

## EGCS-S425

### Miniature Acceleration Sensor

- Ranges  $\pm 50$  g up to  $\pm 2000$  g
- Non-linearity  $\pm 1$  % FSO
- Output  $\pm 150$  mV
- Supply voltage 10 VDC



The Model EGCS-S425 is a small, ISO 6487 and SAE J211 compliant piezo-resistive accelerometer. This unit features internal temperature compensation, anodized aluminum alloy housing and flexible cable output. This sensing element is damped with fluid to extend useful frequency range and reduce the effect of high frequencies.

#### ■ Features

- Fluid Damping
- Ranges from  $\pm 50$  g to  $\pm 2000$  g
- Flexible Cable
- $-20$  °C to  $+80$  °C Temperature Range
- Built-in mechanical stops
- Low zero offset  $< \pm 10$  mV
- Internal Temperature Compensation
- 10 VDC Excitation with  $\pm 150$  mV Output

#### ■ Applications

- Auto Safety Testing
  - Crash
  - Sled
  - Dummy

#### ■ Specification

All values are typical at  $\pm 24$  °C, 100 Hz and 10Vdc excitation unless otherwise stated

Dynamic	Unit						
Range:	g	$\pm 50$	$\pm 100$	$\pm 250$	$\pm 500$	$\pm 1000$	$\pm 2000$
Overrange Limit:	g	$\pm 5000$	$\pm 5000$	$\pm 10000$	$\pm 10000$	$\pm 10000$	$\pm 10000$
Attenuation, Fh:	dB	$\pm 0.5$ at 180 Hz	$\pm 0.5$ at 600 Hz	$\pm 0.5$ at 1000 Hz	$\pm 0.5$ at 1000 Hz	$\pm 0.5$ at 1000 Hz	$\pm 0.5$ at 1000 Hz
Attenuation, Fn:	dB	$+0.5 / -2$ at 300 Hz	$+0.5 / -2$ at 1000 Hz	$+0.5 / -2$ at 1650 Hz	$+0.5 / -2$ at 1650 Hz	$+0.5 / -1$ at 1650 Hz	$+0.5 / -0.5$ at 1650 Hz
Attenuation, 2Fh:	dB	$+0.5 / -4$ at 360 Hz	$+0.5 / -4$ at 1200 Hz	$+0.5 / -4$ at 2000 Hz	$+0.5 / -4$ at 2000 Hz	$+0.5 / -2$ at 2000 Hz	$+0.5 / -1$ at 2000 Hz
Full Scale Output, nom.:	mV	$\pm 150$	$\pm 150$	$\pm 150$	$\pm 150$	$\pm 150$	$\pm 150$
Natural Frequency, min.:	kHz	1	1.5	2.5	4.5	6	10

#### Dymanic

Full Scale Output:	$\pm 150$ mV nom, ( $\pm 100$ mV min., $\pm 225$ mV max.)	
Non-linearity and Hysteresis:	$< \pm 1$ % FSO	
Transverse Sensitivity:	1 %	nominal
Zero Acceleration Output:	$\pm 10$ mV	
Thermal Zero Shift:	$\pm 3$ mV	
Thermal Sensitivity Shift:	$< \pm 0.1$ %/K	
Damping Ratio:	0.7	nominal

#### Electrical

Supply voltage:	10 VDC	Alternate excitations available
Input Resistance:	2000 $\Omega$	nominal
Output Resistance:	1000 $\Omega$	nominal

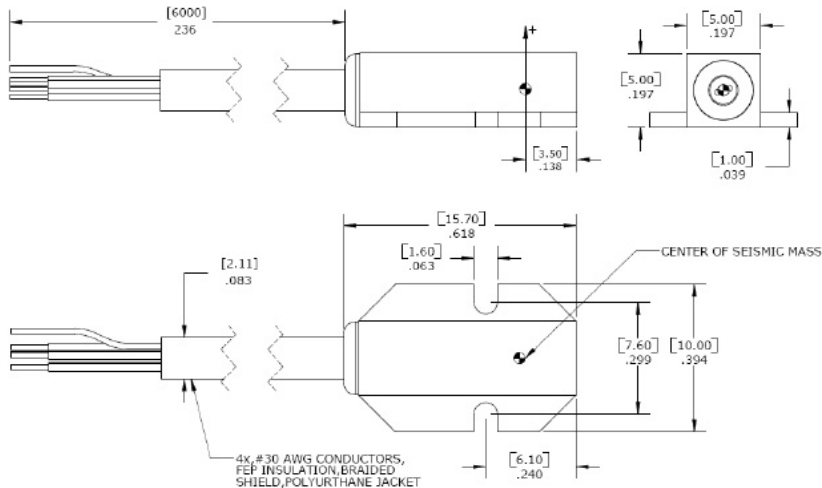
## Environmental

Operating Temperature:	-20 ... +80 °C
Compensated Temperature:	+10 ...+50 °C
Humidity:	Epoxy sealed

## Physical

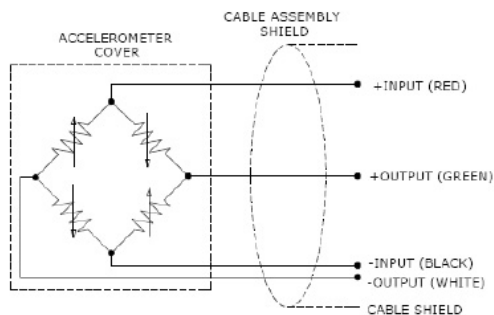
Weight Without Cable:	<5 grams, standard cable length = 6 m
Case Material:	Anodized aluminum
Cable:	4x #30 AWG, Teflon insulated, braided shield, TPU jacket

## Dimensions



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

## Wiring



## Ordering Information

EGCS - S425 - 100 - /L2M/V5

Range

Options or blank

Supply voltage:

Standard = 10 VDC  
V\* = Non-standard, contact factory

Cable length:

Standard = 6 m  
L00M = Replace "00" with total length in m

Calibration Shunt:

RCALX00 = Replace "00" with value of % Range (ex. RCAL50 → 50% FS)

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