



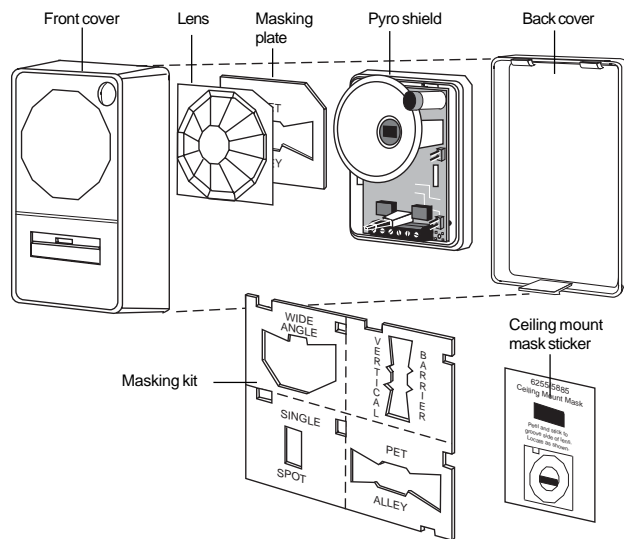
5885 ShatterPro® Plus Motion Sensitive Acoustic Sensor Installation Instructions

Installation

To install the unit:

1. Remove the front cover (*Figure 1*) by gently prying the unit apart at the bottom. The front cover hinges at the top.

Figure 1. Exploded view

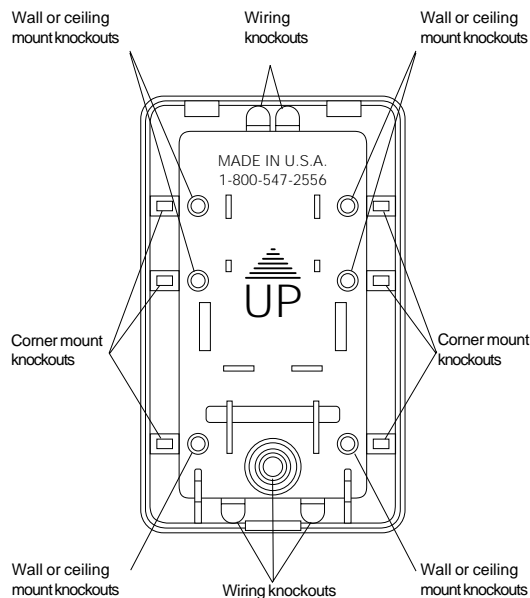


2. Remove the circuit board assembly by holding the pyro shield (*Figure 1*) and pulling it out of the back cover.

CAUTION You must be free of static electricity before handling sensor circuit boards. Touch a grounded, bare metal surface before touching circuit boards or wear a grounding strap.

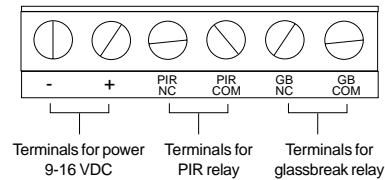
3. Mount the back cover to a ceiling, wall, or corner (see *Mounting*). For wall mounting, make sure the UP arrow is pointing up (*Figure 2*). Use the appropriate mounting and wiring knockouts.

Figure 2. Back Cover



4. Snap the circuit board assembly back onto the back cover by aligning the lower edge of the board with the circuit board guides and pressing it into place.
5. Strip back the outer jacket on the wiring cable to allow it to flex in the case. Make sure the cable is slack in the ceiling or wall to avoid stressing the wires at their connections. Connect the wires as shown in *Figure 3*. The unit should be connected to a UL listed power supply capable of providing 4 hours of standby power.

Figure 3. Wiring



6. Choose a masking plate, if needed (see *Zone patterns*) and cut to match the lens. Insert the masking plate behind the lens on the front cover by pressing it over the three mounting pins (*Figure 4*). To correctly mount the Pet Alley mask (*Figure 5*), the lens must be removed from the front cover, rotated 180 degrees, and cut to fit. Once the front cover is installed, the masking plate will be held tight against the lens.

Figure 4. Inserting a masking plate

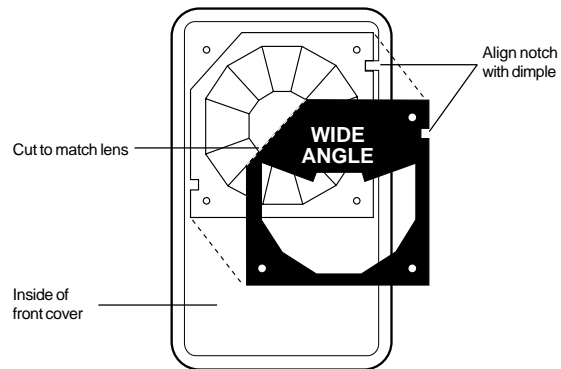
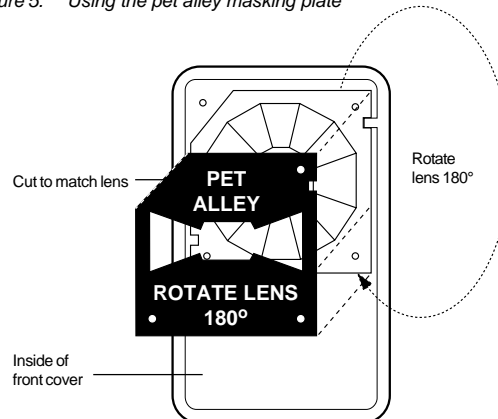


Figure 5. Using the pet alley masking plate



7. Replace the front cover and test the unit (see *Testing the sensor*).

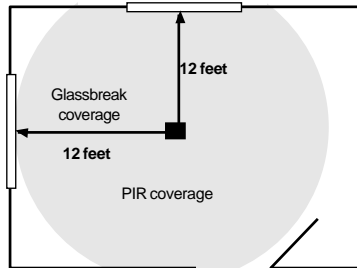
Mounting

For ceiling mount (Figure 6):

1. Mount unit in direct line of sight of windows to be protected.
2. Sensor can be mounted as close as 3.3 feet (1 m) from glass and up to 12 feet (3.7 m) from glass.

Note When ceiling mounted, be sure to use the ceiling mount mask sticker to reduce potential for false alarms.

Figure 6. Ceiling mount

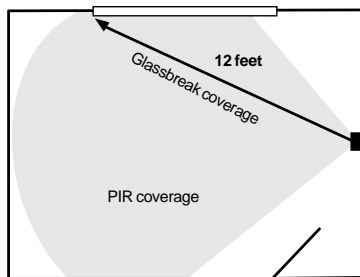


For wall or corner mount (Figure 7):

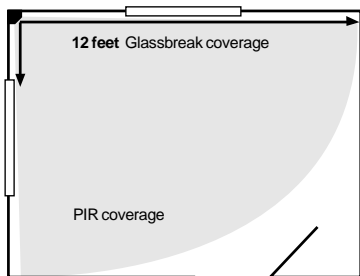
1. Do not aim sensor directly at window - install so PIR is covering the area of room you expect to have occupied.
2. Sensor can be mounted as close as 3.3 feet (1 m) from glass and up to 12 feet (3.7 m) from glass.

Figure 7. Wall and corner mount

Wall mount



Corner mount



Sensor testing

Test the sensor to confirm that the field of view is set correctly and that the glassbreak detector will detect at the desired mounting location.

To test the field of view: Walk into the intended occupied area. The green LED should blink at 1 Hz for 1 minute. This means that the sensor has adjusted to a presence in the room and turned off the glassbreak alarm relay for 1 minute. It will turn the glassbreak on only after no movement has been detected for 1 minute. The LED will remain solid green for 4 seconds, indicating motion detection by the PIR.

To test the glassbreak only: Place Jumper J2 (Figure 8) on two pins so the motion sensing device is separated from glassbreak. Place the 5709C tester next to the microphone and put the unit into test mode by firing off the tester. The unit will be blinking red. Position yourself next to the glass you want to detect, select the appropriate glass type, and test the unit. If drapes or blinds are present, test behind them (Figure 9). The LED will go solid red for 4 seconds if glass is within detection range.

Figure 8. Jumper locations

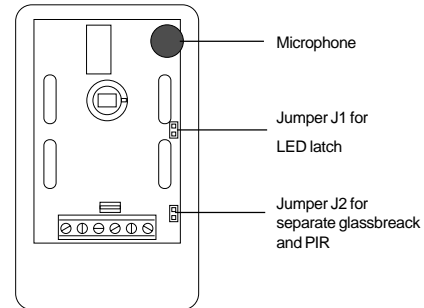
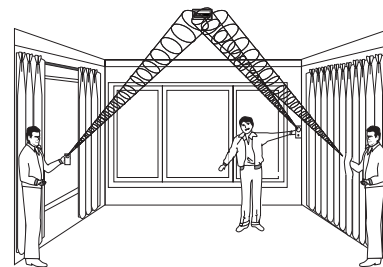


Figure 9. Testing positions



Test and alarm LED indicators

Glassbreak alarm	4 seconds solid red
Glassbreak test	1 Hz blinking red for 1 minute
Glassbreak latched	Solid red
Hand clap test	2 red blinks
PIR alarm	4 seconds solid green
PIR shunting glassbreak	1 Hz blinking green for 1 minute

Note: Each time the glassbreak sensor alarms, it also goes into test mode for 1 minute.

Hand clap test

The ShatterPro Plus can be checked by the installer or end-user while in normal mode by simply clapping hands loudly under the sensor. The LED will blink twice, but the sensor will not trip. This verifies visually that the microphone and circuit board are functioning.

When the ShatterPro Plus trips to an actual alarm condition, it will latch solid for 4 seconds, then start blinking for 1 minute. At the end of 1 minute, the LED will extinguish unless set for "LATCHING LED".

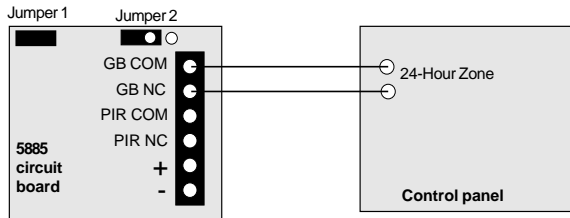
Latching LED

To use the latching LED, remove Jumper J1 (Figure 8) to latch the LED for glassbreak. When the unit alarms for glassbreak, the LED will remain solid red after exiting test mode. Reset the unit by removing power for at least 1 second.

Application tips

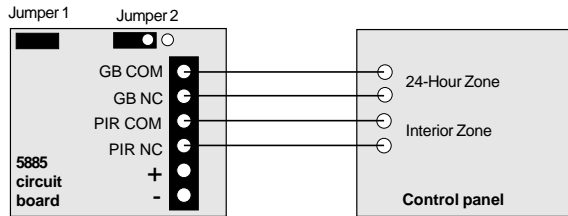
The ShatterPro Plus provides two separate relays, one for the glassbreak sensor and one for the PIR. This configuration allows the ShatterPro Plus to be used in a variety of applications.

Application 1 - 24-hour glassbreak



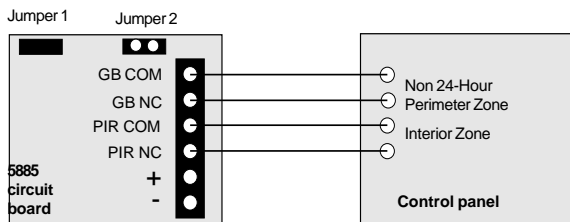
In this application, the glassbreak relay is wired to a separate 24-hour zone and Jumper 2 is placed across one pin. Any time a person enters the PIR's field of view, the glassbreak sensor will be disabled. **The glassbreak sensor will automatically turn back on one minute after the PIR's field of view is vacated.** This application is ideal for kitchens, garages, and other small, acoustically-live rooms that may incur loud occupant-generated sounds. It is also good for 24-hour perimeter protection in commercial installations that employ access control.

Application 2 - 24-hour glassbreak and interior backup PIR



In this application, the glassbreak relay is wired to a 24-hour zone, the PIR relay is wired to a separate interior zone, and Jumper 2 is placed across one pin. The PIR relay is wired to the control panel to provide PIR backup for interior protection. Now when the interior zone is armed, the PIR will also act as a motion detector that will trigger an alarm if someone enters the room. This application is an affordable way to get two sensors in one installation.

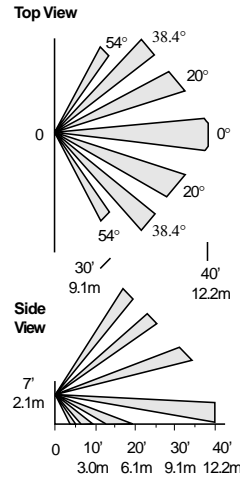
Application 3 - Perimeter glassbreak and interior backup PIR



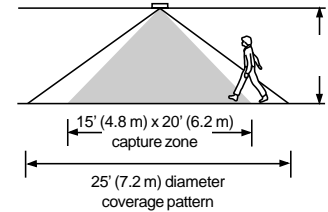
In this application, the glassbreak relay is wired to a separate perimeter (non 24-hour) zone, the PIR relay is wired to a separate interior zone, and Jumper 2 is placed across two pins. This configuration is a very affordable way to get two sensors in one, a glassbreak and a PIR. It's perfect for installations that don't require 24-hour operation, but are armed at night, during unoccupied hours, or during quiet occupied hours.

Zone patterns

Wall mount no mask

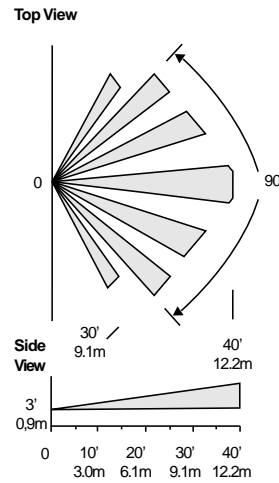


360° ceiling mount with ceiling mount mask

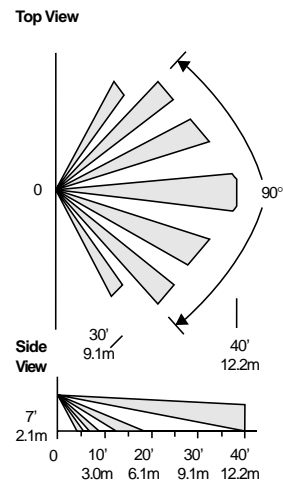


Note: Intruder must enter coverage pattern 3-4 feet (1-1.2 m) to cross one zone for detection of alarm. False alarm sources, such as heaters, should be kept out of the coverage pattern.

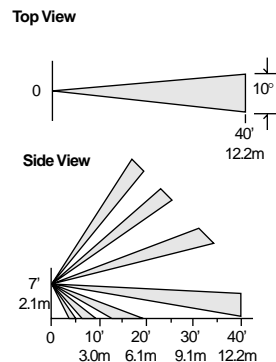
Wall mount with pet alley mask



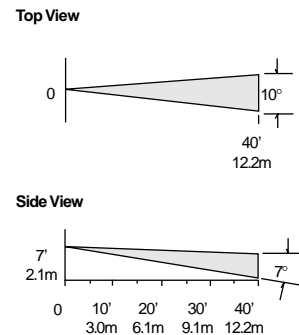
Wall mount with wide angle mask



Wall mount with vertical barrier mask



Wall mount with single spot mask



Specifications

Electrical

Operational voltage	9 to 16 VDC
Current draw	15mA typical, 30 mA max.
Alarm outputs	Normally closed, open 4 seconds on alarm
On resistance	5 to 15 Ohms
Off resistance	>1 MOhms
Maximum loop rating	16 VDC, 50 mA (relay or tamper loop)
Fails safe and opens on power loss	
Wire gauge	14 - 22 AWG

Environmental

Lightning suppression	400 watts for 1 msec pulse
Operating temperature	0 to 120°F (-18 to 50°C)
RFI immunity	20 V/meter from 1 to 1000MHz
Humidity	10% to 90% noncondensing

PIR Features

Pulse count	Bi-directional, 1 zone (2 pulses) with motion verification
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Range

1. Wide Angle (90°)	30 ft. x 30 ft. (9.1 m x 9.1 m), 7 ft. (2.1 m) mounting height
2. 360° Ceiling	15 ft. x 20 ft. (4.6 m x 6.1 m) at 8 ft. (2.4 m) height, 16 ft. x 30 ft. (4.9 m x 9.1 m) at 12 ft. (3.7 m) height, ceiling mounting height up to 12 ft. (3.7 m)
3. Single Spot	40 ft. (12.2 m) range, 7 ft. (2.1 m) mounting height
4. Vertical Barrier	40 ft. (12.2 m) range, 7 ft. (2.1 m) mounting height
5. Pet Alley (90°)	30 ft. (9.1 m) range, 3 ft. (0.9 m) mounting height

Acoustic Glassbreak Features

Microphone	Omni directional 360° electret
Sensitivity setting	Factory set
Range	12 ft. (3.7 m) from ceiling to window wall, 12 ft. (3.7 m) to side wall

Glass types detected:

Plate glass	1/8 in. (3.2 mm) to 1/4 in. (6.4 mm)
Tempered glass	1/8 in. (3.2 mm) to 1/4 in. (6.4 mm)
Wired glass	1/4 in. (6.4 mm)
Laminated glass	1/4 in. (6.4 mm)

Mounting location	Ceiling or any wall except opposite wall
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Min. distance from glass	3.3 ft. (1 m)
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Min. glass size	1 ft. (0.3 m) x 2 ft. (0.6 m)
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Dimensions	3.7 in. (9.4 cm) H x 2.2 in. (5.6 cm) W x 1.2 in. (3.1 cm) D
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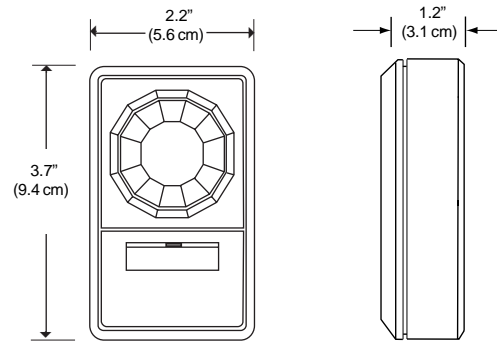
Housing material	Flame retardant ABS plastic
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Color	White/white
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Shunting feature	Glassbreak automatically turns back on 1 minute after vacating PIR's field of view
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Listings	UL639
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Dimensions



Ordering information

Model number	Description
5885-W	ShatterPro® Plus
5709C	Hand held tester