SesMo™ Seismic Sensor

INSTALLATION INSTRUCTIONS

Item: 4772 (A5DS)

Description

SesMo is a combined seismic detector used to protect bank, media safes, strong rooms, automatic ticket machines (ATM), vending machines, solid walls, transportation tracks, telephones post and cash dispensers. The SesMo react to all types of attack tools known today: Oxygen lances, steel and diamond bit drills, hydraulic pressing tools and explosives. The SesMo integrates three detection technologies for an efficient detection: Seismic (Bimorph sensor), light and heat (Oxygen lances effect). The seismic sensor covers approximately 2-6 meters/square (depends on the protected surface). In alarm mode relay output is activated. Few SesMo models are available.

Ordering: SesMo: Three sensors, one relay, housed in ABS plastic for indoor. **HEAT_33**: Remote heat sensor housed in Aluminium case.

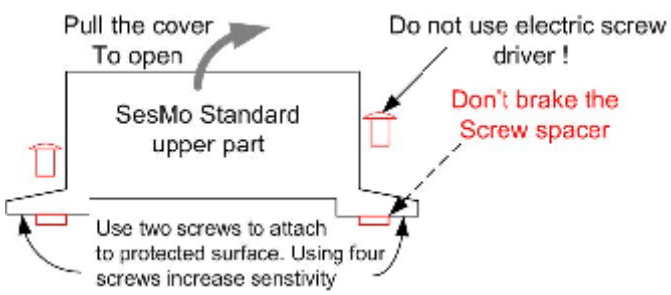
Installation Instructions

Step One: Location

Open the upper cover by pulling the cover. Locate the SesMo in a hard to access location, far from light, heat and vibrations source. Use 2 or 4 screws to attach the SesMo housing to **a solid surface inside the protected object**. Attaching the SesMo to soft surface/wall or **over tightening the two screws may cause false alarms**.

Step Two: Wiring

1. Supply 12V DC Power according to the marked polarity (figure 1)
2. Connect the relay (N.C. and C) terminals to a zone programmed as 24H or Day zone.
3. Wire the Tamper Switch (the Tamper protects the box cover opening) from 'TMP' terminals to a Tamper zone in the control panel. For ATM, safe and similar add door opening sensor to the protected object door.



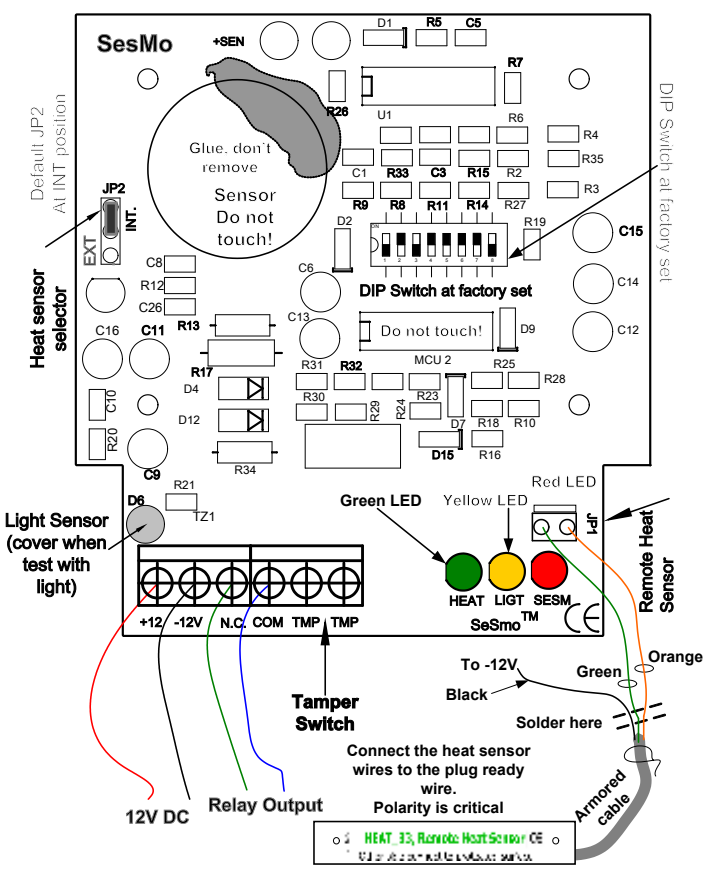


Figure 1: SesMo wiring diagram and indicators

Step Three: Adjusting and setting

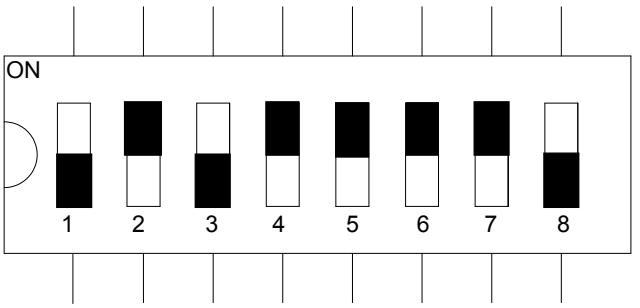


Figure 2: Switches array at factory default settings; **medium** sensitivity

The SesMo contains an internal heat sensor, with an option to connect HEAT_33 external heat sensor, to select one of them use JP2 jumper, refer to figure 1.
The switches array contains the SesMo sensitivity and function setting as detailed below. The description refers to the switch at ON state:

SW 1 – **High sens. Seismic detection**
SW 2 – **Medium sens. Seismic detection**
SW 3 – **Heat sensor high sensitivity**
SW 4 – **Heat sensor enabled**
SW 5 – **Light sensor enabled**
SW 6 **– Two pulses count to all sensors**
SW 7 – **Enable seismic sensor**
SW 8 – **Three pulses count to all sensors**

Lowest Seismic detection sensitivity: SW 1 and 2 are at OFF, SW8 at ON.
Highest Seismic detection sensitivity: SW 1 and 2 are at ON, SW8 at OFF.
If SW1 is ON, SW2 is not effective. SW6 and SW8 at ON sets pulse count to five.
Note 2: Even if the sensor was disabled via DIP switch the sensor LED is still active.

Step Four: Testing

Close the SesMo box, cover the light sensor and don't touch the SesMo box and surface mounted onto. Power-up, during first 1-2 seconds the self-test keep the three indication LEDs on, verify that the three LEDs are off during 60 seconds.
Generate alarm condition for each sensing criteria: Seismic, Light and Heat. Cover the light sensor for total dark. Keep it covered. Seismic test: Use a 200-grams hammer, knock once on the protected outside housing or barrier, if the Red LED alarmed, reduce sensitivity (pulse count and sensitivity). Heat test: Use a 500W fan during 1 minute, directed on the SesMo box, from a distance of approximately 0.5 meter – verify that the alarm is on. Light test: Expose to day or flash light for 2 seconds and verify alarm.

Special glue applied to parts on the board to provide best performance, don't remove.

Alarm is triggered **if one** of the three sensors has been activated.

SesMo Specifications	
Operating Temp: -25 to +80 C°. Humidity: 80%	EMI Protection: 50KV @ 1 mS lightning or surge
MTBF=100,000 Hours	Relay: N.C. Mode, 50 mA @ 12V
DC Input: 11 to 14V DC	Tamper: 500 mA @ 24V
Current: 25 mA @ standby, 50 mA alarm	Seismic: Bimorph Piezo
Detection: Seismic, heat, light	Heat sensor: Semiconductor (min. 75°C)
Indications: Three colored LEDs	Light sensor: Opto Cell (min. 20 Lux)
RFI Protection: 30V/m @ 10–1000 MHz	Size: W=90, L=85, H=50 mm

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