BRAVO® 5GB

Ceiling Mount PIR and Glassbreak Detector

INSTALLATION INSTRUCTIONS

The Bravo 5GB is a ceiling mount motion and glassbreak detector in one housing designed to provide reliable protection for residential and commercial applications. The Bravo 5GB uses a special Fresnel lens made for 360° detection in conjunction with a quad element PIR sensor optimized for uniform detection all around its field of view. Special attention is given to false alarm immunity against RF, static, electrical transient to ensure trouble free operation for many years.

The Bravo 5GB is integrated with an advanced microprocessor based glassbreak sensor, designed to detect the sounds produced by the shattering of framed glass. The glassbreak detection scheme used on Bravo 5GB is a result of an extensive research program, designed to study the properties of glass as well as the properties of sounds produced by the shattering of framed glass. The Bravo 5GB offers a benefit of having motion and glassbreak detectors in one housing for many applications where both protections are required in the same room.

Features

- 360° coverage
- High level static and transient protection
- Excellent RF immunity

Motion Detection

- Multi-Level Signal Processing *
- Quad element PIR sensor
- Temperature compensation
- Fast/Slow detection jumper J3
- LED ON/OFF jumper J4
- Super quiet operation

Glassbreak Detection

- Microcontroller-based Digital Signal Processing technology
- Dynamic Signal Processing* provides accurate detection of plate, laminated, wired and tempered glass types, while rejecting common “bell” or “ringing” type sounds
- “White noise” rejection mechanism
- Installer test mode for glassbreak sensor
- Alarm memory (latching LED) for glassbreak sensor

Patented

Specifications

Electrical

- Input Voltage: 9 - 14.5 VDC
- Current (typical): 38/35 mA (alarm on/off) @12VDC

Contact Rating

- Alarm Relay (PIR): 0.1A @24VDC
- Alarm Relay (Glassbreak): 1.0A @24VDC
- Tamper Switch: 0.1A @24VDC

Size (diameter x height)

4.6" x 1.4" / 117 mm x 36 mm

Motion Detector Range (diameter)

- Detector placed 8 ft./ 2.4 m from floor: 24 ft./ 7.3 m
- Detector placed 10 ft./ 3.0 m from floor: 30 ft./ 9.2 m
- Detector placed 12 ft./ 3.6 m from floor: 40 ft./ 12.2 m

Glassbreak Detector Range

Glass Type	Thickness	Sizes L x W	Max. Range Level 1 Detection	* Max. Range Level 2 Detection
Plate/ Tempered	1/8"/3.17mm to 1/4"/6.35mm	18"x18"/ 0.45x0.45m and up	25ft./7.5m	15ft./4.6m
		12"x12"/0.3x0.3 m to 18"x18"/0.45x0.45m	15ft./4.6m	10ft./3m
Wired/ Laminated	1/4"/ 6.35mm	18"x18"/ 0.45x0.45m and up	20ft./6m	Do not use
		12"x12"/0.3x0.3 m to 18"x18"/0.45x0.45m	10ft./3m	Do not use

Jumper Setting

- J1 Installer Test Mode
- J2 Alarm Memory
- J3 PIR Sensitivity
- J4 Motion LED ON/OFF
- *J5 Glassbreak Detection Level

Jumper	ON	OFF
J1	Glassbreak range test (AFT-100)	Normal operation
J2	LED latch for glassbreak	Normal operation
J3	Fast detection (motion)	Slow detection (motion)
J4	LED enabled (motion)	LED disabled (motion)
J5 *	Level 2 detection with lower glassbreak sensitivity	Level 1 detection with high glassbreak sensitivity

** For UL Installations, **only** Level 1 detection must be used*

Environmental/Immunity

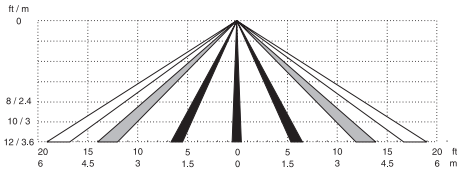
- RF Immunity (Not verified by UL):
  Radiated -10V/m +80% AM (@1KHz) from 80MHz to 1GHz
  Conducted -10V +80% AM (@1KHz) from 150KHz to 80MHz
- Transients @ wiring terminal: 2.4KV @ 1.2joules
- Operating temperature: 32 -122°F / 0 - 50°C
- Humidity 5 - 95% RH non-condensing (verified to 85% by UL)

Product Information

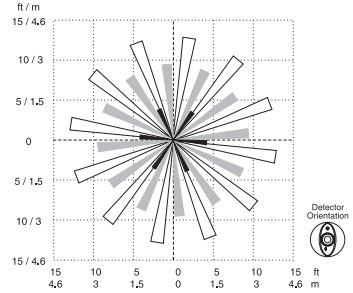
- BV-500GB: Form ‘A’ alarm contact (motion), form ‘C’ alarm contact (glassbreak)
- BV-501GB: Form ‘A’ alarm contact (motion), form ‘C’ alarm contact (glassbreak) and tamper switch
- BV-502GB: Form ‘C’ alarm contact (motion and glassbreak) and tamper switch

Coverage

Side View

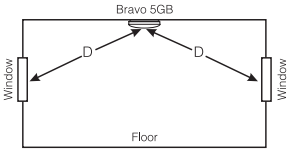


Top View *(at 8 ft./ 2.4 m height)*



Locating the Detector

The Bravo 5GB is designed to be mounted on the ceiling of a dry indoor location for 360° coverage. Ensure that the expected path of an intruder is perpendicular to the beam path. Use the coverage pattern indicated on the diagram to determine the best sensor location.



Note: Maximum distance ‘D’ is limited by the range (Refer to the Glassbreak Detector Range chart)

For optimum glassbreak protection, the detector should have a clear view of the protected glass. Curtains, blinds, and other window coverings will absorb sound energy from the shattering glass. In these cases, mount the detector as close as possible to the protected glass.

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 shows additional range - future changes in room acoustics could reduce that additional range.

***NOTE:** The AFT-100 Glassbreak Simulator will provide the most reliable and accurate indication of the correct mounting location for the detector. Other simulators may trip the unit, but will not provide accurate indications.*

Survey the mounting location and the area being protected for the following potential problems. For the glassbreak sensor, test false alarm immunity by creating any sounds in the room which will likely occur when the detector is armed. Avoid following sources of false alarms:

Reflective Surfaces

Do not aim the detector at reflective surfaces such as mirrors or windows as this may distort the coverage pattern or reflect sunlight directly onto the detector.

Air Flow

Avoid locations that are subject to direct high air flow such as near an air duct outlet.

Moisture

Do not locate the detector near sources of steam or oil.

The Sun

Do not aim the detector such that it will receive direct sunlight.

Obstructions

Do not limit the coverage by placing large objects within the detection area (such as plants, high shelves, filing cabinets etc.).