



## MODEL 64X ACCELEROMETER

Next Generation Crash Accelerometer

Advanced Piezoresistive MEMS Sensor

Excellent Accuracy in Crash Testing

Compliant to SAE J211/J2570

Compliant to ISO 6487

$\pm 200g$  to  $\pm 2000g$  Dynamic Range

### APPLICATIONS

- Anthropomorphic Dummy Instrumentation
- Crush Zone Testing
- Pedestrian Impact Testing
- Auto Safety Testing Applications
- Shock and Impact Testing
- Transient Drop Testing

The Model 64X is the most advanced accelerometer ever released for anthropomorphic dummy instrumentation. The accelerometer features a full bridge output configuration with an advanced damping for excellent shock survivability and flat frequency response to 7kHz. The model 64X accelerometer has a standard cross-talk accuracy of  $<2\%$ , a standard ZMO of  $<\pm 20mV$  and a linearity accuracy specification of  $<\pm 0.70\%$ .

The model 64X accelerometer is offered in ranges from  $\pm 200$  to  $\pm 2000g$  and has distinct colored cables specified for each model so the g-range can visually be identified by the instrumentation engineer during testing. The accelerometer has a standard operating temperature range of  $-40^{\circ}C$  to  $+121^{\circ}C$  and an IP65 environmental protection rating.

### FEATURES

- Standard  $<2\%$  Transverse Sensitivity
- Standard  $<20mV$  ZMO
- Linearity  $<0.7\%$
- 10,000g Shock Protection
- 2-10Vdc Excitation
- IP65 Environmentally Sealed
- Optimum Gas Damping
- Low Noise, Durable Cable

## PERFORMANCE SPECIFICATIONS

All values are typical at +24°C, 80Hz and 10Vdc excitation unless otherwise stated. TE Connectivity reserves the right to update and change these specifications without notice.

### PARAMETERS

DYNAMIC				NOTES
Range (g)	±200	±500	±2000	
Sensitivity (mV/g) <sup>1</sup>	0.8	0.4	0.15	@10Vdc Excitation
Frequency Response (Hz)	0-600	0-800	0-3000	±2%
	0-1400	0-2000	0-5000	±5%
	0-1900	0-2800	0-7000	±1dB
Natural Frequency (Hz)	8000	15000	26000	
Transverse Sensitivity (%)	<2	<2	<2	<1% Option
Damping Ratio	0.5	0.3	0.2	
Shock Limit (g)	10000	10000	10000	

### ELECTRICAL

Zero Acceleration Output (mV)	<±20	Differential
Excitation Voltage (Vdc)	2 to 10	
Input Resistance (Ω)	3500-4500	
Output Resistance (Ω)	3500-4500	
Insulation Resistance (MΩ)	>100	@100Vdc
Residual Noise (μV RMS)	<10	
Ground Isolation	Isolated from mounting surface	

### ENVIRONMENTAL

Thermal Zero Shift (%FSO/°C)	±0.04	From 0 to +50°C
Thermal Sensitivity Shift (%/°C)	-0.20 ±0.05	From 0 to +50°C
Operating Temperature (°C)	-40 to +121	
Storage Temperature (°C)	-40 to +121	
Humidity	Epoxy Sealed, IP65	

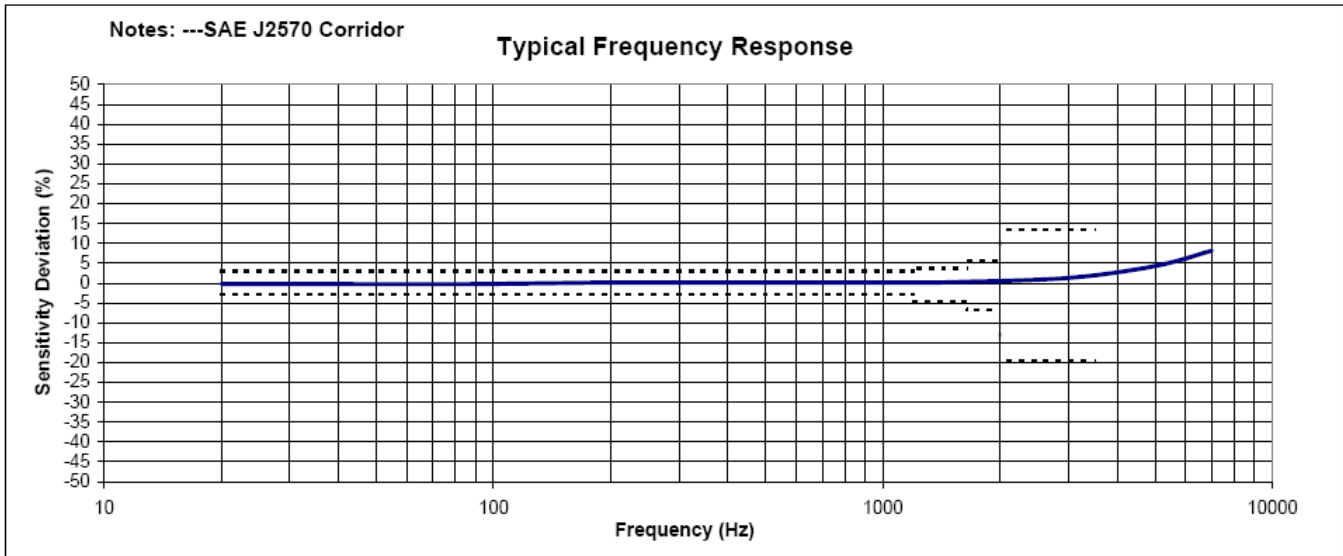
### PHYSICAL

Case Material	Anodized Aluminum
Cable	4x #32 AWG Leads, PFA Insulated, Braided Shield, TPE Jacket
Weight (grams)	1.0
Mounting	2x #0- 80 x 3/16" Socket Head Cap Screws

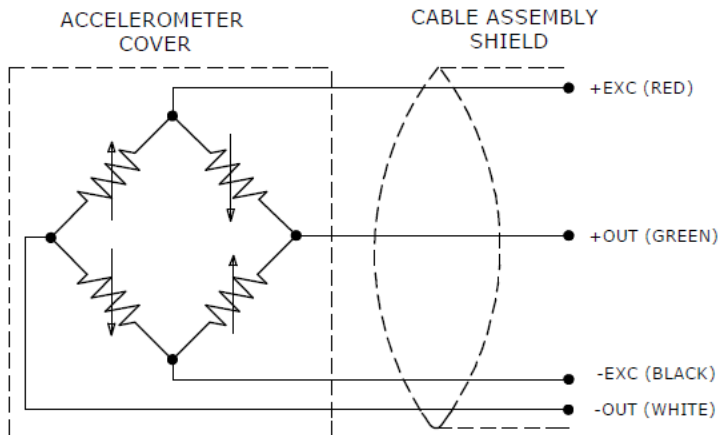
<sup>1</sup> Output is ratiometric to excitation voltage

<b>Calibration supplied:</b>	CS-FREQ-0100	NIST Traceable Amplitude Calibration from 20Hz to ±1dB Frequency Limit
<b>Supplied accessories:</b>	AC-A02053	2x #0-80 (3/16 length) Socket Head Cap Screw, 2x #0 Washer, 1x Allen Key
<b>Optional accessories:</b>	MTG-E2 121 140A	Triaxial Mounting Block 3-Channel Precision Low Noise DC Amplifier Auto-Zero Inline Amplifier

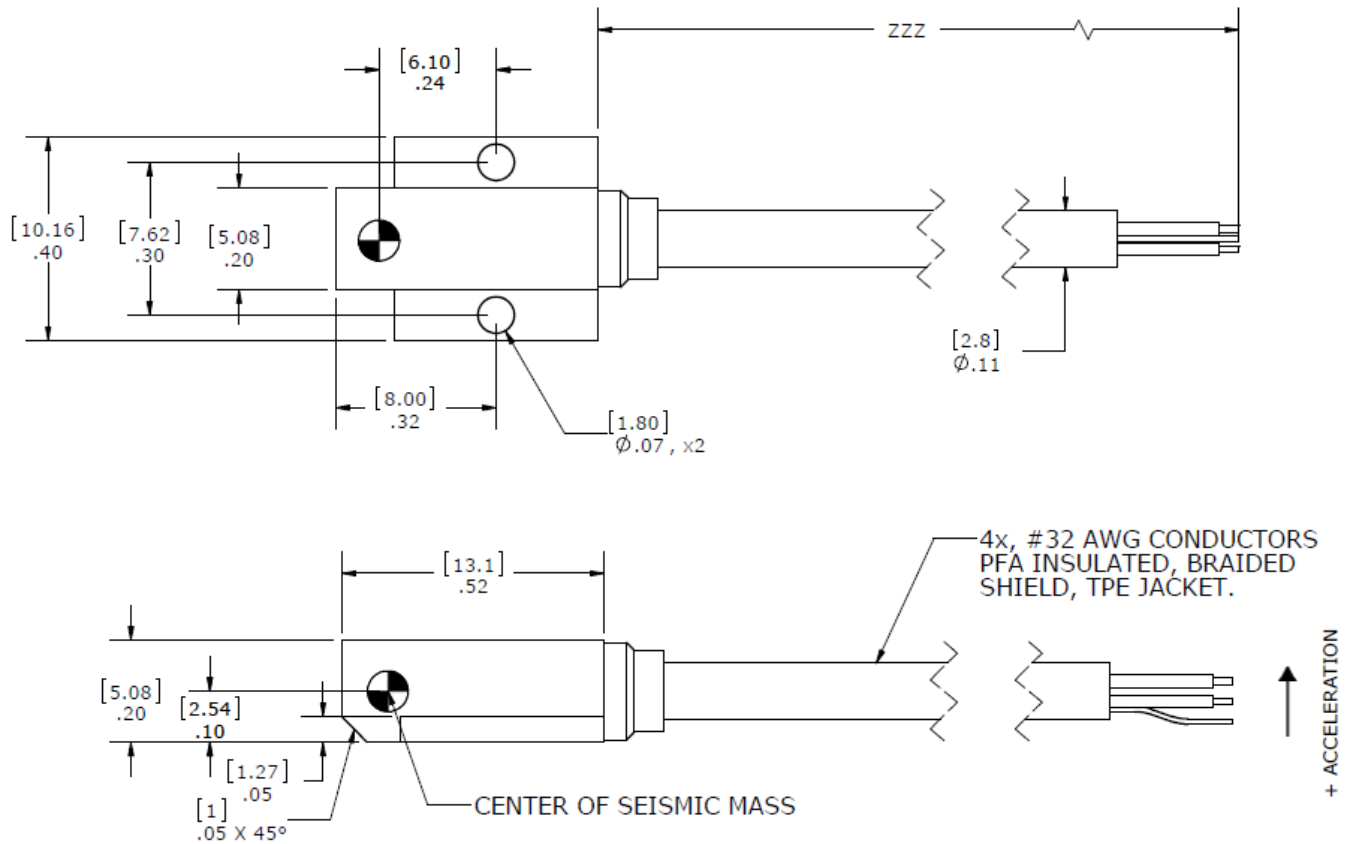
TYPICAL FREQUENCY RESPONSE



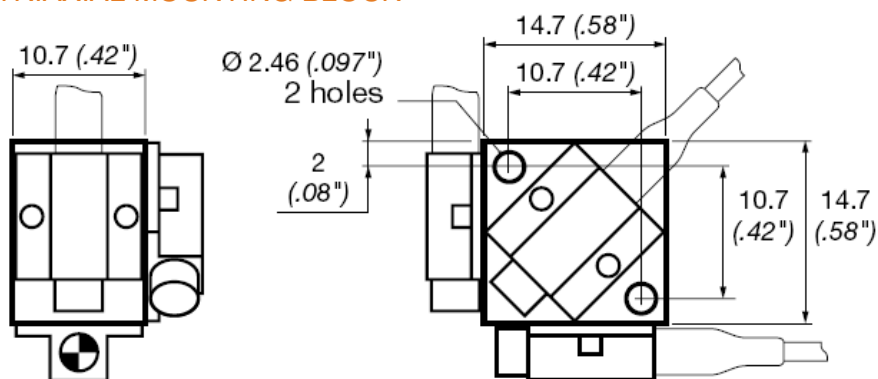
SCHEMATIC



## DIMENSIONS



## TRIAXIAL MOUNTING BLOCK



ORDERING INFORMATION

64X	GGGG	ZZZ	T	XXX
<b>Range</b> 0200=200g (blue cable) 0500=500g (red cable) 2000=2000g (white cable)				
<b>Cable length</b> 240=240 inches 300=300 inches 360=360 inches  197=197 inches, 5 meters 276=276 inches, 7 meters 394=394 inches, 10 meters				
<b>Transverse Sensitivity Option</b> Blank=<2% T=<1%				
<b>Excitation Voltage Option</b> Blank=10Vdc 001=5Vdc 005=2Vdc				
Example; 64X-2000-360 Model 64X, 2000g range, 360inch cable length				

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