

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°C. The model 4603 is hermetically sealed and incorporates an enhanced MEMS sensing element with integral over-range stops for high-g shock protection.



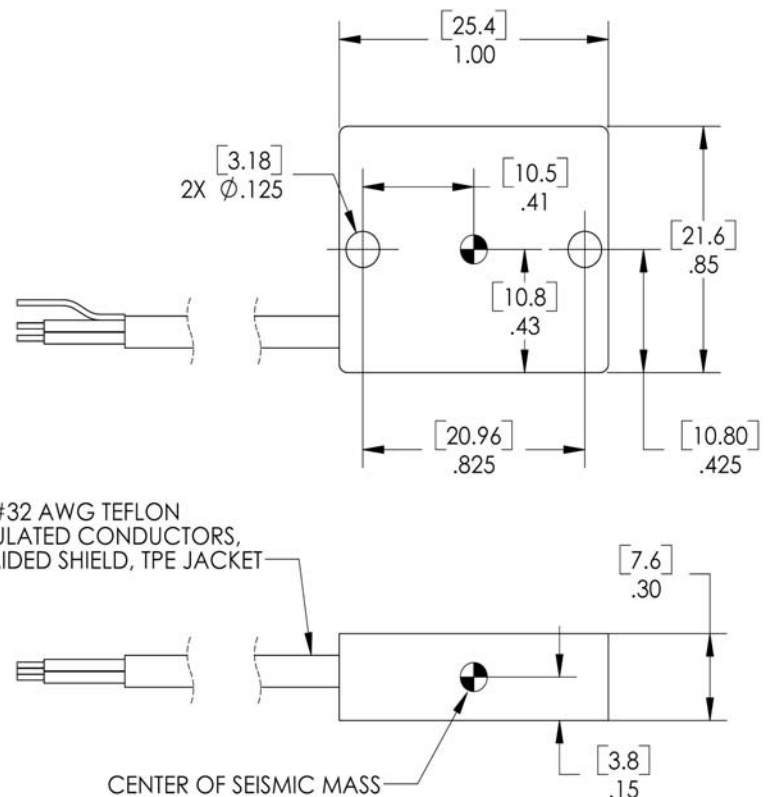
FEATURES

- ◆ $\pm 2g$ 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:
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Model 4603 Accelerometer

performance specifications

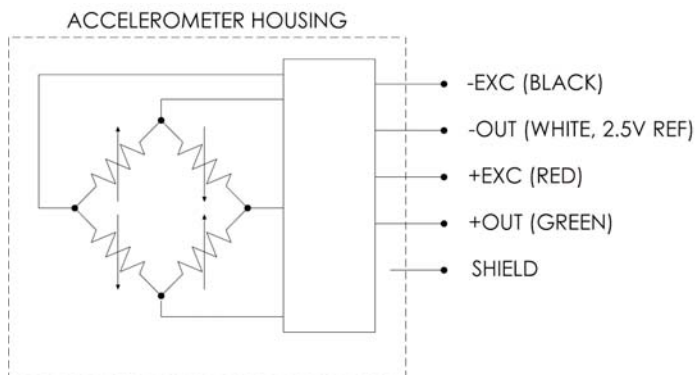
All values are typical at 25°C, 100HZ and 12Vdc excitation unless otherwise stated.

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

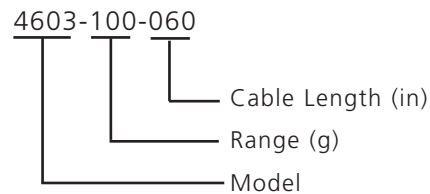
PARAMETERS

DYNAMIC						
Range	+/-2	+/-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%
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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