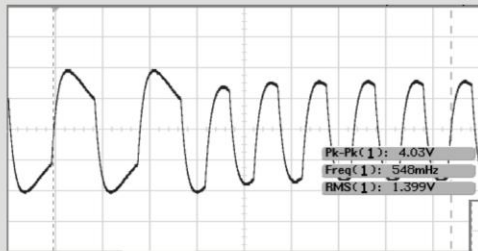


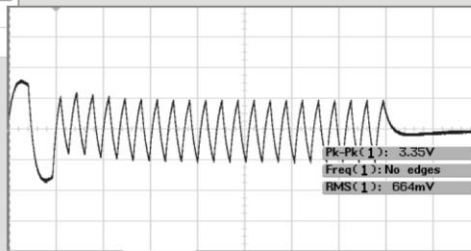


# S-100: Low Power, triaxial Wide Band Seismic Sensor

- 3 component sensor
- Low power consumption
- Borehole type
- Only 50mm diameter
- Up to 100m depth
- Smart elastic clamping
- Wide input voltage range
- Flexible power supply
- Wide Responce 0.2-98Hz
- High Sensitivity 1000V/m/s
- Force-Balance Design
- Build-in test function
- Operation Range: -20 +70°C
- Optional Surface Mount



**Self Test Example**



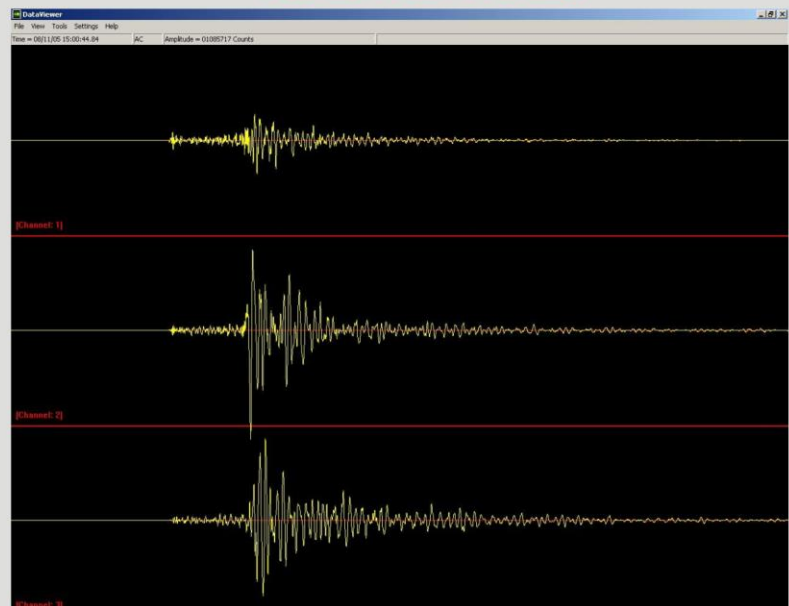
The S-100 is a three-component velocity equivalent output seismic sensor. The design is based on the force-balance principle, thus using three simple geophone elements with natural frequency 4.5Hz. The bandwidth of frequencies is extended from 90Hz, down to 0.2Hz.

The default length of the cable between the sensor and the electronic box is approximately 20 meters but it can be extended up to 100 meters.

The geophones are housed in the same enclosure producing a solid waterproof sensor suitable for installation into boreholes where the noise is considerably less than the surface. The geophones are placed in order and are oriented according to the 3-axes principle. A dot sign, engraved on the plastic cover of the case, indicates the direction of each axis. Optionally, surface mount installation is available.

The sensor is totally controlled by an advanced signal conditioning circuit which supplies current to the geophones putting them to a constant vibration at different frequencies. The signal conditioning circuit is fully protected against over voltage, reverse power supply polarity and lightning inductive currents. It also enters the power-off mode each time it becomes inactive hence reducing the power consumption of the system.

## Seismic event recording



<b>GENERAL</b>	
Number of channels	3
Orientation	Vertical, North-South, East-West
Output resistance	500 Ohms
Geophone case cable length	20 meters (up to 100 meters optional)
Connection cable length	1 - 10 meters
Power	+/- 11 to +/-36Vdc, 75mW
Max output voltage	+/-9Vdc bipolar, 18Vp-p
<b>FEATURES</b>	
Sensitivity	1000V/m/sec
Electronic output noise	160nV/Sqrt(Hz)
Bandwidth	0.2 - 100Hz
<b>PHYSICAL</b>	
Size (electronic box)	160 X 100 mm
Size (geophone enclosure)	180mm length, 50mm diameter
Weight (electronic box)	900g
Weight (geophone case)	600g
<b>PROTECTION</b>	
Overvoltage protection	All pins are protected, all input signals are protected
<b>ENVIRONMENT</b>	
Temperature range	-20 to +70oC
Humidity	100%, IP67 enclosure