

# MODEL 4630 Accelerometer

**MEMS Triaxial Accelerometer**

**DC Response**

**Accurate Temperature Compensation**

**Signal Conditioned Output**

**10,000g Over-Range Protection**

## DESCRIPTION

The Model 4630 is a low noise triaxial accelerometer offering both static and dynamic response. The piezoresistive accelerometer incorporates integral temperature compensation that provides a stable output over a wide operating range. The three independent circuit assemblies are hermetically sealed and can operate on common or separate power supplies. The advanced MEMS sensing elements are gas damped in order to provide a wide stable frequency response.



## FEATURES

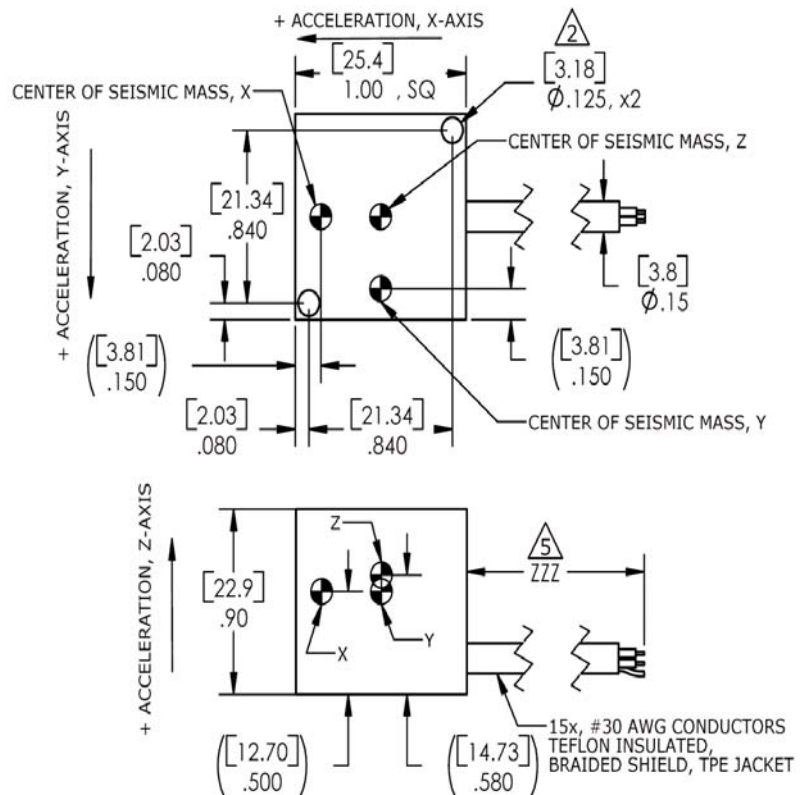
- ◆ Low Noise
- ◆ Three Independent Circuits
- ◆ Lower Current Consumption
- ◆ Ranges:  $\pm 2g$  to  $\pm 500g$
- ◆ DC Response
- ◆ High Over-Range Protection
- ◆ Temperature Compensation
- ◆ Low Transverse Sensitivity

## APPLICATIONS

- ◆ Transportation
- ◆ Vibration/Shock Monitoring
- ◆ Road Vehicle Testing
- ◆ Low Frequency Applications
- ◆ Modal Analyses

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

## dimensions



# Model 4630 Accelerometer

## performance specifications

All values are typical at 25°C, 100HZ and 12Vdc excitation unless otherwise stated.

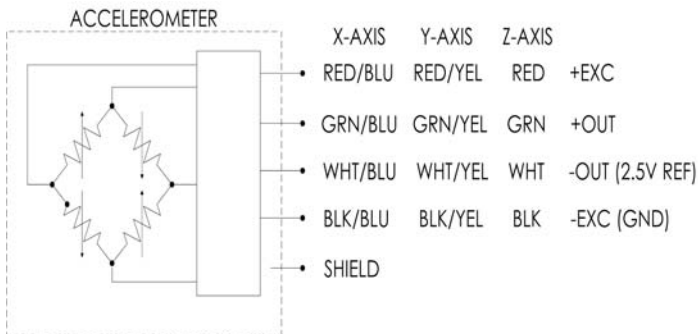
Measurement Specialties reserves the right to update and change these specifications without notice.

### PARAMETERS

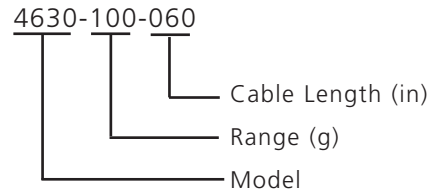
DYNAMIC						
Range	+/-2	+/-5	+/-10	+/-20	UNITS	NOTES
Sensitivity	1000	400	200	100	mV/g	
Frequency Response	0-250	0-300	0-400	0-700	Hz	+/- 5%
Residual Noise	650	400	300	400	µV rms	
Range	+/-50	+/-100	+/-200	+/-500	UNITS	NOTES
Sensitivity	40	20	10	4	mV/g	
Frequency Response	0-1000	0-1500	0-1500	0-1500	Hz	+/- 5%
Residual Noise	500	500	500	500	µV rms	
Non-Linearity			+/-1		% FSO	Maximum
Transverse Sensitivity (Max)			+/-3		%	+/-1% Typical
Zero Acceleration Output			2.50+/-0.05		V	
Thermal Zero Shift (-20 to +80°C)			+/- .019		% FSO/°C	Maximum
Thermal Sensitivity Shift (-20 to +80°C)			+/- .019		%/°C	Maximum
ELECTRICAL						
Excitation Voltage			8 to 24		Vdc	
Excitation Current			5.0		mA	Typical
Reference Voltage			2.5		Vdc	
Output Impedance			100		Ω	Maximum
Insulation Resistance (@ 50Vdc)			100		MΩ	Minimum
Ground Isolation			Isolated			
PHYSICAL						
Housing			Aluminum			Hard Anodized
Weight (cable not included)			20		grams	Maximum
Mounting			2x #4 or 2x M3 Screws			6 lb-in torque
ENVIRONMENTAL						
Shock Limit			10,000		g's	
Operating Temperature			-40 to +155		°C	
Humidity			Sensor assembly hermetically sealed			

Contact factory for custom temperature compensation options

### electrical schematic



### ordering information



### Vibration Sensors Technical Support:

Tel: 949-716-5377

Fax: 949-916-5677

Email: vibration@meas-spec.com