

Model EGCS-S425 Accelerometer



Range ± 50 to $\pm 2000g$
 Critically Damped
 Internally Compensated
 ISO 6487 Compliant



The **Model EGCS-S425** is a small, ISO 6487 and SAE J211 compliant piezoresistive accelerometer. This unit features internal temperature compensation, anodized aluminum alloy housing and flexible cable output. This sensing element is damped with fluid to extend useful frequency range and reduce the effect of high frequencies.

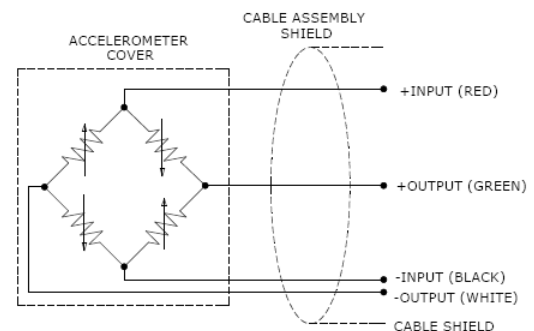
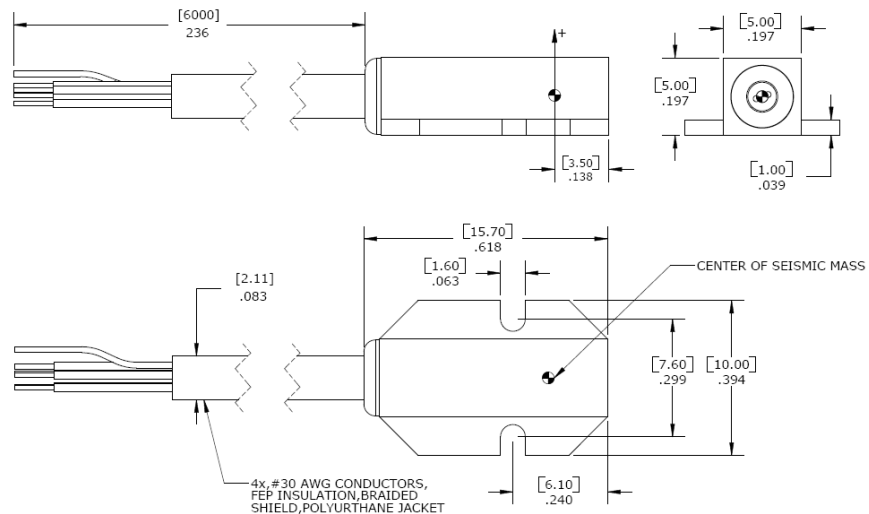
FEATURES

- Fluid Damping
- Ranges from $\pm 50g$ to $\pm 2000g$
- Flexible Cable
- -20°C to $+80^{\circ}\text{C}$ Temperature Range
- Built-in mechanical stops
- Low zero offset $< \pm 10$ mV
- Internal Temperature Compensation
- 10Vdc Excitation with ± 150 mV Output

APPLICATIONS

- Auto Safety Testing
 - Crash
 - Sled
 - Dummy
- Pedestrian Impact
- Dummy Head Impact

dimensions



Model EGCS-S425 Accelerometer

performance specifications

All values are typical at $\pm 24^{\circ}\text{C}$, 100Hz and 10Vdc 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.

RANGES AND OUTPUTS:

g range "FS"	g over-range limit	Attenuation Fh	Attenuation Fn	Attenuation 2Fh	Natural Frequency Minimum
		At 180 Hz	At 300 Hz	At 360 Hz	Min.
± 50	± 5000	$\pm 0.5\text{dB}$	+0.5dB / -2dB	+0.5dB / -4dB	1 kHz
		At 600 Hz	At 1000 Hz	At 1200 Hz	
± 100	± 5000	$\pm 0.5\text{dB}$	+0.5dB / -2dB	+0.5dB / -4dB	1.5 kHz
		At 1000 Hz	At 1650 Hz	At 2000 Hz	
± 250	± 10000	$\pm 0.5\text{dB}$	+0.5dB / -2dB	+0.5dB / -4dB	2.5 kHz
		At 1200 Hz	At 2000 Hz	At 4000 Hz	
± 500	± 10000	$\pm 0.2\text{dB}$	+0.2dB / -1dB	<+0.35dB	4.5 kHz
± 1000	± 10000	$\pm 0.2\text{dB}$	+0.2dB / -1dB	<+0.35dB	6 kHz
± 2000	± 10000	$\pm 0.2\text{dB}$	+0.2dB / -1dB	<+0.35dB	10 kHz

Parameter

DYNAMIC

Parameter	Value	Unit	Notes
Full Scale Output	± 150	mV	Nominal (Min ± 100 , Max ± 225)
Non-Linearity and Hysteresis	< ± 1	%FSO	
Transverse Sensitivity	1	%	Nominal
Zero Acceleration Output	± 10	mV	
Thermal Zero Shift (TZS)	± 3	mV	
Thermal Sensitivity Shift (TSS)	< ± 0.1	% / $^{\circ}\text{C}$	
Damping Ratio	0.7		Nominal

ELECTRICAL

Voltage Excitation	10	Vdc	Alternate excitations available
Input Resistance	2000	Ω	Nominal
Output Resistance	1000	Ω	Nominal

PHYSICAL

Weight Without Cable	< 5	Grams	Standard cable length = 6 meters
Case Material			Anodized aluminum
Cable			4x #30 AWG, FEP Insulated, Braided Shield, TPU Jacket

ENVIRONMENTAL

Operating Temperature	-20 to +80	$^{\circ}\text{C}$	
Compensated Temperature Range	-10 to +50	$^{\circ}\text{C}$	
Humidity			Epoxy sealed, IP61

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OPTIONS AND ACCESSORIES

Calibration supplied:	CS-FREQ-0100	NIST Traceable Amplitude Calibration
Optional accessories:	AC-A04208	Triaxial Mounting Block
	121	3-Channel Precision Low Noise DC Amplifier
	140	Auto-zero Inline Amplifier

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ordering info

EGCS – S425 – 100 – /Z1/L2M/C

| |__ Options, otherwise leave blank
|_____ Range (100 is 100g)

Excitation Voltage:

Special Cable Length:

Connector Wired to Cable:

Dallas ID Module:

Shunt Calibration:

Standard = 10Vdc

V* = Non standard, contact factory

L00M = Replace "00" with length in meter

Contact Factory

Contact Factory

RCAL00 = Replace "00" with value of % Range
(ex. RCAL50; 50% FS)

Example: EGCS-S425-2000-/L2M

Model EGCS-S425, 2000g Range, 2 Meter Cable Length