

EGCS-D0 | EGCS-D1S

Miniature Acceleration Sensor

- Ranges ± 5 g up to ± 10000 g
- Non-linearity ± 1 % FSO
- Output 200 mV
- Supply voltage 15 VDC



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 20000 g 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

- ± 5 g to ± 10000 g Dynamic Range
- Heavy Duty, Rugged
- Static and Dynamic Measurement
- DC to 4000 Hz Frequency Response
- ± 1 % Non-Linearity
- -40 °C to +120 °C Temperature Range

■ Applications

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

■ Specification

All values are typical at +24°C, 100 Hz and 15 VDC excitation unless otherwise stated.

Dynamic	Unit											
Range:	g	± 5	± 10	± 25	± 50	± 100	± 250	± 500	± 1000	± 2500	± 5000	± 10000
Sensitivity (1):	mV/g	40	20	8	4	2	0.8	0.4	0.2	0.08	0.04	0.016
Frequency Response, min $\pm 1/2$ dB:	Hz	0-80	0-120	0-240	0-350	0-500	0-750	0-1000	0-1500	0-2000	0-2400	0-3000
Frequency Response, nom $\pm 1/2$ dB:	Hz	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, nom.:		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

(1) Output is ratiometric to supply voltage

Electrical

Zero Acceleration Output:	± 15 mV differential
Supply voltage:	15 VDC (can be used from 2 to 15Vdc but lower excitation voltage will decrease sensitivity accordingly)
Input Resistance, nom.:	2000 Ω
Output Resistance, nom.:	1000 Ω
Insulation Resistance	>100 M Ω @50 VDC
Ground Isolation	Isolated from Mounting Surface

Environmental

Thermal Zero Shift:	±2.0 mV/50°C (±2.0 mV/100°F)
Thermal Sensitivity Shift:	±2.5 %/50°C (±2.5 %/100°F)
Operating Temperature:	-40 ... +120 °C (-40 ... +250 °F)
Compensated Temperature:	+20 ... +80 °C (+70 ... +170°F), call for other temperature compensation options
Storage Temperature:	-40 ... +120 °C (-40 ... +250 °F)
Humidity:	Epoxy sealed, IP65

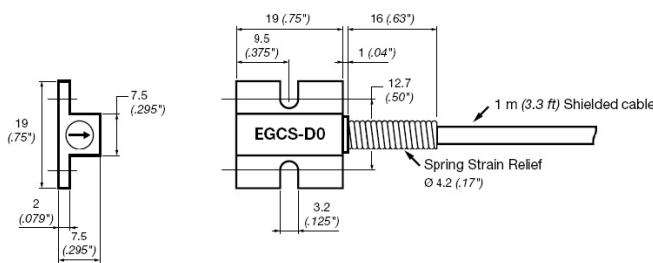
Physical

Case Material	Stainless steel
Cable	4x #28 AWG lads, PFA insulated, braided shield, polyurethane jacket
Weight	10 grams (EGCS-D0), 12 grams (EGCS-D1S)
Mounting	Screw mount (EGCS-D0), stud mount (EGCS-D1S)

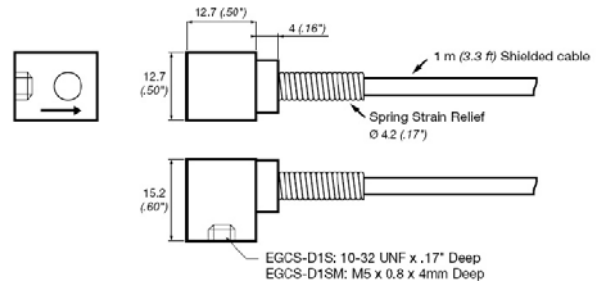
Calibration supplied:	CS-FREQ-0100 NIST traceable amplitude calibration from 20 Hz to ±1/2 dB frequency response limit
------------------------------	--

Dimensions

EGCS-D0

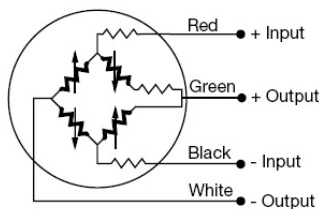


EGCS-D1S, EGCS-D1SM



All dimensions in mm (inches), approx. values. These drawings are for information only and not intended for construction purpose.

Wiring



Ordering Information

EGCS	- D0	- 100	- /Z1/L2M/C
Model	D0, D1S or D1SM	Range	Options or blank

Comp. temperature ranges:	Standard	=	20 ... +80 °C (70 ... +170 °F)
	Z*	=	Non-Standard, contact factory
Supply voltage:	Standard	=	15 VDC
	V*	=	Non-standard, contact factory
Special cable length:	L00F	=	Replace "00" with total length in ft
	L00M	=	Replace "00" with total length in m
Connector wired to cable:	C	=	Microtech type male or equivalent

Due to continual product development, ALTHEN and partners reserve the right to vary the foregoing details without prior notice.

EGCS-D0-D1S-en, © ALTHEN GmbH 02/2012, rev. 2.01

Page 2/2

ALTHEN GmbH Mess- und Sensortechnik

Frankfurter Str. 150 - 152 +49 6195 70060
65779 Kelkheim / Germany +49 6195 700666

<http://www.althensensors.com>
info@althen.de

ALTHEN
MESS- UND SENSORTECHNIK