IntelliSense®

FG-1025Z

Glassbreak Detector

For the ultimate in false alarm immunity, choose the IntelliSense® FG-1025Z glassbreak detector

Features

- **Only listens for sounds coming from Glass**
  Using 2 microphones and Time-Of-Arrival (TOA) processing, the detector listens only for the sound of breaking glass arriving from the protected area and ignores sounds arriving from elsewhere in the room.
- **Superior False Alarm Immunity**
  Digital Signal Processing (DSP) uses an on board Microcontroller with over 1.000 lines of software code to instantly digitise sounds into mathematic sequences, distinguishing common false alarms from breaking glass.
- **Field Proven Glassbreak Protection**
  As the world's most popular glassbreak detectors, IntelliSense products are field-proven around the globe to accurately detect breaking glass.
- **Installer Friendly Installations**
  Designed with the installer in mind, the detector features a centred wire entry hole, 45° terminal blocks, ample wiring room, EOL terminals, dip switches and optional mounting spacers.
- **Ceiling Mount Detector**
  Mounts on the ceiling with a maximum range of 7.6 m to the glass.
- **Fast and Accurate Testing**
  Place the detector in test mode remotely from the floor using the FG-701 hand-held glassbreak simulator.
- **Easily Verify Detector Operation at Any Time**
  A simple clap of the hands will blink the green LED verifying the detector is awake and processing incoming sounds. Both the red and the green LED's will flash if at anytime the continuous self-test discovers a detector failure.

System features

Time-of-Arrival
Two microphones, 180° opposed, enable the unit to hear glass breaking and determine if it came from the perimeter glass it is protecting. False alarm sounds originating from the room are eliminated. This innovative technology dramatically increases accuracy, reliability and false alarm immunity.

Digital Signal Processing (DSP)
Microcontroller based technology instantaneously converts sound vibrations into mathematical sequences to accurately identify the signal pattern of breaking glass.

DSP Advantage
With DSP, the FG-1025Z performs extensive analysis on signal variables including: flex/audio thresholds; ratios and durations; time coincidence; attack thresholds; and microphone overloads.

Indicator LED's
Denoted detection of sound events and alarm condition.

Dip Switches
To enable or disable event LED and alarm memory LED.

Installer Friendly Terminal Blocks
Angle-entry for ease of installation and positions for End-of-Line Resistors.

Enclosed PC Board
No handling of the PCB (Printed Circuit Board).

Built-in Self Testing
Automatically performs continual self-tests. The unit will signal if any test fails.

Remote Test Mode Enable and Disable
Can be tested remotely with the FG-701 Tester.

Test Mode Time Out
Automatically resets from test mode in 10 minutes.

Easy Installation and Set-up
Simply mount within 7.6 m of the glass to be protected. No sensitivity adjustment required.

Radio Frequency Immunity (RFI)
30 V/m, 10 - 1.000 MHz

Power Up and Continuous Self Test
If any test fails, the unit will signal trouble by alternately flashing the indicator LED's.

Accessories
FG-701 : Glassbreak Simulator
FG-SP2 : Spacer Plate

Specifications

Physical Dimensions
White high impact ABS plastic housing.
108 x 22.4 mm (Ø x d)
Weight: 128 g

Range
7.6 m Maximum.

Mounting location
Ceiling.

Alarm Relay
Form C (NO/NC) \ 125 mA @ 25 VDC.

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

Tamper Switch
Combination cover and wall tamper, 25 mA @ 24 VDC.

Power Requirements
8 ~ 14 VDC.
25 mA @ 12 VDC.
AC ripple: 4 Volts peak to peak at Nominal 12 VDC.

Operating Temperature
0°C ~ 49°C.

ESD Immunity
10 kV; discharges of either polarity to exposed surfaces.

Command Input/Remote LED Enable
Active low (0 ~ 1.5 V). High impedance for inputs less than 5.6 V. Draws less than 1 mA for inputs up to 16 V.

Trouble input
Open collector, active high: 1K series resistor; 20 mA / 16 V max.

Approvals
UL listed

Further information on approvals, to be requested from local distributors/ dealers.

Glass Type Thickness

Minimum size for all glass types is 28 cm x 28 cm square. Glass must be framed in the wall of the room or mounted in a barrier of 0.9 m minimum width.

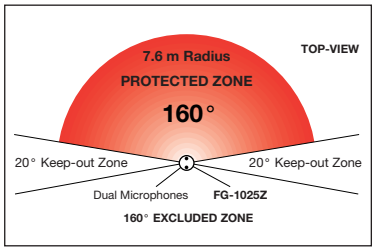
Type	Min. Thickness	Max. Thickness
Plate	2.4 mm	6.4 mm
Tempered	3.2 mm	6.4 mm
Laminated*	3.2 mm	14.3 mm
Wired	6.4 mm	6.4 mm
Coated**	3.2 mm	6.4 mm
Sealed Insulating*	3.2 mm	6.4 mm

* *Laminated and sealed insulating glass types are protected only if both plates of glass are broken.*
** *For glass coated on the inner surface with 3M scotchshield type RE35NEARL or Hard Glass Security Film, reduce maximum effective range to 4.6 m.*

FlexGuard® Glassbreak Simulator/Tester
The sound of breaking glass is digitally simulated by the FG-701 and is compatible for testing all IntelliSense glassbreak detectors. Testing glassbreak detectors upon installation is highly recommended.

Zones

Time-of-Arrival Processing



The FG-1025Z performance is achieved through the use of 2 microphones and Time-Of-Arrival (TOA) processing. When a sound is generated in the room, the microphone nearest the sound will hear it first. The Microcontroller in the unit monitors all sound events received by the microphones and processes only those received first at the 'front' microphone, which is pointed toward the protected zone. Sounds arriving at the 'back' microphone first are simply ignored. Because of the symmetry of the unit, the space surrounding the front and back microphones is divided evenly between protected and excluded zones. A region 20 degrees wide on each side of the unit is the keep-out zone. In this region sound may or may not be processed. Glass to be protected should never be within the keep-out zone. However, false-alarm rejection is still high in this region.

For further information, please contact:

The IntelliSense glassbreak detector family of products is designed for primary perimeter protection. For a complete security system, additional interior protection devices are recommended.