

# Model EGAXT3 Accelerometer

Miniature Triaxial Design  
DC Response  
10,000 g Overrange Stops  
Broad Temperature Range

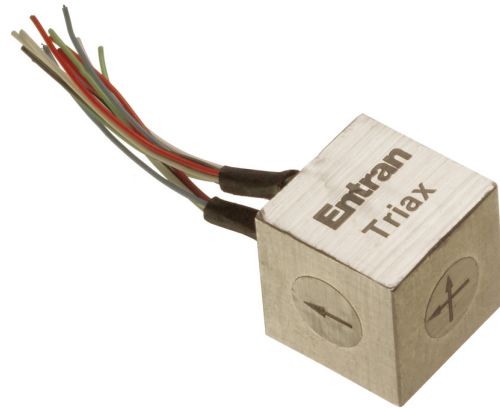
**The Model EGAXT3** miniature triaxial accelerometer combines a damping ratio of 0.7 (Nominal) with built-in overrange stops that are set to protect the unit against 10,000g shocks. This is ideal for applications which may experience rough handling or in situations where the accelerometer must survive a high initial overload in order to make a low g measurement. These units feature a Wheatstone Bridge output with compensated temperature range of 20 to 80 °C.

## FEATURES

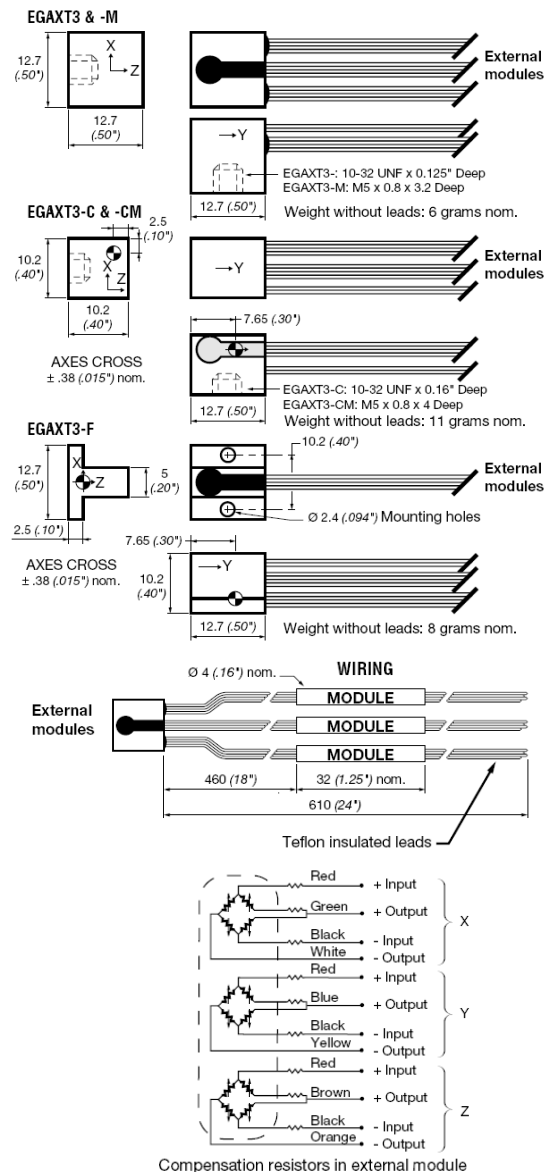
- Miniature Triaxial
- Low Weight
- Static and Dynamic Measurement
- Frequency Response through 3000 Hz
- $\pm 1\%$  Non-Linearity
- -40 °C to +120 °C Operating Range
- 10,000 g Overrange Protection

## APPLICATIONS

- Flight Test & Control
- Launch
- Robotics
- Shock Testing



## dimensions



# Model EGAXT3 Accelerometer

## performance specifications

All values are typical at +24°C, 100Hz and 15Vdc excitation unless otherwise stated. Measurement Specialties reserves the right to update and change these specifications without notice.

| Parameters                   |          |         |         |         |           |           |          |         |         |         | Notes      |
|------------------------------|----------|---------|---------|---------|-----------|-----------|----------|---------|---------|---------|------------|
| <b>DYNAMIC</b>               |          |         |         |         |           |           |          |         |         |         |            |
| Range (g)                    | ±5       | ±10     | ±15     | ±25     | ±50       | ±100      | ±250     | ±500    | ±1000   | ±2500   |            |
| Sensitivity EGAXT (mV/g)     | 5.2-11.3 | 4.2-9.0 | 3.1-6.8 | 2.1-4.5 | 1.57-3.38 | 1.05-2.25 | .52-1.13 | .35-.75 | .17-.38 | .07-.15 |            |
| Frequency Response min. (Hz) | 0-120    | 0-140   | 0-220   | 0-300   | 0-350     | 0-400     | 0-500    | 0-750   | 0-1000  | 0-1400  | ±1/2dB     |
| Frequency Response nom. (Hz) | 0-250    | 0-300   | 0-450   | 0-600   | 0-700     | 0-900     | 0-1000   | 0-1500  | 0-2000  | 0-3000  | ±1/2dB     |
| Natural Frequency (Hz)       | 500      | 600     | 900     | 1200    | 1400      | 1700      | 2000     | 3000    | 4000    | 6000    |            |
| Non-Linearity (%FSO)         | ±1       | ±1      | ±1      | ±1      | ±1        | ±1        | ±1       | ±1      | ±1      | ±1      |            |
| Transverse Sensitivity (%)   | <3       | <3      | <3      | <3      | <3        | <3        | <3       | <3      | <3      | <3      |            |
| Damping Ratio                | 0.7      | 0.7     | 0.7     | 0.7     | 0.7       | 0.7       | 0.7      | 0.7     | 0.7     | 0.7     | Nominal    |
| Shock Limit (g)              | 10000    | 10000   | 10000   | 10000   | 10000     | 10000     | 10000    | 10000   | 10000   | 10000   | All 3 Axes |

### ELECTRICAL

|                               |   |  |  |  |  |  |  |  |  |  |              |
|-------------------------------|---|--|--|--|--|--|--|--|--|--|--------------|
| Zero Acceleration Output (mV) | ±15   |  |  |  |  |  |  |  |  |  | Differential |
| Excitation Voltage (Vdc)      | 15 (can be used from 2 to 15Vdc but lower excitation voltage will decrease sensitivity accordingly) |  |  |  |  |  |  |  |  |  |              |
| Input Resistance (Ω)          | 1000  |  |  |  |  |  |  |  |  |  | Nominal      |
| Output Resistance (Ω)         | 450   |  |  |  |  |  |  |  |  |  | Nominal      |
| Insulation Resistance (MΩ)    | >100  |  |  |  |  |  |  |  |  |  | @50Vdc       |
| Ground Isolation              | Isolated from Mounting Surface  |  |  |  |  |  |  |  |  |  |              |

### 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 to 120°C (-40 to 250°F)  |
| Compensated Temperature   | 20 to 80°C (70 to 170°F), contact factory for other temperature compensation options |
| Storage Temperature       | -40 to 120°C (-40 to 250°F)  |
| Humidity                  | Epoxy Sealed   |

### PHYSICAL

|               |   |
|---------------|---|
| Case Material | Aluminum  |
| Cable         | 12x Teflon Leads, 24 inch                                     |
| Weight        | 6-11 grams  |
| Mounting      | Adhesive or Screw Mount Versions Available (-F configuration) |
| AWG           | #34   |

|                           |   |
|---------------------------|---|
| <b>Wiring color code:</b> | X-axis: +Excitation = Red; -Excitation = Black; +Output = Green; -Output = White  |
|                           | Y-axis: +Excitation = Red; -Excitation = Black; +Output = Blue; -Output = Yellow  |
|                           | Z-axis: +Excitation = Red; -Excitation = Black; +Output = Brown; -Output = Orange |

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## ordering info

### EGAXT3 - F - 100 - /L2M/C

|         |               |              |
|---------|---------------|--------------|
| Model   | Range (X/Y/Z) | Options      |
|         |               | C            |
|         |               | L00F or L00M |
|         |               | M00F or M00M |
|         |               | V1 thru V15  |
|         |               | S            |
| Housing |               |              |
| F       |               |              |

|  |          |   |  |
|--|----------|---|--|
| COMPENSATED TEMPERATURE RANGES: STANDARD | Z*       | = | 20°C TO 80°C (70°F TO 170°F)   |
|  |          | = | Non-Standard, contact factory  |
| 5 WIRE BRIDGE WIRING                     |          |   |  |
| FOR ADJUSTABLE ZERO OFFSET:              | 5        | = | 5 wire   |
| EXCITATION VOLTAGE:                      | STANDARD | = | 15 Vdc   |
|  | V00      | = | Replace "00" with Excitation between 1 and 15. If less than 15, Sensitivity (FSO) will decrease accordingly. |
| SPECIAL LEAD LENGTH:                     | L00F     | = | Replace "00" with total length in feet   |
|  | L00M     | = | Replace "00" with total length in meters   |
| SPECIAL MODULE LOCATION:                 | M00F     | = | Replace "00" with distance between sensor and module in feet   |
|  | M00M     | = | Replace "00" with distance between sensor and module in meters   |
| CONNECTOR WIRED TO CABLE:                | C        | = | Microtech male or equivalent *w/o mate)  |