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# MODEL EGCS-D0 & EGCS-D1S ACCELEROMETERS

#### **Specifications**

- DC Response, Critically Damped
- ±5g to ±10,000g Dynamic Range
- Rugged Design, Integral Strain Relief
- Fluid Damped, Over-Range Stops
- Temperature Compensated
- -40°C to +100°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</li>

#### **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 <±20mV.

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℃, 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) @15Vde	c 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℃ to +100℃											
Compensated Temp	+20℃ to +80℃, contact factory fo r 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		ount for EG						0-32 stud)				
1 Output is ratiometric to exc			(-/-/-		,, =		- (					

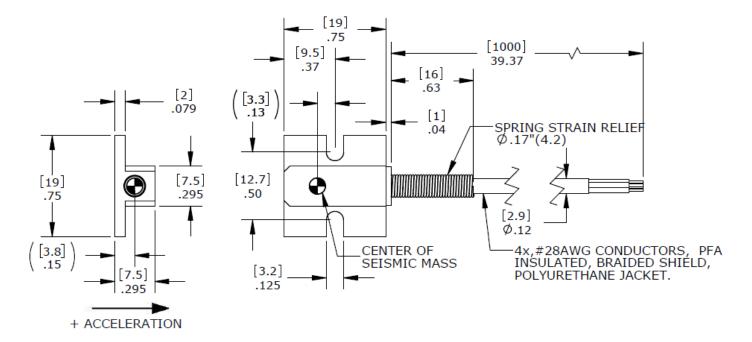
Output is ratiometric to excitation voltage

Calibration supplied: NIST Traceable Amplitude Calibration from 20Hz to ±1dB Frequency Limit CS-FREQ-0100

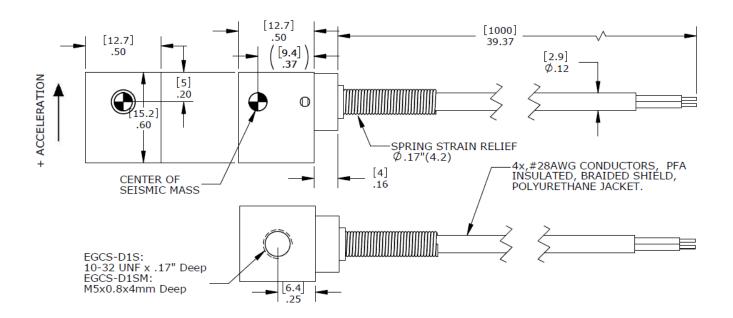
Triaxial Mounting Block for EGCS-D0 Version AC-A04686 Optional accessories: 121

3-Channel Precision Low Noise DC Amplifier

#### Dimensions, Model EGCS-D0

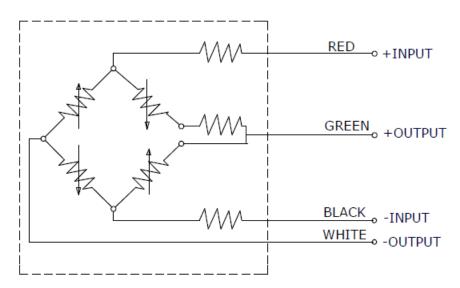


#### Dimensions, Model EGCS-D1S

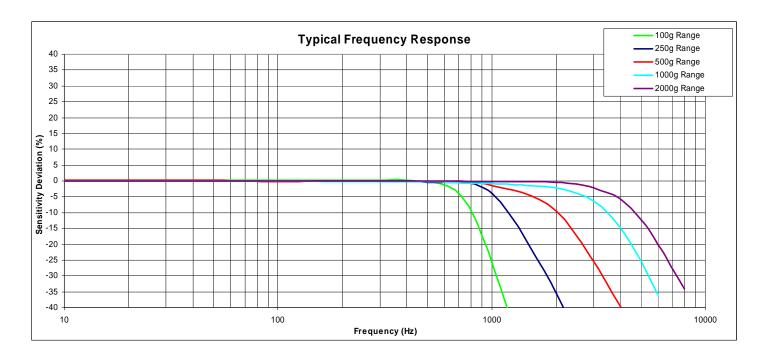


### Schematic, for both EGCS-D0 and EGCS-D1S

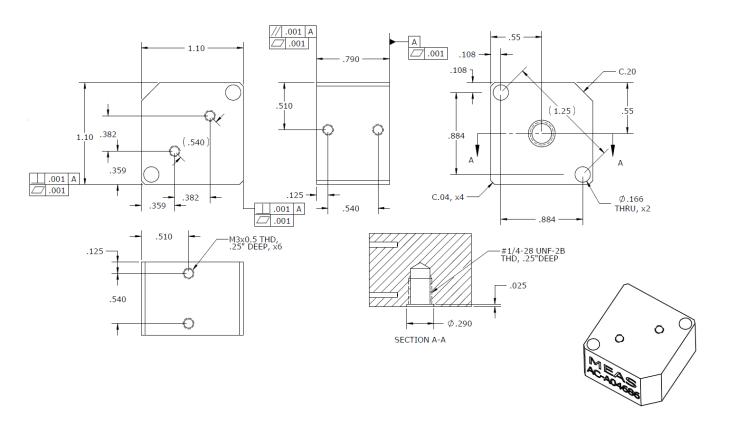
#### **ACCELEROMETER**



## Typical Frequency Response



#### **Triaxial Mounting Block**



#### **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 1000 = 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 I L2M = 2 meters L5M = 5 meters L10M = 10 meters	length			

Example; EGCS-D0-100-/L2M

Model EGCS-D0, 100g range, 2 meters cable length

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Version # 10/2020

