

## MODEL 834M1 ACCELEROMETER



### SPECIFICATIONS

- ◆ **Triaxial Piezoelectric Accelerometer**
- ◆ **<22 $\mu$ A 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  $\pm 2000g$  to  $\pm 6000g$  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

- ◆  $\pm 2000g$  to  $\pm 6000g$  Dynamic Range
- ◆ Low Cost Triaxial
- ◆ Hermetically Sealed
- ◆ Piezo-ceramic Crystals
- ◆  $-40^{\circ}$  to  $+125^{\circ}\text{C}$  Operating Range
- ◆ Single Axis Configurations Available

### APPLICATIONS

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

**PERFORMANCE SPECIFICATIONS**

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

Parameters			Notes
<b>DYNAMIC</b>			
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	
Broadband Noise (µV)	40	30	0.1Hz-10kHz
Spectral Noise (mg/√Hz)	3.2	4.0	@ 10Hz
Spectral Noise (mg/√Hz)	0.6	1.0	@ 100Hz
Spectral Noise (mg/√Hz)	0.2	0.5	@ 1000Hz
<b>ELECTRICAL</b>			
Bias Voltage (Vdc)	Exc Voltage / 2		
Total Supply Current (µA) <sup>1</sup>	<22		
Excitation Voltage (Vdc)	3.3 to 5.5		
Output Impedance (Ω)	<100		
Insulation Resistance (MΩ)	>50		@100Vdc
Shielding	100%		
Ground Isolation	Isolated from Mounting Surface		
<b>ENVIRONMENTAL</b>			
Temperature Response (%)	-20/+30 from -40°C to +125°C		
Operating Temperature (°C)	-40 to +125		
Storage Temperature (°C)	-40 to +125		
Humidity	Hermetically Solder Sealed		
<b>PHYSICAL</b>			
Sensing Element	Ceramic (shear mode)		
Case Material	Ceramic Base, Nickel Silver Cover		
Weight (grams)	2.6		

<sup>1</sup> A lower current consumption of 4 micro-amperes is available on model 834.

<sup>2</sup> The model 834M1 is not to be reflow soldered at high temperature, manual soldering is recommended. See operating manual.

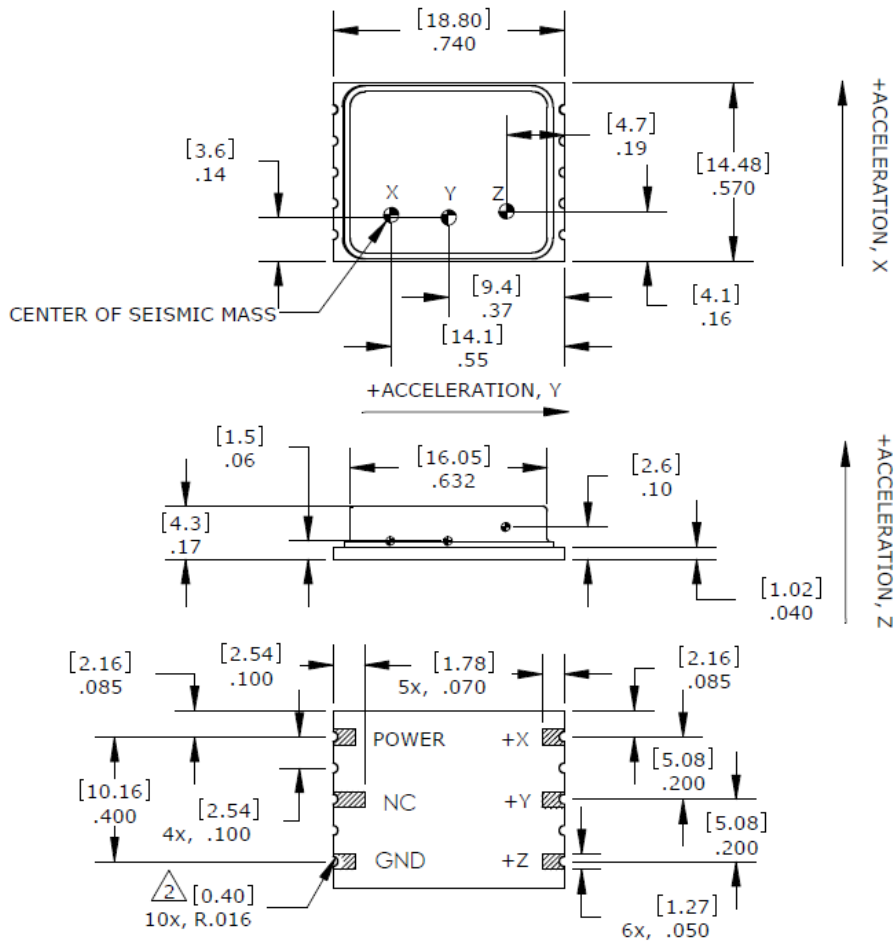
<sup>3</sup> The model 834M1 can be operated with 2.8V excitation but the full-scale range will be limited. See operating manual for details.

**Calibration supplied:** CS-SENS-0100 NIST Traceable Amplitude Calibration at 80Hz

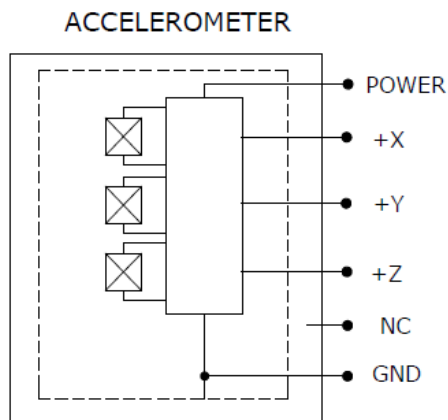
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## DIMENSIONS



## SCHEMATIC



## ORDERING INFORMATION

834M1

GGGG

**Range**

2000=2000g

6000=6000g

Example;  
834M1-6000  
Model 834M1, 6000g range

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