

## MODEL 832 ACCELEROMETER



### SPECIFICATIONS

- ◆ Triaxial Piezoelectric Accelerometer
- ◆ <math>4\mu\text{A}</math> Current Consumption
- ◆ Full Signal and Power Conditioning
- ◆ Circuit Board Mountable

The **Model 832** 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 4 micro-amps. The **model 832** is available in  $\pm 25\text{g}$  to  $\pm 500\text{g}$  ranges and provides a flat frequency response up to 2kHz. The **model 832M1** provides an extended frequency range to 6kHz.

### FEATURES

- ◆  $\pm 25\text{g}$  to  $\pm 500\text{g}$  Dynamic Range
- ◆ Low Cost Triaxial
- ◆ Hermetically Sealed
- ◆ Piezo-ceramic Crystals
- ◆  $-20^\circ$  to  $+80^\circ\text{C}$  Operating Range
- ◆  $-40^\circ$  to  $+125^\circ\text{C}$  Available on 832M1
- ◆ Single Axis Configurations Available

### APPLICATIONS

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

**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)	±25	±50	±100	±200	±500			
Sensitivity (mV/g)	50.0	25.0	12.5	6.25	2.5		±30%	
Frequency Response (Hz) <sup>1</sup>	2-2000	2-2000	2-2000	2-2000	2-2000		±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)	300	210	160	150	160		2Hz-10kHz	
Spectral Noise (µg/√Hz)	120	120	120	120	400		@ 10Hz	
Spectral Noise (µg/√Hz)	80	80	80	80	320		@ 100Hz	
Spectral Noise (µg/√Hz)	40	40	40	40	160		@ 1000Hz	
<b>ELECTRICAL</b>								
Bias Voltage (Vdc)	Exc Voltage / 2							
Total Supply Current (µA)	<4							
Excitation Voltage (Vdc) <sup>3</sup>	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							
<b>ENVIRONMENTAL</b>								
Temperature Response (%)	-10/+20 from -20°C to +80°C							
Operating Temperature (°C)	-20 to +80							
Storage Temperature (°C)	-20 to +80							
<b>PHYSICAL</b>								
Sensing Element	Ceramic (shear mode)							
Case Material	Ceramic Base, Nickel Silver Cover							
Weight (grams)	3.6							

<sup>1</sup> A wider frequency response of 2-6000Hz is available on model 832M1

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

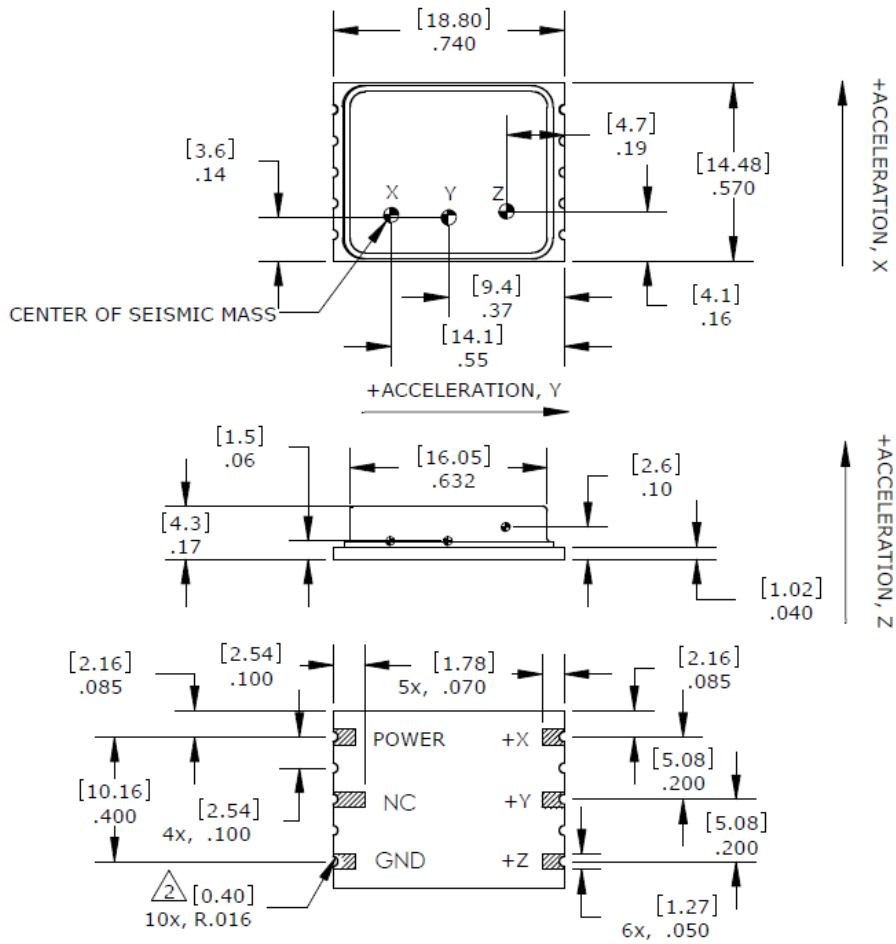
<sup>3</sup> The model 832 can be operated with 2.8V excitation but the full-scale range will be limited. See operating manual for details.

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

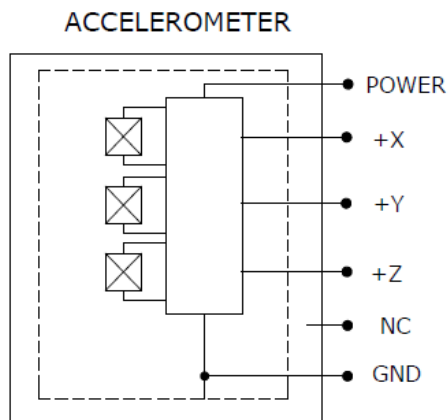
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# MODEL 832 ACCELEROMETER

## DIMENSIONS



## SCHEMATIC



## ORDERING INFORMATION

832

GGGG

**Range**

0025=25g

0050=50g

0100=100g

0200=200g

0500=500g

Example;

832-0500

Model 832, 500g range

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