

# MODEL EGAS ACCELEROMETER

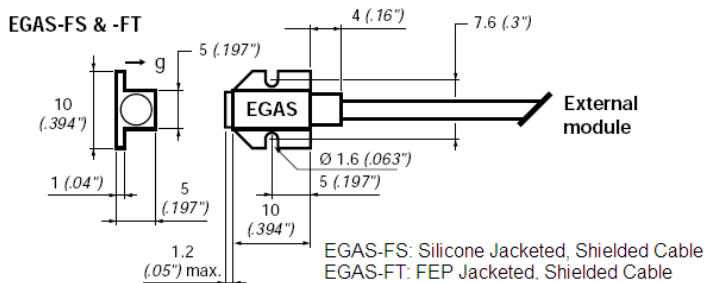
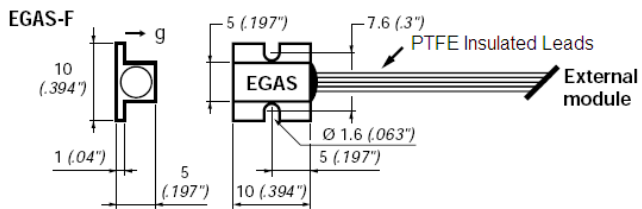
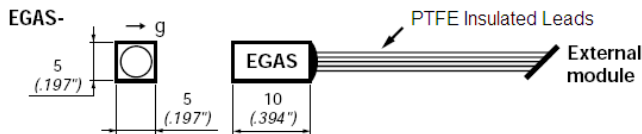
## SPECIFICATIONS

- Miniature Design, Light Weight
- DC Response, Critically Damped
- 10,000 g Over-range Stops
- Broad Temperature Range

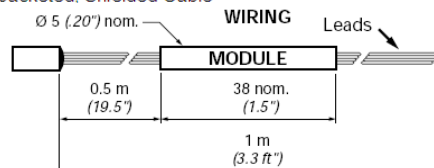
The **Model EGAS** is a miniature, uniaxial accelerometer featuring ranges from  $\pm 5g$  through  $\pm 2500g$ . This rugged unit weighs less than 1 gram (without leads) and has an over-range limit of 10,000g's. The  $\frac{1}{2}$  active bridge is suitable for shunt calibration. With an operating temperature range of  $-40^{\circ}\text{C}$  to  $+120^{\circ}\text{C}$ , the EGAS is the unit of choice for measurement professionals in the automotive, military, aerospace and transportation industries. Its combined nonlinearity and hysteresis of  $\pm 1\%$  makes the EGAS well-suited for on-site testing as well as laboratory use.



## dimensions



EGAS-FS: Silicone Jacketed, Shielded Cable  
EGAS-FT: FEP Jacketed, Shielded Cable

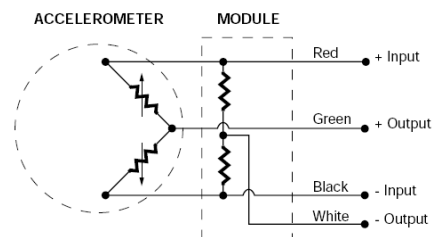


## FEATURES

- 2-15Vdc Excitation Voltage
- Weighs < 1 gram
- Static and Dynamic Measurement
- Frequency Response through 3500 Hz
- 2% Transverse Sensitivity
- Damping Ratio 0.7

## APPLICATIONS

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



## 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

		±5	±10	±25	±50	±100	±250	±500	±1000	±2500	Notes
Range (g)											
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-	0-	0-	±1/2dB
Frequency Response	nom. (Hz)	0-150	0-200	0-400	0-600	0-900	0-1300	1000	1500	2000	±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	Stainless Steel
Cable	4x #34 AWG Conductors PTFE Insulated, Shielded & Jacketed on -FS & -FT Options
Weight	1 grams
Mounting	Screw Mount for EGAS-F, Adhesive Mount for EGAS

**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:**

MTG-F2	Triaxial Mounting Block for EGAS-FS & -FT
MTG-F3	Triaxial Mounting Block for EGAS-F
121	3-Channel Precision Low Noise DC Amplifier
140	Auto-zero Inline Amplifier

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### ORDERING INFO

#### EGAS – F – 100 – /Z1/L2M/C

| | | Options, otherwise leave blank  
| | Range (100 is 100g)  
| Housing (-F, -FS, -FT or leave blank)

#### 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

Standard = 15Vdc

V\* = Non standard, contact factory

L00F = Replace "00" with length in feet

L00M = Replace "00" with length in meter

C = Microtech type male or equivalent

R = RJ Telephone Male, for EGAS & -F

RS = RJ Telephone Male, for -FS & -FT

#### Excitation Voltage:

#### Special Cable Length:

#### Connector Wired to Cable:

Example: EGAS-F-100-/L2M

Model EGAS, F Housing Configuration, 100g Range, 2 Meter Cable Length

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