

## MODEL 832M1 ACCELEROMETER



### SPECIFICATIONS

- ◆ Triaxial Piezoelectric Accelerometer
- ◆ <math><22\mu\text{A}</math> 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  $\pm 25\text{g}$  to  $\pm 500\text{g}$  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

- ◆  $\pm 25\text{g}$  to  $\pm 500\text{g}$  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
- ◆ 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)	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
<b>ELECTRICAL</b>						
Bias Voltage (Vdc)	Exc Voltage / 2					
Total Supply Current (µA) <sup>1</sup>	<22					
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 (%)	-20/+30 from -40°C to +125°C					
Operating Temperature (°C)	-40 to +125					
Storage Temperature (°C)	-40 to +125					
<b>PHYSICAL</b>						
Sensing Element	Ceramic (shear mode)					
Case Material	Ceramic Base, Nickel Silver Cover					
Weight (grams)	3.0					

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

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

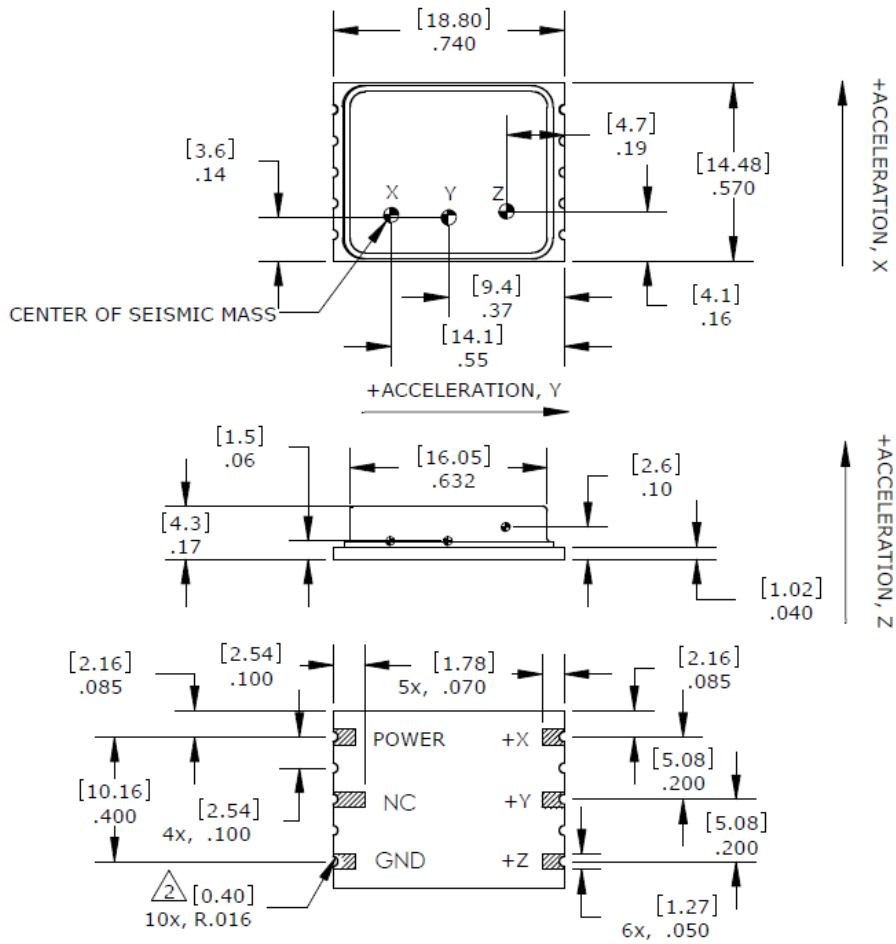
<sup>3</sup> The model 832M1 can be operated with 2.8V excitation but the full-scale range will be limited. See operating manual for details.

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

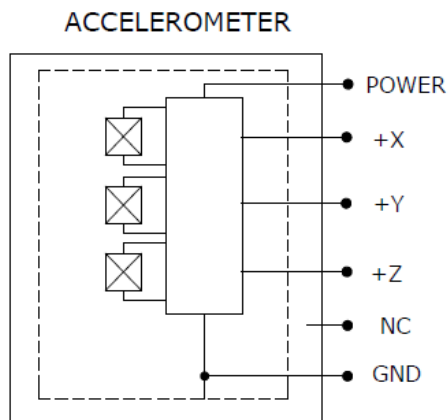
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## DIMENSIONS



## SCHEMATIC



## ORDERING INFORMATION

<b>832M1</b>	<b>GGGG</b>
<b>Range</b> 0025=25g 0050=50g 0100=100g 0200=200g 0500=500g	

Example;  
832M1-0500  
Model 832M1, 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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