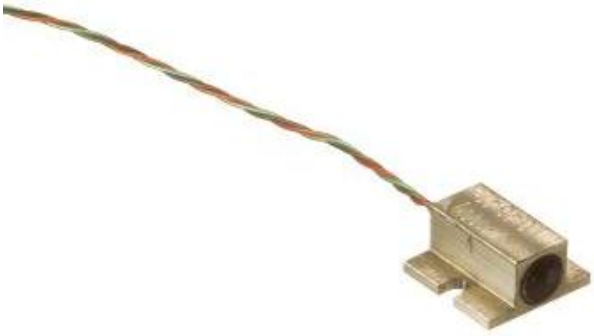
Model EGAS Accelerometer

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 ±5g through ±2500g. This rugged unit weighs less than 1 gram (without leads) and has an over-range limit of 10,000g's. The ½ active bridge is suitable for shunt calibration. With an operating temperature range of -40ºC to +120ºC, the EGAS is the unit of choice for measurement professionals in the automotive, military, aerospace and transportation industries. Its combined nonlinearity and hysteresis of ±1% makes the EGAS well-suited for on-site testing as well as laboratory use.

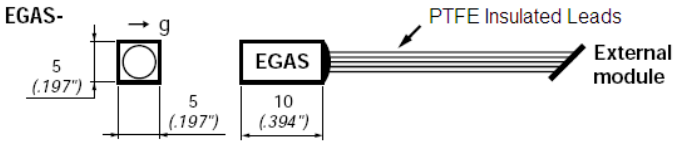
FEATURES

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

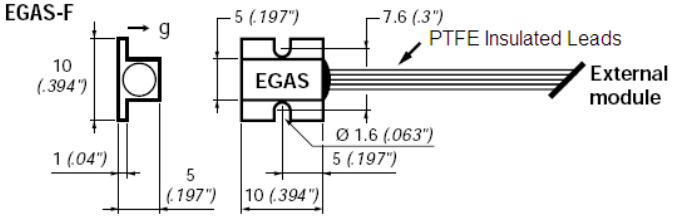
APPLICATIONS

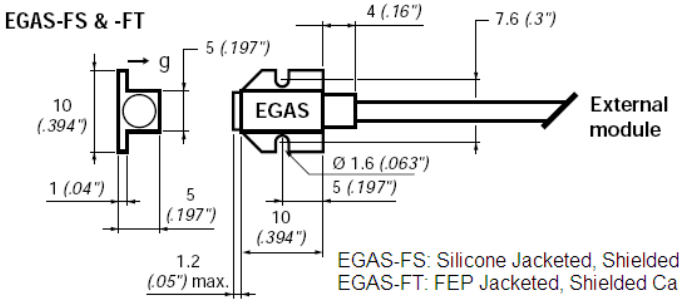
- Sports and Recreation
- Modeling and Entertainment
- Biodynamics
- Automotive Testing
- Laboratory Usage

dimensions

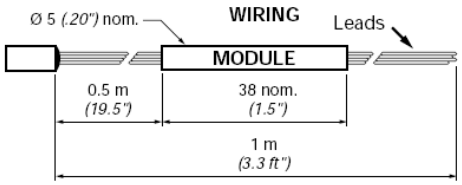


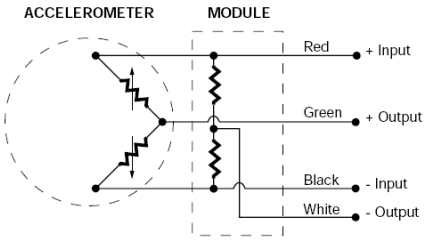
Dim: mm *(inches)*





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





Model EGAS 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. 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	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

ordering info

EGAS – F – 100 – /Z1/L2M/C

- I I I___Options, otherwise leave blank
- I I_____ Range (100 is 100g)
- I_____ 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
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: EGAS-F-100-/L2M
Model EGAS, F Housing Configuration, 100g Range, 2 Meter Cable Length