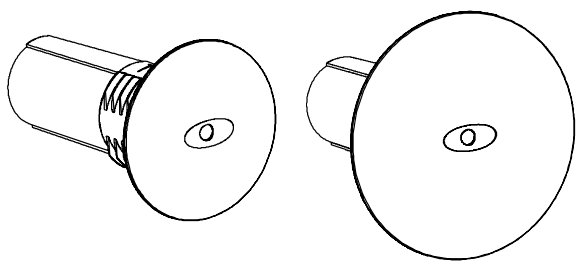
resideo

FlexGuard ® FG-1625RFM
Glassbreak Detector

Installation and Setup Guide

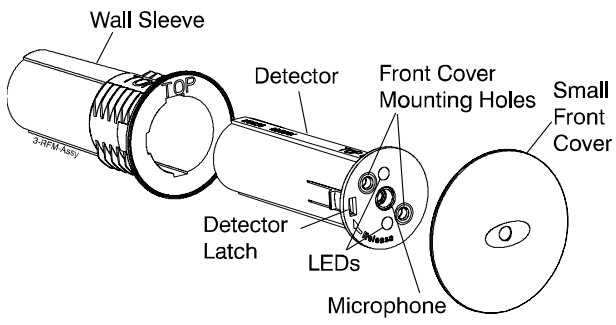
Refer to Supplemental Information (page 2) for complete descriptions of these installation steps

FG-1625RFM Glassbreak Detector

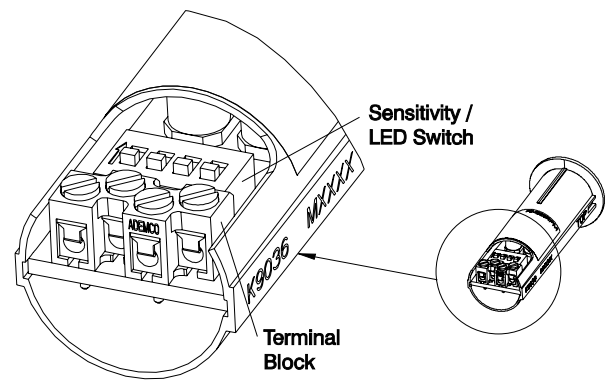


FG-1625RFM with Small Front Cover

FG-1625RFM with Large Front Cover



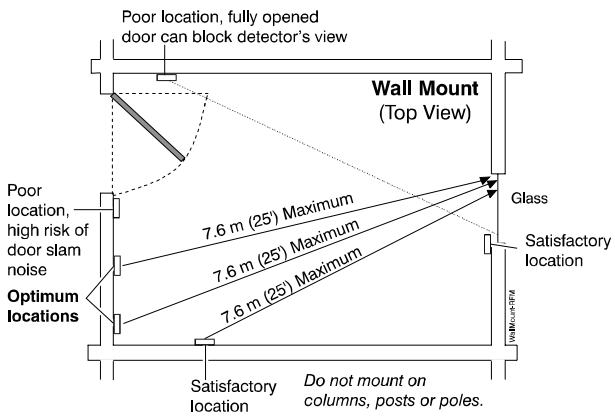
FG-1625RFM Components

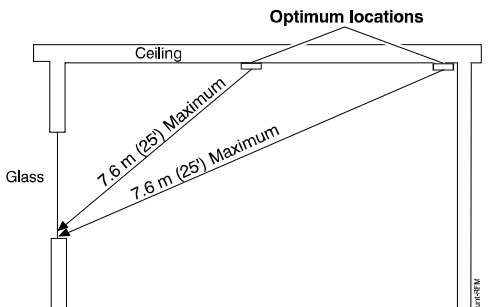


FG-1625RFM Glassbreak Detector, Terminal Block and Sensitivity / LED Switch

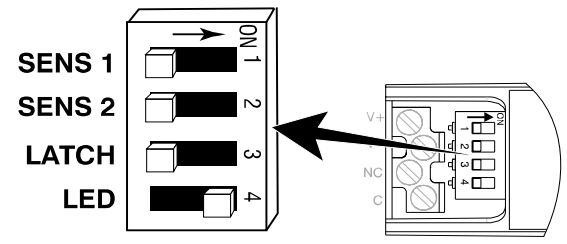
Select Mounting Location

IMPORTANT: Before drilling the mounting hole, make sure you do *NOT* exceed the maximum distance (25'/7.6 m) from the glass.





Set Sensitivity & LED Configuration



SENS1 & SENS2 configure sensitivity

SENSITIVITY	APPROXIMATE RANGE	SENS1	SENS2
MAX	7.6m (25 ft)	**OFF**	**OFF**
MEDIUM	4.6m (15 ft)	**ON**	**OFF**
LOW	3m (10 ft)	**OFF**	**ON**
LOWEST	1.5m (5 ft)	**ON**	**ON**

NOTE: Ranges are approximate and vary with each room's acoustic properties. Always verify range with an IntelliSense FG-701 Glassbreak Simulator.

The LATCH and LED DIP switches configure LED indicator behavior.

SWITCH	OFF	ON
LATCH	Red LED lights for 5 seconds during alarm	Red LED latches ON when detector goes into alarm [1, 2]
LED	LEDs disabled (except for power up and test mode[3])	LEDs always enabled

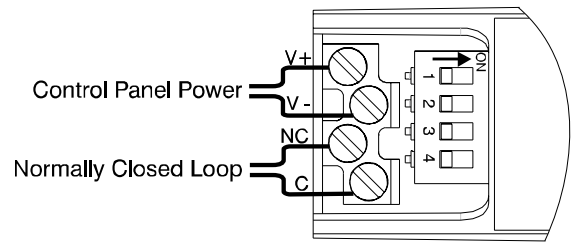
[1] The timing of the alarm relay is not affected by the latched Alarm LED.

[2] Reset the Alarm LED by removing/restoring power, or by toggling the detector in and out of Test Mode.

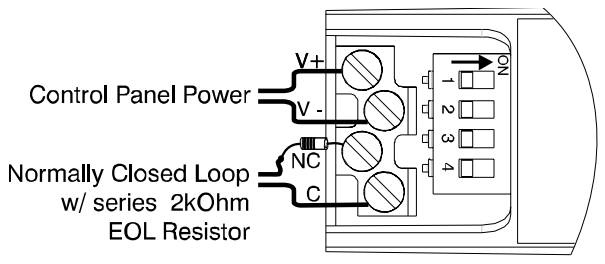
[3] LEDs can be enabled/disabled using FG-701.

Connect Detector

Connect detector using 18 to 22 AWG wire, with ends stripped approximately 5mm (3/16 in.) Use the appropriate wiring method as shown in these diagrams:



Normally Closed Loop/No EOL Resistor

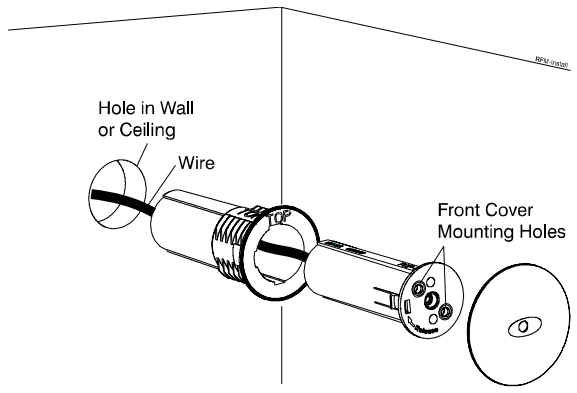


Normally Closed Loop/With EOL Resistor

Note: Be sure to pass the wire through the wall sleeve ***before*** wiring the detector.

Install Detector

- Test location and set Sensitivity as needed.
- Drill a mounting hole 1" diameter by 2.75" deep (minimum) in the wall or ceiling. (The hole diameter may need to be increased for best installation in some solid materials.)
- Run the wire through the wall or ceiling and slide the wire through the hole at the bottom of the wall sleeve.
- Insert the wall sleeve into the wall or ceiling. Position the "TOP" marking to ensure the front cover center design has either a horizontal or vertical alignment when attached. (See following illustration.)
- Wire the detector.
- Align the "TOP" markings on the detector and wall sleeve, and insert the detector into the wall sleeve.



Wiring and Installing the Detector

- Select either the small or large front cover and attach it to the detector: insert the front cover installation posts into the mounting holes and snap the front cover into place.
  Note: Both the small and large covers provide the same excellent detection. Select the front cover size to best fit the application.

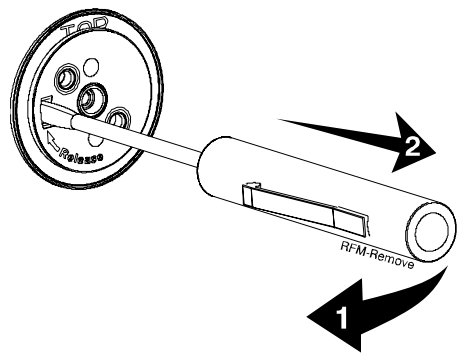
Test Detector Installation

Enter Test Mode using an FG-701 Glassbreak Simulator (see Testing the Detector on the next page) or manually by shorting Test Mode pads.

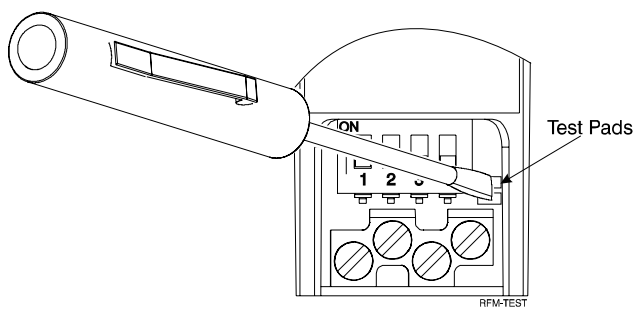
Note: Testing with the FG-701 is *highly recommended.*

To use the test mode pads, first remove the front cover of the detector. Carefully slide the tip of a flat blade screwdriver under the edge of the front cover and gently pry upward.

Next, remove the detector from the wall sleeve. Insert a 3mm screwdriver into the detector latch (see Components illustration in first column). Gently press outward, and then pull the detector toward you with the screwdriver.



Removing detector from the Wall Sleeve



Shorting the Test Mode Pads (if the FG-701 is unavailable)

Short the test mode pads with the screwdriver, and check to make sure the detector is in test mode. Once in test mode, replace the detector in the wall sleeve, and *replace front cover before testing the detector*.

Refer to Installation Instructions and diagrams (page 1) when installing this product

1. General Information

The FG-1625RFM flush mount glassbreak detector senses the sound of breaking plate, tempered, laminated, wired, coated and sealed insulating glass.

2. Choosing Mounting Location

The preferred mounting location for the device is on a wall or ceiling, opposite the protected glass.

For the best detector performance, select a mounting location that is:

- within 7.6 m (25 feet) of the protected glass;
- within clear view of the protected glass;
- at least 2 m (6.5 feet) from the floor;
- at least 1 m (3.3 feet) from forced air ducts;
- at least 1 m (3.3 feet) from sirens or bells greater than 5 cm (2 inches) in diameter.
- between the protected glass and any heavy window coverings that may be present. Alternatively, when heavy window coverings are present, the detector can be mounted on the frame of the window.

Avoid mounting the detector on the same wall as the protected glass, on free-standing posts or pillars, or in rooms with noisy equipment (air compressors, bells, power tools, etc.), if this equipment is operated when the detector is armed.

3. Configuring Sensitivity (Range)

DIP switches SENS1 and SENS2 set detector sensitivity (range), as shown:

SENSITIVITY	RANGE *	SENS1	SENS2
MAX	7.6m (25 ft)	**OFF**	**OFF**
MEDIUM	4.6m (15 ft)	**ON**	**OFF**
LOW	3m (10 ft)	**OFF**	**ON**
LOWEST	1.5M (5 ft)	**ON**	**ON**

***** Sensitivity must be set to match the distance between the detector and the protected glass, as verified using the FG-701 Glassbreak Simulator.

4. Configuring LED Switch

The LATCH and LED DIP switches determine LED indicator operation.

SWITCH	OFF	ON
LATCH	Red LED lights for 5 seconds during alarm	Red LED latches ON when detector goes into alarm [1, 2]
LED	LEDs disabled (except for power up and test mode[3])	LEDs always enabled

[1] Alarm relay timing is not affected by the latched Alarm LED.

[2] Reset the Alarm LED by removing/restoring power, or by toggling the detector in and out of Test Mode.

[3] LEDs can be enabled/disabled using FG-701.

5. Preparing Mounting Location

CAUTION: Make sure the mounting location DOES NOT exceed the maximum distance (25'/7.6m) from the glass.

The FG-1625RFM is designed for flush mounting in a 1" diameter hole. Once you have selected the appropriate mounting location, drill a 1" diameter hole.

NOTE: In hardwood or other solid material the hole diameter must be increased for best installation. The hole must be a minimum of 2.75" deep.

6. Installing the Wall Sleeve

After selecting the location and drilling the mounting hole, pull the hook-up wires through the slot in the bottom of the wall sleeve.

Caution: Make sure to orient the wall sleeve so the indentation on the detector's front cover is either horizontal or vertical when installed. (See Wiring and Installing the Detector illustration on page 1.)

Insert the wall sleeve into the installation hole until firmly seated.

7. Wiring the Detector

Refer to the wiring diagrams (page 1) to select the appropriate wiring configuration.

NOTE: US and Canada- This sensor must be connected to a UL/ULC**/or CUL** Listed power supply or control panel supplying a minimum of four hours of standby time.

**Listing per Canadian standards S318 or S304.

Resetting the FG-1625RFM is accomplished by momentarily disconnecting the V+ line. (Disconnection of only the V- line will not reset the unit).

8. Installing the Detector

Align the "TOP" marking on the detector with the "TOP" marking on the wall sleeve. Insert the detector into the wall sleeve until the latch engages.

9. Installing the Detector Cover

Select the appropriate cover from the two sizes provided. Align the two cover mounting posts with the two marked holes in the detector and snap the cover into place. See Components illustration on page 1.
Note: The cover must be in place for correct operation.

10. Testing the Detector

The detector should be tested at least once each year. Test the detector with the FG-701 Glassbreak Simulator.

Note: The FG-701 uses calibrated signal output for true range verification, and provides reliable, convenient remote test-mode activation. Testing each installation with the FG-701 is highly recommended

Other simulators will not give accurate indication of range.

Always test detector with cover in place.

To enter the Test Mode with the FG-701:

1. Stand within 4.6 m (15 feet) of the detector.
2. Switch the FG-701 to ACTIVATE and MANual modes.
3. Point the front of the glassbreak simulator towards the detector. Press the red START button to send a short activation code.

To enter Test Mode manually:

1. Remove the front cover.
2. Use a screwdriver to remove the detector from the wall sleeve (see illustration on page 1).
3. Short the Test Mode pads on the PC board (located next to the DIP switch).
4. Replace the detector in the wall sleeve, and then replace the front cover.

The detector's green LED blinks approximately once per second to indicate that it has entered Test Mode.

When the detector enters Test Mode, the green LED on the detector flashes about once per second. If the green LED does not flash, move closer to the detector and repeat the procedure.

Testing the Detector (flex and audio signals):

To test the detector using the FG-701:

1. Place the detector in Test Mode.
2. Set the FG-701 switches to the TEST and FLEX positions.
3. Position the FG-701 near the farthest point of the protected glass, and point it directly at the detector. If window coverings are present, close them fully and hold the FG-701 between the coverings and the protected glass.
4. Press the red START button. The simulator clicks on and starts an 8-second armed period.
5. Generate a flex signal by carefully striking the glass with a cushioned tool. The FG-701 responds with a burst of glassbreak audio.

If the detector receives both the flex and audio signals properly, its red Alarm LED lights for five (5) seconds. (Red Alarm LED does not latch in Test Mode).

Testing the Detector (audio signals only):

The FG-701 can also be used to test the detector's ability to receive audio signals only. See the FG-701 Operating Instructions for additional information. When it receives the audio signal, the detector flickers its green Event LED.

Exiting Test Mode:

When you have finished testing, exit Test Mode by following the same procedure used to enter Test Mode.

The FG-1625RFM automatically exits Test Mode after five minutes if no events are detected.

11. LED Indicators

The detector is equipped with two LEDs: a green Event LED and a red Alarm LED. When the LEDs are enabled, they light in a variety of patterns to indicate the detector's status. The following table summarizes the LED messages.

CONDITION	GREEN LED	RED LED
Normal	OFF	OFF
Normal, event detected	Flicker	OFF
Normal, break detected	OFF	ON 5 seconds
Normal, alarm latched	OFF	ON
Power up	ON 1 second	ON 1 second
Low Voltage	Flash ON/OFF	Flash ON/OFF
Test Mode	Flash once per sec	OFF
Test Mode, event detected	Flicker	OFF
Test Mode, alarm	Flash once per sec	ON 5 seconds

12. Remote LED Enable/Disable Mode

The detector's Remote LED Enable/Disable Mode allows you to enable or disable the detector's LEDs with the FG-701 Glassbreak Simulator.

To enable or disable the LEDs with the FG-701:

1. LED switch, S4 position 4, must be off.
2. Enter Test Mode, and then exit Test Mode.
3. Within two (2) seconds, enter Test Mode again; this changes LED enable/disable status.
4. Exit Test Mode again.
5. Clap your hands to test the LEDs. If enabled, the green LED will flicker. If disabled, the green LED will remain off.

13. Specifications

Range:
7.6 m (25 ft.) maximum, omni-directional; No minimum range

Operating Temperature:
-10° to 55° C (14° to 131° F)
Storage: -20° to 60° C (-4° to 140° F)

Alarm Duration:
5 seconds (unaffected by alarm LED latching)

Alarm Relay:
Form A
90 mA maximum
16 VDC maximum
Rated for direct panel connection only

Power Requirements:
8 - 16 VDC; 5.5 mA typical at 12 VDC, 12 mA max at 12 VDC, LED Latched
AC Ripple: 4 Volts peak-to-peak at Nominal 12 VDC

RFI Immunity:
30 V/m,
10 MHz - 1000 MHz

ESD Immunity:
10 kV discharges of either polarity to exposed surfaces

Dimensions:
Small Front Cover:
45.0mm
(1.8 in.) Diameter
Large Front Cover:
63.5mm
(2.5 in.) Diameter
Wall Sleeve: For installation in 1" (25mm) hole. Maximum depth, without wire 66mm (2.6 in.)

Weight:
24.0 g (0.85 oz.) with small front cover
25.5 g (0.90 oz.) with large front cover
Packaged: 54.0 g (1.90 oz.)

Approvals / Listings:
FCC/IC Verified
CE C-Tick
UL listed ULC listed
EN 50131-1 Security Grade 1, Environmental Class II

For Connection to an EN 60950 Class II Limited Power Source

14. Nominal Glass Thickness Chart

Glass Type*	Nominal Thickness	
	Minimum	Maximum
Plate	2mm (3/32 in.)	10mm (3/8 in.)
Tempered	3mm (1/8 in.)	10mm (3/8 in.)
Laminated [3]	3mm (1/8 in.)	14mm (9/16 in.)
Wired	6mm (1/4 in.)	6mm (1/4 in.)
Coated [2]	3mm (1/8 in.)	6mm (1/4 in.)
Sealed Insulating[1, 3]	3mm (1/8 in.) [13mm (1/2 in.) overall]	6mm (1/4 in.) [19mm (3/4 in.) overall]

***** Minimum size for all types is 28cm (11 in.) square; glass must be framed in the wall or mounted in a barrier at least 0.9m (36 in.) wide.

[1] Protected only if both plates in the unit are broken

[2] Coated glass with security films up to 0.35mm (14 mils) thick (including films for solar protection) may be used. Evaluated with these products: 3M® SCOTCHSHIELD® SH14CLARL – 0.35mm (14 mils), 4 ply film; Film Technologies International, Inc.'s GLASS-GARD® GGLL 1200 – 0.3mm (12 mils), 3 ply film by Underwriters Laboratories Inc. at Resideo's request.

[3] In compliance with Underwriters Laboratories of Canada's Standard for Intrusion Detection Units (CAN/ULC-S306-M89), the maximum range for 3mm (1/8 in.) laminated, and 3mm (1/8 in.) sealed insulating plate glass should be 6 m (20 ft.); sensitivity should be set at maximum.

Canada: Wiring methods shall be in accordance with CSA C22.1 Canadian Electrical Code, Part 1, Safety Standard for Electrical Installations.

NOTICES

FCC Notice: 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: 1) Reorient or relocate the receiving antenna, 2) Increase the separation between the equipment and receiver, 3) Connect the equipment into an outlet on a circuit different from that to which the receiver is connected, and/or 4) Consult the dealer or an experienced radio/television technician for help.

The user is cautioned that changes or modifications not expressly approved by Resideo could void the user's authority to operate this equipment.

IC Notice: This Class B digital device apparatus meets complies with the Canadian standard ICES-003.

Cet appareil numérique de la Classe B est conforme à la norme NMB-003 du Canada.

Responsible Party / Issuer of Supplier's Declaration of Conformity: Ademco Inc., a subsidiary of Resideo Technologies, Inc., 2 Corporate Center Drive., Melville, NY 11747, Ph: 516-577-2000
To obtain applicable EU compliance Declaration of Conformities for this product, please refer to our Website, www.resideo.com.
For any additional information regarding the compliance of this product to any EU specific requirements, please contact:

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