

MODEL 832 ACCELEROMETER



SPECIFICATIONS

- ◆ Triaxial Piezoelectric Accelerometer
- ◆ $4\mu\text{A}$ 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° to $+80^\circ\text{C}$ Operating Range
- ◆ -40° 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
DYNAMIC						
Range (g)	±25	±50	±100	±200	±500	
Sensitivity (mV/g)	50.0	25.0	12.5	6.25	2.5	±30%
Frequency Response (Hz) ¹	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
ELECTRICAL						
Bias Voltage (Vdc)	Exc Voltage / 2					
Total Supply Current (µA)	<4					
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 (%)	-10/+20 from -20°C to +80°C					
Operating Temperature (°C)	-20 to +80					
Storage Temperature (°C)	-20 to +80					
PHYSICAL						
Sensing Element	Ceramic (shear mode)					
Case Material	Ceramic Base, Nickel Silver Cover					
Weight (grams)	3.6					

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

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

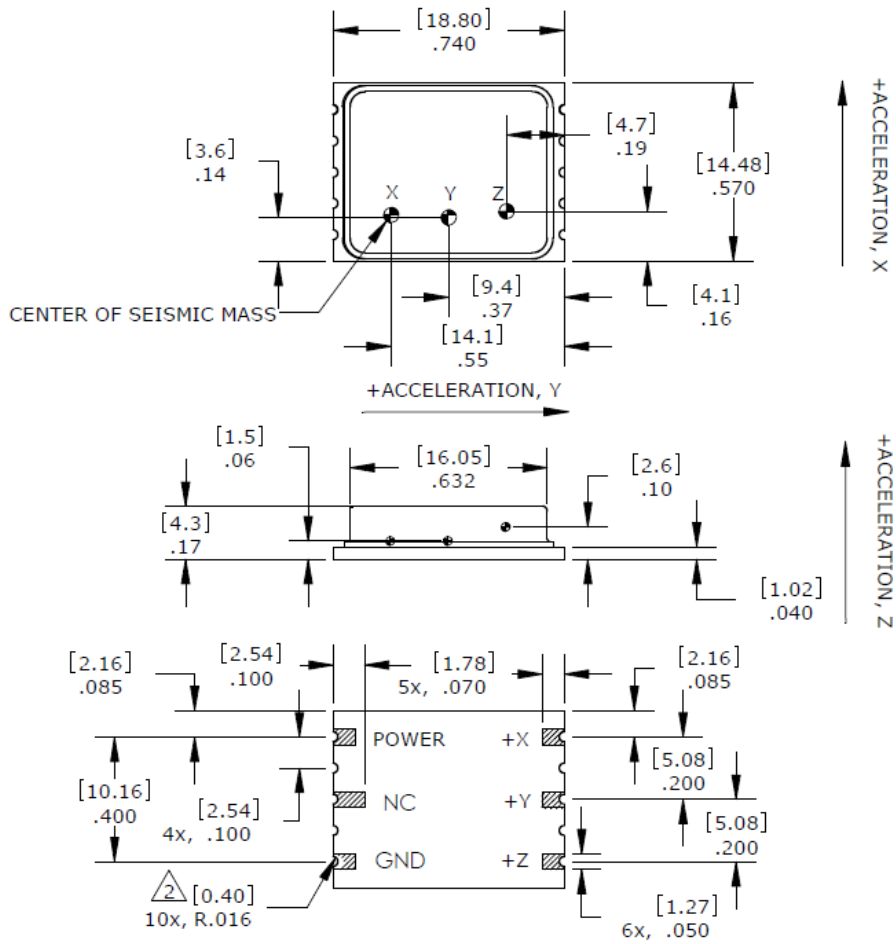
³ The model 832 can be operated with 2.8V excitation but the full-scale range will be limited. See operating manual for details.

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

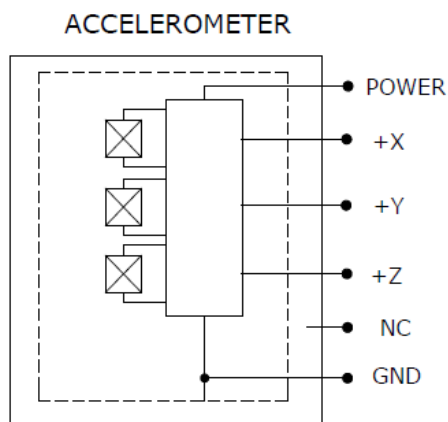
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DIMENSIONS



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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