

MODEL EGAXT3 TRIAXIAL DAMPED ACCELEROMETER

Specifications

- Miniature Triaxial DC Accelerometer
- Critically Damped, Over-Range Stops
- $\pm 10g$ to $\pm 2500g$ Dynamic Range
- Temperature Compensated
- -40°C to $+120^{\circ}\text{C}$ Operating Range
- 10,000g Shock Protection

Features

- Individual Axes Sensing Elements
- DC to 2000Hz Frequency Response
- Full Bridge Design
- Linearity $<1\%$
- 2-15Vdc Excitation
- $<3\%$ Transverse Sensitivity

Applications

- General Purpose T&M Applications
- Vibration & Shock Monitoring
- Flight Testing
- Transient Drop Testing
- Static & Dynamic Measurements

The TE Connectivity EGAXT3 series accelerometers are miniature DC vibration sensors designed for test applications requiring small light weight sensors with minimal mass loading. The accelerometers are critically fluid damped and feature a full bridge output configuration with mechanical over-range stops for outstanding shock survivability. The damped EGAXT3 designs are available in ranges from $\pm 10g$ to $\pm 2500g$ and feature 0-2000Hz frequency response (range dependent).

The EGAXT3 and EGAXT3-F accelerometers can be powered with a range of 2-15Vdc excitation voltage. The accelerometers have a standard cross-talk accuracy of $<3\%$ and a standard ZMO (zero measurand output) of $<\pm 20\text{mV}$.

The EGAXT3 series are environmentally sealed with IP61 protection. The accelerometers are available in two form factors, the EGAXT3 designed for epoxy mounting and the EGAXT3-F designed for screw mounting. The accelerometers incorporate an inline temperature compensation module which ensures accurate output over full operating temperature range.

For a single axis version, TE Connectivity offers the model EGAXT accelerometer design.

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MODEL EGAXT3 ACCELEROMETER

Performance Specifications

All values are typical at +24°C, 80Hz (>50g ranges) 16Hz (≤50g ranges) and 15Vdc excitation unless otherwise stated. TE Connectivity reserves the right to update and change these specifications without notice.

PARAMETERS

DYNAMIC									
Range (g)	±10	±25	±50	±100	±250	±500	±1000	±2500	
Sensitivity (mV/g) @15Vdc	6	3	2.25	1.5	0.75	0.50	0.25	0.10	
Frequency Response, Hz	0-140	0-300	0-350	0-400	0-500	0-750	0-1000	0-1400	±1/2dB
Min Resonance Freq, Hz	600	1200	1400	1700	2000	3000	4000	6000	
Transverse Sensitivity	<3%	<3%	<3%	<3%	<3%	<3%	<3%	<3%	
Non-Linearity	±1%	±1%	±1%	±1%	±1%	±1%	±1%	±1%	
Damping Ratio	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	
Shock Limit (g)	±1000	±2000	±5000	±10000	±10000	±10000	±10000	±10000	

ELECTRICAL

Zero Measurand Output	<±20 mV, differential
Excitation Voltage	2 to 15Vdc
Input Resistance	2000 Ohms nominal
Output Resistance	1000 Ohms nominal
Insulation Resistance	>100 MΩ @50Vdc
Ground Isolation	Isolated from mounting surface
Warm-Up Time	<10 seconds

ENVIRONMENTAL

Thermal Zero Shift	±2.5mV / 50°C (±2.5mV / 100°F)
Thermal Sensitivity Shift	+1% to -4% / 50°C (+1% to -4% / 100°F)
Operating Temperature	-40°C to +120°C
Compensated Temp	+20°C to +80°C, contact factory for other temperature compensation options
Humidity	Epoxy Sealed, IP61

PHYSICAL

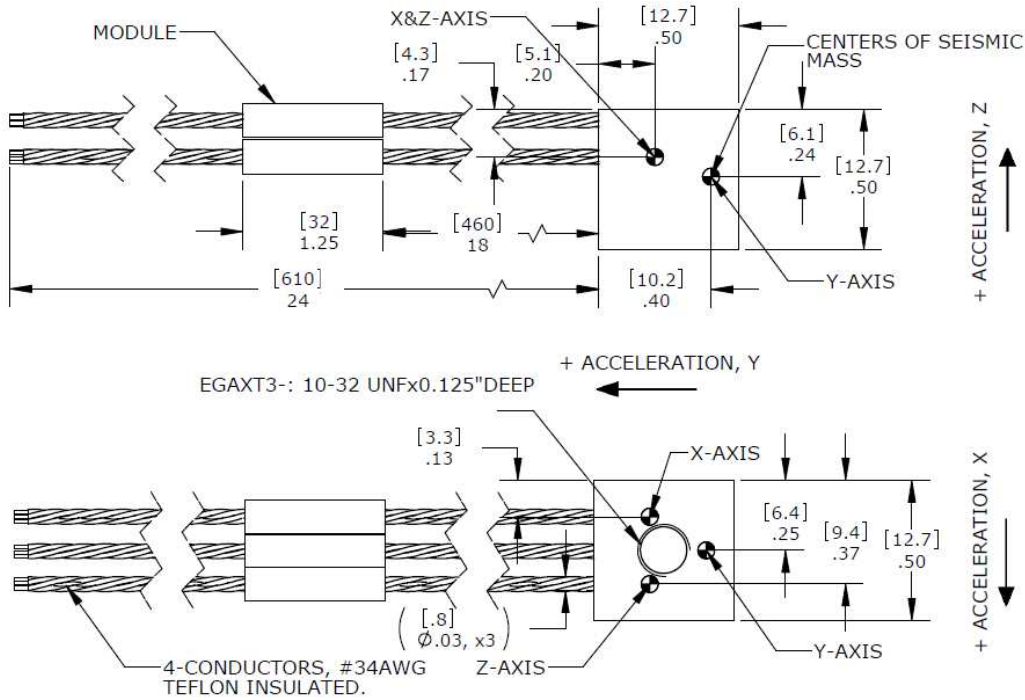
Case Material	Stainless Steel
Cable	4x #34 AWG PTFE Leads 24 inches, Each Axis
Weight	<6 grams
Mounting	Epoxy mount for EGAXT3, Screw mount for EGAXT3-F (2x #2-56 or M2)

¹ Output is ratiometric to excitation voltage

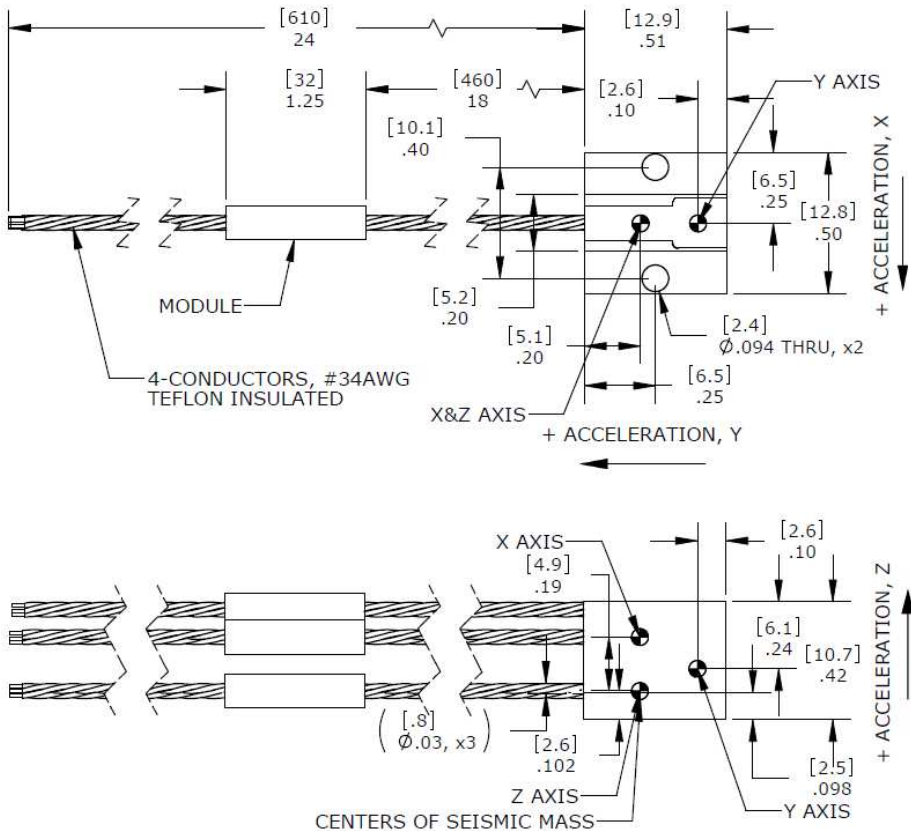
Calibration supplied:	CS-FREQ-0100	NIST Traceable Amplitude Calibration from 20Hz to ±1/2dB Frequency Limit
Optional accessories:	121	Channel Precision Low Noise DC Amplifier

MODEL EGAXT3 ACCELEROMETER

Dimensions, Model EGAXT3

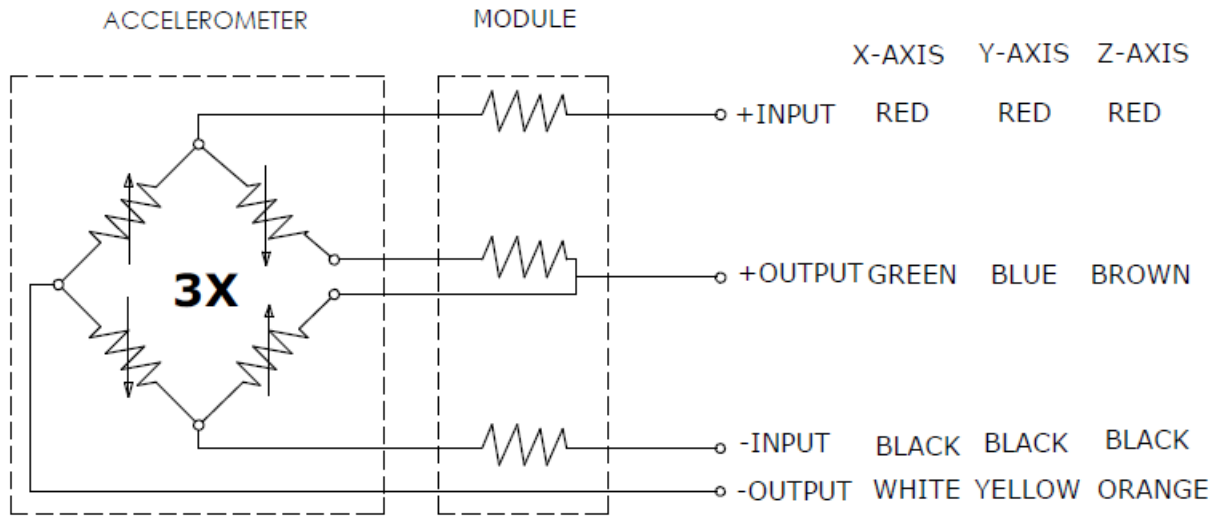


Dimensions, Model EGAXT3-F



MODEL EGAXT3 ACCELEROMETER

Schematic, for both EGAXT3 and EGAXT3-F



MODEL EGAXT3 ACCELEROMETER

Ordering Information

EGAXT3 or EGAXT3-F

GGGG

-/VX

/LZZ

Range

10 = 10g
25 = 25g
50 = 50g
100 = 100g
250 = 250g
500 = 500g
1000 = 1000g
2500 = 2500g

Excitation Voltage

Leave blank for standard 15Vdc
V5 = 5Vdc excitation
V10 = 10Vdc excitation

Cable length

Leave blank for standard 2 feet cable length
L2M = 2 meters
L5M = 5 meters
L10M = 10 meters

Example; EGAXT3-100-/L5M, triaxial model EGAXT3, epoxy mount version, 100g range, 5 meter cable length
EGAXT3-F-100, triaxial model EGAXT3, flange mount version, 100g range, standard 2 feet cable length

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