

MODEL 4603 Accelerometer

-54°C to +121°C Operating Range

Hermetically Sealed

High Sensitivity

MEMS Accelerometer

Flight Test Accelerometer

DESCRIPTION

The **Model 4603** is designed for both static and dynamic measurements in critical and demanding applications. The accelerometer is available in ranges from ± 2 to $\pm 500g$ and offers outstanding thermal performance over the complete operating range from -54°C to $+121^{\circ}\text{C}$. The model 4603 is hermetically sealed and incorporates an enhanced MEMS sensing element with integral over-range stops for high-g shock protection.



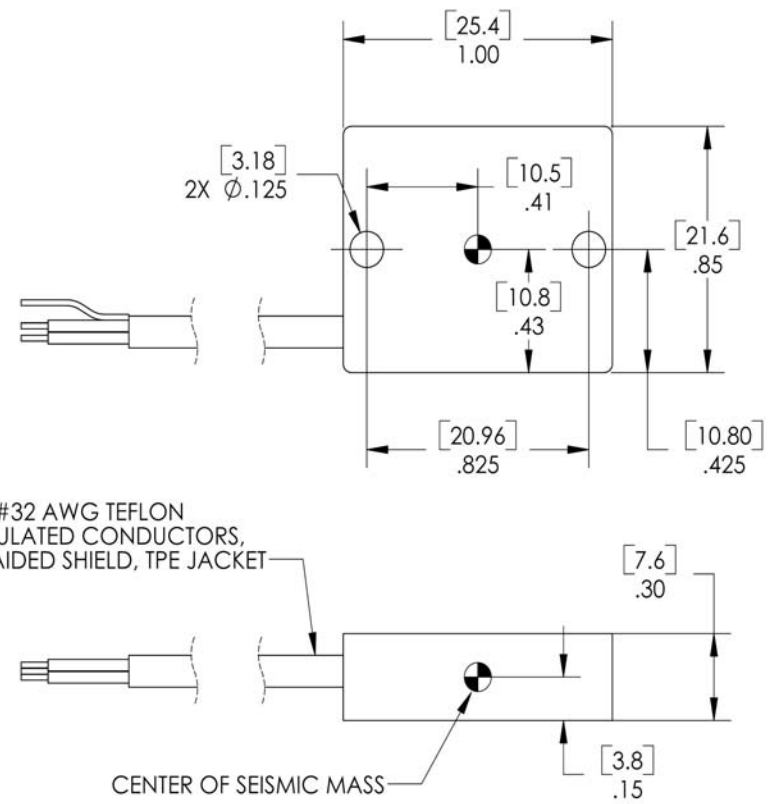
FEATURES

- ◆ $\pm 2g$ to $\pm 500g$ Dynamic Range
- ◆ Amplified Output
- ◆ Lower Power Consumption
- ◆ Gas Damping
- ◆ Integral Strain Relief
- ◆ DC, Low Frequency Response

APPLICATIONS

- ◆ Flight Testing
- ◆ Flutter & Nacelle Vibrations
- ◆ Weapons Development
- ◆ Structural Testing
- ◆ Test & Instrumentation
- ◆ Performance Testing
- ◆ Transportation

dimensions



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



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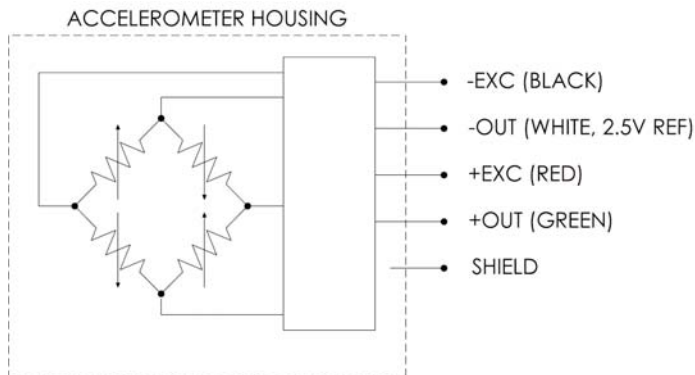
performance specifications

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.

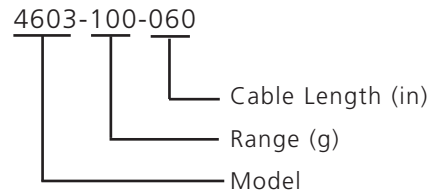
PARAMETERS

DYNAMIC						
Range	+/-2	+/-10	+/-30	+/-50	UNITS	NOTES
Sensitivity	1000	200	67	40	mV/g	Typical
Frequency Response	0-250	0-400	0-700	0-1000	Hz	+/- 5%
DYNAMIC (continued)						
Range	+/-100	+/-200	+/-500		UNITS	NOTES
Sensitivity	20	10	4		mV/g	Typical
Frequency Response	0-1500	0-1500	0-1500		Hz	+/- 5%
Non-Linearity		+/-1			% FSO	+/-0.1% Typical
Transverse Sensitivity (Max)		+/-3			%	+/-1% Typical
Zero Acceleration Output		2.50+/-0.05			V	Maximum
Thermal Zero Shift (-40 to +100°C)		+/-0.02			% FSO/°C	Maximum
Thermal Sensitivity Shift (-40 to +100°C)		+/-0.02			%/°C	Maximum
Damping Ratio		0.70				Gas Damped
ELECTRICAL						
Excitation Voltage		8 to 36			Vdc	
Excitation Current		5.0			mA	Typical
Reference Voltage		2.5			Vdc	
Output Impedance		100			Ohms	Maximum
Insulation Resistance (@ 50Vdc)		100			MΩ	Minimum
Ground Isolation		Isolated				
PHYSICAL						
Base and Lid Material		Aluminum				Hard Anodized
Weight		8			grams	
Mounting		2x #4 or 2x M3 Screws				6 lb-in mounting torque
ENVIRONMENTAL						
Shock Limit		10,000			g's	
Operating Temperature		-54 to +121			°C	
Humidity		Electronics & sensor element hermetically sealed				

electrical schematic



ordering information



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