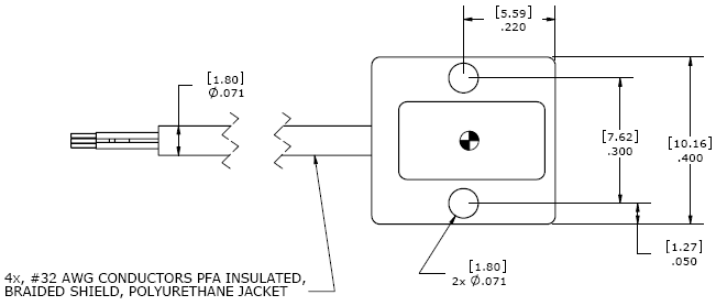
MODEL 52F ACCELEROMETER

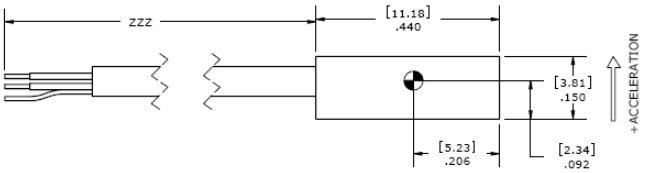
SPECIFICATIONS

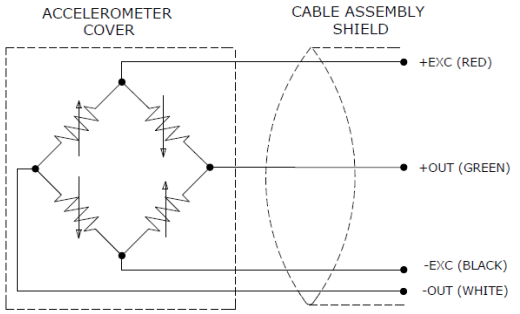
- **Small Size, Aluminum Housing**
- **Low Noise, Jacketed Cable**
- **±50g to ±2000g Range**
- **Silicon MEMS Technology**
- **High Over Range Protection**

The **Model 52F 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. A slight amount of gas damping provides outstanding shock survivability and a flat amplitude response to 7kHz.

DIMENSIONS







FEATURES

- 2-10 Vdc Excitation
- Measures Static Acceleration
- ±5,000 g's Shock Protection
- Transverse sensitivity <3%
- Weight <1.0 grams
- 26kHz Resonant Frequency
- Linearity ±1%

APPLICATIONS

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

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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	
Sensitivity (mV/g) [1]	2	0.9	0.4	0.15	
Frequency Response (Hz)	0-1000	0-1400	0-2000	0-4500	±5%
	0-1400	0-1900	0-2800	0-6000	±1dB
Resonant Frequency (Hz)	4000	8000	15000	26000	
Non-Linearity (% FSO)	±1	±1	±1	±1	
Transverse Sensitivity (%)	<3	<3	<3	<3	1% Option
Shock Limit (g)	5000	5000	5000	5000	
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, IP65				
PHYSICAL					
Case Material	Anodized Aluminum				
Cable (Integral 30 Foot Cable)	4x #32 AWG PFA Insulated, Braided Shield, PU Jacket				
Weight (grams)	1.0				Cable not included
Mounting	2x #0-80 x 1/4” Socket Head Cap Screws				Torque 3 lb-in

Calibration supplied:	CS-FREQ-0100	NIST Traceable Amplitude Calibration from 20Hz to ±1dB Frequency Limit
Optional accessories:	121	Three Channel DC Signal Conditioner Amplifier
	140A	Auto-zero Inline Amplifier

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ORDERING INFORMATION

PART NUMBERING Model Number+Range+Cable Length+Options

52F-GGGG-CCCT-ZZ
I I I I_____Options
I I I_____1% Transverse Sensitivity when “T” is present.
I I_____Cable (360 is 360 inches)
I_____Range (0500 is 500 g)

Optional Dash Numbers
-001 5Vdc Calibration
-002 2Vdc Calibration

Example: 52F-2000-360
Model 52F, 2000g, 360” (30ft) Cable), No Options.

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