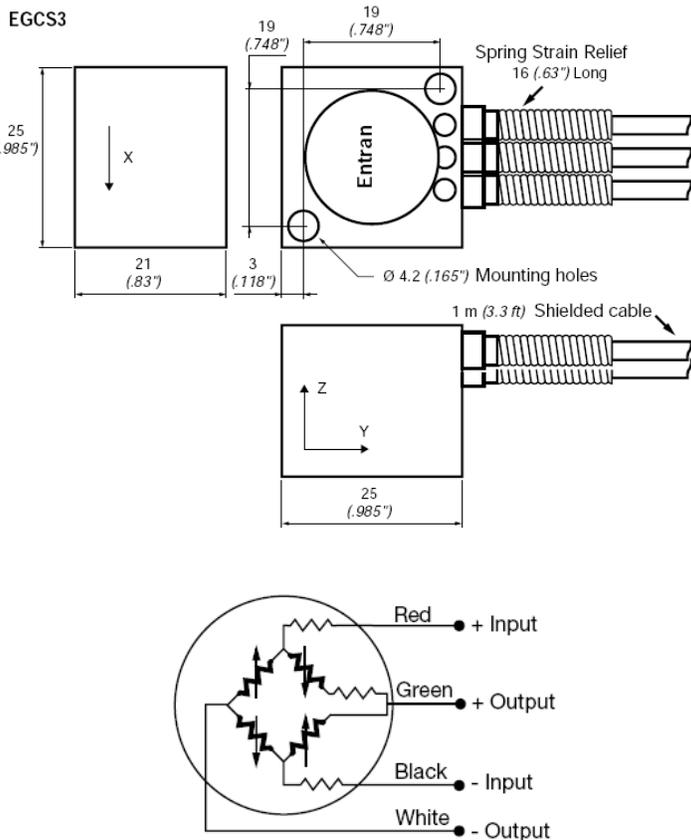


DIMENSIONS



MODEL EGCS3-D TRIAXIAL ACCELEROMETER

SPECIFICATIONS

- ◆ Triaxial, DC Response
- ◆ 10,000 g Overrange Stops
- ◆ $\pm 5g$ to $\pm 5000g$ Dynamic Range
- ◆ Critically Damped

The Model EGCS3-D triaxial accelerometer is available in ranges from $\pm 5g$ through $\pm 5000g$. With over-range limit to $\pm 10,000g$ and spring strain relief, this rugged device is ideal for offshore, downhole and shock testing applications. Its small size and screw mounting ensure ease of installation while its low power requirements and DC output facilitate integration into data acquisition and monitoring systems. The EGCS3 also features CE Conformance to EN 61010-1, EN 50081-1 and EN 50082-1.

FEATURES

- ◆ $\pm 5g$ to $\pm 5000g$ Dynamic Range
- ◆ Heavy Duty, Rugged
- ◆ Static and Dynamic Measurement
- ◆ DC to 4000Hz Frequency Response
- ◆ $\pm 1\%$ Non-Linearity
- ◆ $-40\text{ }^{\circ}\text{C}$ to $+120\text{ }^{\circ}\text{C}$ Temperature Range
- ◆ 10,000g Over-range Protection

APPLICATIONS

- ◆ Blast Testing
- ◆ Machine Control
- ◆ Performance Testing
- ◆ Engine Testing
- ◆ Road Vehicle Testing

MODEL EGCS3-D TRIAXIAL ACCELEROMETER

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

| | ±5 | ±10 | ±25 | ±50 | ±100 | ±250 | ±500 | ±1000 | ±2500 | ±5000 | Notes |
|------------------------------|-------|-------|-------|-------|-------|--------|--------|--------|--------|--------|---------|
| 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) | ±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 Compensated Temperature | -40 to +120°C (-40 to +250°F) | | | | | | | | | |
| Storage Temperature | +20 to +80°C (+70 to +170°F), contact factory for other temperature compensation options | | | | | | | | | |
| Humidity | -40 to +120°C (-40 to +250°F) Epoxy Sealed | | | | | | | | | |

PHYSICAL

| | | | | | | | | | | |
|---------------|--|--|--|--|--|--|--|--|--|--|
| Case Material | Anodized Aluminum | | | | | | | | | |
| Cable | PFA Insulated Leads, Braided Shield, Silicone Jacket | | | | | | | | | |
| Weight | <50 grams | | | | | | | | | |
| Mounting | Screw Mount | | | | | | | | | |
| 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: 121 3-Channel Precision Low Noise DC Amplifier
140 Auto-zero Inline Amplifier

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MODEL EGCS3-D TRIAXIAL ACCELEROMETER

ORDERING INFORMATION

EGCS3 – D – 100 – /Z1/L2M/C

+(70 to +170°F)

| |___ Options, otherwise leave blank

contact factory

|_____ Range (100 is 100g)

contact factory

with length in meter

male or equivalent

Example: EGCS3-D-100-/L2M

Model EGCS3, 100g Range, 2 Meter Cable Length

Compensated Temp Ranges:

Standard = +20 to +80°C

Z* = Non standard,

Excitation Voltage:

Standard = 15Vdc

V* = Non standard,

Special Cable Length:

with length in feet

L00F = Replace "00"

L00M = Replace "00"

Connector Wired to Cable:

C = Microtech type

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