

## FlexGuard™

Dual Technology Glass-Break Detector  
INSTALLATION INSTRUCTIONS

### Models

FG-715 15' range

FG-730 30' range

The FG-715 and FG-730 from IntelliSense are **dual technology** glass-break detectors that use flex detection and audio discrimination to detect breaking glass.

The flex and audio technologies are sensitive to different frequencies. The flex technology is sensitive to **ultra low frequencies**, the type generated by a blow to a glass window. The audio technology detects the frequency of breaking glass.

The audio technology remains off until the flex technology detects a blow to the glass. For an alarm condition to occur, the audio must detect the frequency of breaking glass within a defined time-window *after* the flex detects a blow to the glass. Because both technologies must detect and verify glass breakage, **false alarms are virtually eliminated**.

### FEATURES

- Dual flex/audio technology
- Low 10 - 14 VDC operation
- Low 25 mA at 12 VDC current draw
- No adjustment on audio
- Adjustment on flex detection to fit characteristics of each location (FG-730 only)
- Alarm memory
- Indicator LEDs
- Energized form C alarm relay
- Circuit protection
- Cover tamper switch
- Noise burst rejection circuit
- RFI immunity
- UL listed

### MOUNTING LOCATION

The FG-715 and FG-730 can be mounted on walls, in corners, even on false or suspended ceilings. Refer to the guidelines below when selecting a mounting location.

- The unit must have a direct line of sight to, and a clear view of, the protected glass.
- Locate the FG-715 **within 15'** (4.5 m) of the glass to be protected. Locate the FG-730 **within 30'** (9 m) of the glass to be protected.
- Curtains, blinds, and other window coverings will absorb energy from breaking glass. Heavy curtains, for example, will effectively block the sound signal. In these cases, mount the unit on the window frame behind the window covering, or above the window. **Make sure to test the unit thoroughly for proper detection.**
- Do not mount the unit in front of air ducts or forced air fans, or close to bells measuring 2" (or larger) in diameter.

### MOUNTING PROCEDURE

Orient the unit as shown in Figure 1. Remove the screw located at its top. While depressing the latch near the top of the unit, swing the front cover forward. Use the back cover as a template to mark holes for the mounting screws and wiring, then drill the holes.

- **Note:** If you plan to corner-mount the unit, remove the printed circuit board *before* marking and drilling holes for the mounting screws.

Pull the wiring into the unit through the back cover. Using the two mounting screws, mount the rear housing at the desired location.

After removing screw at top of unit, depress this latch to open housing

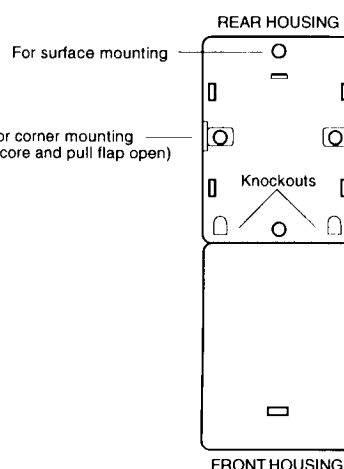
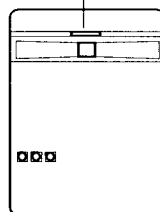


Figure 1 Mounting the FG-715/FG-730

### WIRING

Observing the proper polarity, wire the unit as shown in Figure 2 (use 22 to 14 AWG). Reverse-polarity connections will not damage the unit.

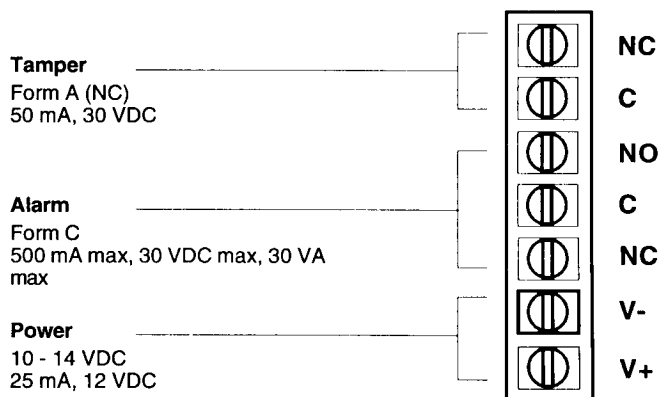


Figure 2 FG-715/FG-730 Terminal Strip

### FLEX ADJUSTMENT

The flex technology of the FG-715 cannot be adjusted.

To adjust the flex technology of the FG-730: Use a screwdriver to set the flex sensitivity control (R5) at **MAXIMUM** by turning it all the way clockwise. Refer to Figure 3 on the back side of this page.

Turn on any heating/air conditioning system in the vicinity and observe the yellow flex LED (DS2) for approximately one minute. Excessive subsonic (inaudible) noise typically produced by air handling systems may cause the flex LED to flash randomly.

If it flashes randomly, turn the R5 control counterclockwise just until the flashing stops.

### TESTING THE FG-715/FG-730

Use the FG-700 Glass-Break Simulator to test the FG-715/FG-730 detector.

Activate the simulator in **MANual** mode at the farthest point of the glass to be protected (15' maximum for FG-715, 30' maximum for the FG-730). If the green LED (DS1) on the detector flashes, the audio technology will detect breaking glass at that distance.

Test the flex technology by carefully striking the glass with your hand or a cushioned tool. If the yellow LED on the detector flashes, the flex technology will be sensitive enough to detect a blow to the glass at that distance.

### Testing the FG-715/FG-730 (continued)

Switch the FG-700 simulator to the FLEX mode and generate a flex signal by carefully striking the glass. The simulator will automatically generate a burst of glass-break sound, and the red LED (DS3) on the FG-715/FG-730 should light to indicate an alarm condition.

See the FG-700 operating instructions for additional testing information.

### FINAL TESTING

To ensure maximum protection against false alarms, activate any device in the area that may automatically cycle: pumps, generators, heating/air conditioning units, etc. If the cycling devices trigger an alarm, mount the unit in a different location.

There is no need to relocate the detector if the cycling only briefly triggers the flex technology (the yellow LED flashes).

### ALARM MEMORY

The FG-715 and FG-730 are equipped with a latching circuit for the alarm LED. When the latching circuit is activated, an alarm condition will make the red alarm LED on the units latch on. This feature is particularly helpful in determining which unit alarmed in a multiple detector installation.

To activate the latching circuit, install a jumper at position W2 on the printed circuit board. Refer to Figure 3. To reset the latched alarm LED, remove then restore power to the detector.

**Note:** The latching circuit has absolutely no effect on the alarm relay. The alarm relay will continue to function as normal.

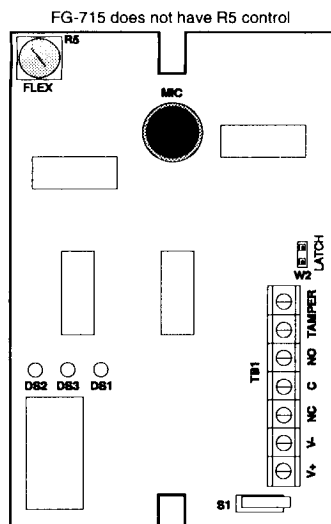


Figure 3 Testing the FG-715/FG-730

### SPECIFICATIONS:

#### Range:

FG-715 15' (4.5 m)

FG-730 30' (9 m)

#### Weight:

3 oz (85 g)

#### Operating temperature:

32° to 120° F (0° to 49° C)

#### Alarm relay:

Form C

500 mA max

30 VDC max

#### Tamper switch:

Form A (NC)

50 mA, 30 VDC

#### Power requirements:

10 - 14 VDC

25 mA, 12 VDC

#### Dimensions:

3.9" H x 2.4" W x 0.79" D

(98 mm x 61.5 mm x 20 mm)

#### Glass types:

1/8", 3/16", and 1/4" plate;

1/4" laminated, wired, and

tempered;

minimum size 10-7/8" x 10-7/8",

single pane

#### Patents:

US Patents 4,853,677; 5,107,249

and 5,109,216 other international

patents applied for

#### Approvals:

UL listed

**NOTE:** The FG-715/FG-730 should be tested at least once each year to ensure proper operation.

**Important:** The FG-715/FG-730 must be connected to a UL listed power supply or UL listed control unit capable of providing a minimum of four hours of standby power.

### LIMITED WARRANTY

Seller warrants its products to be in accordance with its own plans and specifications and to be free from defects in materials and workmanship under normal use and service for 18 months from the date stamp control on the product; or for products not having an IntelliSense date stamp, for 12 months from the date of original purchase, unless the installation instructions or catalogue sets forth a shorter period, in which case the shorter period shall apply.

Seller's obligation shall be limited to repairing or replacing, at its option, free of charge for materials or labor, any part which is proved not in compliance with Seller's specifications or proves defective in materials or workmanship under normal use and service. This warranty is void if the product is altered or improperly repaired or serviced by anyone other than IntelliSense factory service. For warranty service, contact the FlexGuard service center listed below.

THERE ARE NO WARRANTIES, EXPRESS OR IMPLIED, OF MERCHANTABILITY, OR FITNESS FOR A PARTICULAR PURPOSE OR OTHERWISE, WHICH EXTEND BEYOND THE DESCRIPTION ON THE FACE HEREOF. In no case shall Seller be liable to anyone for any consequential or incidental damages for breach of this or any other warranty, express or implied, or upon any other basis of liability whatsoever, even if the loss or damage is caused by Seller's own negligence or fault.

Seller does not represent that its product may not be compromised or circumvented; that the product will prevent any personal injury or property loss by burglary, robbery, fire, or otherwise; or that the product will in all cases provide adequate warning or protection. Buyer understands that a properly installed and maintained alarm system may only reduce the risk of burglary, robbery, or fire without warning, but it is not insurance or guarantee that such will not occur or that there will be no personal injury or property loss as a result. CONSEQUENTLY, SELLER SHALL HAVE NO LIABILITY FOR ANY PERSONAL INJURY, PROPERTY DAMAGE, OR OTHER LOSS BASED ON A CLAIM THAT THE PRODUCT FAILED TO GIVE WARNING. However, if Seller be held liable, whether directly or indirectly, for any loss or damage arising under this Limited Warranty or otherwise, regardless of cause or origin, Seller's maximum liability shall not in any case exceed the purchase price of the product, which shall be fixed as liquidated damages and not as a penalty, and shall be the complete and exclusive remedy against Seller.

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