



Applications

- Geophysical, seismic and civil engineering studies applications
- Low frequency vibration measurement in Civil Engineering applications
- Structural monitoring
- Flight test monitoring
- Low acceleration analysis

A333 Series

Gravity Referenced, Ultra-Low Range Tri-Axial Linear Servo Accelerometer

The A333 Series are high precision, closed loop, servo balance, ultra-low range tri-axial accelerometer that can be used for a wide variety of industrial and aerospace applications. Derived from the standard A320 Series single axis accelerometer and despite its low measuring range, the A333 Series are very robust and shock resistant. Electrical terminations are via a multi-pin, electrical connector.

Features

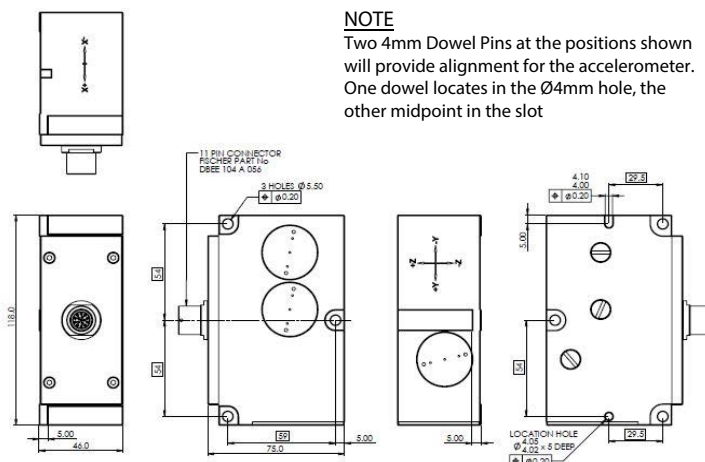
- Fully self-contained - connect to a DC power source and a readout or control device for a complete operating system.
- High-level output signal
- $\pm 1/10g$ to $\pm 2g$ ranges available
- Extremely rugged, withstands 1500g shock
- Extreme high resolution of 0.0005%FRO
- Manufactured to AS91000D and ISO 9001:2015 standards

Benefits

- Very low measuring range
- Easy mounting
- Wide temperature range -18°C to +70°C

Electrical Connections

PIN	FUNCTION
1	+ 15V DC SUPPLY
2	0V COMMON
3	- 15V DC SUPPLY
4	'X' SIGNAL OUTPUT
5	'X' SIGNAL RETURN
6	'Y' SIGNAL OUTPUT
7	'Y' SIGNAL RETURN
8	'Z' SIGNAL OUTPUT
9	'Z' SIGNAL OUTPUT
10	NOT USED
11	NOT USED



Specifications

Specifications by Range @ +20°C (+68°F)

Range (each axis)		± 0.10g	± 0.25g	± 0.50g	± 1.00g	± 2.00g
Excitation Voltage	Volts dc	±12 to ±18				
Current Consumption	mA (nom)	± 15				
Full Range Output (FRO) (see note 1)	Volts dc	± 5 (option of ± 10Vdc)				
Output Standardisation	%FRO(max)	± 0.2				
Output Impedance	Ω (max)	10				
Output Noise	Vrms (max)	0.002				
Non-Linearity (see note 2)	%FRO(max)	0.05				
Non-Repeatability	%FRO(max)	0.02	0.02	0.015	0.010	0.010
Resolution	%FRO(max)	0.0005				
Frequency Response (-3dB)	Hz (nom)	20	30	40	55	60
Cross-axis Sensitivity (see note 3)	g/g (max)	± 0.002				
Zero Offset (see note 4)	Volts dc (max)	± 0.10				
Thermal Zero Shift	%FRO/°C (max)	± 0.03	± 0.01	± 0.005	± 0.005	± 0.005
Thermal Sensitivity Shift	%Reading/°C (max)	± 0.03	± 0.01	± 0.006	± 0.006	± 0.006

Environmental Characteristics

Operating Temperature Range	°C	-18 to +70	(-18°F to +158°F)
Survival Temperature Range	°C	-40 to +70	(-40°F to +158°F)
Constant Acceleration Overload		50	
Shock Survival		1500g, 0.5sec, ½ sine	
Vibration Endurance		35g rms, 20 Hz to 2000 Hz sinusoidal	
Environmental Sealing		IP 65	

Notes

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

Model Designation & Ordering Code

A 3 2 3 - 0 0 0 1 - □ g
 □ g Range