



MODEL 64X CRASH TEST ACCELEROMETER

- Next Generation Crash Accelerometer
- Advanced Piezoresistive MEMS Sensor
- Excellent Accuracy in Crash Testing
- Compliant to SAE J211/J2570
- Compliant to ISO 6487
- $\pm 200\text{g}$ to $\pm 2000\text{g}$ Dynamic Range

APPLICATIONS

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

FEATURES

- Standard $<2\%$ Transverse Sensitivity
- Wide bandwidth to $>8\text{kHz}$
- Standard $<20\text{mV}$ ZMO
- Linearity $<0.7\%$
- 10,000g Shock Protection
- 2-10Vdc Excitation
- IP65 Environmentally Sealed
- Optimum Gas Damping
- Low Noise, Durable Cable

The TE Connectivity model 64X is the most advanced accelerometer ever released for anthropomorphic dummy instrumentation. The accelerometer features a full bridge output configuration with ideal gas damping tailored for outstanding shock survivability and a flat frequency response to $>8\text{kHz}$. The model 64X accelerometer has a standard cross-talk accuracy of $<2\%$ (with option for $<1\%$), a standard ZMO of $<\pm 20\text{mV}$ and a linearity accuracy specification of $<\pm 0.70\%$.

The model 64X crash test accelerometer is offered in ranges from ± 200 to $\pm 2000\text{g}$ 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°C to $+121^\circ\text{C}$ and is fully encapsulated in Stycast for IP65 environmental protection rating. The nominal 4000Ω bridge impedance limits current draw resulting in quick warm-up time and minimal drift, unlike lower impedance designs on the market which are subject to much longer warm-up time due to gage heating effects.

TE Connectivity also supplies the calibration data in a user friendly excel format which enables high volume users to quickly upload the calibration information for each sensor installed.

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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) ¹	0.60-0.12	0.30-0.60	0.12-0.30	@10Vdc Excitation
Frequency Response (Hz)	0-600	0-800	0-3000	±2%
	0-1400	0-2000	0-6000	±5%
	0-1900	0-2800	0-8000	±1dB
Natural Frequency (Hz)	8000	15000	26000	
Transverse Sensitivity (%)	<2	<2	<2	<1% Option
Damping Ratio	0.50	0.30	0.15	
Cable Color	Blue	Red	White	
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			
Warm-Up Time	<30 seconds			

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			
Humidity	Epoxy Sealed, IP65			

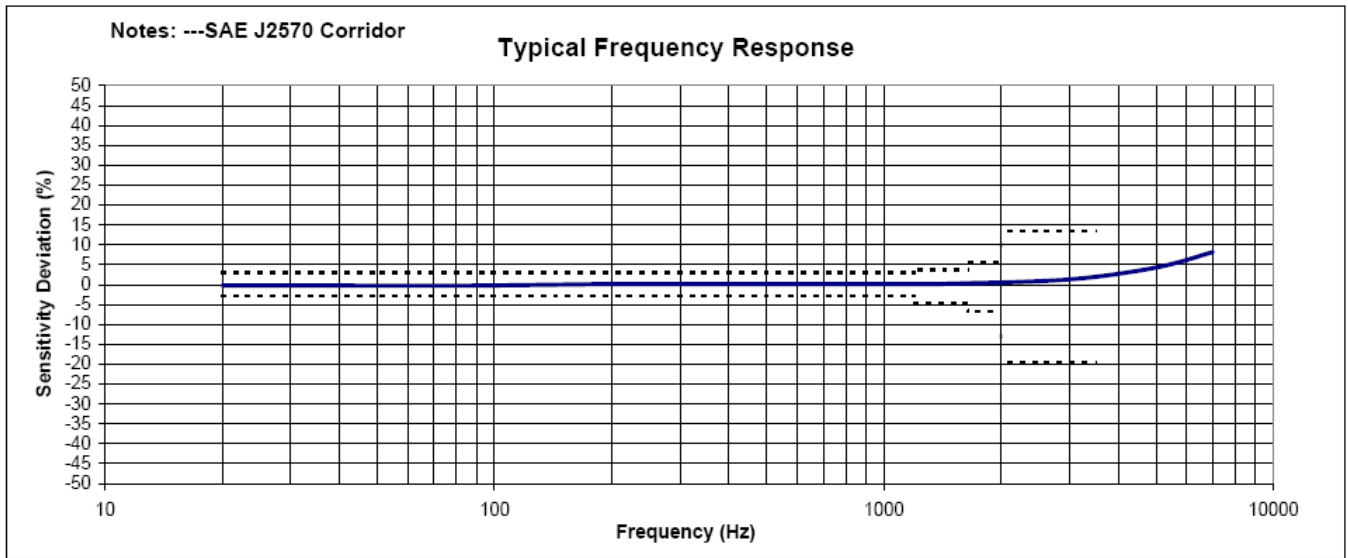
PHYSICAL

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			

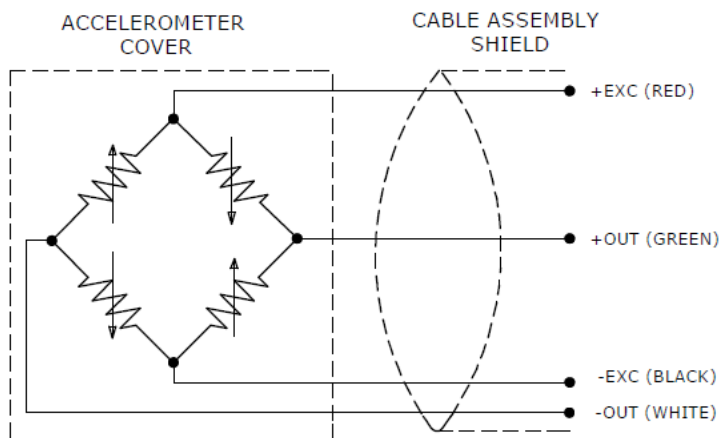
¹ Output is ratiometric to excitation voltage

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

TYPICAL FREQUENCY RESPONSE

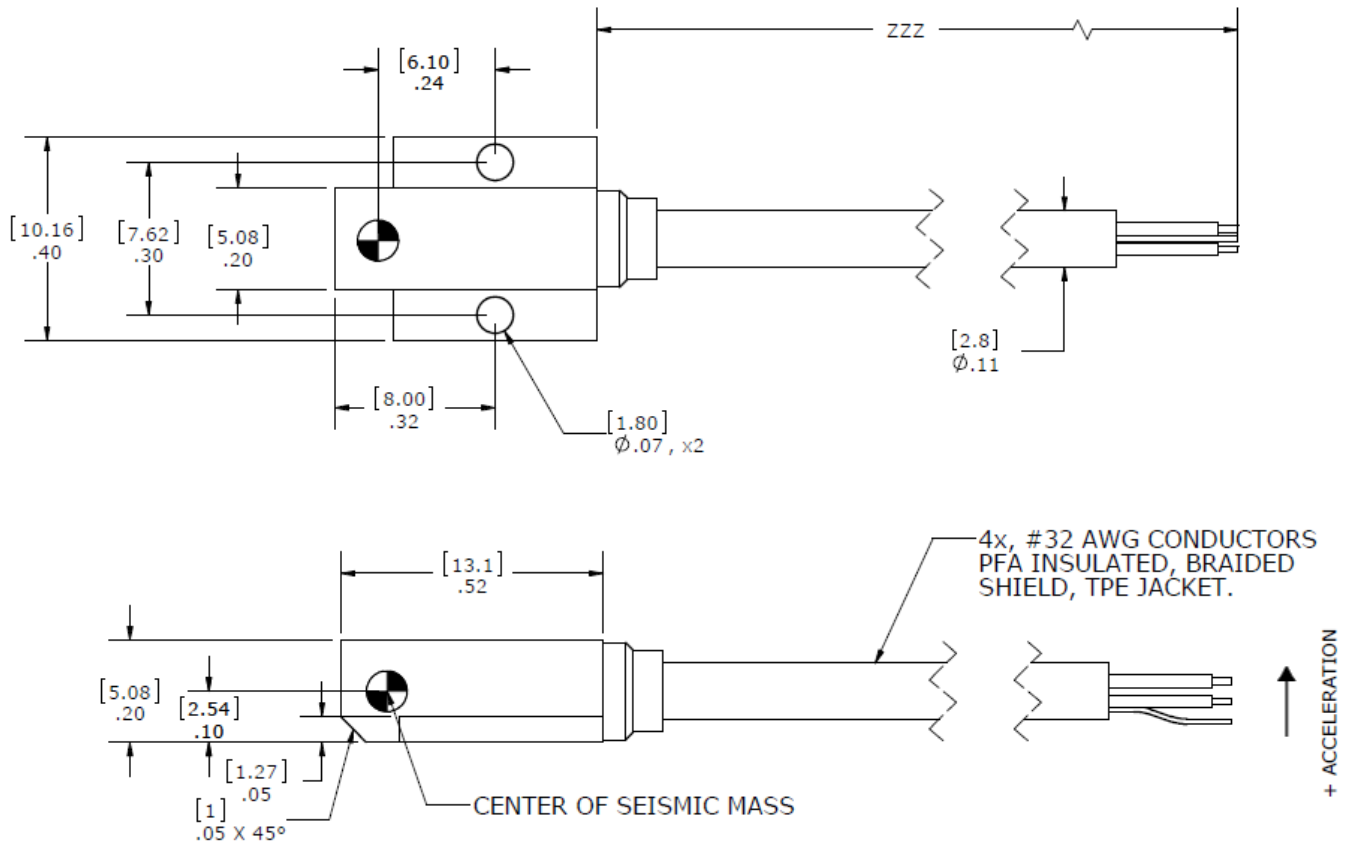


SCHEMATIC

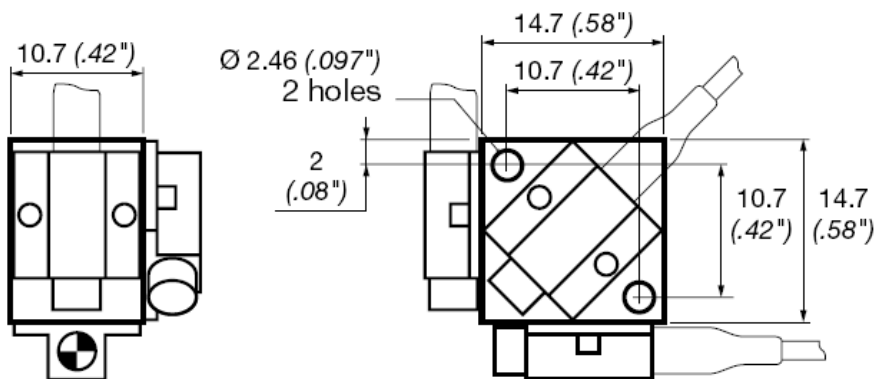


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DIMENSIONS



TRIAxIAL MOUNTING BLOCK



ORDERING INFORMATION

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

Example; 64X-2000-360
Model 64X, 2000g range,360inch cable length

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