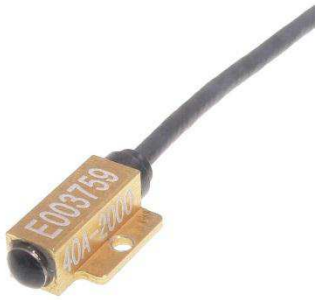
MODEL 40A ACCELEROMETER



SPECIFICATIONS

- **±25g to ±2000g Dynamic Range**
- **Fluid Damped, DC Response**
- **Compliant to SAE J2570**
- **Temperature Compensated**

The **Model 40A Accelerometer** is a small piezoresistive accelerometer designed to be compliant with the latest SAE J211/J2570 (AUG2009) specifications. This unit features built-in mechanical stops, anodized aluminum alloy housing and flexible cable output. The sensing element is fluid damped to extend useful frequency range and reduce the adverse effect of high frequencies ringing caused by sensor resonance

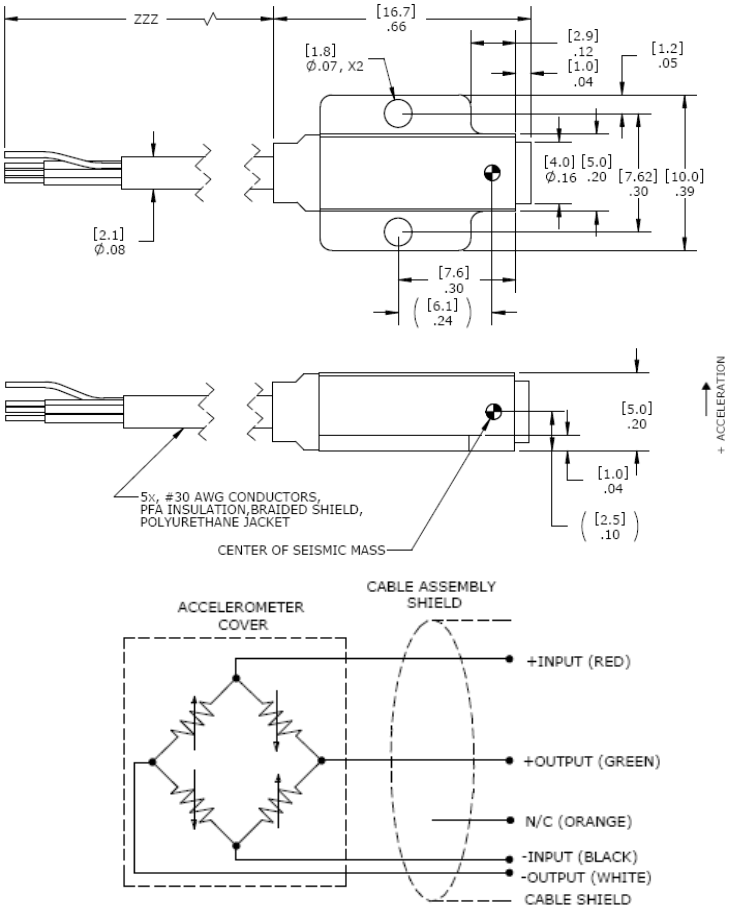
FEATURES

- Silicon Piezoresistive Elements
- ±25 to ±2,000 g Ranges
- 2-10 Vdc Excitation
- -20 to +80 ºC Temperature Range
- Critically Damped Sensor
- Low Transverse Sensitivity
- <±20 mV Zero Offset

APPLICATIONS

- Safety Crash Testing
- Auto
- Truck
- Recreational Vehicles
- Shock Testing

DIMENSIONS



PERFORMANCE SPECIFICATIONS

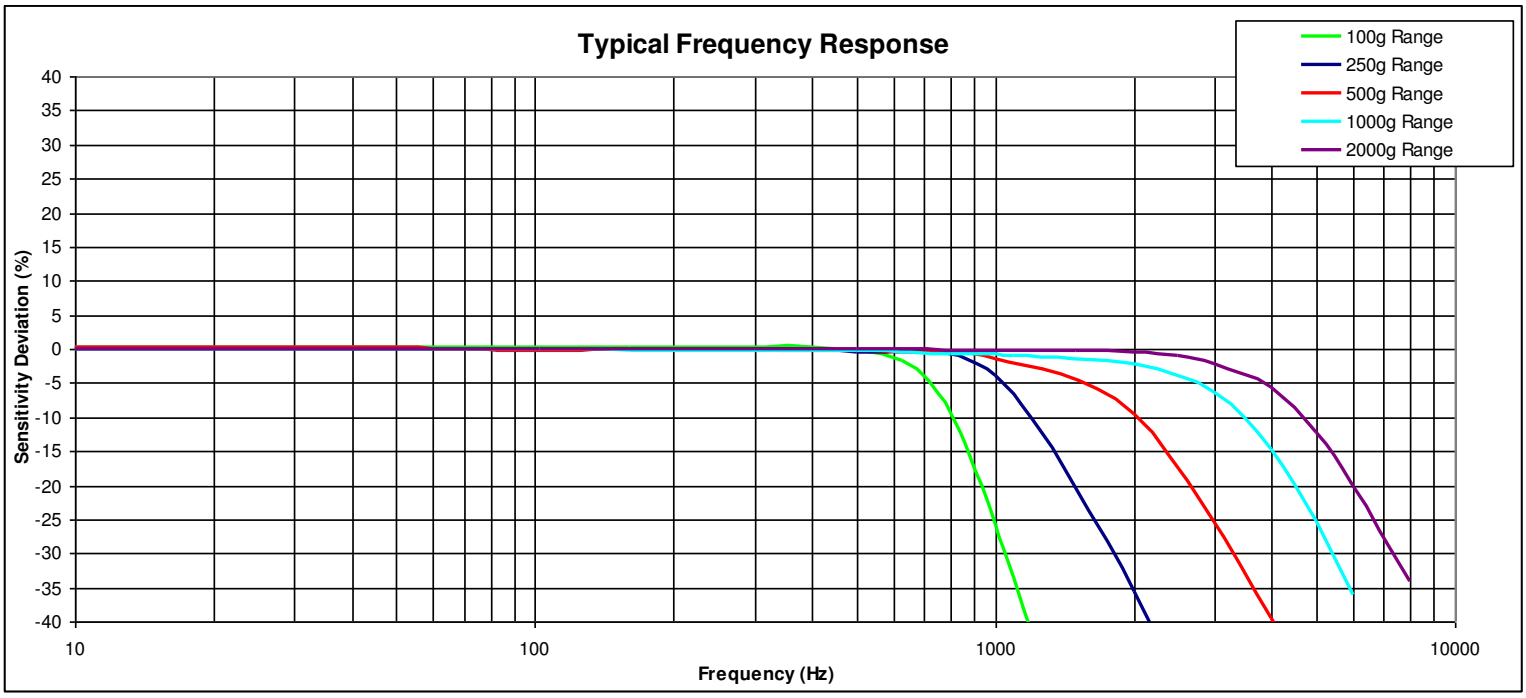
All values are typical at ±24°C, 80Hz and 10Vdc excitation unless otherwise stated. Measurement Specialties reserves the right to update and change these specifications without notice.

Parameters	-0025	-0100	-0250	-0500	-1000	-2000	
DYNAMIC							**Notes**
Range(g)	±25	±100	±250	±500	±1000	±2000	
Sensitivity (mV/g) [1]	6.0	1.5	0.60	0.30	0.15	0.075	@10Vdc excitation
Frequency Response (Hz)	0-200	0-400	0-600	0-1100	0-1500	0-2500	+2.5%/-8%
	0-350	0-675	0-1100	0-2000	0-2700	0-4500	+2.5%/-20%
Natural Frequency (Hz)	>800	>1500	>2500	>4500	>6000	>10000	
Non-Linearity (% FS)	±1	±1	±1	±1	±1	±1	
Damping Ratio	0.7	0.7	0.7	0.7	0.7	0.7	Typical
Transverse Sensitivity (%)	<3	<3	<3	<3	<3	<3	
Shock Limit (g)	5000	10000	10000	10000	10000	10000	

ELECTRICAL		
Zero Acceleration Output (mV)	<±20	
Excitation (Vdc)	2 to 10	
Input Resistance (Ω)	2000	Typical
Output Resistance (Ω)	1000	Typical
Insulation Resistance (MΩ)	>100	@100Vdc
Ground Isolation	Isolated from mounting surface.	
ENVIRONMENTAL		
Thermal Zero Shift (%FSO/°C)	±0.05	From -10 to +50°C
Thermal Sensitivity Shift (%/°C)	±0.1	From -10 to +50°C
Operating Temperature (°C)	-20 to +80	
Storage Temperature (°C)	-20 to +80	
Humidity	Epoxy Sealed, IP61	
PHYSICAL		
Case Material / Cover Material	Anodized Aluminum	
Cable (Integral 30 Foot Cable)	5x #30 AWG Conductors, PFA Insulated, Braided Shield, PU Jacket	
Weight (grams)	<5	Cable Not Included
Mounting	2x 0-80 x 3/16 socket head cap screws	
Mounting Torque	3 lb-in (0.7 N-m)	
OPTION		
Model 40L-GGGG-ZZZ	With transverse sensing direction (parallel to mounting surface)	

[1] Output is ratiometric to excitation voltage. Tolerance is +50%/-30%.

Calibration supplied:	CS-FREQ-0100	NIST Traceable Amplitude Calibration from 20Hz to Upper Frequency Limit
Supplied accessories:	AC-A03923	2x #0-80 (3/16" length) Socket Head Cap Screw, 2x #0 Washer, 1x Allen Key
Optional accessories:	MTG-E2	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

40A-GGGG-ZZZT-XXX
I I I I_____Options (otherwise leave blank)
I I I_____1% Transverse Sensitivity when "T" is present
I I_____Cable (360 is 360 inches)
I_____Range (0100 is 100 g)

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

Example: 40A-2000-360
Model 40A, 2000g, 360" (30ft) Cable, No Options

Option: Model 40L-GGGG-ZZZ with transverse sensing direction (parallel to mounting surface)

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