

## 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						
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.

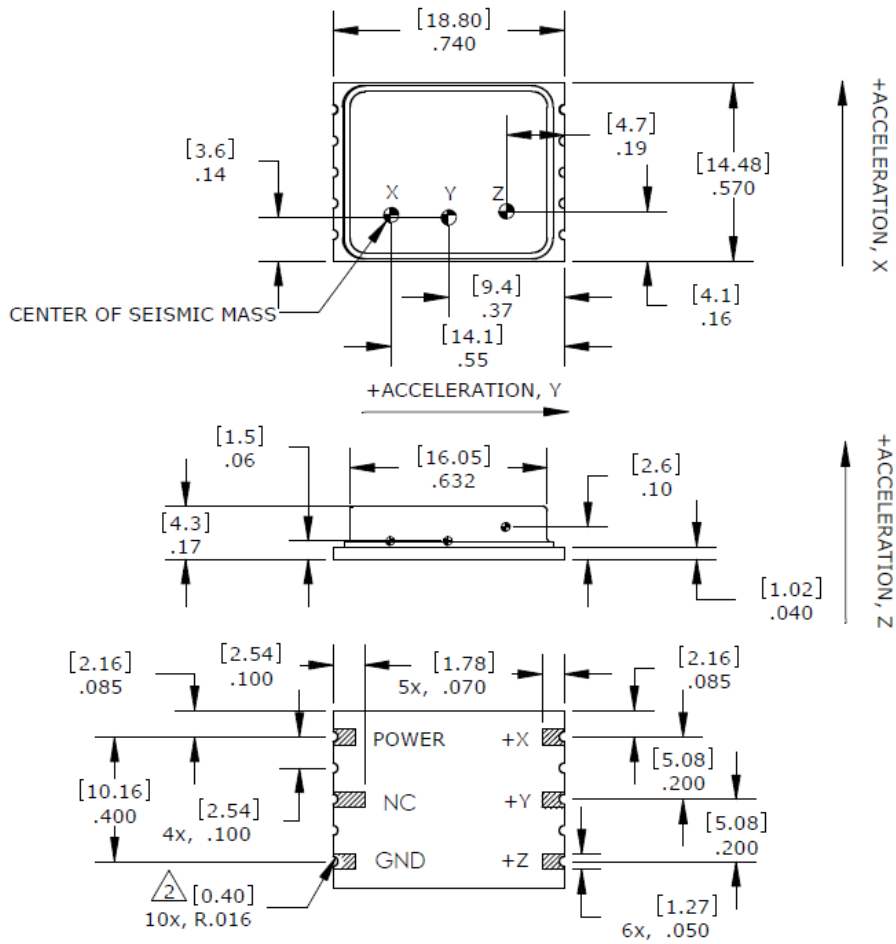
<sup>3</sup> The model 832 can be operated with 2.8V excitation but the full-scale range will be limited. See operating manual for details.

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

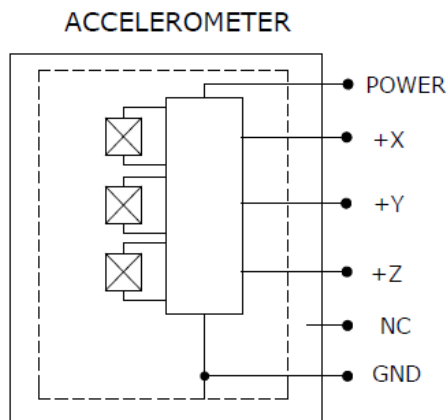
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## DIMENSIONS



## SCHEMATIC



ORDERING INFORMATION

832	GGGG
<b>Range</b> 0025=25g 0050=50g 0100=100g 0200=200g 0500=500g	

Example;  
832-0500  
Model 832, 500g range



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本 社：〒124-0023 東京都葛飾区東新小岩3丁目9番6号 TEL: (03) 3695-5431 / FAX: (03) 3695-5698  
大阪支店：〒530-0054 大阪市北区南森町2-2-9(南森町八千代ビル7F) TEL: (06) 6361-4831 / FAX: (06) 6361-9360  
e-mail: sales-tokyo@krone.co.jp URL: <https://www.krone.co.jp>

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