

# A320 Series

Gravity Referenced, Ultra-Low Range  
Linear Servo Accelerometer

## Features

- Ultra Low Range  $\pm 1/10 g$  to  $\pm 2g$
- High-level output signal
- Fully self-contained - connect to a DC power source and a readout or control device for a complete operating system
- Extremely rugged, withstands 1500g shock



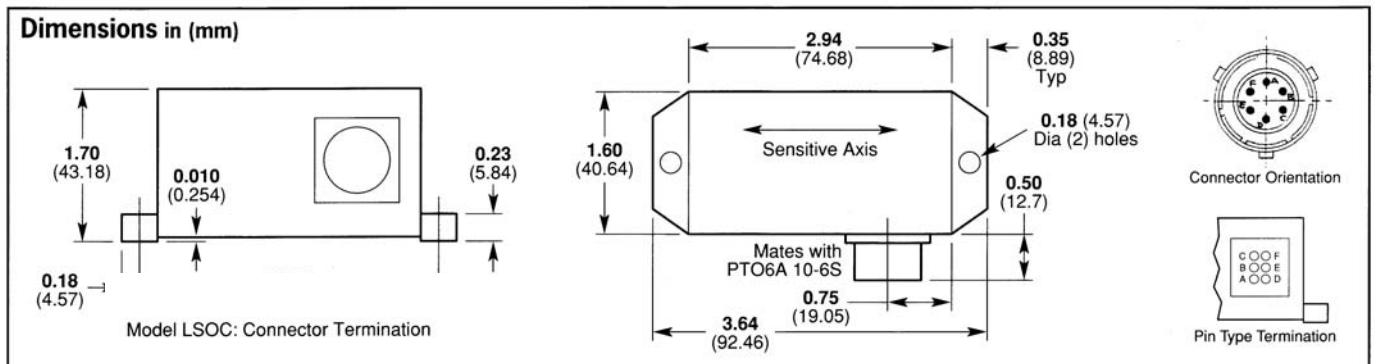
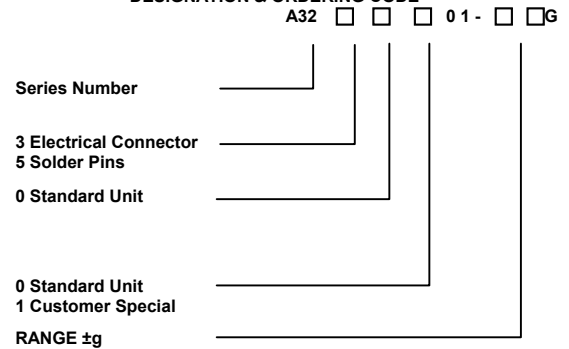
## Applications

- Geophysical, seismic and civil engineering studies
- Flight test monitoring
- Structural monitoring
- Low acceleration analysis

## Description

The A320 Series are high precision, closed loop, servo balance, ultra-low range accelerometers that can be used for a wide variety of industrial and aerospace applications. Despite its very low measuring range, the A320 Series are extremely robust and shock resistant. Electrical terminations are via 6-pin, bayonet lock connector or solder pins.

### DESIGNATION & ORDERING CODE



In North America: Email: [nasales@sherbornesensors.com](mailto:nasales@sherbornesensors.com)  
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Sherborne Sensors, a Nova Metrix company

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## Environmental Characteristics

Operating Temperature Range	°C	-18 to 70
Survival Temperature Range	°C	-40 to 70
Constant Acceleration Overload	g	50
Shock Survival		1500g, 0.5msec, ½ sine
Vibration Endurance		35g rms, 20 Hz to 2000 Hz sinusoidal
Environmental Sealing		IP65

## Specifications by Range @ 20°C

Ranges		± 0.10g	± 0.25 g	± 0.5 g	± 1.0 g	± 2.0 g
Excitation Voltage	Volts dc			±12 to ±18		
Current Consumption	mA (nom)			±15		
Full Range Output (FRO) (see notes 1 & 5)	Volts dc			±5 (option of ±10Vdc)		
Output Standardisation	% FRO (max)			±2		
Output Impedance	Ω (max)			10		
Output Noise (DC to 10kHz)	Vrms (max)			0.002		
Non-Linearity (see note 2)	% FRO (max)			0.05		
Non-Repeatability	% FRO (max)	0.02	0.02	0.02	0.01	0.01
Resolution	% FRO (min)			0.0005		
Frequency Response (-3dB)	Hz (nom)	20	30	40	55	60
Cross-axis sensitivity (see note 4)	g/g (max)			± 0.002		
Zero Offset (see note 3)	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
EMC Directive	EN61326: 1998					
EMC Emissions	EN55022: 1998			30 MHz to 1 GHz		
EMC Immunity	EN61000-4-2: 1995 inc A1: 1998 & A2: 2001			± 4 kV		
	EN61000-4-3: 2002			10 V/m		
	EN61000-4-4: 2004			± 1 kV		
	EN61000-4-6: 1996 inc A1: 2001			3 Vrms		
	EN61000-4-6: 2007			10 Vrms		
	EN61000-4-8: 1994 inc A1: 2001			30 A/m		

## Notes

1. Full Range Output 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. Zero offset is specified under static conditions with no vibration inputs
4. Cross-axis Sensitivity is the output at 1g in cross-axis when tested under static acceleration conditions

## How to Order

Specify model type with appropriate range; e.g. an A323-0001-0.5G is an accelerometer with connector and a range of ±½ g; an A325-0001-0.25G is an accelerometer with solder pins and a range of ±¼g  
Specify Mating Connector 3CON-0009 if required.



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