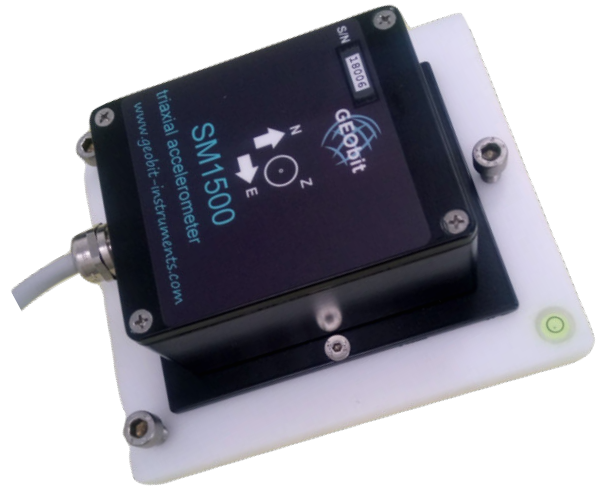


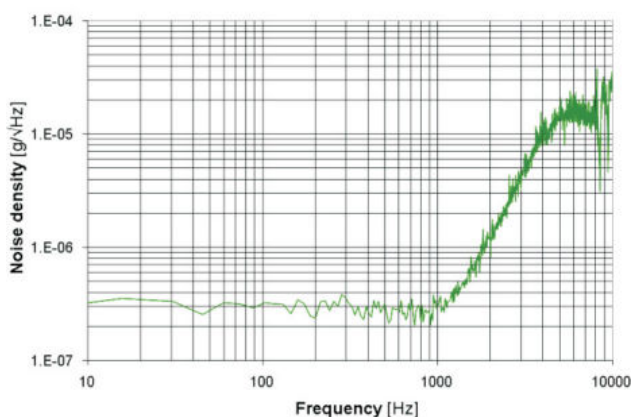
## SMA Acceleration Sensors

- 3 axis accelerometers
- Low power consumption
- Surface/wall mount installation
- MEMS-ASIC force balance technology
- Wide input voltage range
- Wide bandwidth DC to 550Hz or 2.4kHz
- Range +/-2g, +/-3g, +/-5g, +/-10g
- Wide dynamic range 102dB or 116dB
- Noise level  $6\mu\text{grms}/\sqrt{\text{Hz}}$  or  $0.7\mu\text{grms}/\sqrt{\text{Hz}}$
- Operation Range: -20 +70°C



## FEATURES

The SM1500 and SM550 are MEMS type, three-component acceleration sensors. They have wide frequency response. SM1500 model's response is DC to 550Hz and SM550 model's response is DC to 2.4kHz. Default Sensitivity is 2.4V/g for the SM1500 and 0.8V/g for the SM550 and can be adapted according to user's requirements.



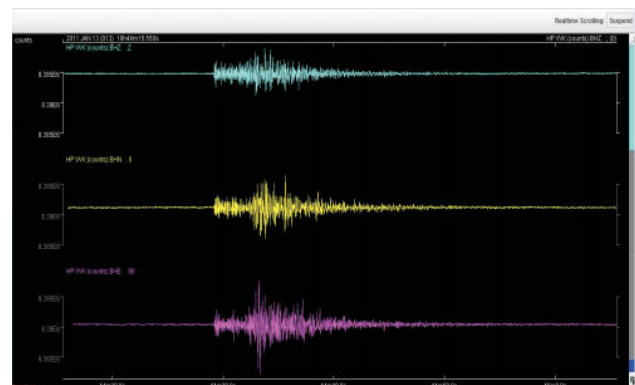
The SM1500 accelerometer is based on a variable capacitor transducer and a feedback circuit that operates in a closed-loop configuration. The feedback force is controlled by an application-specific integrated circuit (ASIC) which provides high reliability and low output noise.

The SM1500 and SM550 sensors operate getting powered from a single +9 to +18Vdc with and the

typical power consumption is 28mA@12Vdc. Other power capabilities are available under request. The acceleration output of SM1500 and SM550 sensors can be bipolar or differential, 4-20mA current loop output is also available for both sensors.

## APPLICATIONS:

- Structural monitoring applications
- Earthquake monitoring
- Geophysics
- Homeland and border security
- Vibrations monitoring
- Tilt and inclination monitoring
- Shock measurements





# INSTRUMENT SPECIFICATIONS

## GENERAL

Number of channels

## SM1500

3

Orientation

Vertical, North-South, East-West

Power

MEMS-Variable capacitor transducer and feedback circuit with close-loop configuration.

Bias Level

0V +/-100mV

## SM550

3

Vertical, North-South, East-West

MEMS-Variable capacitor transducer and feedback circuit with close-loop configuration.

0V +/-100mV

## FEATURES

Range

+/- 2g  
+/- 3g  
+/- 5g  
+/- 10g

+/- 2g  
+/- 4g  
+/- 8g

Sensitivity

2.7V/g

0.8V/g

Noise

6µgrms/sqrt(Hz) or 0.7µgrms/sqrt(Hz)

20µgrms/sqrt(Hz)

## PHYSICAL

Size

160 x 100mm

160 x 100mm

Weight

0.8kg

0.8kg

Mounting

Floor or wall mounting

Floor or wall mounting

## ENVIRONMENTAL

Temperature range

-20 to +70°C

-20 to +70°C

Humidity

100% IP67

100% IP67



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