Schaevitz® A320 ‘L’ Series
Gravity Referenced, Ultra-Low Range
Linear Servo Accelerometer with 4 to 20mA Output

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 ± 2g 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.

Dimensions in (mm)

Model A300-0003
Schaevitz® A320 ‘L’ Series
Gravity Referenced, Ultra-Low Range
Linear Servo Accelerometer with 4 to 20mA Output

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

<table>
<thead>
<tr>
<th>Ranges</th>
<th>± 0.10g</th>
<th>± 0.25g</th>
<th>± 0.50g</th>
<th>± 1.00g</th>
<th>± 2.00g</th>
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</thead>
<tbody>
<tr>
<td>Excitation Voltage Volts dc</td>
<td>20 to 30</td>
<td></td>
<td></td>
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<tr>
<td>Current Consumption mA (nom)</td>
<td>35</td>
<td></td>
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<tr>
<td>Full Range Output (FRO) (see notes 1 &amp; 5) mA (nom)</td>
<td>4 to 20</td>
<td></td>
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<tr>
<td>Output Standardisation % FRO (max)</td>
<td>±2</td>
<td></td>
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<tr>
<td>Output Noise mA (max)</td>
<td>0.020</td>
<td></td>
<td></td>
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<tr>
<td>Non-Linearity (see note 2) %Reading (max)</td>
<td>0.08</td>
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<tr>
<td>Non-Repeatability % FRO (max)</td>
<td>0.02</td>
<td>0.01</td>
<td>0.01</td>
<td>0.01</td>
<td>0.01</td>
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<tr>
<td>Resolution % FRO (max)</td>
<td>0.01</td>
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<tr>
<td>Frequency Response (-3dB) Hz (nom)</td>
<td>20</td>
<td>30</td>
<td>40</td>
<td>55</td>
<td>60</td>
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<tr>
<td>Cross-axis sensitivity (see note 4) g/g (max)</td>
<td>± 0.002</td>
<td></td>
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<tr>
<td>Zero Offset (see note 3) mA (max)</td>
<td>± 0.10</td>
<td></td>
<td></td>
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<tr>
<td>Thermal Zero Shift %FRO/°C (max)</td>
<td>± 0.05</td>
<td>± 0.02</td>
<td>± 0.01</td>
<td>± 0.01</td>
<td>± 0.01</td>
</tr>
<tr>
<td>Thermal Sensitivity Shift %Reading/°C (max)</td>
<td>± 0.05</td>
<td>± 0.02</td>
<td>± 0.01</td>
<td>± 0.01</td>
<td>± 0.01</td>
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</tbody>
</table>

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.