

# Model 832 Accelerometer

Triaxial Piezoelectric Accelerometer  
 <4 $\mu$ A Current Consumption  
 Full Signal and Power Conditioning  
 Circuit Board Mountable



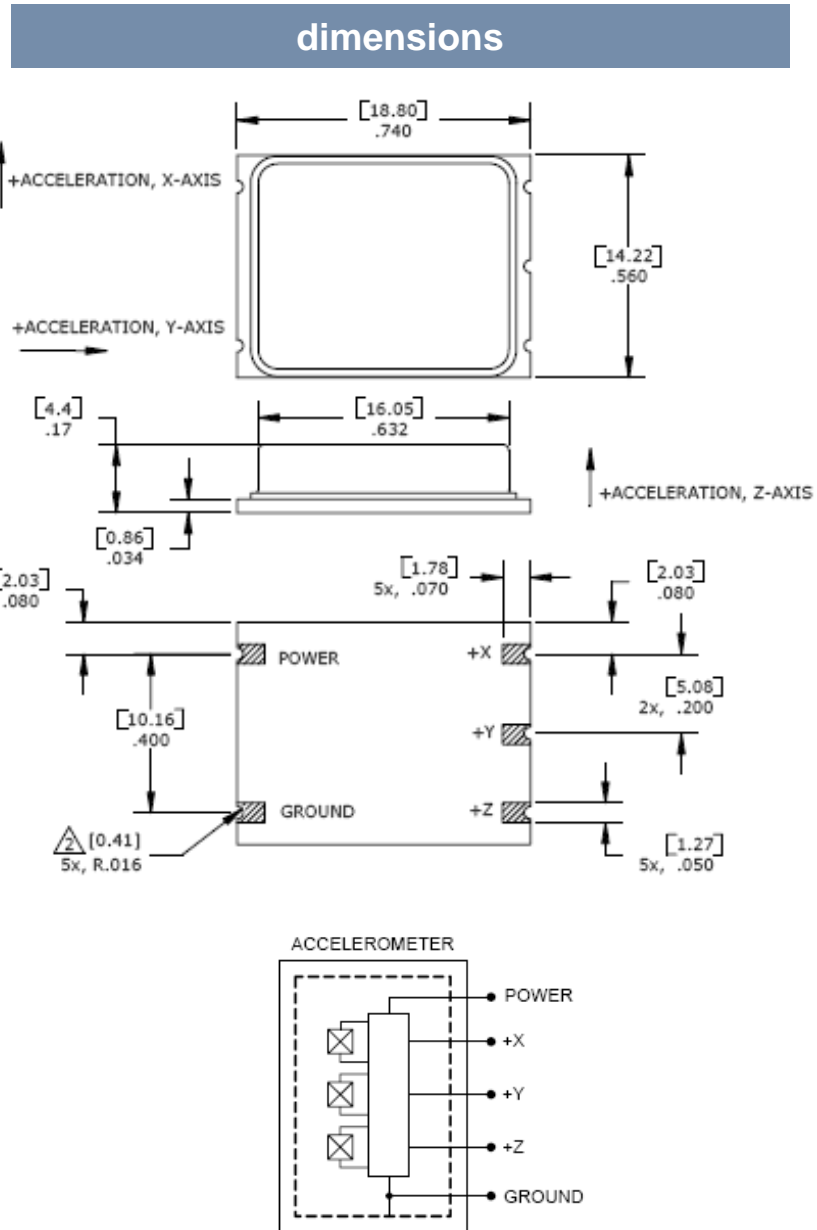
**The Model 832** is a low cost, board mountable triaxial accelerometer. Featuring stable piezo-ceramic crystals, the accelerometer incorporates full power and signal conditioning with a maximum current consumption of 4 micro-amps. The model 832 is available in  $\pm 100g$  to  $\pm 500g$  ranges and provides a flat frequency response up to 2kHz. The model 832M1 provides an extended frequency range to 6kHz.

## FEATURES

- $\pm 100g$  to  $\pm 500g$  Dynamic Range
- Low Cost Triaxial
- Hermetically Sealed
- Piezo-ceramic Crystals
- $-20^{\circ}$  to  $+80^{\circ}C$  Operating Range
- Single Axis Configurations Available

## APPLICATIONS

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



# 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.

Parameters				Notes
<b>DYNAMIC</b>				
Range (g)	±100	±200	±500	
Sensitivity (mV/g)	12.5	6.25	2.5	±30%
Frequency Response (Hz) <sup>1</sup>	2-2000	2-2000	2-2000	±2dB
Natural Frequency (Hz)	>10000	>10000	>10000	
Non-Linearity (%FSO)	±2	±2	±2	
Transverse Sensitivity (%)	<5	<5	<5	
Shock Limit (g)	10000	10000	10000	
<b>ELECTRICAL</b>				
Bias Voltage (Vdc)	Exc Voltage / 2	Exc Voltage / 2	Exc Voltage / 2	
Total Supply Current (µA)	<4	<4	<4	
Excitation Voltage (Vdc)	3.3 to 5.5	3.3 to 5.5	3.3 to 5.5	
Output Impedance (Ω)	<100	<100	<100	
Insulation Resistance (MΩ)	>100	>100	>100	
Residual Noise (µg/√Hz)	50	100	200	@100Vdc 2Hz to 10kHz
Shielding	100%			
Ground Isolation	Isolated from Mounting Surface			
<b>ENVIRONMENTAL</b>				
Temperature Response (%)	±10	±10		
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			
Cable	Not applicable			
Weight (grams)	3.0			
Mounting	Not applicable			
Mounting Torque	Not applicable			
AWG	Not applicable			

<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, manual soldering is recommended. See application note.

**Wiring color code:** See schematic

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## ordering info

PART NUMBERING Model Number+Range

832-GGGG  
|  
| \_\_\_\_ Range (0200 is 200g)

Example: 832-0200  
Model 832, 200g