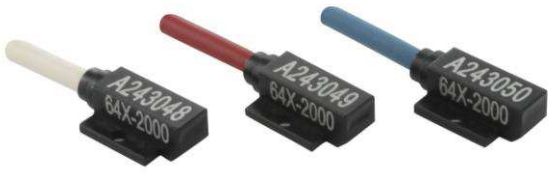
te.com

MODEL 64X CRASH TEST ACCELEROMETER



Specifications

- Next Generation Crash Accelerometer
- Advanced Piezoresistive MEMS Sensor
- Excellent Accuracy in Crash Testing
- Compliant to SAE J211/J2570
- Compliant to ISO 6487
- ±50g to ±6000g Dynamic Range
- Color Coded Cable to g-Range

Features

- Standard <2% Transverse Sensitivity
- Wide bandwidth to >8kHz
- Standard <20mV ZMO
- Linearity <0.7%
- 10,000g Shock Protection
- 2-10Vdc Excitation
- IP66 Environmentally Sealed
- Optimum Gas Damping
- <10sec Warm-Up Time

Applications

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

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 >8kHz. The model 64X accelerometer has a standard cross-talk accuracy of <2% (with option for <1%), a standard ZMO of <±20mV and a linearity accuracy specification of <±0.70%.

The model 64X crash test accelerometer is offered in ranges from ±50 to ±6000g and has distinct colored cables specified for each model so the g-range can visually be identified by the instrumentation engineer during testing.

The crash test accelerometer has a standard operating temperature range of -40°C to +121°C and is fully encapsulated in Stycast for IP66 environmental protection rating. The nominal 4000Ω bridge impedance limits current draw resulting in quick <10 second 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.

CLICK HERE ›
CONNECT WITH A SPECIALIST

Downloaded from Arrow.com.

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)	±50	±200	±500	±2000	±6000	
Sensitivity (mV/g)[1]	1.2-3.0	0.60-0.12	0.30-0.60	0.12-0.30	0.05-0.12	@10Vdc Excitation
Frequency Response (Hz)	0-400 0-1000 0-1400	0-600 0-1400 0-1900	0-800 0-2000 0-2800	0-3000 0-6000 0-8000	0-3000 0-6000 0-8000	±2% ±5% ±1dB
Natural Frequency (Hz)	4000	8000	15000	26000	28000	
Transverse Sensitivity (%)	<2	<2	<2	<2	<2	<1% Option
Non-Linearity (%FSO)	±0.7	±0.7	±0.7	±0.7	±0.7	
Damping Ratio	0.50	0.50	0.30	0.15	0.10	
Cable Color	Black	Blue	Red	White	White	
Shock Limit (g)	10000	10000	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	<10 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, IP66	

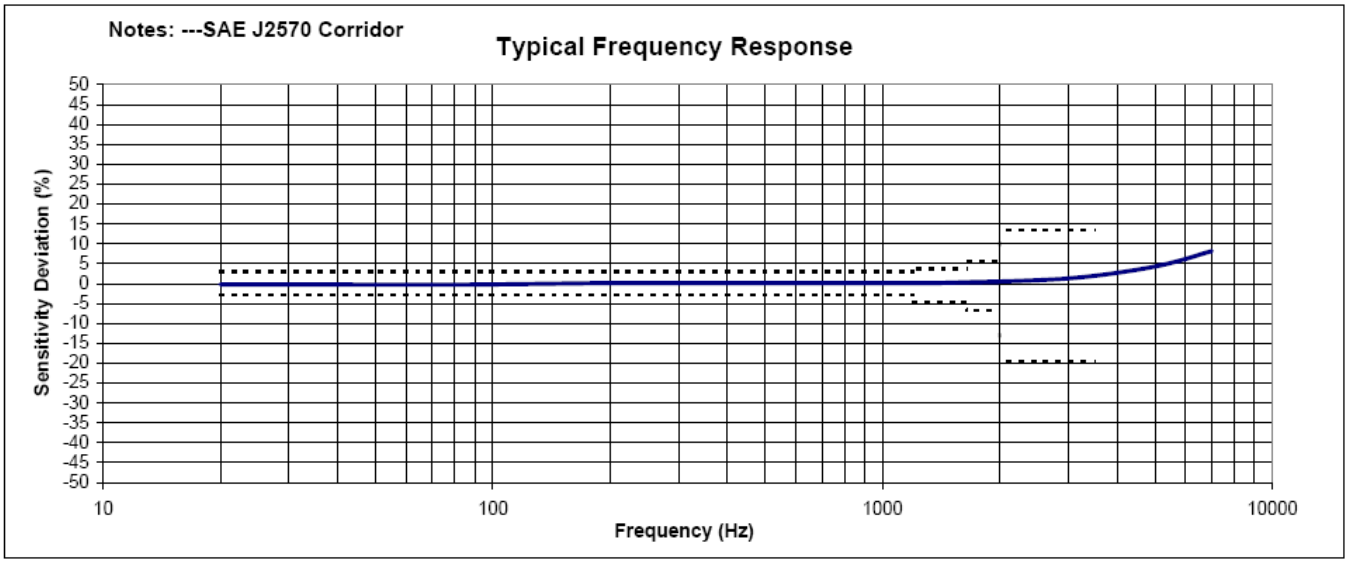
PHYSICAL		
Case Material	Anodized Aluminum	
Cable	4x #32 AWG Leads, PFA Insulated, Braided Shield, TPE Jacket	
Weight (grams)	1.0	Cable not included
Mounting	2x #0- 80 x 3/16” Socket Head Cap Screws	

[1] Output is ratiometric to excitation voltage

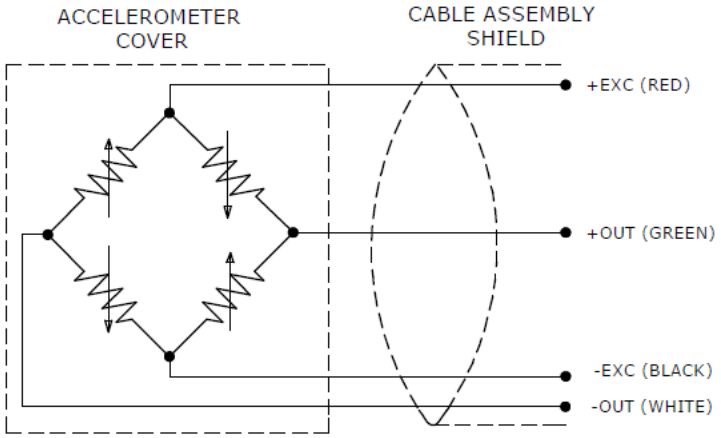
Calibration supplied:	CS-FREQ-0100	NIST Traceable Amplitude Calibration from 20Hz to ±1dB Frequency Limit
Optional accessories:	MTG-E2	Triaxial Mounting Block
	121	3-Channel Precision Low Noise DC Amplifier

Downloaded from Arrow.com.

Typical Frequency Response

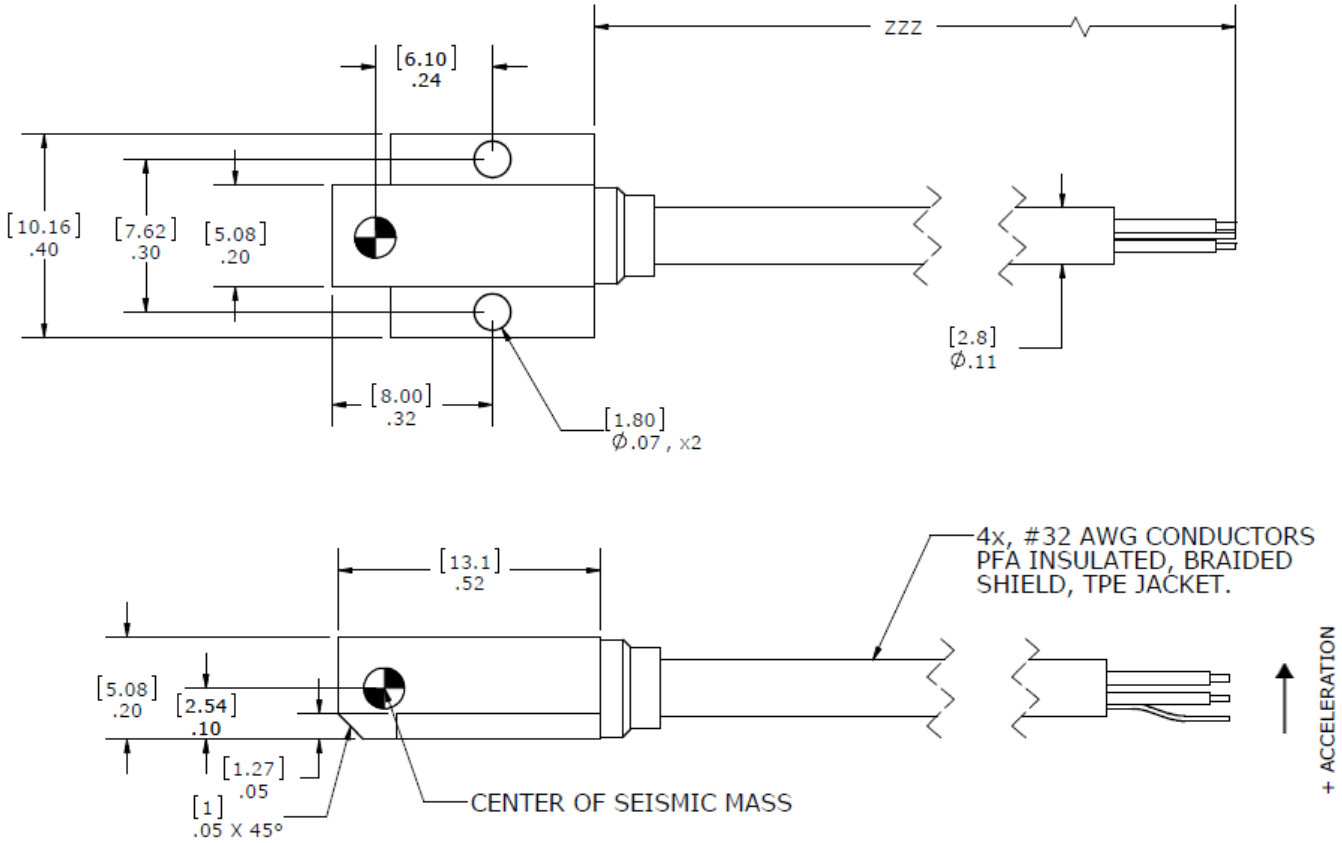


Schematic

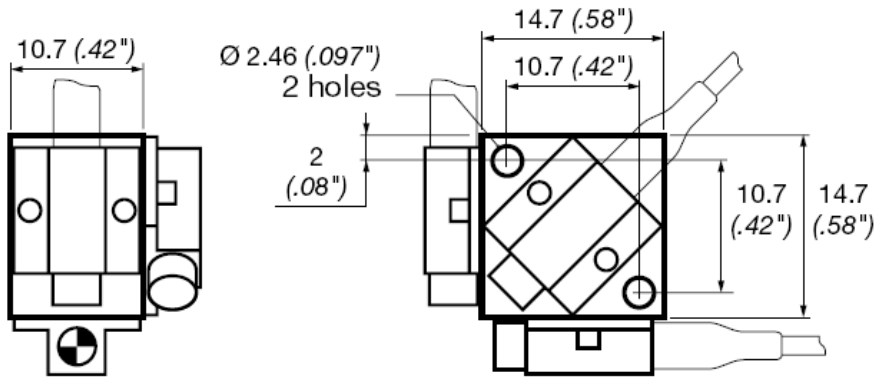


Downloaded from Arrow.com.

Dimensions



Triaxial Mounting Block



Downloaded from Arrow.com.

Ordering Information

64X	GGGG	ZZZ	T	XXX

Range
0050 = 50g (black cable)
0200 = 200g (blue cable)
0500 = 500g (red cable)
2000 = 2000g (white cable)
6000 = 6000g (white cable)

Cable length
240 = 240 inches, 20 feet
360 = 360 inches, 30 feet
276 = 276 inches, 7 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 (30ft) cable length

Example; 64X-0500-276T
Model 64X, 500g range, 276inch (7m) cable length, <1% transverse sensitivity option

CLICK HERE ›
CONNECT WITH A SPECIALIST

NORTH AMERICA
Measurement Specialties, Inc.,
a TE Connectivity Company
Tel: 800-522-6752
customercare.hmpt@te.com

EUROPE
MEAS France SAS
a TE Connectivity Company
Tel: +31 73 624 6999
customercare.lcsb@te.com

ASIA
Measurement Specialties (China), Ltd.,
a TE Connectivity Company
Tel: 0400-820-6015
customercare.shzn@te.com

te.com

TE Connectivity, TE, TE Connectivity (logo) and Every Connection Counts are trademarks. All other logos, products and/or company names referred to herein might be trademarks of their respective owners

The information given herein, including drawings, illustrations and schematics which are intended for illustration purposes only, is believed to be reliable. However, TE Connectivity makes no warranties as to its accuracy or completeness and disclaims any liability in connection with its use. TE Connectivity's obligations shall only be as set forth in TE Connectivity's Standard Terms and Conditions of Sale for this product and in no case will TE Connectivity be liable for any incidental, indirect or consequential damages arising out of the sale, resale, use or misuse of the product. Users of TE Connectivity products should make their own evaluation to determine the suitability of each such product for the specific application.

© 2019 TE Connectivity Corporation. All Rights Reserved.

Version # 10/2020

Downloaded from Arrow.com.