

## DESCRIPTION

The 5400 Glassbreak Shock Sensors are designed to respond to shock waves of breaking glass. Sensor can protect plate, tempered, laminated, and wired glass up to 1/4" thick. Adjustable sensitivity gives the installer the opportunity to fine-tune the sensor to the environment, enhancing detection and minimizing nuisance alarms. Bi-directional outputs and LED set-up indication speeds installation and ensures correct sensitivity adjustment. Magnetic reed and tamper switches are available options.

### Sensor Operation

When the security system is operational and detects a glassbreak, the sensor alarms, producing three responses:

1. The red LED on the sensor goes on for the period of time the sensor is open (2-6 seconds);
2. The impedance of the sensor goes from <15 ohms (closed) to >1.0 megaohms (open);
3. This is registered by the control panel as an alarm. After an alarm, the sensor automatically resets itself, and the LED extinguishes simultaneously.

Models in the latching LED mode require power interruption to reset the LED.

## STEP 1 - MOUNTING

The 5400 sensors are designed to mount in the corner of windows or doors, either on the frame or on the glass itself. Sensor range is 10' (3.1 m) for one glass panel unless compromised by window construction. See Testing instructions for confirming range. Sensor placement examples are shown in Figure 1.

### Sensor Placement

Mount the sensor near a corner, preferably a lower corner. The mounting surface must be clean, flat, and the glass must be securely installed in the frame for a frame mounted sensor.

#### Glass Mounting

Place the sensor about 1" (2.5 cm) in from the frame.

Mount the sensor with the provided double-sided tape pad.

1. Clean the area where the sensor will be mounted with a 50/50 solution of isopropyl alcohol and water on a clean cloth.
2. Dry the area.
3. Center the tape pad on the back of the sensor first, then press the sensor firmly on the frame or glass.

#### Frame Mounting

Place the sensor about 2" (5 cm) from the top or bottom of the frame.

Mount the sensor with self tapping screws. Do not use tape.

1. Drill a 7/64" (2.8 mm) hole for mounting on metal frames.
2. Tighten screws evenly until sensor is firmly against the frame. Do not over tighten.

### Reed Switch Models

Model 5415A has the reed switch in series with the alarm loop.

### Mounting the Magnet

- Mount the magnet on the moving portion of the window or door. It can be mounted on either side of the sensor but must be centered with the sensor housing (see Figure 2).
- Position the magnet no more than 1" (2.5 cm) from the sensor housing.
- Verify reed closure before mounting magnet.

## STEP 2 - WIRING

Remove the cover by depressing the snap in the slot at the end of the sensor and lifting the cover. Wires can enter through the bottom or the end of the sensor. For concealed wiring, run wires through bottom hole before mounting sensor. To exit the end, run the wires in the terminal block end of the plastic base and notch out the centered wire exit in the cover. Connect appropriate wires to the terminal blocks as labeled on the circuit board (see Figure 3).

# Sentrol 5400 Series

## Glassbreak Shock Sensors

Models 5414, 5415A, 5425

## Installation Instructions



Figure 1. Sensor placements

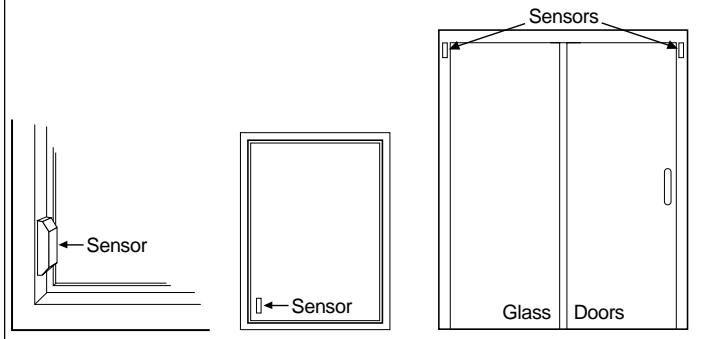


Figure 2. Magnet placement

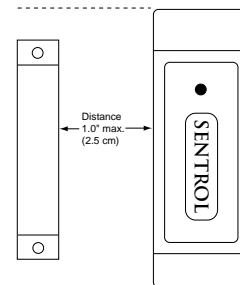
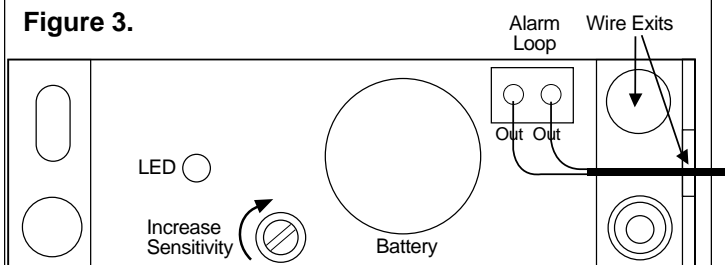
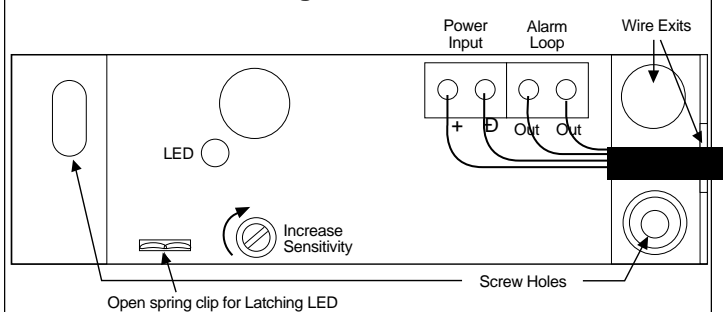


Figure 3.



### 5414 and 5415A Wiring Guide



### 5425 Wiring Guide

## STEP 3 - TESTING

Once mounted, the sensor is ready for the sensitivity adjustment. Models with the latching LED option should be adjusted before opening the spring clip.

1. Use a small screwdriver to turn the potentiometer counterclockwise as far as it will go. Then turn the potentiometer slightly clockwise.
2. Rap the glass firmly about 1' (30.5 cm) in from the farthest corner (see Figure 4). Use the plastic handle of a medium screwdriver (about 10" [25.4 cm] long) to do this.
3. If the LED does not light, turn the potentiometer further in the clockwise direction, and rap the glass again. Continue this procedure until the LED lights.

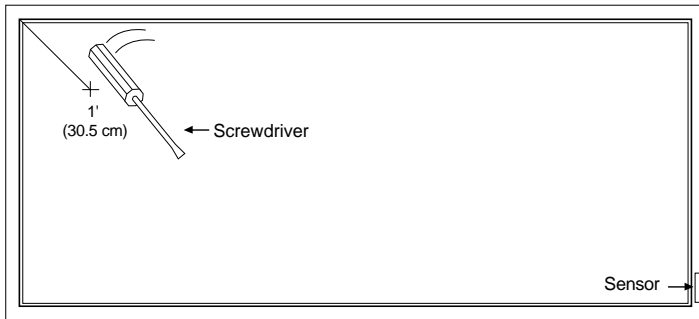
On windows greater than 10 sq. ft. (1 sq. m), verify setting by rapping adjacent corners. This setting should yield the proper protection with a high degree of false alarm immunity. For multiple sensor applications, coverage of sensors should overlap.

### Latching LED Models

To engage latching LED feature on model 5425, open the spring clip. Finish the installation by carefully snapping on the cover.

**NOTE:** Range is reduced on windows that open if the window is lined with felt or a gasket for tight sealing. This lining can effectively block shock transmission to the frame mounted sensor. Sliding glass doors will likely require two sensors. Test sensor at least annually to ensure proper operation.

Figure 4. Rap test



## SPECIFICATIONS

### ALL MODELS

Range of Coverage .....	10' (3.1 m)
Resistance: Normal .....	<15 ohms (closed)
Alarm .....	>1.0 megaohms (open)
Time Open on Alarm .....	2-6 seconds
Maximum Loop Rating .....	16V DC, 50 mA
Wire Lead Size .....	16-22 gauge
Mounting .....	Tape pad or screws
Dimensions .....	3.46" L x 1.1" W x 0.84" H (8.8 cm x 2.8 cm x 2.1 cm)

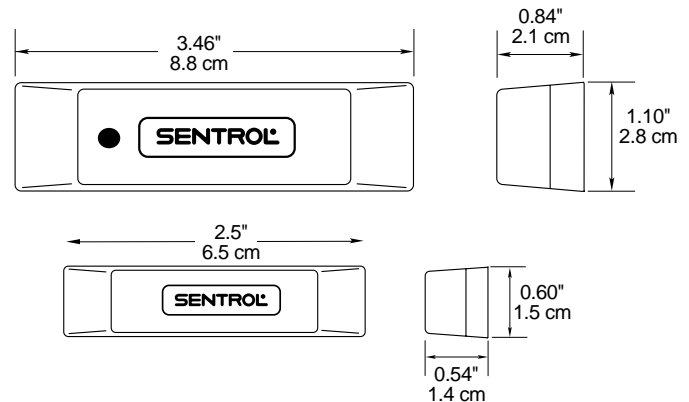
### BATTERY MODELS (5414, and 5415A)

Battery Type .....	Lithium
Battery Life .....	15 years (estimated)
Number of Leads .....	2 (alarm loop)

### POWERED MODELS (5425)

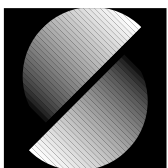
Operational Voltage .....	9-16V DC
Current Draw .....	15 mA maximum
Number of Leads .....	4

## DIMENSIONS



## ORDERING INFORMATION

Model Number	Description	Loop Configuration	Color	Listing
5414-W	Lithium battery, tamper, 2-wire	NC	White	UL
5414-M	Lithium battery, tamper, 2-wire	NC	Mahogany brown	UL
5415A-W	Lithium battery, tamper, 2-wire, alarm loop reed switch, magnet	NC	White	UL
5415A-M	Lithium battery, tamper, 2-wire, alarm loop reed switch, magnet	NC	Mahogany brown	UL
5425-W	External power, 4-wire, latching LED option	NC	White	
5425-M	External power, 4-wire, latching LED option	NC	Mahogany brown	



SENTROL

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