

Model 832 Accelerometer



Triaxial Piezoelectric Accelerometer
<4 μ 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 $\pm 25g$ to $\pm 500g$ ranges and provides a flat frequency response up to 2kHz. The model 832M1 provides an extended frequency range to 6kHz.

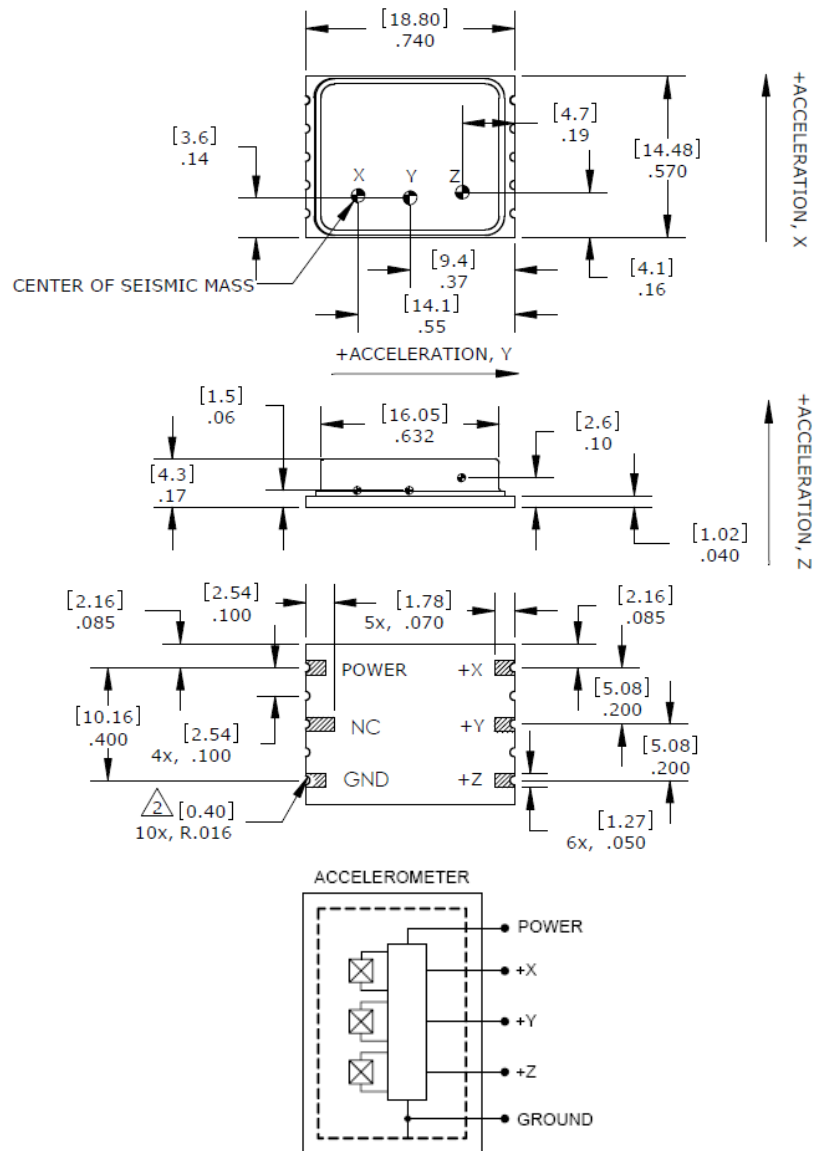
FEATURES

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

APPLICATIONS

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

dimensions



Model 832 Accelerometer

performance specifications

All values are typical at +24°C, 100Hz and 3.3Vdc excitation unless otherwise stated. Measurement Specialties reserves the right to update and change these specifications without notice. Standard product parameters are described in PSC-1001 for Embedded AC Accelerometers.

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	
ELECTRICAL						
Bias Voltage (Vdc)	Exc Voltage / 2	Exc Voltage / 2	Exc Voltage / 2	Exc Voltage / 2	Exc Voltage / 2	
Total Supply Current (µA)	<4	<4	<4	<4	<4	
Excitation Voltage (Vdc) ³	3.3 to 5.5	3.3 to 5.5	3.3 to 5.5	3.3 to 5.5	3.3 to 5.5	
Output Impedance (Ω)	<100	<100	<100	<100	<100	
Insulation Resistance (MΩ)	>100	>100	>100	>100	>100	@100Vdc
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
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 application note.

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

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

The information in this sheet has been carefully reviewed and is believed to be accurate; however, no responsibility is assumed for inaccuracies. Furthermore, this information does not convey to the purchaser of such devices any license under the patent rights to the manufacturer. Measurement Specialties, Inc. reserves the right to make changes without further notice to any product herein. Measurement Specialties, Inc. makes no warranty, representation or guarantee regarding the suitability of its product for any particular purpose, nor does Measurement Specialties, Inc. assume any liability arising out of the application or use of any product or circuit and specifically disclaims any and all liability, including without limitation consequential or incidental damages. Typical parameters can and do vary in different applications. All operating parameters must be validated for each customer application by customer's technical experts. Measurement Specialties, Inc. does not convey any license under its patent rights nor the rights of others.

ordering info

PART NUMBERING Model Number+Range

832-GGGG
|
| ____ Range (0200 is 200g)

Example: 832-0200
Model 832, 200g