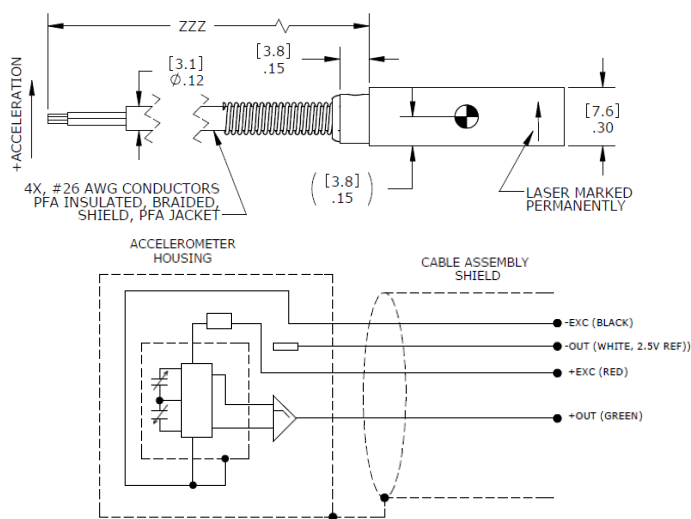
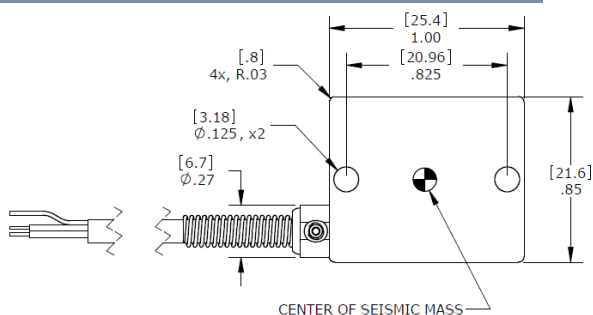


## DIMENSIONS



# MODEL 4604 ACCELEROMETER

## SPECIFICATIONS

- ◆ Advanced Temp Compensation
- ◆ Robust Strain Relief
- ◆ Amplified, Signal Conditioned
- ◆ DC Response, Ultra-Stable

The **Model 4604** is a rugged, low-profile MEMS accelerometer designed for both static and dynamic applications. The accelerometer is available in ranges from  $\pm 2$  to  $\pm 200g$  and offers outstanding thermal performance. The output is signal conditioned with exceptional long term stability. The **model 4604** incorporates a PFA insulated cable with a rugged strain relief designed for demanding applications

## FEATURES

- ◆  $\pm 2g$  to  $\pm 200g$  Dynamic Range
- ◆ Amplified Output
- ◆ Low Power Consumption
- ◆ Gas Damping
- ◆ #26 AWG PFA Cable
- ◆ DC, Low Frequency Response
- ◆ 8 to 36Vdc Excitation Voltage

## APPLICATIONS

- ◆ Flight Testing
- ◆ Flutter and Nacelle Vibrations
- ◆ Road Vehicle Testing
- ◆ Structural Testing
- ◆ Test and Instrumentation
- ◆ Transportation

## PERFORMANCE SPECIFICATIONS

All values are typical at +24°C, 80Hz and 12Vdc excitation unless otherwise stated. Measurement Specialties reserves the right to update and change these specifications without notice.

### Parameters

#### DYNAMIC

	±2	±5	±10	±30	±50	±100	±200	Notes
Range (g)								
Sensitivity (mV/g)	1000	400	200	67	40	20	10	±10%
Frequency Response (Hz)	0-250	0-700	0-1000	0-1000	0-1000	0-1000	0-1000	±5% <sup>1</sup>
Natural Frequency (Hz)	700	800	1000	1500	4000	6000	8000	
Non-Linearity (%FSO)	±0.5	±0.5	±0.5	±0.5	±0.5	±0.5	±0.5	
Transverse Sensitivity (%)	<2	<2	<2	<2	<2	<2	<2	<1 Typical
Damping Ratio	0.7	0.7	0.7	0.7	0.7	0.7	0.7	
Shock Limit (g)	5000	5000	5000	5000	5000	5000	5000	
Residual Noise (µV RMS)	600	750	800	800	800	800	800	Passband
Spectral Noise (µg/√Hz)	38	71	126	378	632	1265	2530	Passband

#### ELECTRICAL

Zero Acceleration Output (mV)	±50							Differential
Excitation Voltage (Vdc)	8 to 36							
Excitation Current (mA)	<5							
Bias Voltage (Vdc)	2.5							
Full Scale Output Voltage (V)	±2							
Output Resistance (Ω)	<100							
Insulation Resistance (MΩ)	>100							@100Vdc
Turn On Time (msec)	<100							
Ground Isolation	Isolated from Mounting Surface							

#### ENVIRONMENTAL

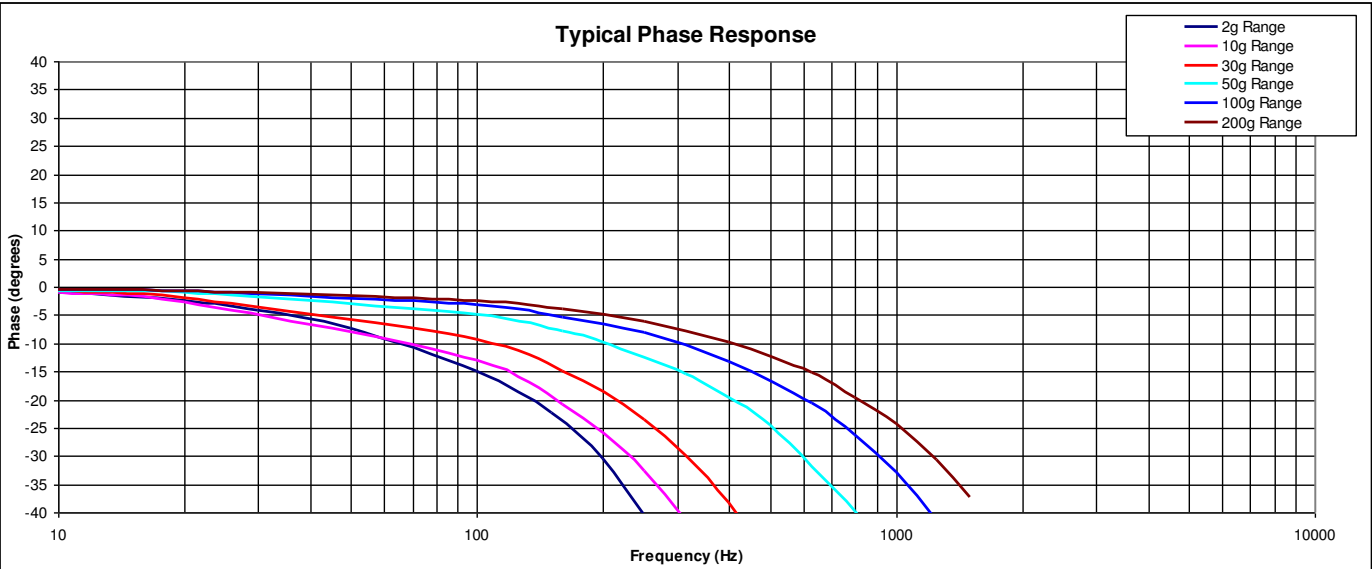
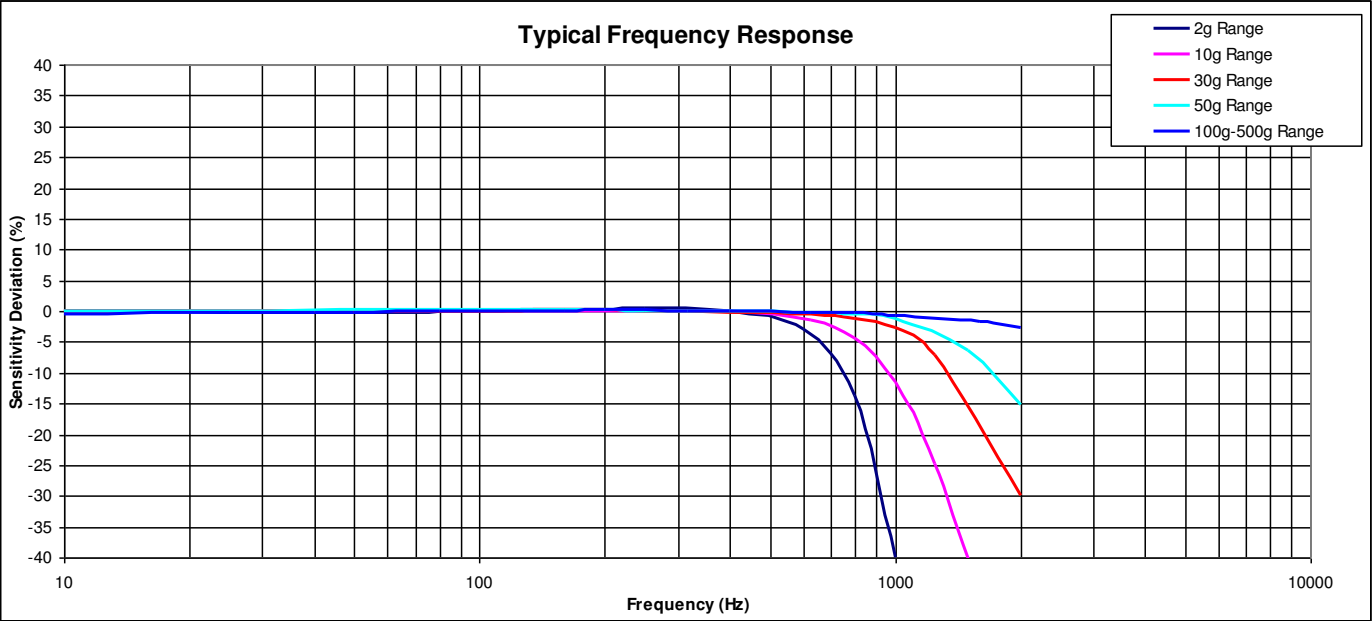
Thermal Zero Shift (%FSO/°C)	±0.004							Typical
Thermal Sensitivity Shift (%/°C)	±0.010							Typical
Operating Temperature (°C)	-55 to 125							
Storage Temperature (°C)	-55 to 125							
Humidity (Active Element & Electronics)	Hermetically Sealed							
Humidity (Housing)	Epoxy Sealed, IP65							

#### PHYSICAL

Case Material	Anodized Aluminum
Cable	4x, #26 AWG Conductors, PFA Insulated, Braided Shield, PFA Jacket
Weight (grams)	10
Mounting	2x #4 or M3 Screws
Mounting Torque	6 lb-in (0.7 N-m)

<b>Calibration supplied:</b>	CS-FREQ-0100	NIST Traceable Amplitude Calibration from 20Hz to ±5% Frequency Response Limit <sup>1</sup>
<b>Supplied accessories:</b>	AC-A02285	2x #4-40 (7/16 length) Socket Head Cap Screw and Washer
<b>Optional accessories:</b>	AC-D02669 121	Triaxial Mounting Block 3-Channel Precision Low Noise DC Amplifier

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**ORDERING INFORMATION**

4604	GGG	ZZZ	C
<b>Series Type</b>			
<b>Range</b>			
002=2g			
005=5g			
010=10g			
030=30g			
050=50g			
100=100g			
200=200g			
<b>Cable length</b>			
060=60 inches			
120=120 inches			
180=180 inches			
240=240 inches			
300=300 inches			
360=360 inches			
480=480 inches			
600=600 inches			
197=197 inches, 5 meters			
394=394 inches, 10 meters			

Example; 4604-010-060-C  
Model 4604, 10g range, 60inch cable length

**NORTH AMERICA**

Measurement Specialties, Inc.,  
a TE Connectivity Company  
Phone: 800-522-6752  
Email: [customercare.hmpt@te.com](mailto:customercare.hmpt@te.com)

**EUROPE**

MEAS France SAS  
a TE Connectivity Company  
Phone: 800-440-5100  
Email: [customercare.lcsb@te.com](mailto:customercare.lcsb@te.com)

**ASIA**

Measurement Specialties (China), Ltd.,  
a TE Connectivity Company  
Phone: 0400-820-6015  
Email: [customercare.shzn@te.com](mailto:customercare.shzn@te.com)

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