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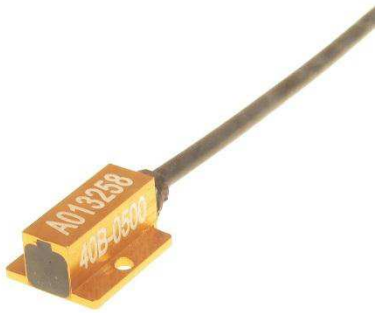
TE connectivity SENSOR SOLUTIONS

MODEL 40B ACCELEROMETER

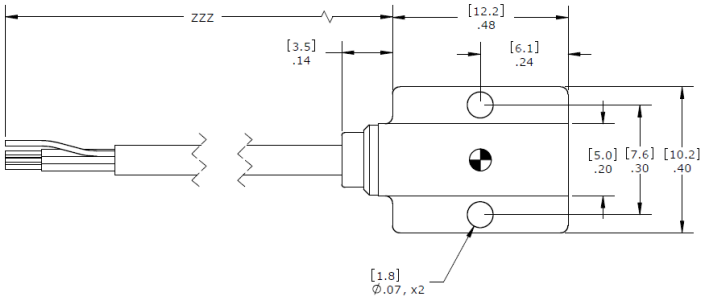


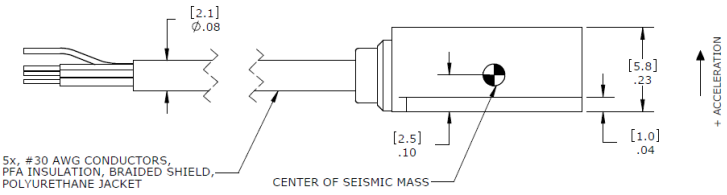
SPECIFICATIONS

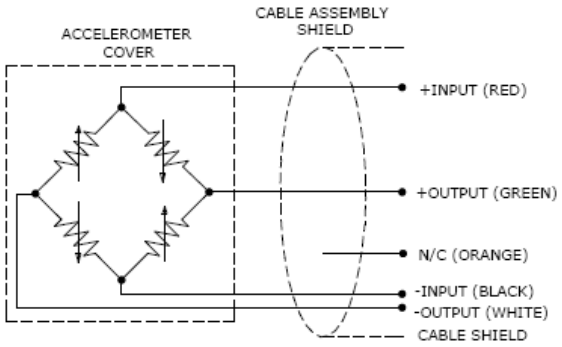
- **±100g to ±2000g Dynamic Rang0065**
- **Fluid Damped, DC Response**
- **Compliant to SAE J2570**
- **Temperature Compensated**

The **Model 40B 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.

DIMENSIONS







FEATURES

- Silicon Piezoresistive Elements
- ±100 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
- Pedestrian Impact Testing
- Dummy Instrumentation
- Recreational Vehicles
- Shock Testing

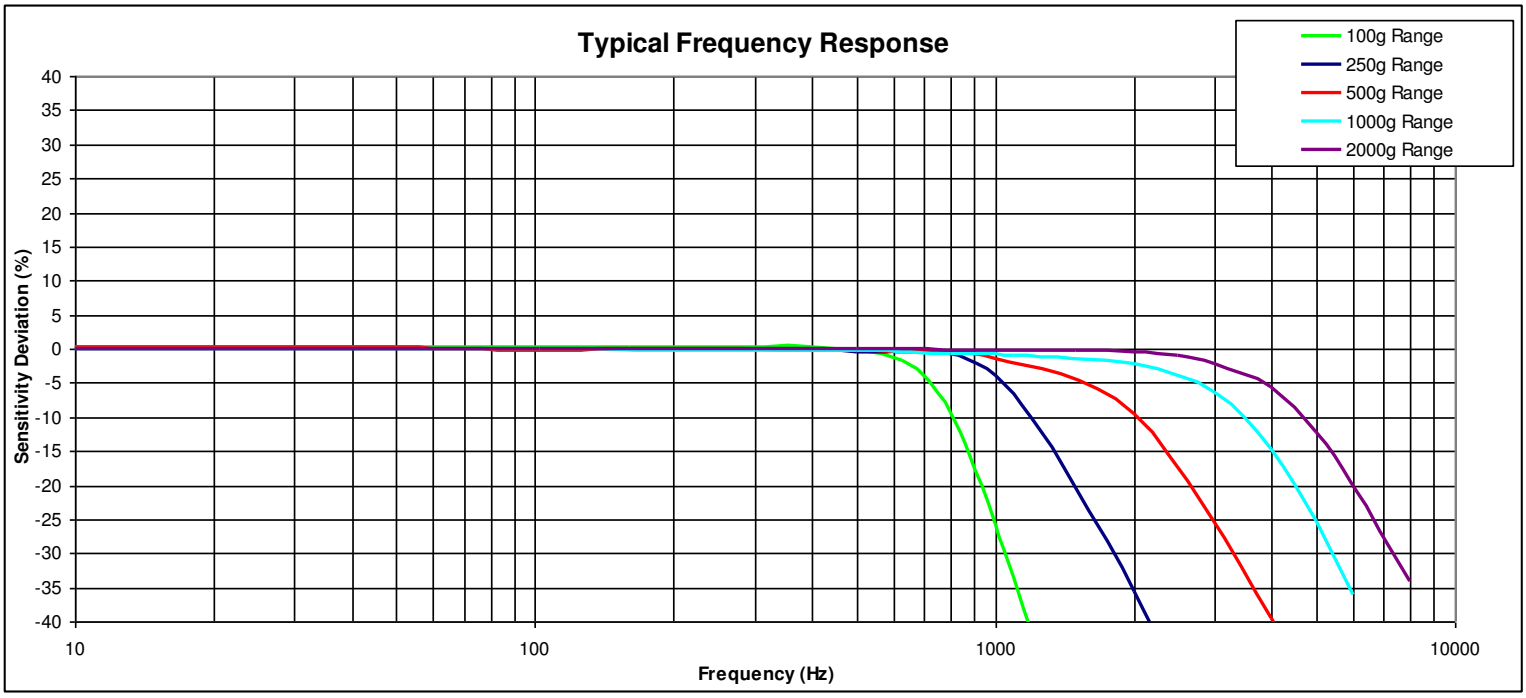
PERFORMANCE SPECIFICATIONS

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	-0100	-0250	-0500	-1000	-2000	
DYNAMIC						**Notes**
Range(g)	±100	±250	±500	±1000	±2000	
Sensitivity (mV/g) [1]	1.5	0.60	0.30	0.15	0.075	@10Vdc excitation
Frequency Response (Hz)	0-400	0-600	0-1100	0-1500	0-2500	+2.5%/-8%
	0-675	0-1100	0-2000	0-2700	0-4500	+2.5%/-20%
Natural Frequency (Hz)	>1500	>2500	>4500	>6000	>10000	
Non-Linearity (% FS)	±1	±1	±1	±1	±1	
Damping Ratio	0.7	0.7	0.7	0.7	0.7	Typical
Transverse Sensitivity (%)	<3	<3	<3	<3	<3	
Shock Limit (g)	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 40BL-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-E4	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

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

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

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