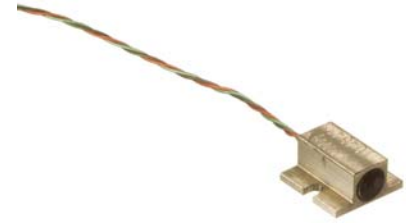


EGAS

Miniature Acceleration Sensor

- Ranges ± 5 g up to ± 2500 g
- Non-linearity ± 1 % FSO
- Output 100 mV
- Supply voltage 15 VDC



The Model EGAS is a miniature, uni-axial accelerometer featuring ranges from ± 5 g through ± 2500 g. This rugged unit weighs less than 1 gram (without leads) and has an over-range limit of 10000 g's. The 1/2 active bridge is suitable for shunt calibration. With an operating temperature range of -40 °C to $+120$ °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 ± 1 % makes the EGAS well-suited for on-site testing as well as laboratory use.

■ Features

- Small Size
- 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

■ Specification

All values are typical at $+24$ °C, 100 Hz and 15 VDC excitation unless otherwise stated.

Dynamic	Unit											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		$\pm 1/2$ dB
Frequency Response, nom.:	Hz	0-150	0-200	0-400	0-600	0-900	0-1300	0-1750	0-2500	0-3500		$\pm 1/2$ dB
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, nom.:		0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7		
Shock Limit:	g	500	1000	2000	5000	10000	10000	10000	10000	10000		

Electrical

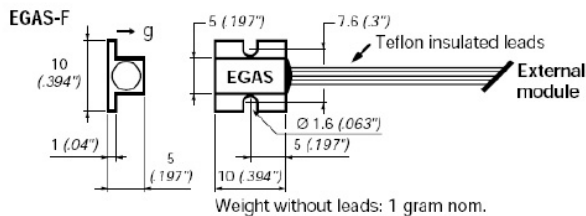
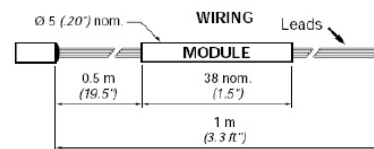
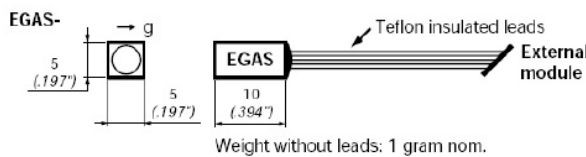
Zero Acceleration Output:	± 15 mV differential
Supply voltage:	15 VDC (can be used from 2 to 15 VDC but lower excitation voltage will decrease sensitivity accordingly)
Input Resistance, nom.:	1300 Ω
Output Resistance, nom.:	1500 Ω
Insulation Resistance	>100 M Ω @50 VDC
Ground Isolation	Isolated from mounting surface

Environmental

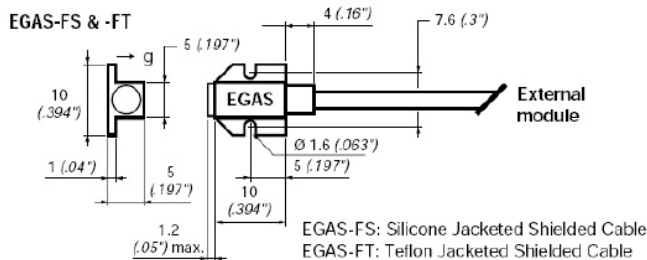
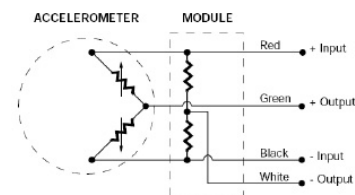
Thermal Zero Shift:	± 1.0 mV/50°C (± 1.0 mV/100°F)
Thermal Sensitivity Shift:	± 2.5 %/50°C (± 2.5 %/100°F)
Operating Temperature:	$-40 \dots +120$ °C ($-40 \dots +250$ °F)
Compensated Temperature:	$+20 \dots +80$ °C ($+70 \dots +170$ °F), call for other temperature compensation options

Storage Temperature:	-40 ... +120 °C (-40 ... +250 °F)
Humidity:	Epoxy sealed
Physical	
Case Material	Stainless steel
Cable	Teflon® insulated leads, shielded & jacketed on -FS & -FT options
Weight	Approx. 1 grams
Mounting	Screw mount for EGAS-F, adhesive mount for EGAS
AWG	#34
Wiring color code:	+ Supply = Red; - Supply = Black; + Output = Green; - Output = White
Calibration supplied:	CS-FREQ-0100 NIST traceable amplitude calibration from 20 Hz to ±1/2 dB frequency response limit

■ Dimensions

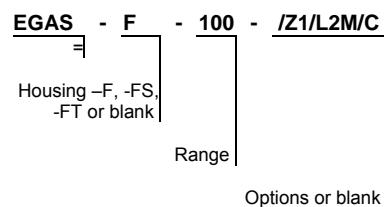


■ Wiring



All dimensions in mm (inches), approx. values.
 These drawings are for information only and not intended for construction purpose. Please ask for detailed drawings.

■ Ordering Information



Comp. temperature ranges:	Standard = +20 ... +80 °C (70 ... +170 °F)
	Z* = Non-Standard, contact factory
Supply voltage:	Standard = 15 VDC
	V* = Non-standard, contact factory
Special cable length:	L00F = Replace "00" with total length in ft
	L00M = Replace "00" with total length in m
Connector wired to cable:	C = Microtech type male or equivalent
	R = RJ Telephone Male, for EGAS & -F
	RS = RJ Telephone Male, for -FS & -FT
5-wire bridge: (for adjustable ZMO)	5 = 5 wire

Example EGAS-F-100-/L2M:
 Model EGAS, F housing configuration, 100 g range, 2 m cable length

Due to continual product development, ALTHEN and partners reserve the right to vary the foregoing details without prior notice.

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