



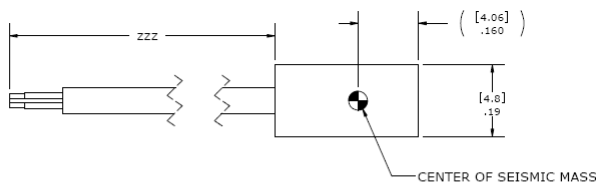
MODEL 52M30 ACCELEROMETER

SPECIFICATIONS

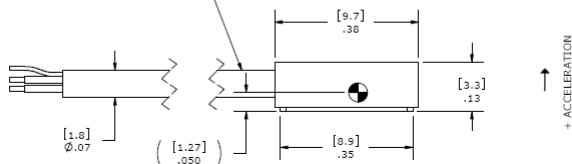
- Small Size, Light Weight
- Jacketed & Shielded Cable
- Silicon MEMS Technology
- $\pm 50g$ to $\pm 6000g$ Ranges

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 $+90^{\circ}\text{C}$ and measurement ranges of $\pm 50g$ to $\pm 6,000g$. A slight amount of gas damping provides outstanding shock survivability and a flat amplitude response to 7kHz.

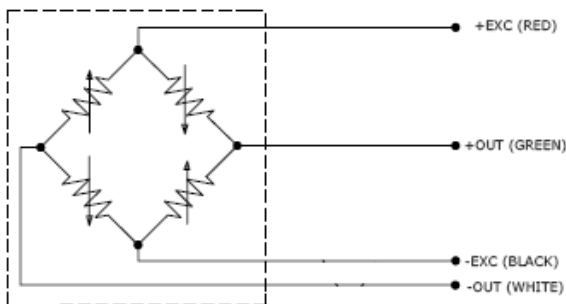
DIMENSIONS



4x, #32 AWG CONDUCTORS PFA INSULATED, BRAIDED SHIELD, POLYURETHANE JACKET



ACCELEROMETER COVER



FEATURES

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

APPLICATIONS

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

PERFORMANCE SPECIFICATIONS

All values are typical at $\pm 24^{\circ}\text{C}$, 80Hz and 10Vdc excitation unless otherwise stated. Measurement Specialties reserves the right to update and change these specifications without notice.

Parameters

DYNAMIC

	± 50	± 200	± 500	± 2000	± 6000	Notes
Range(g)						
Sensitivity (mV/g) ¹	2.0	0.9	0.4	0.15	0.10	
Frequency Response (Hz)	0-400 0-1000 0-1400	0-600 0-1400 0-1900	0-800 0-2000 0-2800	0-2000 0-5000 0-7000	0-3000 0-5000 0-7000	$\pm 2\%$ $\pm 5\%$ $\pm 1\text{dB}$
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)	$<\pm 50$					
Excitation (Vdc)	2 to 10					
Input Resistance	2400-6000					
Output Resistance (Ω)	2400-6000					
Insulation Resistance ($M\Omega$)	>100					@100Vdc
Ground Isolation	Isolated from mounting surface					

ENVIRONMENTAL

Thermal Zero Shift (%FSO/ $^{\circ}\text{C}$ (%FSO/ $^{\circ}\text{F}$))*	$\pm 0.05 (\pm 0.03)$					0°C to $+50^{\circ}\text{C}$
Thermal Sensitivity Shift (%/ $^{\circ}\text{C}$ (%/ $^{\circ}\text{F}$))*	$-0.20 \pm 0.05 (-0.11 \pm 0.03)$					0°C to $+50^{\circ}\text{C}$
Operating Temperature ($^{\circ}\text{C}$)	-40 to +90					
Storage Temperature ($^{\circ}\text{C}$)	-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					Cable not included
Weight (grams)	0.5					
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

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ORDERING INFORMATION

PART NUMBERING Model Number+Range+Cable Length+Options

52M30-GGGG-CCC-ZZ

Diagram showing the breakdown of the part number: GGGG is Options, CCC is Cable (360 is 360 inches), and ZZ is 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

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