

Model EGCS-D0/D1S Accelerometer



Rugged Design
DC Response
Critically Damped
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 10,000g 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.

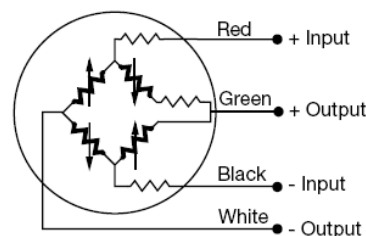
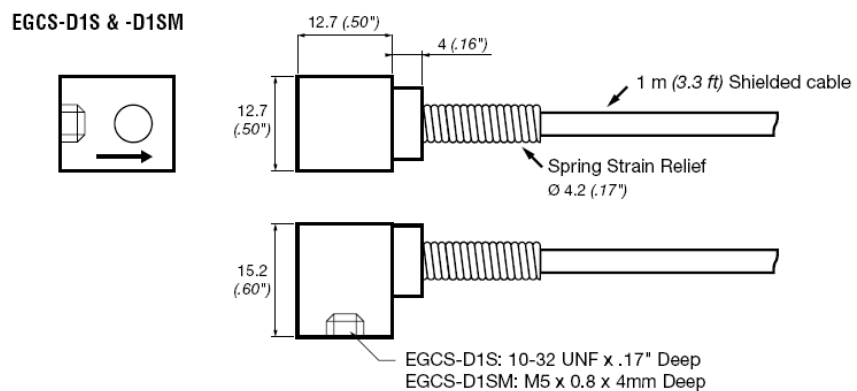
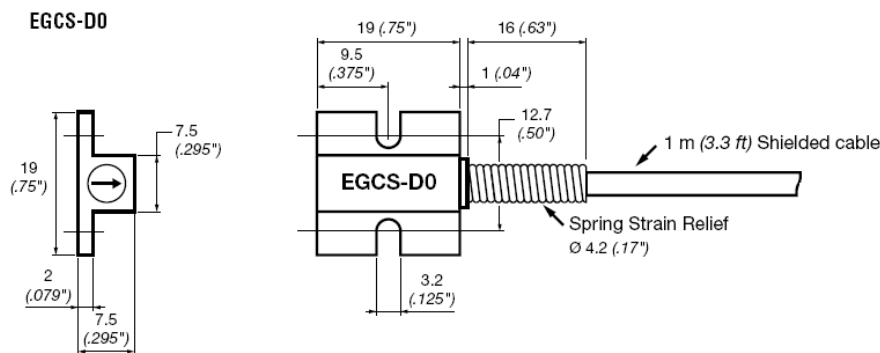
FEATURES

- ±5g to ±5000g Dynamic Range
- Heavy Duty, Rugged
- Static and Dynamic Measurement
- DC to 4000Hz Frequency Response
- ±1% Non-Linearity
- -40 °C to +120 °C Temperature Range
- 10,000g Over-range Protection

APPLICATIONS

- General Purpose
- Machine Control
- Inspection
- Engine Testing
- Road Vehicle Testing

dimensions



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											Notes
DYNAMIC											
Range (g)	±5	±10	±25	±50	±100	±250	±500	±1000	±2500	±5000	
Sensitivity (mV/g)	40	20	8	4	2	0.8	0.4	0.2	0.08	0.04	
Frequency Response min. (Hz)	0-80	0-120	0-240	0-350	0-500	0-750	0-1000	0-1500	0-2000	0-2400	±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	±1/2dB
Natural Frequency (Hz)	300	400	800	1200	1800	2600	3500	5000	7000	8000	
Non-Linearity (%FSO)	±1	±1	±1	±1	±1	±1	±1	±1	±1	±1	
Transverse Sensitivity (%)	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	
Damping Ratio	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	Nominal
Shock Limit (g)	500	1000	2000	5000	10000	10000	10000	10000	10000	10000	
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										
PHYSICAL											
Case Material	Stainless Steel										
Cable	PFA Insulated Leads, 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										
AWG	#28										
Wiring color code:	+Excitation = Red; -Excitation = Black; +Output = Green; -Output = White										
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:

Standard = +20 to +80°C (+70 to +170°F)
 Z* = Non standard, contact factory

Excitation Voltage:

Standard = 15Vdc

Special Cable Length:

V* = Non standard, contact factory
 L00F = Replace "00" with length in feet
 L00M = Replace "00" with length in meter

Connector Wired to Cable:

C = Microtech type male or equivalent

Example: EGCS-D0-100-/L2M

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