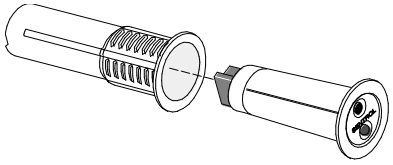
ShatterPro II Advanced Acoustic Sensor with Pattern Recognition Technology Installation Instructions



SEE PAGE 4 FOR IMPORTANT WARNINGS, DISCLAIMERS, AND PRODUCT/SAFETY INFORMATION.

Introduction

This is the 5820A-W and 5825A-W ShatterPro II Advanced Acoustic Sensor Installation Instructions. The ShatterPro II sensor is designed to detect breaking glass from framed windows in the perimeter of a building.

Install the sensors on a perimeter loop armed whenever the door and window contacts are armed. To prevent false alarms, avoid applications where glassbreak sensors are configured to be active in all arming levels.

The sensor false alarm immunity technology functions best in rooms with only moderate noise. Some sounds can duplicate the points on the glassbreak pattern the sensors detect.

The sensors may not consistently detect cracks in glass or bullets that break through the glass. Always complement glassbreak sensors with interior protection.

Connect the sensors to a UL Listed control panel, or a power supply that provides at least four hours of standby power.

Mounting location

You can mount the sensors on the ceiling or on a wall.

Wall mount

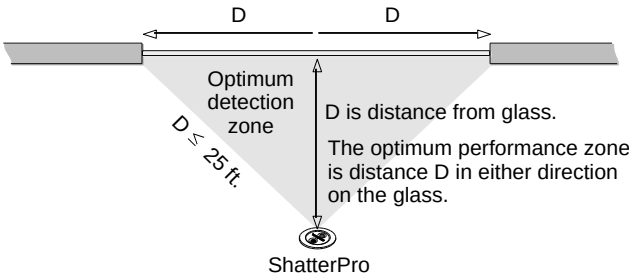
The best wall-mount location is on the wall opposite to the glass to be protected, assuming this glass is within the sensor range and line of sight. You can also use the adjoining wall.

Ceiling mount

Mount the sensors in a location that is in direct line of sight of the glass to be protected. However, since sound travels out from a broken window, a position 8 ft. (2.4 m) into the room provides better detection.

The mounting location can affect sensor detection ability. To ensure optimum performance, the coverage zone width should be no greater than two times the distance from the sensor to the closest point of glass. For instance, if a sensor is mounted 10 ft. (3 m) from the glass, its optimum performance zone will be 10 ft. (3 m) in either direction of the midpoint. You can mount the sensors from 3.3 to 25 ft. (1 to 7.6 m) from the farthest point of the glass. Figure 1 below shows the coverage zone with D being the distance from the glass.

Figure 1: Coverage zone



Use the following guidelines to determine the best mounting location:

- Mount the sensors at least 3.3 ft. (1 m) from the windows being protected and at least 4 ft. (1.2 m) from noise sources such as TV's, speakers, sinks and doors.
- Mount the sensors in the direct line of sight of the glass to be protected.
- Avoid rooms smaller than 10 by 10 ft. (3 m by 3 m).
- Avoid locations where lined, insulating, or sound deadening drapes or closed wooden shutters are used.
- Mount the sensors in a suitable environment: temperature between 0 and 120°F (−18 and 50°C); and humidity between 10 and 90% noncondensing. Do not install the sensors in humid rooms. Excess moisture on the circuit boards can eventually cause a short and a false alarm.
- Mount the sensors on a stable surface up to 25 ft. (7.6 m) from the farthest point on the glass surface.

P/N 466-2934 • REV A • ISS 26MAY17

- Avoid locations that expose the sensors to possible false alarm sources such as:
  - Glass airlocks and vestibule areas
  - Kitchens
  - Corner mountings
  - Residential car garages
  - Small utility rooms
  - Stairwells
  - Bathrooms
  - Small acoustically live rooms

Coverage range

The sensors are omnidirectional, providing 360° coverage. Coverage is measured from a sensor to the point on the glass farthest from the sensor. The sensors can be mounted as close as 3.3 ft. (1 m) from the glass. The maximum range depends on the type of glass being protected:

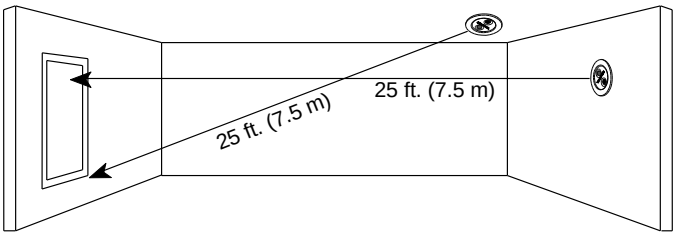
Armor-coated glass

Mount the sensors no more than 12 ft. (3.65 m) from the glass.

Plate, tempered, laminated, and wired glass

When the sensors are mounted on the ceiling or the opposite or adjoining wall, (Figure 2 below) maximum range is 25 ft. (7.5 m).

Figure 2: Maximum coverage range



Testing

Test the sensor upon installation and if the window glass-type is changed.

The sensors are designed to detect the breaking of framed glass mounted in an outside wall. Testing the sensors with unframed glass, broken bottles, etc., may not trip the sensors. The sensors typically do not trip to glass breaking in the middle of the room. To verify sensor range and operation, you need to use the UTC Fire & Security 5709C hand-held tester.

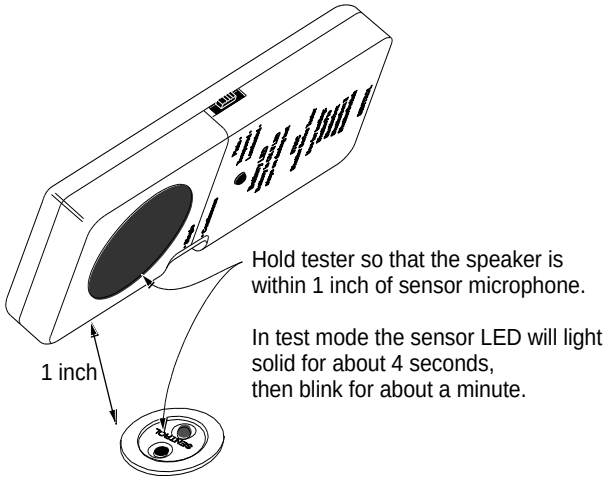
Test mode

To put the sensors in test mode, do the following:

1. Connect a 9-volt battery to the sensor for pretesting.
2. Temporarily mount sensor in the desired location.
3. Use the 5709C hand-held tester to put the sensor into test mode. Set the tester to tempered glass and hold the tester on top of the sensor (Figure 3 below). Activate the tester, this will trip the sensor into test mode for one minute. In test mode, the LED will blink continuously. To extend test time, activate the tester at least once a minute.

When the system is armed and the sensor trips to an alarm condition, the LED will light solid for four seconds and then revert back to a one minute test mode. At the end of one minute, the LED will extinguish if it is in *set up LED* mode, or the LED will light if it is in *latching LED* mode.

Figure 3: Activating test mode

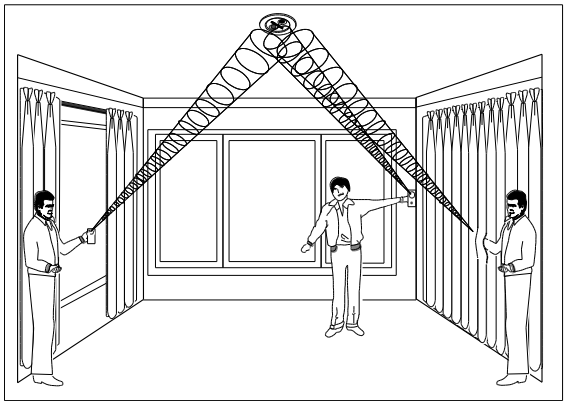


Sensor test

Before you can test the sensors, they must be in test mode (blinking). To test the sensors, do the following:

1. Choose the laminated setting on the tester.
2. Hold the tester near the surface of the glass to be protected and aim the speaker at the sensor. Be sure the tester is at the point on the glass farthest from the sensor. If closed drapes or curtains are present, hold the tester behind them (Figure 4 below).

Figure 4: Testing behind curtains



3. Press the test button on the tester. The LED on the sensor should stay on for four seconds to indicate the glass is within detection range of the sensor. If the LED does not stay on for four seconds, move the sensor and retest.

For latching LED, provide a power reset by removing power and resetting the LED.

Installation

All wiring must conform to the National Electric Code (NEC) and/or local codes having jurisdiction.

Do not install sensors in rooms with ultrasonic sensors.

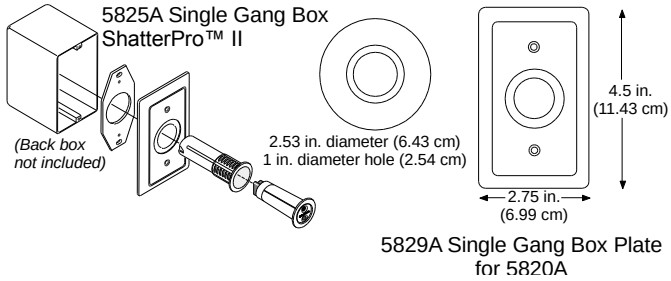
To mount the sensor on a wall or ceiling, do the following:

1. Drill a 1 in. (2.5 cm) hole. For hard woods, drill a 1 1/16 in. (2.7 cm) hole. For a cleaner hole, use a spade bit rather than a twist bit.
2. Run wires through the hole and the sleeve to the sensor.
3. Connect wires to the wire terminals as shown in “Wiring” below.
4. Insert the sleeve into the mounting hole and insert the sensor into the sleeve, matching the ribs on the sensor with the grooves on the sleeve.

To mount the Single-gang Box ShatterPro II model (5825A-W) in a single-gang box, see Figure 5 below and do the following:

1. Mount the adaptor bracket to the single-gang box (not included) and mount the adaptor plate to the bracket.
2. Run wires through the wire entry hole and sleeve to the sensor.
3. Connect wires to the wire terminals as shown in “Wiring” below.
4. Insert the sleeve into the adaptor plate and insert the sensor into the sleeve, matching the ribs on the sensor with the grooves in the sleeve.

Figure 5: Recessed mounting in a single gang box

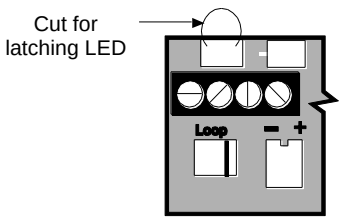


Wiring

Strip back the outer jacket on your wiring cable. This allows wires to flex in the case. Make sure the cable is slack in the wall to avoid stressing the wires at their connections.

Figure 6 below shows the wiring terminals for ShatterPro II.

Figure 6: ShatterPro II wiring terminals



Maintenance

When installed and used properly, minimal maintenance is required. You should test the sensors annually to ensure proper operation.

Clean the covers with a damp (water) cloth as needed to keep it free of dust and dirt. Always test the sensors after cleaning them.

Specifications

Voltage	9 to 16 VDC
Current:	
Typical	15 mA
Maximum	25 mA
Relay output:	Normally closed, open 4 seconds upon alarm
On resistance	10 Ω −5 +10
Off resistance	> 1 MΩ
Maximum loop rating	16 VDC, 50 mA (relay)
Detection range	3.3 to 25 ft. (1 to 7.5 m) , 360°
Minimum glass size	12 by 24 in. (0.3 by 0.6 m)
Recommended glass thickness:	
Plate	3/32 to 1/4 in. (2.4 to 6.4 mm)
Tempered	1/8 to 1/4 in. (3.2 to 6.4 mm)
Wired	1/4 in. (6.4 mm)
Laminated	1/8 to 1/4 in. (3.2 to 6.4 mm)
Operating temperature	0 to 120°F (−18 to 50°C)
Relative humidity	10 to 90% noncondensing
Microphone	Omnidirectional electret
Color	White
Wiring terminals	14-22 AWG

Regulatory information

Manufacturer	UTC Fire & Security Americas Corporation, Inc. 3211 Progress Drive, Lincolnton, NC, 28092, USA AUTHORIZED EU REPRESENTATIVE: UTC Fire & Security B.V. Kelvinstraat 7, 6003 DH Weert, Netherlands
FCC/IC	This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures: - Reorient or relocate the receiving antenna. - Increase the separation between the equipment and receiver. - Connect the equipment into an outlet on a circuit

	different from that to which the receiver is connected. - Consult the dealer or an experienced radio/TV technician for help. Changes or modifications not expressly approved by UTC Fire and Security could void the user's authority to operate the equipment. This device complies with Industry Canada license-exempt RSS standard(s). Operation is subject to the following two conditions: (1) this device may not cause interference, and (2) this device must accept any interference, including interference that may cause undesired operation of the device.
	Cet appareil est conforme avec Industrie Canada exempts de licence standard RSS (s). Son fonctionnement est soumis aux deux conditions suivantes: (1) cet appareil ne doit pas provoquer d'interférences et (2) cet appareil doit accepter toute interférence, y compris celles pouvant causer un mauvais fonctionnement de l'appareil.
Copyright	Copyright © 2017 United Technologies Corporation. All rights reserved.
Trademarks	Interlogix is a registered trademark of United Technologies Corporation. Interlogix is part of UTC Climate, Controls & Security, a unit of United Technologies Corporation.
Product warnings	THESE PRODUCTS ARE INTENDED FOR SALE TO AND INSTALLATION BY AN EXPERIENCED SECURITY PROFESSIONAL. UTC FIRE & SECURITY AMERICAS CORPORATION, INC. ("INTERLOGIX") CANNOT PROVIDE ANY ASSURANCE THAT ANY PERSON OR ENTITY BUYING ITS PRODUCTS, INCLUDING ANY "AUTHORIZED DEALER", IS PROPERLY TRAINED OR EXPERIENCED TO CORRECTLY INSTALL SECURITY RELATED PRODUCTS. A PROPERLY INSTALLED AND MAINTAINED ALARM/SECURITY SYSTEM MAY ONLY REDUCE THE RISK OF EVENTS SUCH AS BREAK-INS, BURGLARY, ROBBERY OR FIRE; IT IS NOT INSURANCE OR A GUARANTEE THAT SUCH EVENTS WILL NOT OCCUR, THAT ADEQUATE WARNING OR PROTECTION WILL BE PROVIDED, OR THAT THERE WILL BE NO DEATH, PERSONAL INJURY, AND/OR PROPERTY DAMAGE AS A RESULT. WHILE INTERLOGIX MAKES REASONABLE EFFORTS TO REDUCE THE PROBABILITY THAT A THIRD PARTY MAY HACK, COMPROMISE OR CIRCUMVENT ITS SECURITY PRODUCTS, RELATED SOFTWARE OR CLOUD SERVERS, ANY SECURITY PRODUCT, SOFTWARE OR CLOUD SERVER MANUFACTURED, SOLD AND/OR LICENSED BY INTERLOGIX, MAY STILL BE HACKED, COMPROMISED AND/OR CIRCUMVENTED. CERTAIN PRODUCTS OR SOFTWARE MANUFACTURED, SOLD OR LICENSED BY INTERLOGIX CONNECT TO THE INTERNET TO SEND AND/OR RECEIVE DATA ("INTERNET OF THINGS" OR "IOT" PRODUCTS). ANY CONTINUED USE OF AN IOT PRODUCT AFTER INTERLOGIX HAS CEASED SUPPORTING THAT IOT PRODUCT (E.G., THROUGH NOTICE THAT INTERLOGIX NO LONGER PROVIDES FIRMWARE UPDATES OR BUG FIXES) MAY RESULT IN REDUCED PERFORMANCE, MALFUNCTION, AND/OR INCREASED VULNERABILITY TO HACKING, COMPROMISE AND/OR CIRCUMVENTION. INTERLOGIX DOES NOT ENCRYPT COMMUNICATIONS BETWEEN ITS ALARM OR SECURITY PANELS AND THEIR OUTPUTS/INPUTS INCLUDING, BUT NOT LIMITED TO, SENSORS OR DETECTORS UNLESS REQUIRED BY APPLICABLE LAW. AS A RESULT THESE COMMUNICATIONS MAY BE INTERCEPTED AND COULD BE USED TO CIRCUMVENT YOUR ALARM/SECURITY SYSTEM. THE ABILITY OF INTERLOGIX PRODUCTS AND SOFTWARE TO WORK PROPERLY DEPENDS ON A NUMBER OF PRODUCTS AND SERVICES MADE AVAILABLE BY THIRD PARTIES OVER WHICH INTERLOGIX HAS NO CONTROL INCLUDING, BUT NOT LIMITED TO, INTERNET, CELLULAR AND LANDLINE CONNECTIVITY; MOBILE DEVICE AND OPERATING SYSTEM COMPATIBILITY; AND PROPER INSTALLATION AND MAINTENANCE. INTERLOGIX SHALL NOT BE LIABLE FOR ANY DAMAGES CAUSED BY ACTIONS OR OMISSIONS OF THIRD PARTIES. BATTERY OPERATED SENSORS, DETECTORS, KEYFOBS, PANIC DEVICES AND OTHER PANEL ACCESSORIES HAVE A LIMITED BATTERY LIFE. WHILE THESE PRODUCTS MAY BE DESIGNED TO PROVIDE SOME WARNING OF IMMINENT BATTERY DEPLETION, THE ABILITY TO DELIVER SUCH WARNINGS IS LIMITED AND SUCH WARNINGS MAY NOT BE PROVIDED IN ALL CIRCUMSTANCES. PERIODIC TESTING OF THE SYSTEM IN ACCORDANCE WITH PRODUCT DOCUMENTATION IS THE ONLY WAY TO DETERMINE IF ALL SENSORS, DETECTORS, KEYFOBS, PANIC DEVICES AND OTHER PANEL ACCESSORIES ARE FUNCTIONING PROPERLY. CERTAIN SENSORS, PANIC DEVICES AND OTHER PANEL ACCESSORIES MAY BE PROGRAMMED INTO AN ALARM PANEL AS "SUPERVISORY" SO THAT THE ALARM PANEL WILL INDICATE IF IT DOES NOT RECEIVE A REGULAR SIGNAL FROM THE DEVICE WITHIN A CERTAIN PERIOD OF TIME. CERTAIN DEVICES CANNOT BE PROGRAMMED AS SUPERVISORY. DEVICES CAPABLE OF BEING PROGRAMMED AS SUPERVISORY MAY NOT BE PROPERLY PROGRAMMED AT INSTALLATION, RESULTING IN A FAILURE TO REPORT TROUBLE WHICH COULD RESULT IN DEATH, SERIOUS INJURY AND/OR PROPERTY DAMAGE. SIRENS/SOUNDERS, INCLUDING INTERNAL SIRENS/SOUNDERS IN PANELS, ARE DESIGNED TO EMIT VERY LOUD SOUNDS. THESE SOUNDS CAN CAUSE HEARING DAMAGE TO PERSONS EITHER IN CLOSE PROXIMITY TO THE SIREN/SOUNDER WHEN ACTIVATED OR EXPOSED TO SUCH SOUNDS OVER LONGER PERIODS OF TIME.
Warranty disclaimers and other disclaimers	INTERLOGIX HEREBY DISCLAIMS ALL WARRANTIES AND REPRESENTATIONS, WHETHER EXPRESS, IMPLIED, STATUTORY OR OTHERWISE INCLUDING (BUT NOT LIMITED TO) ANY WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE WITH RESPECT TO ITS SECURITY PRODUCTS AND RELATED SOFTWARE. INTERLOGIX FURTHER DISCLAIMS ANY OTHER IMPLIED WARRANTY UNDER THE UNIFORM COMPUTER INFORMATION

	TRANSACTIONS ACT OR SIMILAR LAW AS ENACTED BY ANY COUNTRY. (USA ONLY) SOME STATES DO NOT ALLOW THE EXCLUSION OF IMPLIED WARRANTIES, SO THE ABOVE EXCLUSION MAY NOT APPLY TO YOU. THIS WARRANTY GIVES YOU SPECIFIC LEGAL RIGHTS AND YOU MAY ALSO HAVE OTHER LEGAL RIGHTS THAT VARY FROM STATE TO STATE. INTERLOGIX MAKES NO REPRESENTATION, WARRANTY, COVENANT OR PROMISE THAT ITS SECURITY PRODUCTS AND/OR RELATED SOFTWARE (I) WILL NOT BE HACKED, COMPROMISED AND/OR CIRCUMVENTED; (II) WILL PREVENT, OR PROVIDE ADEQUATE WARNING OR PROTECTION FROM, BREAK-INS, BURGLARY, ROBBERY, FIRE; OR (III) WILL WORK PROPERLY IN ALL ENVIRONMENTS AND APPLICATIONS. INTERLOGIX WILL NOT BE LIABLE FOR UNAUTHORIZED ACCESS (I.E., HACKING) INTO THE CLOUD SERVERS OR YOUR TRANSMISSION FACILITIES, PREMISES OR EQUIPMENT, OR FOR UNAUTHORIZED ACCESS TO DATA FILES, PROGRAMS, PROCEDURES OR INFORMATION THEREON, UNLESS AND ONLY TO THE EXTENT THAT THIS DISCLAIMER IS PROHIBITED BY APPLICABLE LAW. SYSTEMS SHOULD BE CHECKED BY A QUALIFIED TECHNICIAN AT LEAST EVERY 3 YEARS UNLESS OTHERWISE INSTRUCTED IN THE PRODUCT DOCUMENTATION AND, IF APPLICABLE, THE BACKUP BATTERY REPLACED AS REQUIRED. THE INFORMATION IN THIS DOCUMENT IS SUBJECT TO CHANGE WITHOUT NOTICE. UPDATED INFORMATION CAN BE FOUND AT WWW.UTCFSSECURITYPRODUCTS.EU/PRODUCTWARNING/. INTERLOGIX ASSUMES NO RESPONSIBILITY FOR INACCURACIES OR OMISSIONS AND SPECIFICALLY DISCLAIMS ANY LIABILITIES, LOSSES, OR RISKS, PERSONAL OR OTHERWISE, INCURRED AS A CONSEQUENCE, DIRECTLY OR INDIRECTLY, OF THE USE OR APPLICATION OF ANY OF THE CONTENTS OF THIS DOCUMENT. THIS PUBLICATION MAY CONTAIN EXAMPLES OF SCREEN CAPTURES AND REPORTS USED IN DAILY OPERATIONS. EXAMPLES MAY INCLUDE FICTITIOUS NAMES OF INDIVIDUALS AND COMPANIES. ANY SIMILARITY TO NAMES AND ADDRESSES OF ACTUAL BUSINESSES OR PERSONS IS ENTIRELY COINCIDENTAL. REFER TO THE DATA SHEET AND USER DOCUMENTATION FOR INFORMATION ON USE. FOR THE LATEST PRODUCT INFORMATION, CONTACT YOUR SUPPLIER OR VISIT WWW.INTERLOGIX.COM.
	2012/19/EU (WEEE directive): Products marked with this symbol cannot be disposed of as unsorted municipal waste in the European Union. For proper recycling, return this product to your local supplier upon the purchase of equivalent new equipment, or dispose of it at designated collection points. For more information see: www.utcfssecurityproducts.eu/recycle/

Product ordering

Product	Description
5820A-W	Recessed ShatterPro II, latch or nonlatch LED
5825A-W	Single-gang Box ShatterPro II
Accessories	
5709C-W	Glassbreak hand-held tester

Contact information

www.interlogix.com

For customer support, see www.interlogix.com/customer-support