

Model 4000A Accelerometer



Piezoresistive MEMS Accelerometer

Signal Conditioned Output

Temperature Calibrated

Low Cost, Lightweight

DESCRIPTION

The **Model 4000A** is an economical signal conditioned accelerometer with integral temperature compensation. The accelerometer incorporates a 2nd generation piezoresistive MEMS sensor providing outstanding performance. The accelerometer is packaged in a rugged aluminum housing ideal for transportation and instrumentation testing. The signal conditioned output incorporates a 2.5V reference that offers the user a differential or single-ended output.



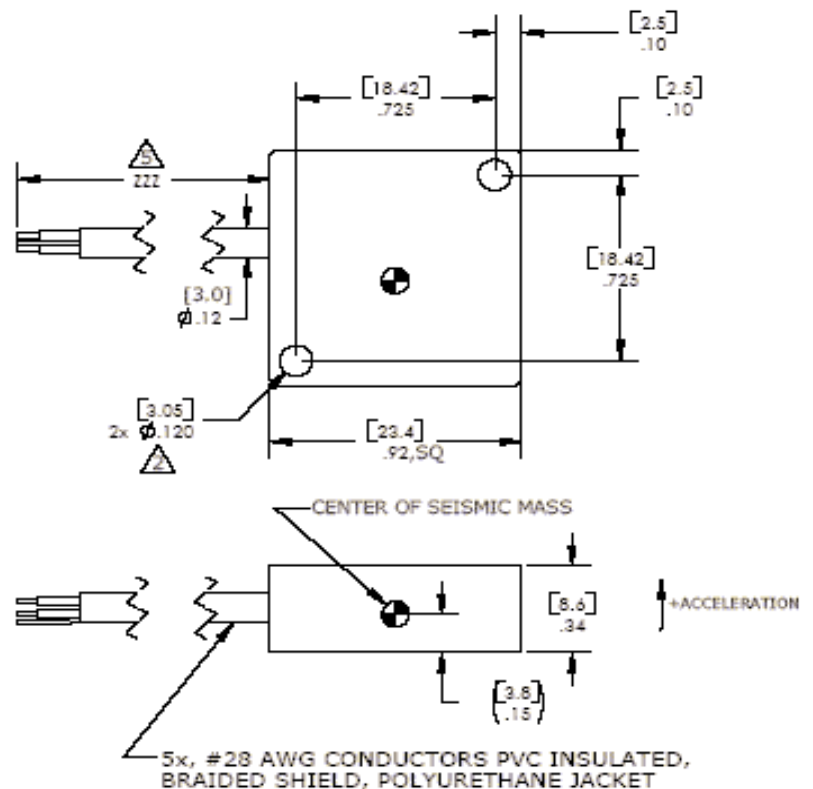
FEATURES

- ◆ $\pm 2g$ to $\pm 200g$ Dynamic Range
- ◆ High Over-Range Protection
- ◆ Signal Conditioned Output
- ◆ Low Power Consumption
- ◆ Lightweight
- ◆ Gas Damping
- ◆ Integral Cable – Connector Options

APPLICATIONS

- ◆ Low Frequency Monitoring
- ◆ Transportation
- ◆ Vibration Sensing
- ◆ Test & Instrumentation
- ◆ Machine Control
- ◆ Motion Analysis
- ◆ Tilt

dimensions



Vibration Sensors Technical Support:
Tel: 949-716-5377
Fax: 949-916-5677
Email: vibration@meas-spec.com

measurement
SPECIALTIES

Model 4000A Accelerometer

performance specifications

All values are typical at 25°C, 100Hz and 12Vdc excitation unless otherwise stated. Measurement Specialties reserves the right to update and change these specifications without notice.

Parameters

DYNAMIC

Range	±2	±5	±10	±20	Units	Notes
Sensitivity	1000	400	200	100	mV/g	
Frequency Response	0-200	0-300	0-350	0-600	Hz	±5%
Residual Noise	650	400	300	400	µV RMS	

Range	±50	±100	±200	Units	Notes
Sensitivity	40	20	10	mV/g	
Frequency Response	0-800	0-1300	0-1500	Hz	±5%
Residual Noise	500	500	500	µV RMS	

Non-Linearity			±0.5	% FSO	
Transverse Sensitivity (Max)			±3	%	±1% Typical
Zero Acceleration Output			2.50±.10	V	
Thermal Zero Shift (-20 to +85°C)			±.028	% FSO/°C	Maximum
Thermal Sensitivity Shift (-20 to +85°C)			±.028	%/°C	Maximum

ELECTRICAL

Excitation Voltage			8 to 32	Vdc	
Excitation Current			5.0	mA	Typical
Bias Voltage			2.5	Vdc	
Output Impedance			100	Ω	Maximum
Insulation Resistance (@ 50Vdc)			100	MΩ	Minimum
Ground Isolation			Isolated		

PHYSICAL

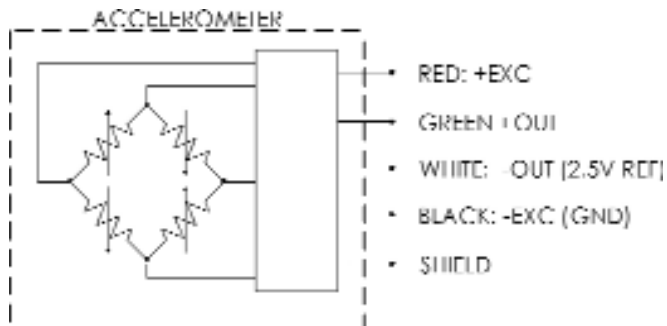
Housing			Hard anodized Aluminum		
Weight (cable not included)			8	grams	Maximum
Mounting			2x #4 or M3 Screws		3 lb-in mounting torque

ENVIRONMENTAL

Shock Limit			5,000	g's	
Operating Temperature			-20 to +85	°C	
Humidity			Epoxy Sealed		

Contact factory for custom temperature compensation options.

electrical schematic



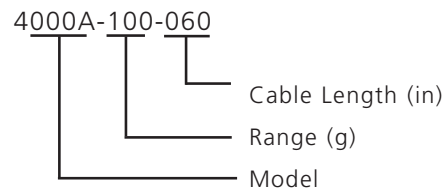
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ordering information



Note: For 5-pin female connector (used on obsolete model 3140 & 3145) contact factory for model 4001A.

CONTATO

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