Acuity™

Glass Break Detector

Acuity™

A breakthrough in sound discriminating technology, Acuity glass break detectors offer Dynamic Sound Analysis - a detection system so advanced it's recognized by two patents*. The product of years of research and testing, Dynamic Sound Analysis includes new audio sampling and digital signal processing techniques that introduce a significant new standard for detector sensitivity and immunity to false alarms.

*Patents Pending at date of print

FEATURES

- Exceptional microphone frequency range provides excellent sound capture at low sound volumes and distances of up to 25' (7.6 m).

- Digital Signal Processing analyzes sound in remarkable detail to provide greater detector sensitivity and immunity to false alarms.

- Exceptional detection of all common types of framed glass including; plate, wired, tempered and laminated. In addition, Acuity glass break detectors also accommodate changes in frame construction, glass thickness and room acoustics.

- Jumper selectable sensitivity range.

- AFT-100 glass break tester and Acuity test mode jumper insure reliable installation and response.

- High static and transient protection includes MOV reliable circuitry.

- Acuity is a microprocessor based detector using Surface Mount Device (SMD) construction. All DSC products are manufactured to ISO 9001 quality standards.

DSC®
Security Products

Specifications

- **ELECTRICAL :**

  Voltage... 9-16 VDC

  Current @ 12 VDC .... 25 mA typ./35 mA max.

  Alarm relay :

      Contact ratings............................ 1 A @ 24 VDC

      ON resistance .... 0.1 Ω

  Tamper switch :

      Contact ratings............................ 0.1 A @ 24 VDC

  Microphone type .... Omnidirectional Electret

- **MECHANICAL :**

  Dimensions (L x W x H) .... 3.5 x 2.5 x 0.8 in
                                       (89 x 64 x 20 mm)

- **OPERATION :**

Glass Type	Sizes	Maximum 'D' Detection Range	
		Level 1[†]	Level 2[†]
Plate/Tempered			
$\frac{1}{8}$" - $\frac{1}{4}$" thick (3 - 6 mm)	18" x 18" and up (46 x 46 cm)	25' (7.6 m)	15' (4.6 m)
	12" x 12" to 18" x18" (30 x 30 to 46 x 46 cm)	15' (4.6 m)	10' (3 m)
Wired/Laminated			
$\frac{1}{4}$" thick (6 mm)	18" x 18" and up (46 x 46 cm)	20' (6 m)	DO NOT USE
	12" x 12" to 18" x18" (30 x 30 to 46 x 46 cm)	10' (3 m)	

[†] Jumper selectable

Alarm duration .... 3 seconds

Additional operating modes :

    Installer test mode .... Jumper J1

   Alarm memory (LED latch) .... Jumper J2

- **ENVIRONMENTAL/IMMUNITY :**

  Operating temperature .... 32-120 °F (0-50 °C)

  Humidity .... 5 to 95% RH
                                      non-condensing

  RF immunity .... 20 V/m (0.01 - 1200 MHz)

  Transients @ wiring terminal .... 2.4 kV @ 1.2 joules

  Static discharge .... 15 kV
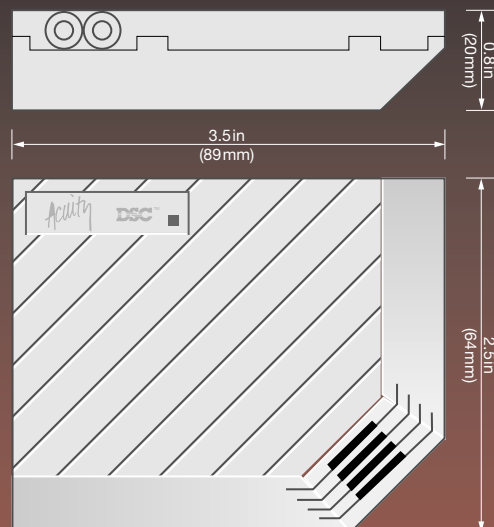
AC-100	-	with Form 'A' alarm contact
AC-101	-	with Form 'A' alarm contact & tamper switch
AC-102	-	with Form 'C' alarm contact & tamper switch

Flexible Installation

Acuity glass break detectors may be mounted on the opposite wall, adjacent wall, or on the ceiling over the protected windows.

Opposite Wall Mounting   Adjacent Wall Mounting   Ceiling Mounting

Windows   Windows   Windows
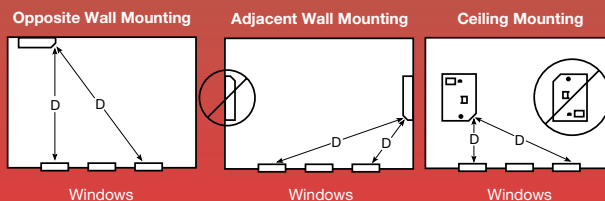
AFT-100 Glass Break Simulator

The AFT-100 glass break simulator is a portable, battery operated tester that ensures reliable locating and testing of Acuity glass break detectors :

- **generates plate or tempered glass sound samples**
- **3" (7.6 cm) full range speaker accurately reproduces the full range of frequencies generated by shattering glass**
- **single or automatic/continuous sound** *(sound every 10 sec)* **operation**

Architects Specifications

Glass break detectors shall employ microcontroller-based DSP technology with wide-band signal processing to provide accurate glass break detection of Plate, Laminated, Wired, and Tempered glass, while rejecting common 'bell' or 'ringing' type sounds, and 'white noise'.

Glass breakage shall be detectable over wide variations in frame construction, glass strength and room acoustics.

Glass Break Detectors shall have a built-in test mode, alarm memory (LED latching), transient/static protection, SMD construction for high RF immunity, and a microcontroller low voltage reset circuit.

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