



LC-102PIGBSS

Professional Passive Infrared Shock & Glass Breakage Detectors with Pet Immunity

Installation Instructions



A new generation of professional movement spread spectrum analyzing PIR, Shock & Glass Breakage detectors. The detector provides an analysis of environmental conditions through the entire movement spread frequency spectrum. It listens for sounds of breaking glass, which produces two sequential signals of different frequency "SHOCK" and "GLASS". The unique phased frequency detection circuitry of this detector allows detection of both shock signal and the strong signal of glass breakage creating a false alarm free detector. The detector does not need to be attached to the window, providing volume protection, and allowing you to protect several windows with one detector.

TYPICAL INSTALLATION

Select mounting location

Choose a location in front of the protected windows, in direct line of sight within 4.5m. In case of more than one window, place the detector in the center area facing the windows, make sure that this location will be most likely to intercept an intruder, that may cross the PIR beams. See PIR detection beams. See SHOCK and GLASS detection area Fig.5, Fig.6. If heavy blinds or curtains cover the glass, you must locate the detector behind the blinds on the window frame or above it, otherwise the blinds might block the sound.

Avoid the following locations: *Facing direct sunlight. *Facing areas subject with temperature changes. *Areas with air ducts or substantial air flows. *Facing metal doors. *Close to door entrance bells measuring 2" (or larger) in diameter.

MOUNTING DETECTOR BASE

1. To remove the front cover, unscrew the holding screw and gently raise the front cover Fig.4-11. 2. To remove the PC board, carefully unscrew the holding screw located on the PC board Fig.4-9. 3. Break out the desired holes for proper installing Fig.2 B or C. 4. The circular and rectangular indentations at the bottom base are the knockout holes for wire entry. You may also use mounting holes that are not in use for running the wiring into the detector. (For option with bracket - lead wire through the bracket, Fig.4-7) 5. Mount the detector base to the wall, corner or ceiling. (For option with bracket install bracket) Fig.1, Fig.3 6. Reinstall the PC board by fully tightening the holding screw. Connect wire to terminal block. 7. Replace the cover by inserting it back in the appropriate closing pins and screw in the holding screw.

DETECTOR INSTALLATION

Terminal Block Connections (See Fig.7)

Terminals 1 & 2 - Marked "T1, T2" (TAMPER) If a Tamper function is required connect these terminals to a 24-hour normally closed protective zone in the control unit. If the front cover of the detector is opened, an immediate alarm signal will be sent to the control unit.

Terminals 3 & 4 - Marked "PIR: NC, C" These are the output PIR relay contacts of the detector. Connect to a normally closed zone in the control panel.

Terminal 5 - Marked "EOL" - End of line option.

Terminals 6 & 7 - Marked "MIC: NC, C" These are the output MICROPHONE relay contacts of the detector. Connect to a normally closed zone in the control panel.

Terminal 8 - Marked "-" (GND) Connect to the negative Voltage output or ground of the control panel.

Terminal 9 - Marked "+" (+12V) Connect to a positive Voltage output of 8.2 -16Vdc source (usually from the alarm control unit)

FIG 1 - Bracket Installation

FIG 2 - Knockout holes

FIG 3 - Bracket options

- 1 Wall Mount Bracket
- 2 Ceiling Mount Bracket

FIG 4 - Detector Installation

FIG 5 - Detector Mounting

FIG 6 - Lens pattern

FIG 7 - Terminal block

PIR				MIC			
T2	T1	NC	C	EOL	NC	C	-12V +
1	2	3	4	5	6	7	8
1	2	3	4	5	6	7	8

SETTING - UP THE DETECTOR

PIR SENSITIVITY ADJUSTMENT: Switch 3 of DIP-4. Use for Setting "PULSE" - provides sensitivity control of PIR according to the environment. Position Left - "On"- High sensitivity For stable environments. Position Right - "OFF"- Low sensitivity For harsh environments.

"PIR CAL" POTENTIOMETER ADJUSTMENT: According to protected area range. Use the potentiometer marked "PIR CAL" to adjust the detection sensitivity between 15% and 100% according to walk test in the protected area. (Factory setting is 57%). Rotate the potentiometer clockwise to increase range, counter-clockwise to decrease range. Always walk test and re-adjust if required.

LED INDICATION OF ALARM SIGNAL: Switch 1 of DIP-4. Use for Setting "LED" - provides control of Alarm signal LED indication. Position Left - "On" - LED enable. Position Right "OFF" - LED disable.

SOUND SENSITIVITY ADJUSTMENT: Switch 2 of DIP-4. Use for Setting "AUDIO" - provides control of sound detection sensitivity. Position Left - "On" - reducing the sensitivity of sound detection by 50%. (Use in small room). Position Right "OFF" - Sensitivity of sound detection 100%.

PET IMMUNITY SETTING: Switch 4 of DIP-4. Use for Setting "PET" 15kg - 25kg. Position Left "ON" Immunity to PET up to 15 kg. Position Right "OFF" Immunity to PET up to 25 kg

TEST PROCEDURES

Wait for one minute warm up time after applying 12-Vdc power. Conduct testing with the protected area cleared of all people. Make sure to test the unit thoroughly for proper detection.

Walk test: 1. Remove front cover. Set "PULSE" to "ON" position, and set "LED" to "ON" position. 2. Replace the front cover. 3. Start walking slowly across the detection area. 4. Observe that the red led lights whenever motion is detected. 5. Allow 5 sec. between each test for the detector to stabilize. 6. After the walk test is completed, you can set the "LED" to "OFF" position.

NOTE: Walk tests should be conducted, at least once a year, to confirm proper operation and coverage of the detector.

ADJUSTMENT

Shock / Glass Adjustment Use only during testing and setting



Glass Break adjustment

To adjust the glass break sensitivity, place the jumper accordingly GLASS TEST marking. Green (SHOCK) LED is constantly ON. Now you can adjust the sensitivity by rotating the GLASS CAL potentiometer. Operate the Sound Break Simulator* near the protected window and rotate the potentiometer GLASS CAL clockwise to increase sensitivity, and counter-clock-wise to decrease sensitivity until the Yellow and Red LEDs are illuminating for each glass break sound.

Note: When the jumper is set for GLASS adjustment, only the high frequency sound of breaking glass is detected. *It is recommended to use GLASS-BREAK Simulator FG-701 (CROW p/n 004001)

Shock Adjustment

To adjust the shock setting (increase/decrease sensitivity) place the jumper accordingly SHOCK TEST marking - Yellow (GLASS) LED is constantly ON. Now you can adjust the sensitivity by rotating the potentiometer SHOCK CAL. Hit gently on the protected glass and rotate the potentiometer clockwise to increase sensitivity, and counter-clock-wise to decrease sensitivity until the Green and Red LEDs are illuminating for each hit.

Note: When the jumper is set for SHOCK adjustment, only the low frequency of the shock signal prior to glass breakage is detected.

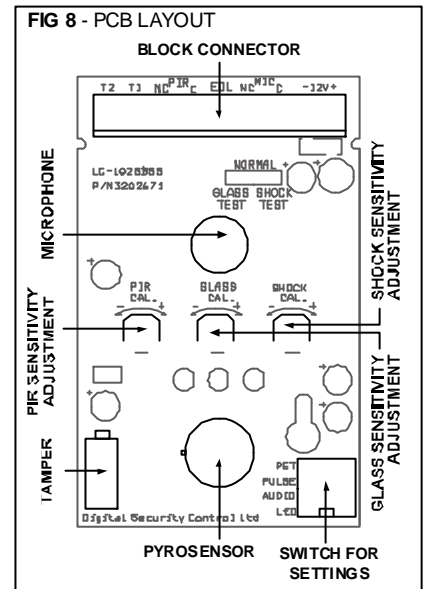
SHOCK/GLASS TEST PROCEDURE

Final Testing

* Make sure to set jumper "GLASS/SHOCK" in position NORMAL. When the jumper is in this position, the detector will detect both shock and sound frequencies. * To ensure maximum protection against false alarms, activate any device in the area, which might automatically cycle pumps, gene

TECHNICAL SPECIFICATION

Detection Method	Quad (Four element) PIR & electret microphone	Warm Up Period	60 sec
Detection Speed	0.15 - 3.6 m/sec	RFI Protection	30V/m 10 - 1000MHz
Power Input	8.2 - 16 Vdc	EMI Protection	50,000V of electrical interference from lighting
Current Draw	Alarm PIR :16.5mA; Alarm Shock & Glass 22mA; Alarm all: 18mA Standby: 16.5 mA	Visible Light	stable against halogen light 2.4m (8ft) or reflected light Glass up to 10m (90°); PIR up to 15m (WA lens)
BI Directional Temp.	YES	Protection	Yellow LED (GLASS) - glass break signal for testing & adjustment
Compensation	YES	LEDs indicator	Green LED (SHOCK) - shock signal for testing & adjustment
Pulse Count	1, AUTO		Red LED (ALARM) - alarm signal:
Alarm Period	2 sec		Fleshing light - glass & break detection or glass & shock & PIR detection
Alarm Output	N.C 28Vdc 0.1 A with 10 Ohm series protection resistors		Constant light - PIR detection
Tamper Switch	N.C 28Vdc 0.1A with 10 Ohm series protection resistor - open when cover is remove	Dimensions	118mm x 62.5mm x 41mm (4.65" x2.46" x1.61")
		Weight	110 gr.



LIMITED WARRANTY: Digital Security Controls Ltd, warrants that for a period of 12 months from the date of purchase, the product shall be free of defects in materials and workmanship under normal use and that in fulfillment of any breach of such warranty, Digital Security Controls Ltd shall, at its option, repair or replace the defective equipment upon returns of the equipment to its repair depot. This warranty applies only to defects in parts and workmanship and not to damage incurred in shipping or handling, or damage due to causes beyond the control of Digital Security Controls Ltd, such as lightning, excessive voltage, mechanical shock, water damage, or damage arising out of abuse, alteration or improper application of the equipment.

The foregoing warranty shall apply only to the original buyer, and is and shall be in lieu of any and all other warranties, whether expressed or implied and of all other obligations or liabilities on the part of Digital Security Controls Ltd. Digital Security Controls Ltd neither assumes responsibility for, nor authorizes any other person purporting to act on its behalf to modify or to change this warranty, nor to assume for it any other warranty or liability concerning this product. In no event shall Digital Security Controls Ltd be liable for any direct, indirect or consequential damages, loss of anticipated profits, loss of time or any other losses incurred by the buyer in connection with the purchase, installation or operation or failure of this product.

Motion detectors can only detect motion within the designated areas as Shown in their respective installation instructions. They cannot discriminate between intruders and intended occupants. Motion detectors do not provide volumetric area protection. They have multiple beams of detection and motion can only be detected in unobstructed areas covered by these beams. They cannot detect motion which occurs behind walls, ceilings, floor, closed doors, glass partitions, glass doors or windows. Any type of tampering whether intentional or unintentional such as masking, painting, or spraying of any material on the lenses, mirrors, windows or any other part of the detection system will impair its proper operation. Passive infrared motion detectors operate by sensing changes in temperature. However their effectiveness can be reduced when the ambient temperature rises near or above body temperature or if there are intentional or unintentional sources of heat in or near the detection area. Some of these heat sources could be heaters, radiators, stoves, barbecues, fireplaces, sunlight, steam vents, lighting and so on.

WARNING: Digital Security Controls Ltd, recommends that the entire system be completely tested on a regular basis. However, despite frequent testing, and due to, but not limited to, criminal tampering or electrical disruption, it is possible for this product to fail to perform as expected.

Important information: Changes or modifications not expressly approved by Digital Security Controls Ltd could void the user's authority to operate this equipment.