MODEL EGCS-D0/D1S ACCELEROMETER

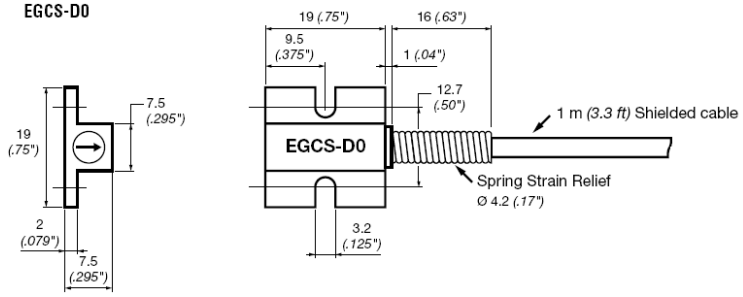
SPECIFICATIONS

- **Rugged Design**
- **DC Response, Critically Damped**
- **±5g to ±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 +80ºC.

dimensions

EGCS-D0



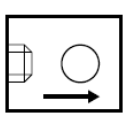
FEATURES

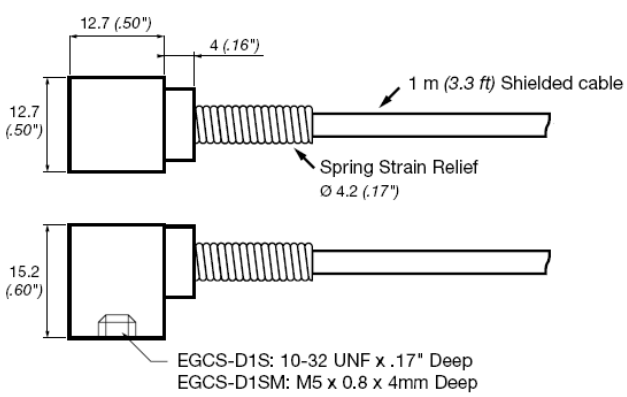
- ±5g to ±10,000g Dynamic Range
- Heavy Duty, Rugged
- Static and Dynamic Measurement
- DC to 4000Hz Frequency Response
- ±1% Non-Linearity
- -40ºC to +100ºC Temperature Range

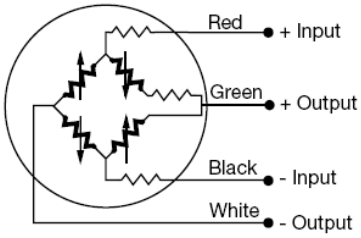
APPLICATIONS

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

EGCS-D1S & -D1SM







PERFORMANCE SPECIFICATIONS

All values are typical at +24°C, 80Hz 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) +3%/-8%	0-90	0-120	0-240	0-360	0-540	0-780	0-1050	0-1500	0-2100	0-2400	0-3000
Frequency Response nom. (Hz) +3%/-18%	0-150	0-200	0-400	0-600	0-900	0-1300	0-1750	0-2500	0-3500	0-4000	0-5000
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)	±20 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 +100°C (-40 to +212°F)
Compensated Temperature	+20 to+80°C (+70 to +170°F), contact factory for other temperature compensation options
Storage Temperature	-40 to +100°C (-40 to +212°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:	AC-A04686	Triaxial Mounting Block for EGCS-D0
	121	3-Channel Precision Low Noise DC Amplifier
	140	Auto-zero Inline Amplifier

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ORDERING INFO

EGCS – D0 – 100 – /Z1/L2M/C

+(70 to +170°F)

I I I___Options, otherwise leave blank

contact factory

I I_____ Range (100 is 100g)

I_____ Housing (D0, D1S or D1SM)

contact factory

length in meter

male or equivalent

Compensated Temp Ranges: Standard = +20 to +80°C

Z* = Non standard,

Excitation Voltage: Standard = 15Vdc

V* = Non standard,

Special Cable Length: L00F = Replace “00” with length in feet

L00M = Replace “00” with

Connector Wired to Cable: C = Microtech type

Example: EGCS-D0-100-/L2M

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

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