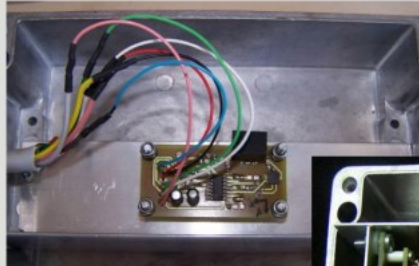


SM500-1500 Strong Motion Accelerometers MEM Sensor

- 3 axis accelerometers
- Low power consumption
- Surface mount installation
- MEMS technology
- Wide Input Voltage Range
- Wide Bandwidth DC-1500 Hz
- Output Range +/-3g linear
- Wide Dynamic Range 117dB
- Noise Level $0.3\mu\text{g}_{\text{rms}}/\text{Hz}$
- Operation Range: -20 +70°C

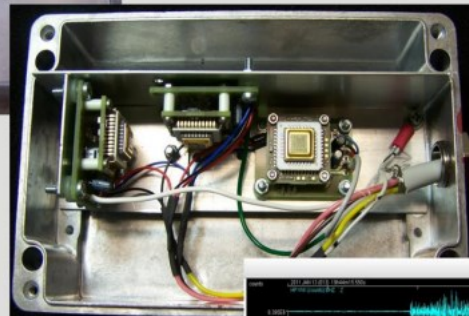


The default cable length between the sensor and the digitizer is approximately 2 meters but it can be extended up to 50 meters.

The sensors are surface mounted, over a provided special base, giving the ability for leveling.

APPLICATIONS:

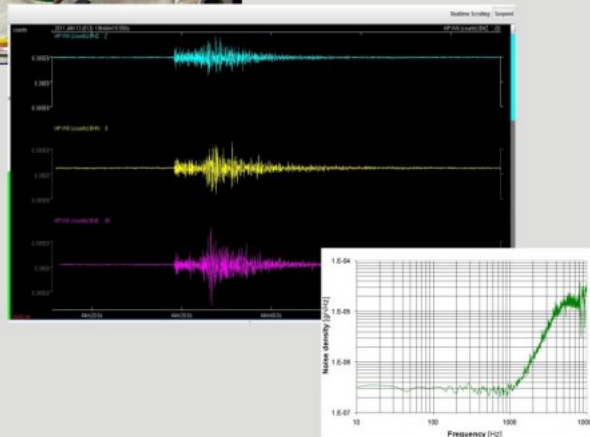
- Structural Monitoring Applications
- Earthquake monitoring
- Geophysics
- Homeland and Border Security
- Vibrations Monitoring
- Tilt and Inclination monitoring
- Shock measurements



The SM550 and SM1500 are two MEMS type, three-component acceleration equivalent output sensor. Both have wide frequency response. Model SM1500 has a response from DC to 1500Hz, while the SM550 model has a response from 0.5 to 550Hz. Output Range is +/-3g for the horizontal axes, and +/-2g for the vertical axes. Sensitivity is 1.2V/g for the Sm1500, and 0.3V/g for the SM550 model.

The SM1500 sensor operates from a bipolar power supply that can range from +/-6V to +/-15V with a typical power consumption of 33mA @6Vdc

The SM550 sensor operates from a unipolar power supply that can range from +/-9V to +/-20V with a typical power consumption of 16mA@9V



When the Earth whispers we are there!!!

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INSTRUMENT CHARACTERISTICS

GENERAL	SM1500	SM550
Number of channels	3	3
Orientation	Vertical, North-South, East-West	Vertical, North-South, East-West
Sensor cable length	2 meters (up to 50 meters optional)	2 meters (up to 50 meters optional)
Power	+/-6V to +/-15V 390mW	+/-9V to +/-20V 288mW
Max output voltage	+/-3.6V _{pp}	+/-0.9V _{pp}
Bias Level	0V +/-100mV	1.6V +/-100mV
FEATURES		
Scale Factor	+/-3g Horizontal +/-2g Vertical	+/-3g Horizontal +/-2g Vertical
Sensitivity	+/-3g	+/-3g
Electronic output noise	0.3 μ g _{rms} /(Hz) ⁻²	150 μ g _{rms} /(Hz) ⁻² Horizontal 300 μ g _{rms} /(Hz) ⁻² Vertical
Bandwidth	DC-1500Hz	0.5-550Hz Vertical 0.5-1600Hz Horizontal
Dynamic Range	117dB	62dB
Nonlinearity	<1% max	<1% max
PHYSICAL		
Size	160 X 100 mm	160 X 100 mm
Weight	600g	600g
PROTECTION		
Overvoltage protection	All pins are protected, all input signals are protected	All pins are protected, all input signals are protected
ENVIRONMENT		
Temperature range	-40 to +85oC	-40 to +85oC
Humidity	100%, IP67 enclosure	100%, IP67 enclosure

