Sherborne Sensors

instrumentos de medida

A215 Series

DC-Operated, Servo Accelerometers

Features

- Available in ranges from ±1g to ± 20g
- High resolution down to 0.0005% FRO Max
- Closed loop force balance system
- Self-Test facility
- DC Input – DC Output
- Manufactured to AS9100 and ISO 9001:2015 standards

Applications

Flight test monitoring	Data acquisition systems
Accident data collection	Low frequency analysis
Structural health monitoring	Train performance testing
Flight simulators	Road bed analysis
Braking control in mass transit systems	Wind turbine control

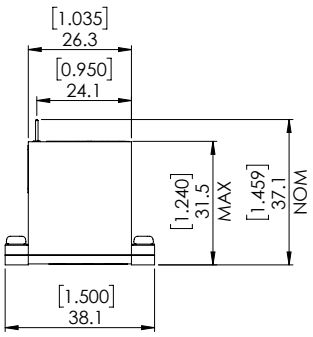
Benefits

- Small size for easy integration into constrained space
- Low weight 57g
- Wide temperature range -55 °C to +95 °C

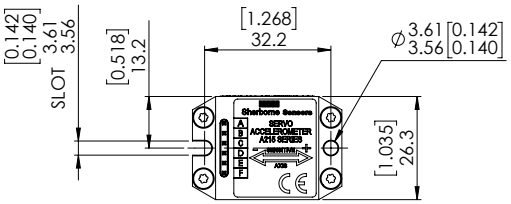
Electrical Connections

Pin A	+15V dc excitation
Pin B	0V dc excitation/output
Pin C	−15V dc excitation
Pin D	±5V dc output
Pin E	Not Connected
Pin F	Self Test

SIDE VIEW



PLAN VIEW



Sherborne Sensors

Specifications

Specifications by Range @ +25°C (+77°F)		± 1g	± 2g	± 5g	± 10g	±20g
Output Impedance	Ω (nom)	5000	2500	5000	2500	5000
Output Noise (DC to 10kHz)	V rms			< 0.005		
Non-linearity *(see note 2)*	% FRO (max)	± 0.05	± 0.05	± 0.05	± 0.05	± 0.10
Hysteresis	% FRO (max)			± 0.02		
Resolution	% FRO (max)			± 0.0005		
Natural Frequency	Hz(min)	5000	2500	5000	2500	5000
Cross-axis Sensitivity *(see note 3)*	% FRO (max)	± 0.2	± 0.2	± 0.2	± 0.2	± 0.5
Zero Offset *(see note 4)*	% FRO			< ± 0.1		
Damping Ratio				0.6 ± 0.1		
Insulation Resistance	MΩ @ 50 Volts dc			≥ 20		
Thermal Zero Shift	%FRO/°C (%FRO/°F) (max)			≤ ± 0.002 (0.004)		
Thermal Sensitivity Shift	%Reading/°C (%Reading/°F) (max)			≤ ± 0.02 (0.04)		
Weight	Grams (ozs)			57 (2) A215		

Electrical

Full Range Output (FRO) *(see note 1)*	Volts dc	± 5
Excitation Voltage	Volts dc	± 15 (± 10%)
Current Consumption	mA	<± 15

Environmental Characteristics

Operating Temperature Range °C (°F)	-55 to +95 (-67 to 203)
Survival Temperature Range °C (°F)	- 65 to 105 (-85 to 221)
Shock	100g, 11ms ½ sine

Notes

1. Full Range Output (FRO) is defined as the full acceleration excursion from positive to negative, i.e. ±2g = 4g
2. Non-linearity is determined by the method of least squares
3. Cross-axis sensitivity is the output of unit when subjected to full range acceleration in cross-axis
4. Zero offset is specified under static conditions with no vibration inputs

Model Designation & Ordering Code

A 2 1 5 - 0 0 0 1 - □ g

g Range