



MODEL 832M1 ACCELEROMETER

SPECIFICATIONS

- ◆ **Triaxial Piezoelectric Accelerometer**
- ◆ **<22 μ A Current Consumption**
- ◆ **Wide Bandwidth to 6kHz**
- ◆ **Circuit Board Mountable**

The **Model 832M1** is a low cost, board mountable triaxial accelerometer. Featuring stable piezo-ceramic crystals, the accelerometer incorporates full power and signal conditioning with a maximum current consumption of 22 micro-amps. The **model 832M1** is available in $\pm 25g$ to $\pm 500g$ ranges and provides a flat frequency response up to greater than 6kHz. The standard model 832 offers the same envelope with a lower maximum current consumption of 4 micro-amps.

FEATURES

- ◆ $\pm 25g$ to $\pm 500g$ Dynamic Range
- ◆ Low Cost Triaxial
- ◆ Hermetically Sealed
- ◆ Piezo-ceramic Crystals
- ◆ -40° to $+125^{\circ}\text{C}$ Operating Range
- ◆ Single Axis Configurations Available

APPLICATIONS

- ◆ Asset Monitoring
- ◆ Data Loggers
- ◆ Impact Monitoring
- ◆ Machine Health Monitoring
- ◆ System Wake-Up Switch
- ◆ Embedded Applications

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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

DYNAMIC

	±25	±50	±100	±200	±500	Notes
Range (g)	±25	±50	±100	±200	±500	
Sensitivity (mV/g)	50.0	25.0	12.5	6.25	2.5	±30%
Frequency Response (Hz)	2-6000	2-6000	2-6000	2-6000	2-6000	±2dB
Natural Frequency (Hz)	>10000	>10000	>10000	>10000	>10000	
Non-Linearity (%FSO)	±2	±2	±2	±2	±2	
Transverse Sensitivity (%)	<10	<10	<10	<10	<10	
Shock Limit (g)	5000	5000	5000	5000	5000	
Broadband Noise (µV)	110	90	50	40	50	2Hz-10kHz
Spectral Noise (µg/√Hz)	120	160	160	160	600	@ 10Hz
Spectral Noise (µg/√Hz)	40	40	40	40	160	@ 100Hz
Spectral Noise (µg/√Hz)	20	16	16	16	80	@ 1000Hz

ELECTRICAL

Bias Voltage (Vdc)	Exc Voltage / 2					
Total Supply Current (µA) ¹	<22					
Excitation Voltage (Vdc) ³	3.3 to 5.5					
Output Impedance (Ω)	<100					
Insulation Resistance (MΩ)	>50					@100Vdc
Warm-Up Time (msec)	30					
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)	3.0

¹ A lower current consumption of 4 micro-amperes is available on model 832.

² The model 832M1 is not to be reflow soldered at high temperature, manual soldering is recommended. See operating manual.

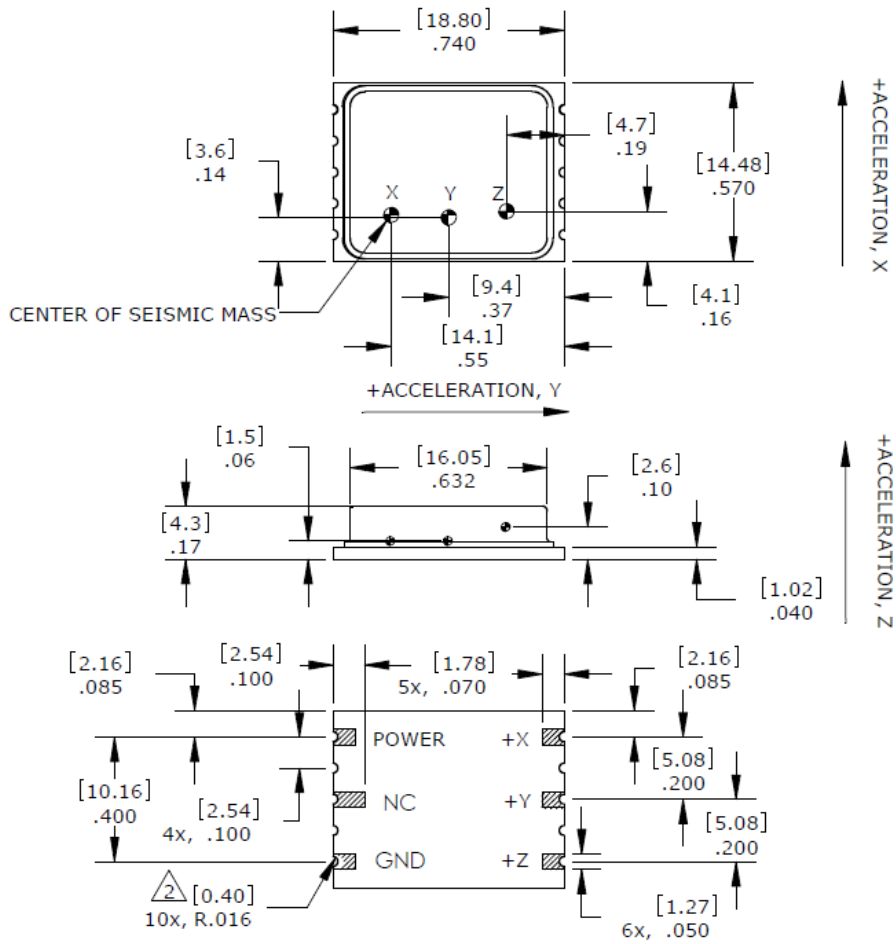
³ The model 832M1 can be operated with 2.8V excitation but the full-scale range will be limited. See operating manual for details.

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

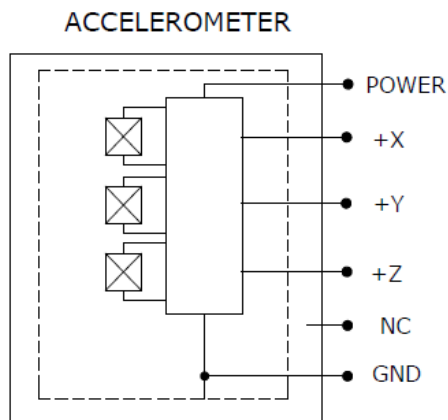
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DIMENSIONS



SCHEMATIC



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ORDERING INFORMATION

832M1

GGGG

Range

0025=25g

0050=50g

0100=100g

0200=200g

0500=500g

Example;

832M1-0500

Model 832M1, 500g range