas-spec.com

Model 834M1 Accelerometer

performance specifications

All values are typical at +24°C, 100Hz and 3.3Vdc excitation unless otherwise stated. Measurement Specialties reserves the right to update and change these specifications without notice. Standard product parameters are described in PSC-1001 for Embedded AC Accelerometers.

Parameters			
DYNAMIC			**Notes**
Range (g)	±2000	±6000	
Sensitivity (mV/g)	0.62	0.20	±30%
Frequency Response (Hz)	2-6000	2-6000	±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) [1]	<22	<22	
Excitation Voltage (Vdc)	3.3 to 5.5	3.3 to 5.5	
Output Impedance (Ω)	<100	<100	
Insulation Resistance (MΩ)	>100	>100	@100Vdc
Broadband Noise (µV)	60	30	2Hz-10kHz
Spectral Noise (mg/√Hz)	4.5	5.0	@ 10Hz
Spectral Noise (mg/√Hz)	0.65	1.0	@ 100Hz
Spectral Noise (mg/√Hz)	0.25	0.50	@ 1000Hz
Shielding	100%		
Ground Isolation	Isolated from Mounting Surface		
ENVIRONMENTAL			
Temperature Response (%)	-20/+30 from -40°C to +125°C		
Operating Temperature (°C)	-40 to +125		
Storage Temperature (°C)	-40 to +125		
PHYSICAL			
Sensing Element	Ceramic (shear mode)		
Case Material	Ceramic Base, Nickel Silver Cover		
Weight (grams)	2.6		

[1] A lower current consumption of 4 micro-amps is available on model 834.
[2] The model 834M1 is not to be reflow soldered at high temperature, manual soldering is recommended. See application note.
[3] The model 834M1 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

Wiring color code: See schematic

ordering info

PART NUMBERING Model Number+Range

834M1-GGGG
I
I_____ Range (2000 is 2000g)

Example: 834M1-2000
Model 834M1, 2000g

32 Journey Ste. 150 Aliso Viejo, CA 92656 949-716-5377 t&m@meas-spec.com