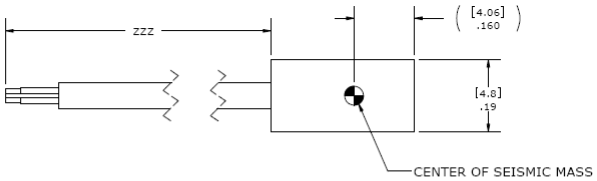
MODEL 52M30 ACCELEROMETER

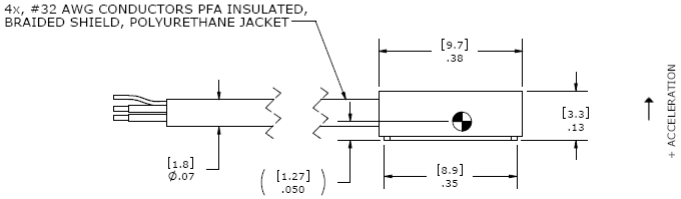
SPECIFICATIONS

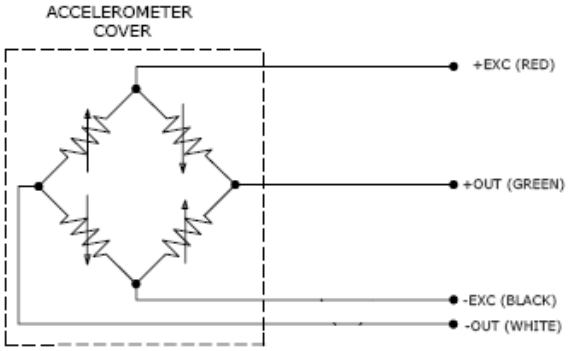
- **Small Size, Light Weight**
- **Jacketed & Shielded Cable**
- **Silicon MEMS Technology**
- **±50g to ±6000g Ranges**

The Model 52M30 accelerometer has an advanced piezoresistive MEMS sensing element which offers excellent dynamic range and stability. This unit features a full bridge output with an operating temperature range from -40 to +90°C and measurement ranges of ±50g to ±6,000g. A slight amount of gas damping provides outstanding shock survivability and a flat amplitude response to 7kHz.

DIMENSIONS







FEATURES

- 2-10 Vdc Excitation
- ±50g to ±6,000g Ranges
- DC Response
- ±10,000g Shock Protection
- Transverse Sensitivity <3%
- 26kHz Resonant Frequency
- Linearity ±1%
- Output Ratiometric to Excitation

APPLICATIONS

- Automotive crash testing
- High impact research
- Biomechanical studies
- Shock testing

PERFORMANCE SPECIFICATIONS

All values are typical at ±24°C, 80Hz and 10Vdc excitation unless otherwise stated. Measurement Specialties reserves the right to update and change these specifications without notice.

Parameters						
DYNAMIC						**Notes**
Range(g)	±50	±200	±500	±2000	±6000	
Sensitivity (mV/g) [1]	2.0	0.9	0.4	0.15	0.10	
Frequency Response (Hz)	0-400	0-600	0-800	0-2000	0-3000	±2%
	0-1000	0-1400	0-2000	0-5000	0-5000	±5%
	0-1400	0-1900	0-2800	0-7000	0-7000	±1dB
Resonant Frequency (Hz)	4000	8000	15000	26000	26000	
Non-Linearity (% FSO)	±1	±1	±1	±1	±1	
Transverse Sensitivity (%)	<3	<3	<3	<3	<3	
Shock Limit (g)	5000	5000	5000	5000	10000	
ELECTRICAL						
Zero Acceleration Output (mV)	<±50					
Excitation (Vdc)	2 to 10					
Input Resistance	2400-6000					
Output Resistance (Ω)	2400-6000					
Insulation Resistance (MΩ)	>100					@100Vdc
Ground Isolation	Isolated from mounting surface					
ENVIRONMENTAL						
Thermal Zero Shift (%FSO/°C(%FSO/°F))*	±0.05 (±0.03)					0°C to +50°C
Thermal Sensitivity Shift (%/°C(%/°F))*	-0.20 ±0.05 (-0.11 ±0.03)					0°C to +50°C
Operating Temperature (°C)	-40 to +90					
Storage Temperature (°C)	-40 to +90					
Humidity	Epoxy Sealed, IP61					
PHYSICAL						
Case Material	Anodized Aluminum					
Cable (Integral 30 Foot Cable)	4x #32 AWG PFA Insulated, Braided Shield, PU Jacket					
Weight (grams)	0.5					Cable not included
Mounting	Adhesive					

[1] Output is ratiometric to excitation voltage

Calibration supplied:	CS-SENS-0100	NIST Traceable Amplitude Calibration at 80Hz
Optional accessories:	AC-D02346	Triaxial Mounting Block
	121	3-Channel Precision Low Noise DC Amplifier
	140A	Auto-zero Inline Amplifier

ORDERING INFORMATION

PART NUMBERING Model Number+Range+Cable Length+Options

52M30-GGGG-CCC-ZZ
I I I_____Options
I I_____Cable (360 is 360 inches)
I_____Range (0500 is 500 g)

Optional Dash Numbers
-01 5Vdc Calibration
-02 2Vdc Calibration

Example: 52M30-2000-360
Model 52M30, 2000g Full Scale Range, 360 inches cable, No Options