

## ACCUSEISL11

### FEATURES

- INOVA's newest single component digital sensor
- Patented MEMS accelerometer and custom electronics to record P-wave
- Single-point receivers with one or three individual sensors per string
- Smallest and most compact digital sensor on the market
- Offers flat amplitude and phase response over a wide frequency range
- Insensitivity to tilt-degradation enables faster deployment of sensors in comparison to geophones
- Robust mechanical housing to withstand operational and environmental stresses
- Compatible with INOVA's Hawk® and G3i® HD acquisition systems
- Ideal for high-density surveys



### TECHNICAL SPECIFICATIONS

<b>Digital Quantization:</b>	24 Bits (23 + Sign)	<b>Frequency Response:</b>	DC to 400 Hz
<b>Sample Rate:</b>	4 ms, 2 ms, 1 ms, 0.5 ms	<b>Low-Cut Filter Options:</b>	3 Hz, 1.45 Hz, Out
<b>Time Standard:</b>	Phase locked to acquisition system clock	<b>Digital High-Cut Filter:</b>	0.82 Nyquist
<b>Full Scale (peak)</b>		<b>Total Harmonic Distortion:</b>	< -100 dB
<b>Normal Mode:</b>	3.3 m/s <sup>2</sup> (335mG)	<b>Sensor Module Interface:</b>	One twisted wire pair
<b>Large Signal Mode:</b>	4.9 m/s <sup>2</sup> (500mG)	<b>Power Consumption</b> <sup>[1]</sup> :	85 mW
<b>Noise</b> <sup>[1]</sup>			
<b>Normal Mode:</b>	0.3 μm/s <sup>2</sup> /√Hz (30nG/√Hz) 3 Hz to 400 $\overline{\text{Hz}}$		
<b>Dynamic Range</b> <sup>[1][2]</sup>			
<b>Normal Mode:</b>	118 dB		

[1] Typical specifications @ 2 ms sampling @ 25 °C

[2] 3Hz to 200Hz

## ACCUSEIS SL11

### PHYSICAL

**Dimensions:** 6.93 cm (H), 6.47 cm (Ø)  
(2.73 in (H)), (2.55 in (Ø))

**Volume:** 216.96 cc (13.24 cu in)

**Weight:** 200 g (0.441 lb)

### ENVIRONMENTAL

**Operating Temperature:** -40 °C to +75 °C

**Storage Temperature:** -50 °C to +85 °C

**Shock:** 1500 g, ½ ms, ½ sine

**Humidity:** 0% to 100% RH non-condensing

**Water Depth Rating:** 15 m

### TESTING

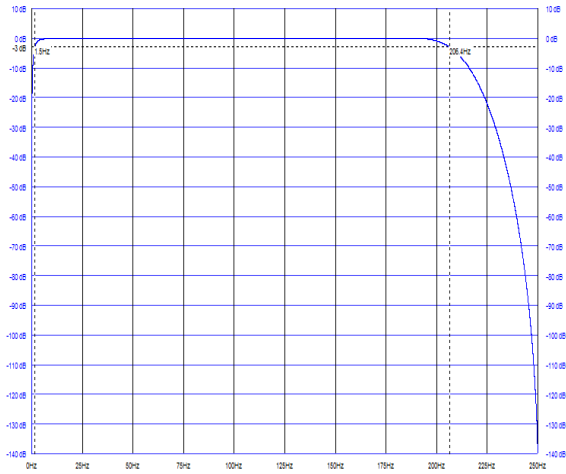
**Embedded Power-up Self Test:** Sensor wake-up and self configuration checks

**Operator Controlled System Tests:** Spread noise  
Sensor loopback (verifies module telemetry, digital filter performance and sensor functionality)  
Telemetry error count  
Sensor Tilt

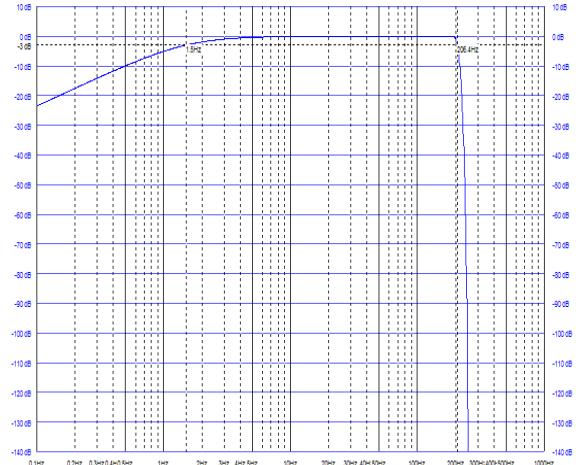
**Sensor Status Checks:** Overscale status  
Sensor offset  
Digital fault flags

## RESPONSE CURVES - 2ms, LOW CUT FILTER = 1.45HZ

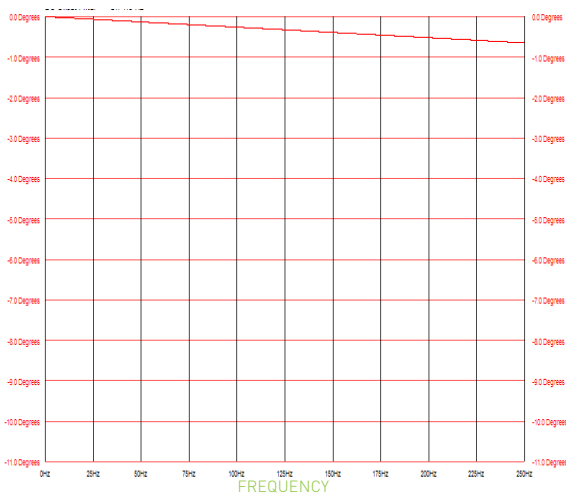
AMPLITUDE RESPONSE



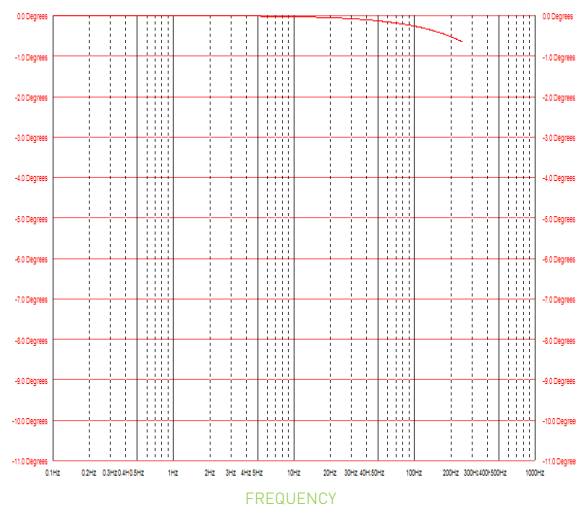
AMPLITUDE RESPONSE - LOG SCALE



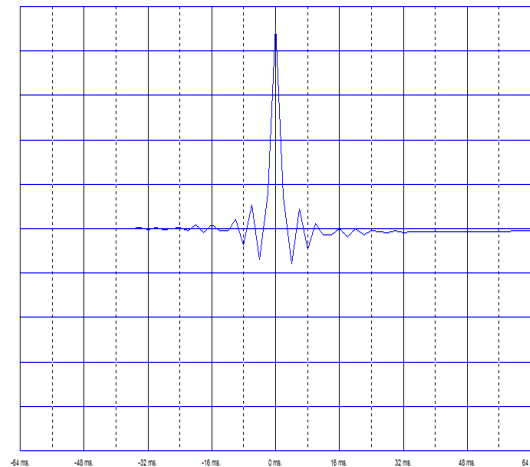
PHASE RESPONSE



PHASE RESPONSE - LOG SCALE

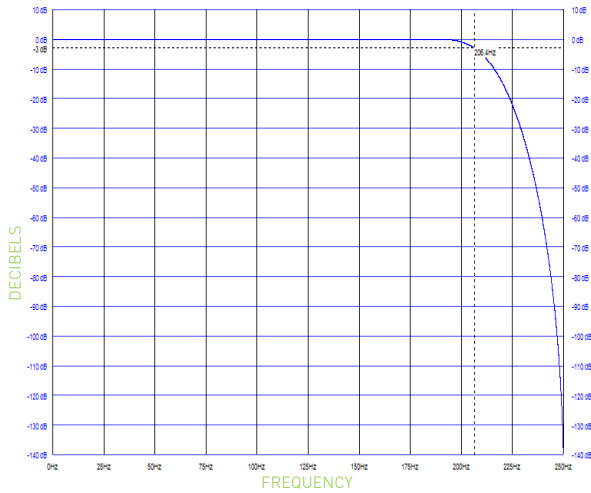


IMPULSE RESPONSE

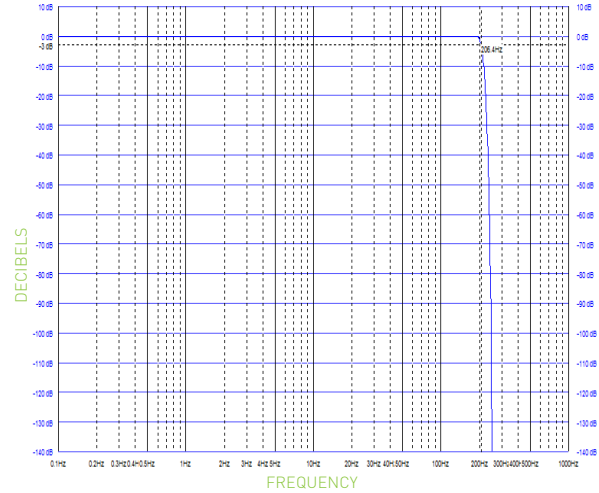


## RESPONSE CURVES - 2ms, LOW CUT FILTER OUT

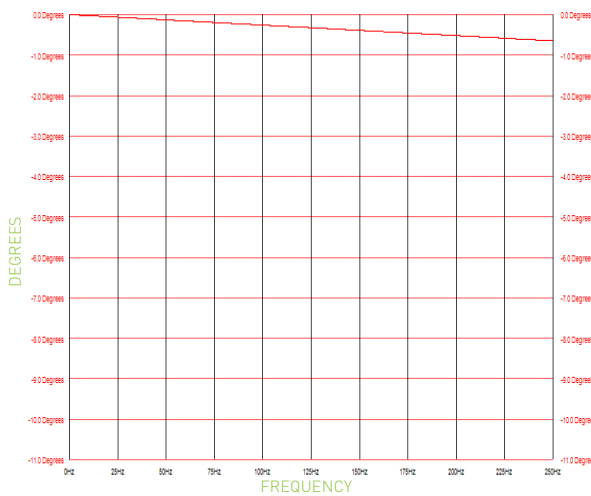
AMPLITUDE RESPONSE



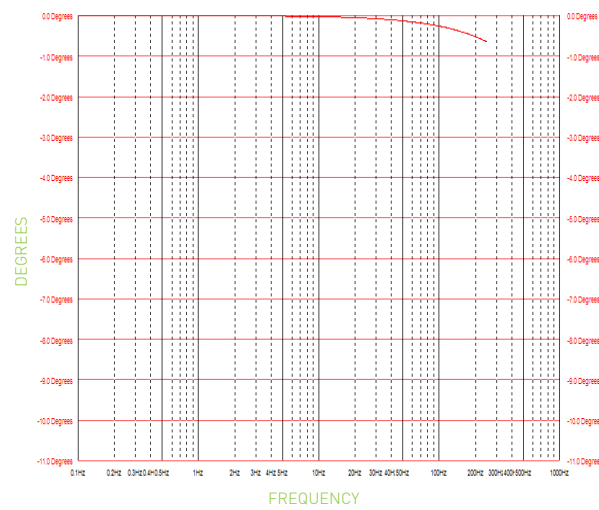
AMPLITUDE RESPONSE - LOG SCALE



PHASE RESPONSE



PHASE RESPONSE - LOG SCALE



IMPULSE RESPONSE

