# Schaevitz® A320 'L' Series

Gravity Referenced, Ultra-Low Range

Linear Servo Accelerometer with 4 to 20mA Output

Sherborne Sensors
Clearly the first choice for precision .....

## Features

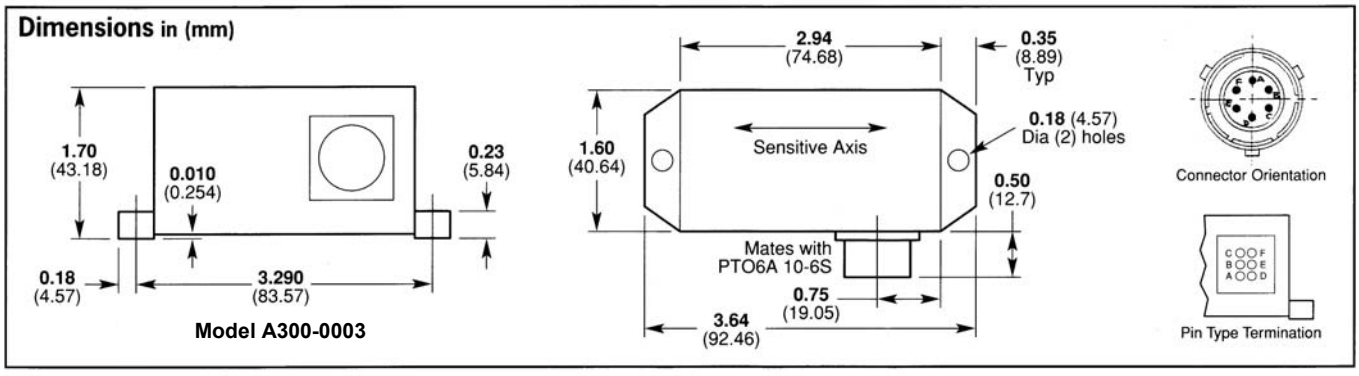
- *Fully self-contained - connect to a DC power source and a readout or control device for a complete operating system*
- *4 to 20mA output signal*
- *±1/10 g to ± 1g ranges available*
- *Extremely rugged, withstands 1500g shock*

## Applications

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

## A320L

The A320L Series are high precision, closed loop, servo balance, ultra-low range accelerometers with 4 to 20mA outputs that can be used in a wide variety of industrial and military applications. Despite its low measuring range the A320L Series are very robust and resistant to mechanical shock. Electrical terminations are via 6-pin, bayonet lock connector or solder pins.




1 Ringway Centre, Edison Road, Basingstoke, Hampshire, RG21 6YH, United Kingdom
Tel: +44 (0) 870 444 0728 Fax: +44 (0) 870 444 0729 Email: sales@sherbornesensors.com
Website: www.sherbornesensors.com

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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 |
| Enviromental Sealing | | IP65 |

## Specifications by Range @ 20°C

| **Ranges** | | **± 0.10g** | **± 0.25 g** | **± 0.50g** | **± 1.00g** |
|---|---|---|---|---|---|
| Excitation Voltage | Volts dc | | 20 to 30 | | |
| Current Consumption | mA (nom) | | 35 | | |
| Full Range Output (FRO) (see notes 1 & 5) | mA (nom) | | 4 to 20 | | |
| Output Standardisation | % FRO (max) | | ±2 | | |
| Output Noise | mA (max) | | 0.020 | | |
| Non-Linearity (see note 2) | %Reading (max) | | 0.08 | | |
| Non-Repeatability | % FRO (max) | 0.02 | 0.01 | 0.01 | 0.01 |
| Resolution | % FRO (max) | | 0.01 | | |
| Frequency Response (-3dB) | Hz (nom) | 20 | 30 | 40 | 55 |
| Cross-axis sensitivity (see note 4) | g/g (max) | | ± 0.002 | | |
| Zero Offset (see note 3) | mA (max) | | ± 0.10 | | |
| Thermal Zero Shift | %FRO/°C (max) | ± 0.05 | ± 0.02 | ± 0.01 | ± 0.01 |
| Thermal Sensitivity Shift | %Reading/°C (max) | ± 0.05 | ± 0.02 | ± 0.01 | ± 0.01 |

## 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 static acceleration conditions
3. Zero offset is specified under static conditions with no vibration inputs
4. Cross-axis Sensitivity is the output at 90 degrees when tested under static acceleration conditions
5. For 1g biased units, the scale factor is 8mA/g

## How to Order

Specify model type with appropriate range; e.g. an A323L-0001-0.5G is an accelerometer with connector and a range of ±½ g; an A325 - 0003 - 0.25G is an accelerometer with pins and a range of ±¼ g.
Please specify Mating Connector 3CON-0009 if required.

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