

MODEL EGAXT DAMPED ACCELEROMETER

Specifications

- DC Response, Critically Damped
- $\pm 10g$ to $\pm 2500g$ Dynamic Range
- Miniature Form Factor
- Fluid Damped, Over-Range Stops
- Temperature Compensated
- -40°C to $+120^{\circ}\text{C}$ Operating Range

Features

- Miniature, Light Weight
- DC to 3000Hz Frequency Response
- Full Bridge Design
- Linearity $<1\%$
- 10,000g Shock Protection
- 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 EGAXT 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 EGAXT designs are available in ranges from $\pm 10g$ to $\pm 2500g$ and feature 0-3000Hz frequency response (range dependent).

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

Triaxial mounting blocks, PN MTG-A1 & MTG-A2, are also offered for multi-axis measurement installations.

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MODEL EGAXT 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

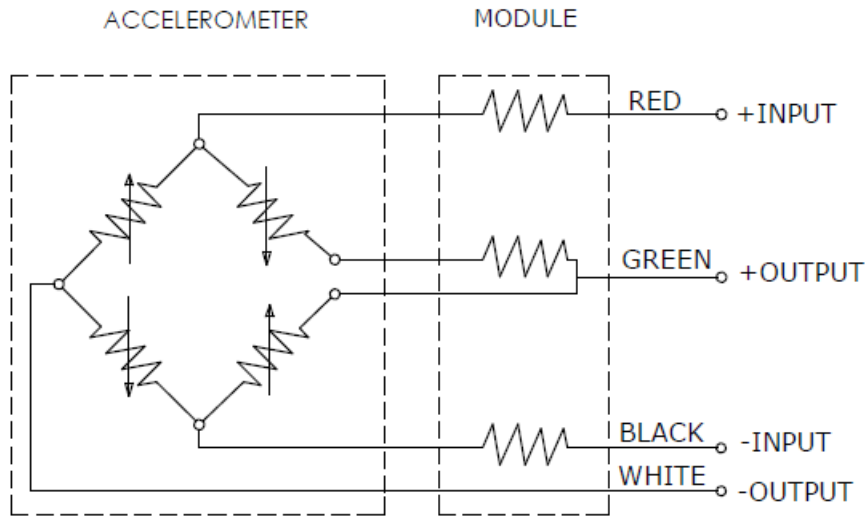
Case Material	Stainless Steel
Cable	4x #34 AWG PTFE Leads, 24 inches
Weight	<1grams
Mounting	Epoxy mount for EGAXT, Screw mount for EGAXT-F (2x #2-56 or M2)

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:	MTG-A1 MTG-A2 121	Triaxial Mounting Block for EGAXT-500 to -2500 ranges Triaxial Mounting Block for EGAXT-10 to -250 ranges Channel Precision Low Noise DC Amplifier

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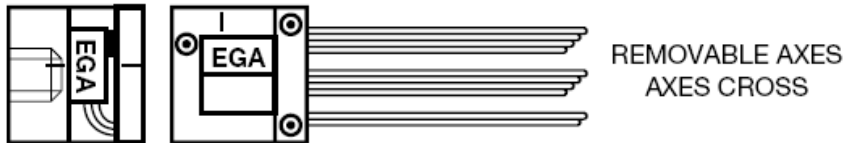
Schematic, for both EGAXT and EGAXT-F



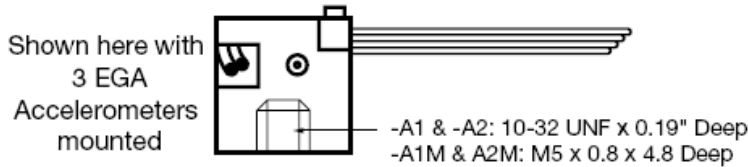
Triaxial Mounting Block

MTG-A1; used with EGAXT-500 to -2500

MTG-A2; used with EGAXT-10 to -250



MTG-A1 & -A1M: 12.7 (.50") x 12.7 (.50") x 12.7 (.50")
 MTG-A2 & -A2M: 13.6 (.535") x 13.6 (.535") x 13.6 (.535")



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Ordering Information

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

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