



MODEL EGCS-D0 & EGCS-D1S ACCELEROMETERS

Specifications

- DC Response, Critically Damped
- $\pm 5g$ to $\pm 10,000g$ Dynamic Range
- Rugged Design, Integral Strain Relief
- Fluid Damped, Over-Range Stops
- Temperature Compensated
- -40°C to $+100^{\circ}\text{C}$ Operating Range

Features

- Rugged Stainless Steel Housing
- DC to 5000Hz Frequency Response
- Full Bridge Design
- Linearity $<1\%$
- 10,000g Shock Protection
- 2-15Vdc Excitation
- $<3\%$ Transverse Sensitivity

Applications

- General Purpose T&M Applications
- Vibration & Shock Monitoring
- Road Vehicle Testing
- Transient Drop Testing
- Static & Dynamic Measurements
- Engine Testing

The TE Connectivity EGCS-D0 and EGCS-D1S series accelerometers are rugged DC sensors designed for harsh measurement applications. The accelerometers are critically fluid damped and feature a full bridge output configuration with mechanical over-range stops for outstanding shock survivability. The damped EGCS-D0 and EGCS-D1S designs are available in ranges from $\pm 5g$ to $\pm 10,000g$ and feature 0-5000Hz frequency response (range dependent).

The EGCS-D0 and EGCS-D1S accelerometers can be powered with a range of 2-15Vdc excitation voltage. The accelerometers have a standard cross-talk accuracy of $<3\%$ and a standard ZMO (zero measurand output) of $<\pm 20\text{mV}$.

The EGCS-D0 & EGCS-D1S series are environmentally sealed with IP65 protection. The -D0 option has a screw mounted flange configuration while the -D1S option has a stud mount configuration.

A triaxial mounting block, PN AC-A04686, is also offered for multi-axis measurement installations.

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Performance Specifications

All values are typical at +24°C, 80Hz (>50g ranges) 16Hz (≤50g ranges) and 15Vdc excitation unless otherwise stated. TE Connectivity reserves the right to update and change these specifications without notice.

PARAMETERS

DYNAMIC

Range (g)	±5	±10	±25	±50	±100	±250	±500	±1000	±2500	±5000	±10000
Sensitivity (mV/g) @15Vdc 40	20	8	4	2	0.8	0.4	0.2	0.08	0.04	0.016	
Frequency Response, Hz											
+5% / -10%	0-90	0-120	0-240	0-360	0-540	0-780	0-1050	0-1500	0-2100	0-2400	0-3000
+5% / -20%	0-150	0-200	0-400	0-600	0-900	0-1300	0-1750	0-2500	0-3500	0-4000	0-5000
Min Resonance Freq, Hz	300	400	800	1200	1800	2600	3500	5000	7000	8000	10000
Transverse Sensitivity	<3%	<3%	<3%	<3%	<3%	<3%	<3%	<3%	<3%	<3%	<3%
Non-Linearity	±1%	±1%	±1%	±1%	±1%	±1%	±1%	±1%	±1%	±1%	±1%
Damping Ratio	0.7	0.7	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	±10000	±12500

ELECTRICAL

Zero Measurand Output	<±20 mV, differential
Excitation Voltage	2 to 15Vdc
Input Resistance	1000-2500 Ohms
Output Resistance	700-1300 Ohms
Insulation Resistance	>100 MΩ @50Vdc
Ground Isolation	Isolated from mounting surface
Warm-Up Time	<10 seconds

ENVIRONMENTAL

Thermal Zero Shift	±2.0mV / 50°C (±2.0mV / 100°F)
Thermal Sensitivity Shift	±2.5% / 50°C (±2.5% / 100°F)
Operating Temperature	-40°C to +100°C
Compensated Temp	+20°C to +80°C, contact factory for other temperature compensation options
Humidity	Epoxy Sealed, IP66

PHYSICAL

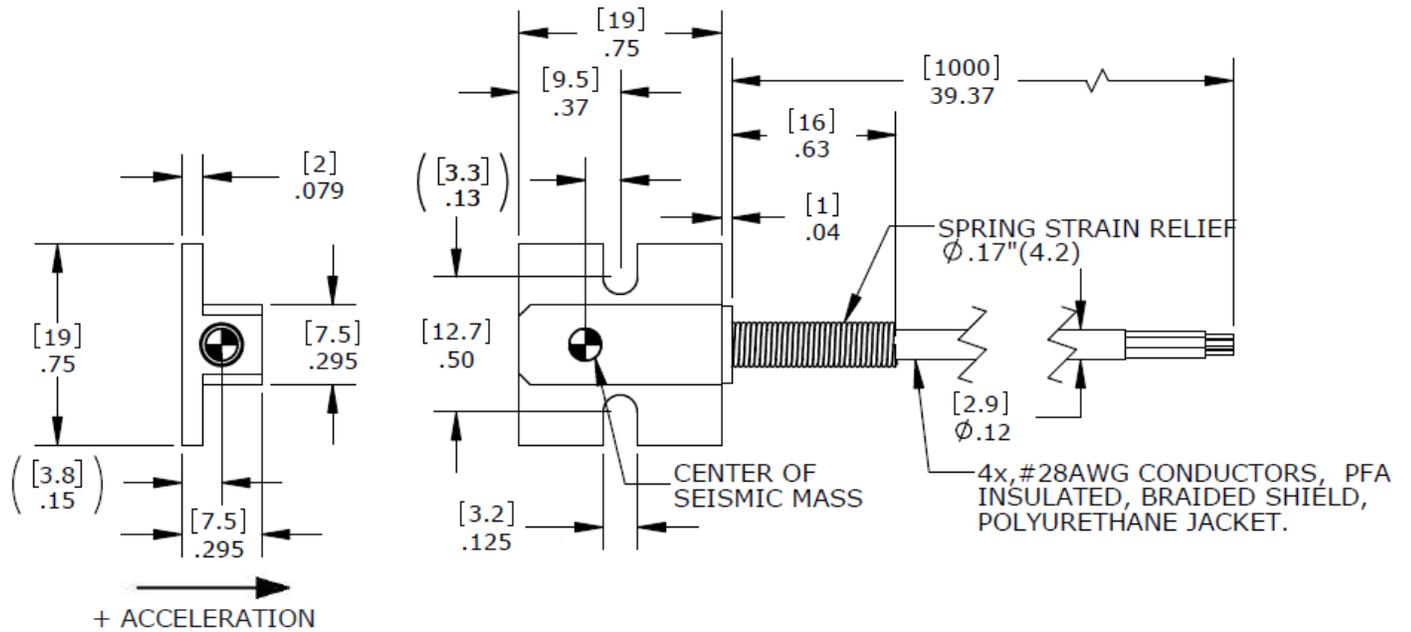
Case Material	Stainless Steel
Cable	4x #28 AWG Leads, PFA Insulated, Braided Shield, Polyurethane Jacket
Weight	10grams for EGCS-D0, 12grams for EGCS-D1S, cable not included
Mounting	Screw Mount for EGCS-D0 (2x #4-40 or M3), Stud Mount for EGCS-D1S (#10-32 stud)

¹ Output is ratiometric to excitation voltage

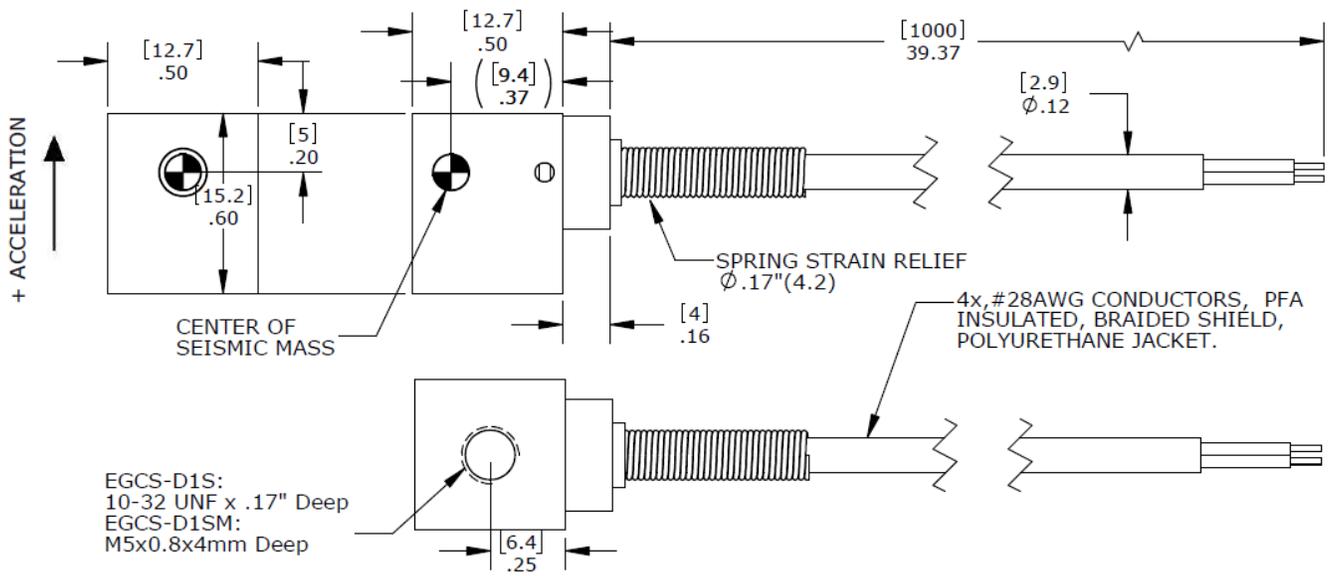
Calibration supplied:	CS-FREQ-0100	NIST Traceable Amplitude Calibration from 20Hz to ±1dB Frequency Limit
Optional accessories:	AC-A04686 121	Triaxial Mounting Block for EGCS-D0 Version 3-Channel Precision Low Noise DC Amplifier

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Dimensions, Model EGCS-D0

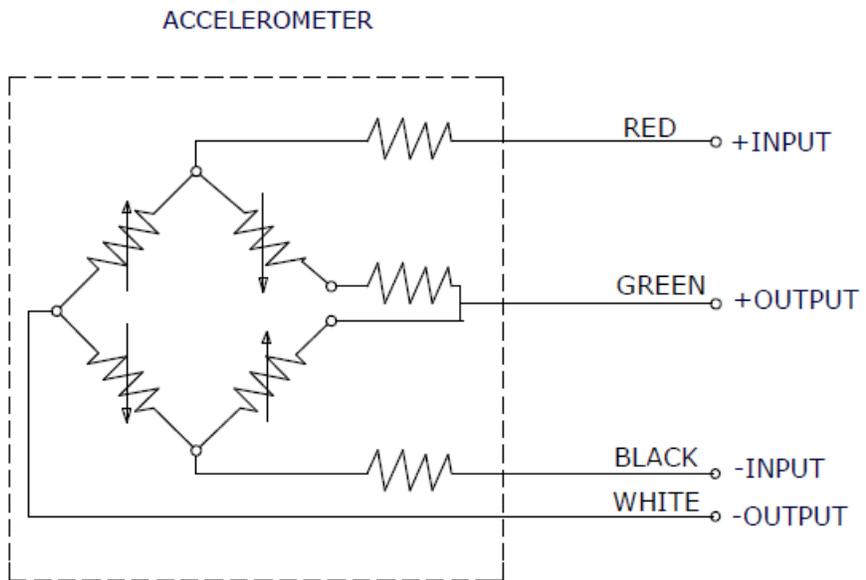


Dimensions, Model EGCS-D1S

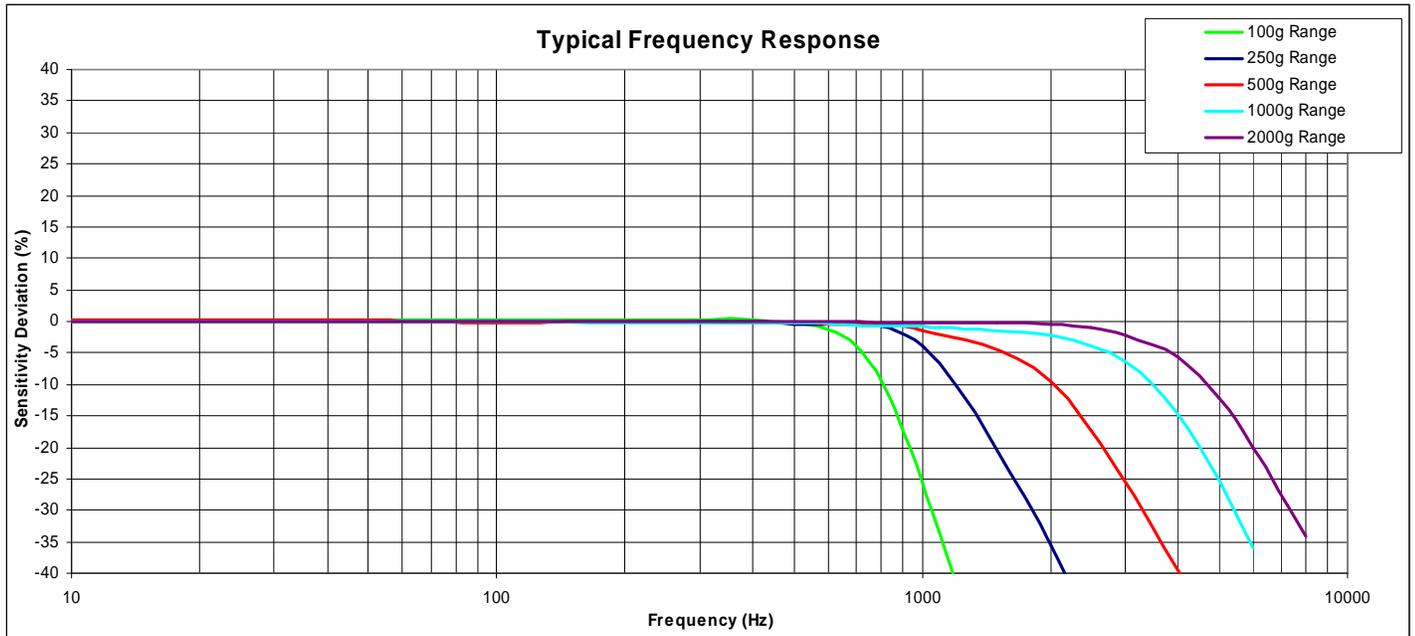


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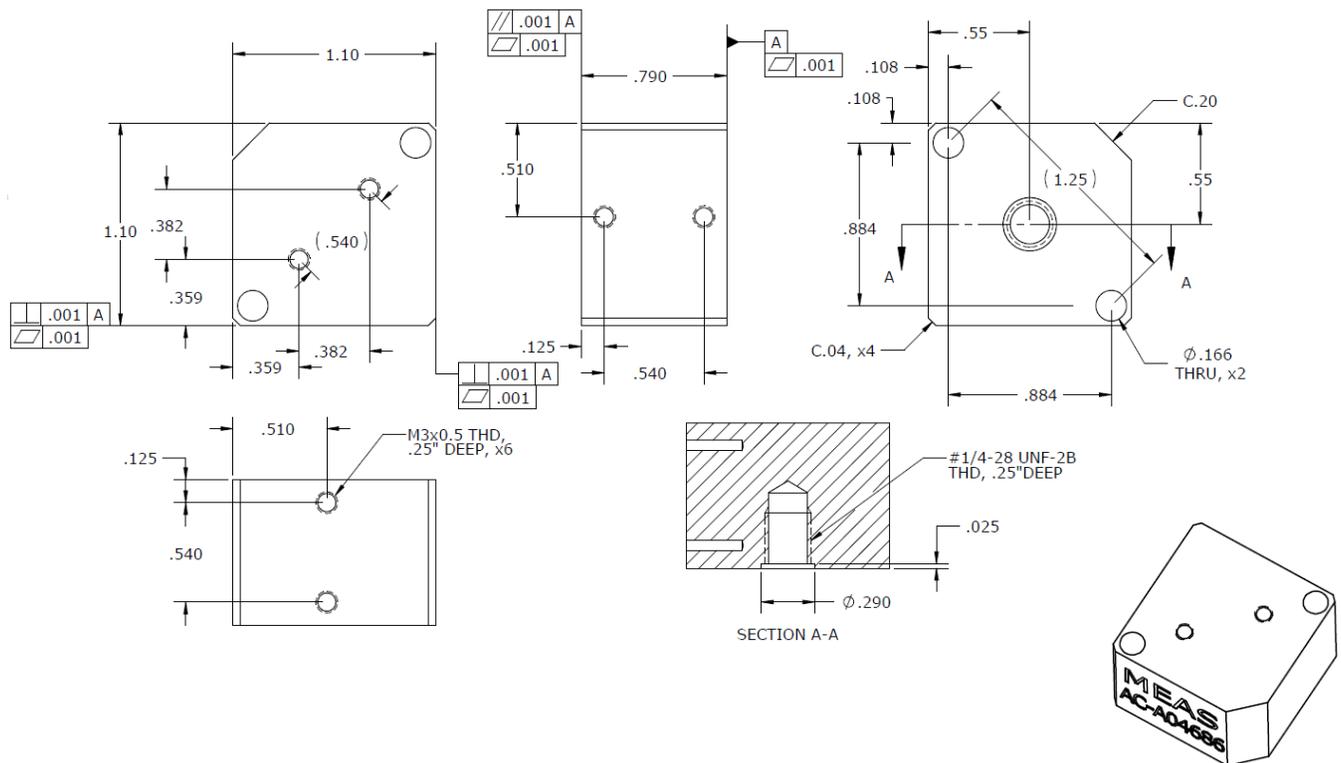
Schematic, for both EGCS-D0 and EGCS-D1S



Typical Frequency Response



Triaxial Mounting Block



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Ordering Information

EGCS-D0 or EGCS-D1S	GGGG	-/VX	/LZZ
Range 5 = 5g 10 = 10g 25 = 25g 50 = 50g 100 = 100g 250 = 250g 500 = 500g 1000 = 1000g 2500 = 2500g 5000 = 5000g 10000 = 10,000g			
Excitation Voltage Leave blank for standard 15Vdc V5 = 5Vdc excitation V10 = 10Vdc excitation			
Cable length Leave blank for standard 1 meter cable length L2M = 2 meters L5M = 5 meters L10M = 10 meters			

Example; EGCS-D0-100-/L2M
Model EGCS-D0, 100g range, 2 meters cable length