

# DG-50

# Glassbreak Detector

## Installation Instructions

The DG-50 is an acoustic glassbreak detector designed to listen for the specific sonic frequencies of breaking glass. The DG-50 is equipped with multi-level discriminating circuitry to maximize its response to breaking glass and minimize its response to normal environmental noises. The DG-50 is extremely resistant to seismic shock and will not alarm in response to a slamming door or even a tap on the case.

### Specifications

Voltage input	9-16 VDC
Supply Ripple	1 V P-P max.
Current	15 mA @ 12 VDC
Operating Temperature	14°F to 122°F (-10°C to 50°C)
Humidity (non-condensing)	95% max. RH
Contact Rating	24 VDC, 100 mA max.
Alarm Duration	3 seconds

### Coverage:

Max. sensitivity - 35' x 35'	(10m x 10m)
Min. sensitivity - 10' x 10'	(3m x 3m)
Dimensions (l x w x h)	3.5" x 2.5" x 0.8" (89 x 64 x 20 mm)

### Product Information

DG-50A: Form A alarm contact

DG-50B: Form A alarm contact and tamper contact

DG-50C: Form C alarm contact and tamper contact

### Locating The Detector

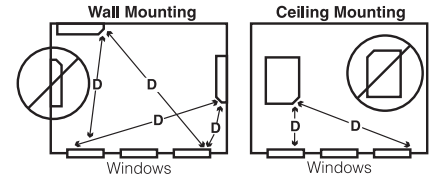
**NOTE: Test the detector thoroughly for proper placement using the AFT-100 Glassbreak Simulator. Other simulators may trip the unit, but will not provide accurate indications.**

- For optimum protection, the detector should have a direct line of sight to the protected glass.
- To ensure glassbreak detection for tempered glass, the DG-50 must be mounted directly in front of the surface to be protected at a maximum distance of 12' and a minimum distance of 5'.

**NOTE: For difficult applications or where the protected glass is greater than 12 feet (3.6m) from the sensor, use the DSC Acuity AC-100 Glassbreak Detector for tempered glass.**

- Window coverings will absorb sound energy from the shattering glass. In these cases, mount the detector as close as possible to the protected glass, either on an adjacent wall, the ceiling, or behind the window covering if possible.
- The detector should be mounted at least 1.8m (6 feet) off the ground.

- Do not mount the detector on the same wall as the protected glass. Refer to the diagram for correct and incorrect mounting locations.
- Avoid installation near "noisy" sources, such as speakers or other objects which produce sounds continuously.



- Do not install the detector beyond the maximum recommended range, even if the AFT-100 simulator shows additional range - future changes in room acoustics could reduce that additional range.
- Application on 24 hour loops should be avoided unless the location is unoccupied.
- Test false alarm immunity by creating any sounds in the room which will likely occur when the alarm system is armed.

### Testing

When choosing a location for each DG-50 glassbreak detector, the following test should be performed to ensure that it is mounted in the best possible location. Select a location and remove the front cover of the detector. Use double-sided tape to temporarily mount the detector in the selected location. Use a 9 volt battery to power the detector.

### AFT-100 Glassbreak Simulator

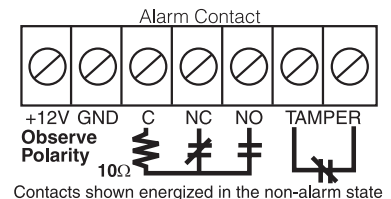
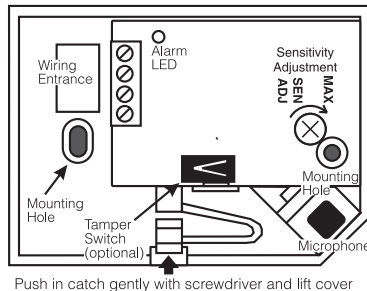
The AFT-100 glassbreak simulator generates plate or tempered glass samples. Use the plate glass setting if you are unsure of the glass type. Observe the following when testing the detector:

- The correct mounting location is indicated by three successive detections. If the detector does not respond each time, relocate the detector and repeat the test.
- If the windows in question are covered by drapes or blinds, place the tester behind the closed window coverings. If the drapes prevent reliable detection, we suggest that the detector be mounted behind the drapes either on an adjacent wall or on the ceiling.
- If there are multiple windows, or one large window, activate the tester at the furthest point on the glass.
- If the sensitivity is too high, turn the adjustment counter-clockwise; if reliable detection is not achieved, increase the sensitivity by turning the adjustment clockwise. Sensitivity should not be adjusted any higher than necessary to achieve reliable detection.

When the detector responds consistently, it can be permanently mounted using the supplied screws.

### Mounting the DG-50

Once the location has been determined, open the detector by pressing the release tab on the bottom with a small flat-blade screwdriver. Remove the cover and set in a safe location. Draw the wires through the rectangular opening in the backplate and connect to the terminal block. Observe polarity for power wiring. Mount the detector using the two mounting screws. Once the detector is permanently mounted, replace the cover and repeat the installation tests using the AFT-100 tester to confirm proper operation.



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