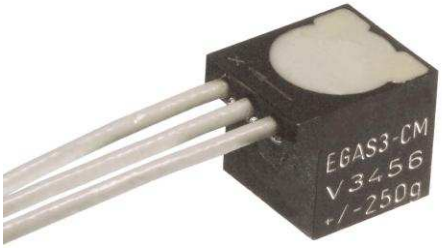
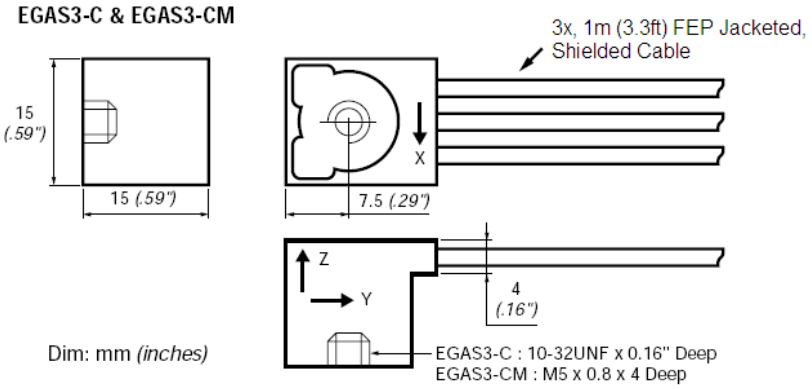
# Model EGAS3 Triaxial Accelerometer

## Miniature Design, Stud Mount
## DC Response, Critically Damped
## 10,000 g Over-range Stops
## Broad Temperature Range




**The Model EGAS3** is a miniature, critically damped triaxial accelerometer available in ranges from ±5g through ±2500g. This rugged unit weighs less than 8 grams (without leads) and has an over-range limit of 10,000g's. Operating from nominal 15Vdc excitation, the model EGAS3 features a ½ active bridge that is suitable for shunt calibration. With an operating temperature range of -40ºC to +120ºC, the EGAS3 is the unit of choice for measurement professionals in the automotive, military, aerospace and transportation industries.

## dimensions

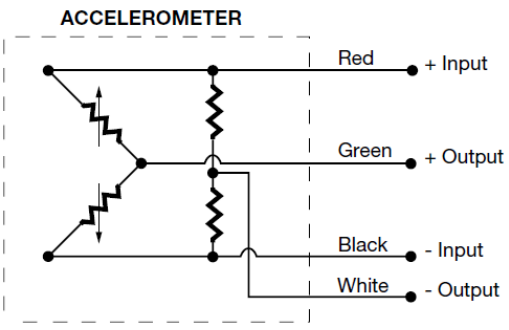



## FEATURES

- Small Size, Stud Mount
- 2-15Vdc Excitation Voltage
- Static and Dynamic Measurement
- Frequency Response through 3500 Hz
- 2% Transverse Sensitivity
- Damping Ratio 0.7
- Internal Temperature Compensation

## APPLICATIONS

- Sports and Recreation
- Modeling and Entertainment
- Biodynamics
- Automotive Testing
- Laboratory Usage




1/2-Active Bridge suitable for shunt calibration on completion side (R Cal).



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## 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. Standard product parameters are described in PSC-1004 for Plug & Play DC Accelerometers.

| Parameters | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| **DYNAMIC** | | | | | | | | | | **Notes** |
| Range (g) | ±5 | ±10 | ±25 | ±50 | ±100 | ±250 | ±500 | ±1000 | ±2500 | |
| Sensitivity (mV/g) | 20 | 10 | 4 | 2 | 1 | 0.4 | 0.2 | 0.1 | 0.04 | |
| Frequency Response min. (Hz) | 0-80 | 0-120 | 0-240 | 0-350 | 0-500 | 0-750 | 0-1000 | 0-1500 | 0-2000 | ±1/2dB |
| Frequency Response nom. (Hz) | 0-150 | 0-200 | 0-400 | 0-600 | 0-900 | 0-1300 | 0-1750 | 0-2500 | 0-3500 | ±1/2dB |
| Natural Frequency (Hz) | 300 | 400 | 800 | 1200 | 1800 | 2600 | 3500 | 5000 | 7000 | |
| Non-Linearity (%FSO) | ±1 | ±1 | ±1 | ±1 | ±1 | ±1 | ±1 | ±1 | ±1 | |
| Transverse Sensitivity (%) | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | |
| Damping Ratio | 0.7 | 0.7 | 0.7 | 0.7 | 0.7 | 0.7 | 0.7 | 0.7 | 0.7 | Nominal |
| Shock Limit (g) | 500 | 1000 | 2000 | 5000 | 10000 | 10000 | 10000 | 10000 | 10000 | |

| | | |
|---|---|---|
| **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) | 1300 | Nominal |
| Output Resistance (Ω) | 1500 | Nominal |
| Insulation Resistance (MΩ) | >100 | @50Vdc |
| Ground Isolation | Isolated from Mounting Surface | |
| **ENVIRONMENTAL** | | |
| Thermal Zero Shift | ±1.0mV / 50°C (±1.0mV / 100°F) | |
| Thermal Sensitivity Shift | ±2.5% / 50°C (±2.5% / 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 | Anodized Aluminum | |
| Cable | #34 AWG Conductors PTFE Insulated, Braided Shield, FEP Jacket | |
| Weight | 8 grams | |
| Mounting | Stud Mount | |

**Wiring color code:** +Excitation = Red; -Excitation = Black; +Output = Green; -Output = White

| | | |
|---|---|---|
| **Calibration supplied:** | CS-FREQ-0100 | NIST Traceable Amplitude Calibration from 20Hz to ±1/2dB Frequency Response Limit |
| **Optional accessories:** | 121 | 3-Channel Precision Low Noise DC Amplifier |
| | 140 | Auto-zero Inline Amplifier |



## ordering info

**EGAS3 – C – 10/50/50 – /Z1/L2M/C**

I I I___Options, otherwise leave blank
I I_____ Range (X/Y/Z axes)
I_____ Housing (-C, -CM)

| | | |
|---|---|---|
| **Compensated Temp Ranges:** | Standard | = +20 to +80°C +(70 to +170°F) |
| | Z1 | = -20 to +40°C (0 to +100°F) |
| | Z2 | = 0 to +60°C (+32 to +140°F) |
| | Z4 | = +40 to +90°C (+100 to +200°F) |
| | Z* | = Non standard, contact factory |
| **Excitation Voltage:** | Standard | = 15Vdc |
| | V* | = Non standard, contact factory |
| **Special Cable Length:** | L00F | = Replace "00" with length in feet |
| | L00M | = Replace "00" with length in meter |
| **Connector Wired to Cable:** | C | = Microtech type male or equivalent |
| | R | = RJ Telephone Male, for EGAS & -F |
| | RS | = RJ Telephone Male, for –FS & -FT |

Example: EGAS3-C-10-/L2M
Model EGAS3, C Housing Configuration (#10-32 Thread), 10g Range All Axes, 2 Meter Cable Length


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