

# Model EGCS-A2/B2 Accelerometer



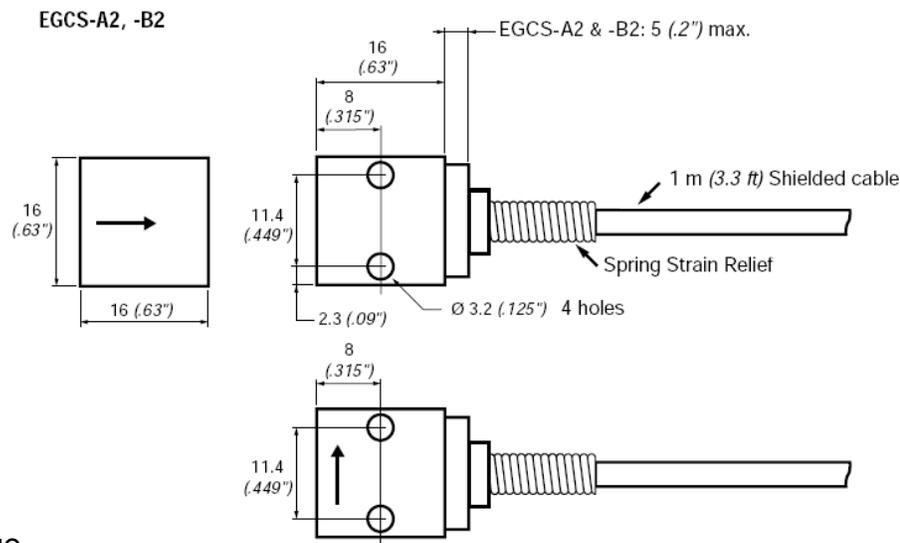
Critically Damped  
DC Response  
Temperature Compensated  
High Sensitivity, Amplified



## The Model EGCS-A2 & -B2

accelerometers are critically damped with built-in over-range stops that are set to protect the unit against 10,000g shocks. The accelerometers incorporate signal conditioning with optional  $\pm 5V_{dc}$  or  $\pm 2.5V_{dc}$  amplified full-scale output and are offered in ranges from  $\pm 5g$  to  $\pm 5000g$ . The accelerometers are ideal for low frequency measurements and feature temperature compensation from  $+20$  to  $+80$  °C.

## dimensions



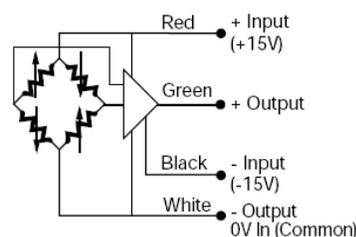
## FEATURES

- $\pm 5g$  to  $\pm 5000g$  Dynamic Range
- Heavy Duty, Rugged
- Static and Dynamic Measurement
- DC to 4000Hz Frequency Response
- $\pm 1\%$  Non-Linearity
- $-40$  °C to  $+120$  °C Temperature Range
- 10,000g Over-range Protection

## APPLICATIONS

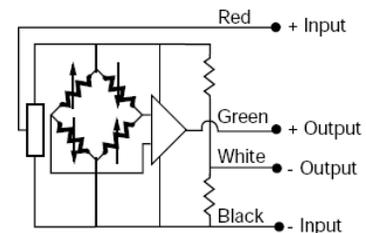
- Road Vehicle Testing
- Machine Control
- Downhole
- Engine Testing
- General Purpose

For specification -A



It is recommended that "0V COMMON" of the power supply be grounded if consistent with proper operation of the instrumentation system.

For specification -B



Common mode output voltage of +5V nom. referred to -Input

# Model EGCS-A2/B2 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											Notes
<b>DYNAMIC</b>											
Range (g)	±5	±10	±25	±50	±100	±250	±500	±1000	±2500	±5000	
Sensitivity, A2 Spec (mV/g)	1000	500	200	100	50	20	10	5	2	1	
Sensitivity, B2 Spec (mV/g)	500	250	100	50	25	10	5	2.5	1	0.5	
Frequency Response min. (Hz)	0-80	0-120	0-240	0-350	0-500	0-750	0-1000	0-1500	0-2000	0-2400	±1/2dB
Frequency Response nom. (Hz)	0-150	0-200	0-400	0-600	0-900	0-1300	0-1750	0-2500	0-3500	0-4000	±1/2dB
Natural Frequency (Hz)	300	400	800	1200	1800	2600	3500	5000	7000	8000	
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)	500	1000	2000	5000	10000	10000	10000	10000	10000	10000	
<b>ELECTRICAL</b>											
Zero Acceleration Output (mV)	±250										Differential
Excitation Voltage (Vdc)	A2: ±15Vdc, B2: 24-32Vdc (28Vdc nominal)										
Excitation Current (mA)	15mA maximum										Nominal
Full Scale Output Voltage (Vdc)	A2: ±5Vdc, B2: ±2.5Vdc										Nominal
Output Impedance (Ω)	A2: 1Ω nominal, B2: 1000Ω nominal										
Insulation Resistance (MΩ)	>100										@50Vdc
Ground Isolation	Isolated from Mounting Surface										
<b>ENVIRONMENTAL</b>											
Thermal Zero Shift	±50mV / 50°C (±50mV / 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										
<b>PHYSICAL</b>											
Case Material	Anodized Aluminum										
Cable	PFA Insulated Leads, Braided Shield, Silicone Jacket										
Weight	<15 grams										
Mounting	Screw Mount										
AWG	#28										
<b>Wiring color code:</b>	+Excitation = Red; -Excitation = Black; +Output = Green; -Output = White										
<b>Calibration supplied:</b>	CS-FREQ-0100 NIST Traceable Amplitude Calibration from 20Hz to ±1/2dB Frequency Response Limit										

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## ordering info

### EGCS – A2 – 100 – /Z1/L2M/C

| | | Options, otherwise leave blank  
 | | Range (100 is 100g)  
 | Specification (A2 or B2)

### Compensated Temp Ranges:

Standard = +20 to +80°C (+70 to +170°F)  
 Z\* = Non standard, contact factory

### Excitation Voltage:

Standard = A2: ±15Vdc, B2: 28Vdc  
 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

Example: EGCS-A2-100-/L2M

Model EGCS, A2 Specifications, 100g Range, 2 Meter Cable Length