

Model EGCS-D0/D1S Accelerometer



Rugged Design
DC Response, Critically Damped
 $\pm 5g$ to $\pm 10,000g$ Range
Broad Temperature Range

The Model EGCS-D0/D1S

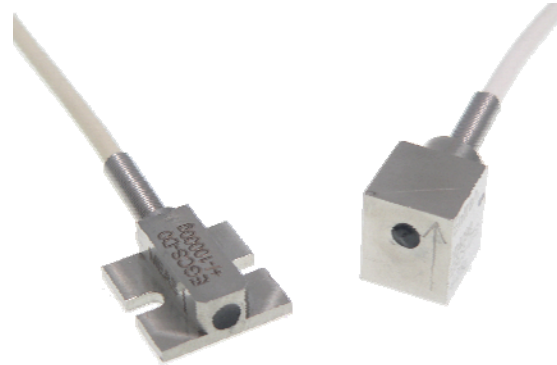
accelerometers are critically damped with built-in over-range stops that are set to protect the unit against up to 20,000g shocks. This is ideal for applications which may experience rough handling or in situations where the accelerometer must survive a high initial overload in order to make a low g measurement. These units feature a Wheatstone Bridge output with compensated temperature range of +20 to +80 °C.

FEATURES

- $\pm 5g$ to $\pm 10,000g$ 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

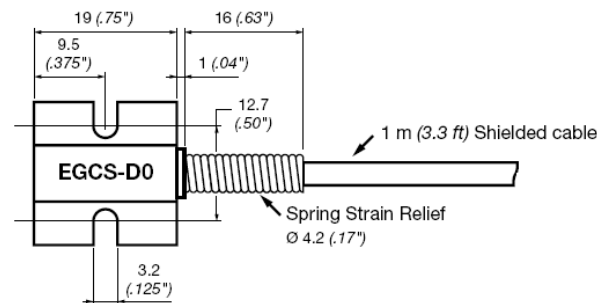
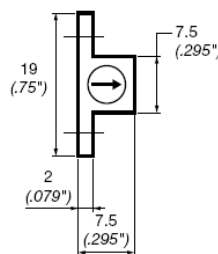
APPLICATIONS

- General Purpose
- Impact & Shock Testing
- Vibration Monitoring
- Engine Testing
- Road Vehicle Testing

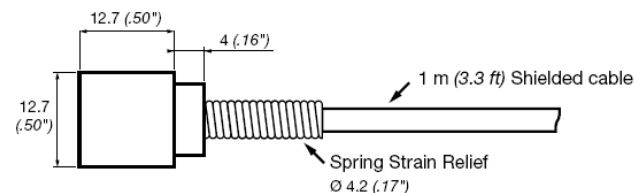
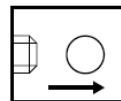


dimensions

EGCS-D0

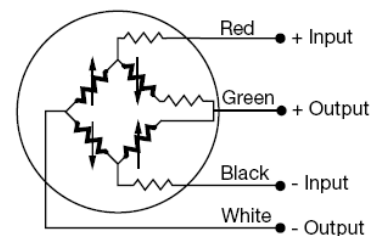


EGCS-D1S & -D1SM



EGCS-D1S: 10-32 UNF x .17" Deep
EGCS-D1SM: M5 x 0.8 x 4mm Deep

北京汇润科贸有限公司
电话: +86 010 5601 8989
+86 010 5601 7979
传真: +86 010 5885 7266
邮箱: sales@aq315.com
<http://www.aq315.com>



Model EGCS-D0/D1S 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

DYNAMIC											
Range (g)	±5	±10	±25	±50	±100	±250	±500	±1000	±2500	±5000	±10000
Sensitivity (mV/g) ¹	40	20	8	4	2	0.8	0.4	0.2	0.08	0.04	0.016
Frequency Response min. (Hz)	0-80	0-120	0-240	0-350	0-500	0-750	0-1000	0-1500	0-2000	0-2400	0-3000
±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	0-5000
±1/2dB											
Natural Frequency (Hz)	300	400	800	1200	1800	2600	3500	5000	7000	8000	16000
Non-Linearity (%FSO)	±1	±1	±1	±1	±1	±1	±1	±1	±1	±1	±1
Transverse Sensitivity (%)	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3
Damping Ratio, Nominal	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	20000	20000

ELECTRICAL

Zero Acceleration Output (mV)	±15 Differential
Excitation Voltage (Vdc)	15 (can be used from 2 to 15Vdc but lower excitation voltage will decrease sensitivity accordingly)
Input Resistance (Ω)	2000 Nominal
Output Resistance (Ω)	1000 Nominal
Insulation Resistance (MΩ)	>100 @50Vdc
Ground Isolation	Isolated from Mounting Surface

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 +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, IP65

PHYSICAL

Case Material	Stainless Steel
Cable	4x #28 AWG Leads, PFA Insulated, Braided Shield, Polyurethane Jacket
Weight	10 grams for EGCS-D0, 12grams for EGCS-D1S
Mounting	Screw Mount for EGCS-D0, Stud Mount for EGCS-D1S

¹ Output is ratiometric to excitation voltage

Calibration supplied:	CS-FREQ-0100	NIST Traceable Amplitude Calibration from 20Hz to ±1/2dB Frequency Response Limit
Optional accessories:	MTG-F4	Triaxial Mounting Block for EGCS-D0
	101	Three Channel DC Signal Conditioner Amplifier
	140	Auto-zero Inline Amplifier

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ordering info

EGCS – D0 – 100 – /Z1/L2M/C

| | | Options, otherwise leave blank
| | Range (100 is 100g)
| Housing (D0, D1S or D1SM)

Compensated Temp Ranges:

Excitation Voltage:

Special Cable Length:

Connector Wired to Cable:

Standard = +20 to +80°C (+70 to +170°F)
Z* = Non standard, contact factory
Standard = 15Vdc
V* = Non standard, contact factory
L00F = Replace "00" with length in feet
L00M = Replace "00" with length in meter
C = Microtech type male or equivalent

Example: EGCS-D0-100-/L2M

Model EGCS, D0 Housing Configuration, 100g Range, 2 Meter Cable Length