MODEL 832M1 ACCELEROMETER

SPECIFICATIONS

- **Triaxial Piezoelectric Accelerometer**
- **<22µA 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 ±25g to ±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

- ±25g to ±500g Dynamic Range
- Low Cost Triaxial
- Hermetically Sealed
- Piezo-ceramic Crystals
- -40° to +125°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.

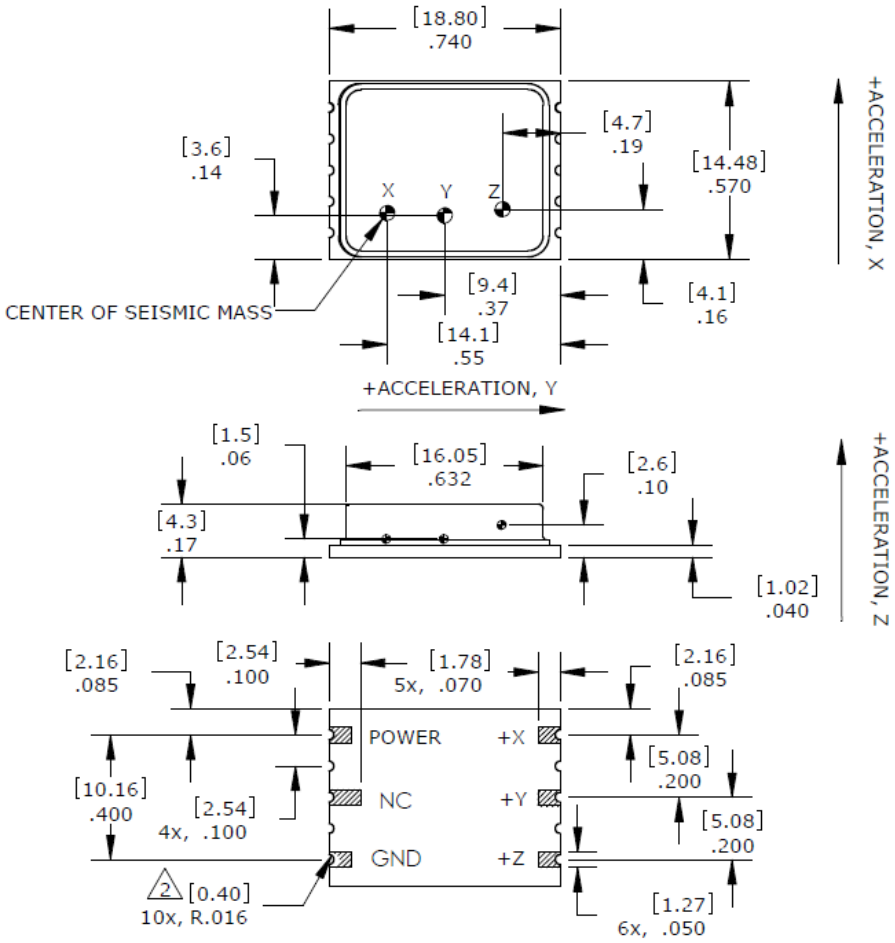
Parameters						
DYNAMIC						**Notes**
Range (g)	±25	±50	±100	±200	±500	
Sensitivity (mV/g)	50.0	25.0	12.5	6.25	2.5	±30%
Frequency Response (Hz)	2-6000	2-6000	2-6000	2-6000	2-6000	±2dB
Natural Frequency (Hz)	>10000	>10000	>10000	>10000	>10000	
Non-Linearity (%FSO)	±2	±2	±2	±2	±2	
Transverse Sensitivity (%)	<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

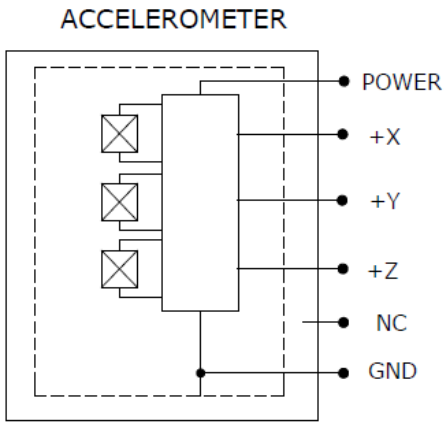
[1] A lower current consumption of 4 micro-amps is available on model 832.
[2] The model 832M1 is not to be reflow soldered at high temperature, manual soldering is recommended. See operating manual.
[3] The model 832M1 can be operated with 2.8V excitation but the full-scale range will be limited. See operating manual for details.

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

DIMENSIONS



SCHEMATIC



ORDERING INFORMATION

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

Example;
832M1-0500
Model 832M1, 500g range