Model 832 Accelerometer

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

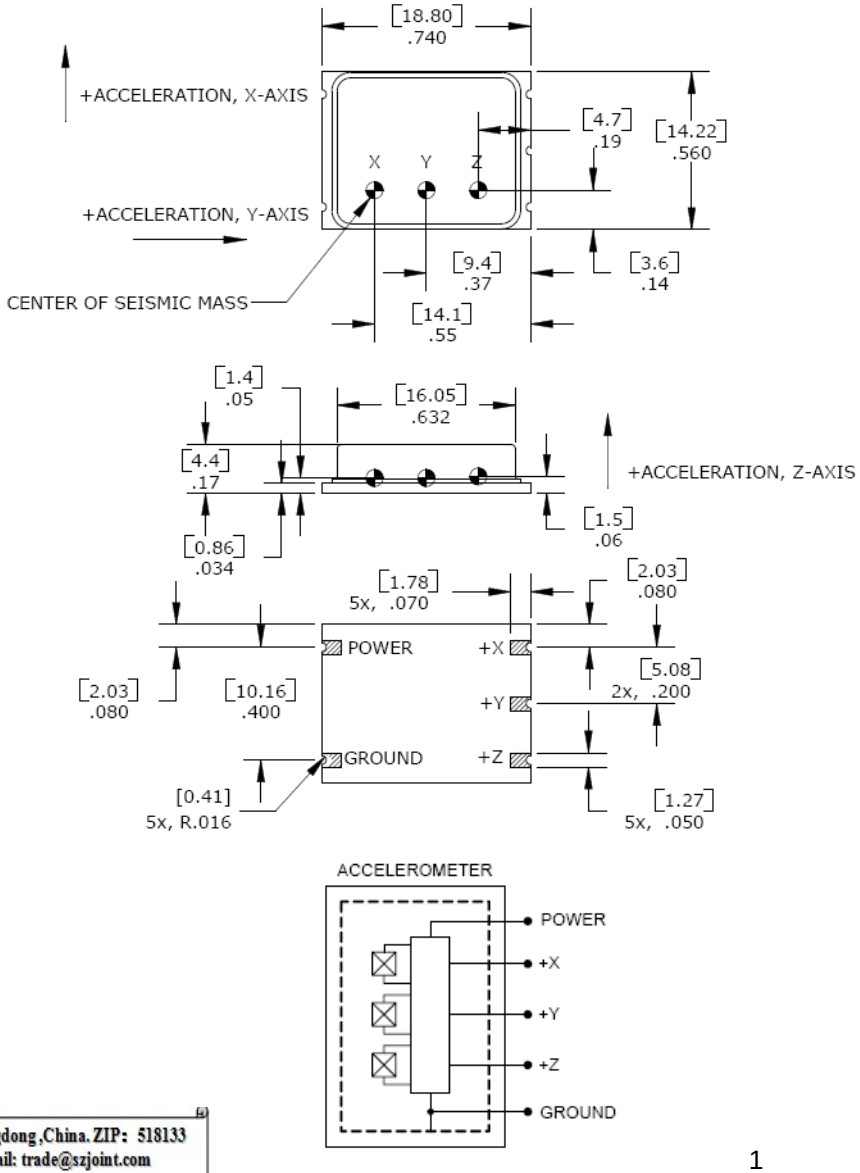
FEATURES

- ±25g to ±500g Dynamic Range
- Low Cost Triaxial
- Hermetically Sealed
- Piezo-ceramic Crystals
- -20° to +80°C Operating Range
- -40° to +125°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



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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						
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) [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 (%)	<8	<8	<8	<8	<8	
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]	3.0 to 5.5	3.0 to 5.5	3.0 to 5.5	3.0 to 5.5	3.0 to 5.5	
Output Impedance (Ω)	<100	<100	<100	<100	<100	
Insulation Resistance (MΩ)	>100	>100	>100	>100	>100	@100Vdc
Broadband Noise (μV)	510	250	128	64	60	2Hz-10kHz
Spectral Noise (μg/√Hz)	400	400	400	400	800	@ 10Hz
Spectral Noise (μg/√Hz)	160	160	160	160	240	@ 100Hz
Spectral Noise (μg/√Hz)	64	64	64	64	160	@ 1000Hz
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)	3.0					

[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

Wiring color code: See schematic

ordering info

PART NUMBERING Model Number+Range

832-GGGG
I
I_____ Range (0200 is 200g)

Example: 832-0200
Model 832, 200g

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