LC-105DGB

Shock & Glass Breakage Detector

Installation Instructions

LC-105DGB belongs to the new generation of glass breakage detectors. The LC-105DGB can detect glass cutting by diamond in addition to the improved detection of glass breakage. This is achieved by our new all-digital signal processing. The LC-105DGB offers the solution for the false-alarms problem. The LC-105DGB detects the unique patterns of sound emitted by breaking or cutting glass. The LC-105DGB does not have to be attached to the window, providing volume protection, and allows the protection of several windows using one detector.

TYPICAL INSTALLATION

Mounting

The detector offers flexible installation. It can be either ceiling mounted or wall mounted as shown in Fig. 1.

Selecting mounting location

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. Make sure to test the unit thoroughly using a glass break simulator for proper detection. Install the detector in a direct line of sight with the protected glass. Do not mount the unit in front of air ducts, or close to bells (measuring 0.5m or larger in diameter). For protecting several windows in one room, locate the detector at optimal distance from them to achieve the best detection.

Note: for symmetrical cover of the detection area it is recommended to place the detector on the ceiling.

CONNECTING THE DETECTOR (Fig. 2,3&4)

1. Use a small screwdriver to release the top of the case and lift open the case (Fig. 3-1,2) There is no need to remove the PCB (Printed Circuit Board) from the case).
2. Insert the wires through the wiring hole (Fig. 3-3).
3. Use the mounting holes (Fig. 2-A) to mount the detector.
4. Connect the wires to the terminal. (Fig.4).
5. Close the case.

JUMPERS

LED ON: LEDS enabled
LED OFF: LEDS disabled
Shock ON: This is the normal working mode. Both breaking glass sound and breaking glass shock-wave are necessary for generating an alarm.
Shock OFF: This mode is used only for installation settings. The sound of breaking glass is enough to generate an alarm.

WIRE CONNECTIONS

Terminal Block Connections (See fig. 4).

Terminal 1 (Marked "-"). Connect to the return Voltage or ground of the control panel.

Terminal 2 (Marked "+"). Connect to the positive Voltage of 9-16 VDC source (usually from the alarm control unit).

Terminals 3 & 4 (Marked TAMPER). If a Tamper function is required connect these terminals to a 24 hours 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 5 & 6 (Marked RELAY). These are the output relay contacts of the detector. Stand by - N.C / Alarm -N.O

Fig. 1 - Detector Mounnting

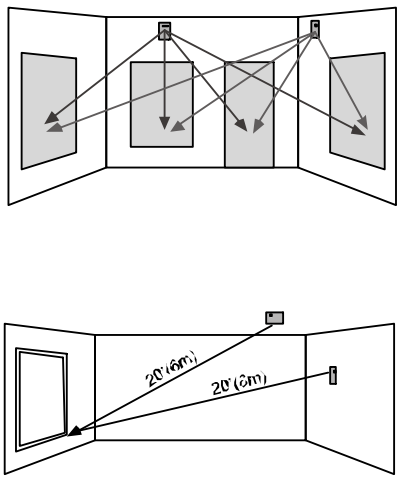
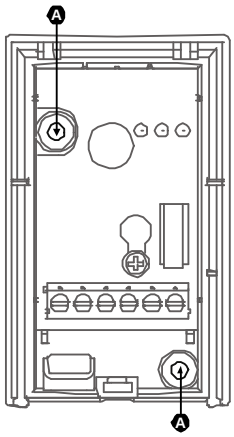


Fig. 2 - Detector Installation



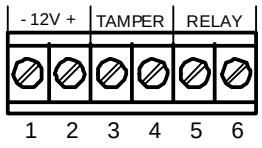
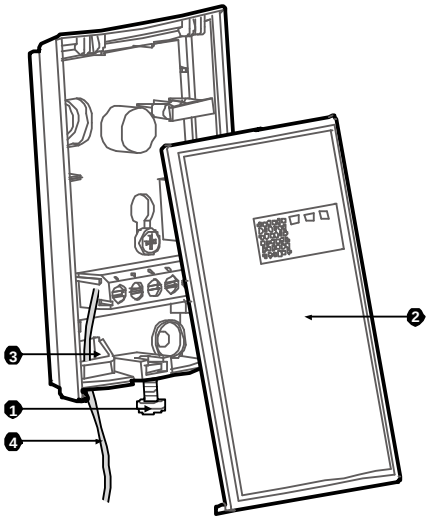


Fig. 4 - Terminal block

Fig. 3 - Detector Installation



Downloaded from www.Manualslib.com manuals search engine

TESTING THE DETECTOR

Set the jumpers as follows: **LED=ON, SHOCK=ON.**

1. Use the simulator in manual mode to simulate the noise of glass breaking . Check that the yellow LED is ON. If it does not light, a sensitivity calibration is necessary. Rotate the "SENS" potentiometer clockwise to increase the sensitivity, and counterclockwise to decrease it. **2.** Use your hand or a padded object to firmly strike on door or table. If the green LED does not light, adjust the sensitivity as necessary. **3.** Use the Simulator in automatic mode and check that the red LED lights. If the red LED, yellow LED and green LEDS are ON, your detector is working properly.

***** Cutting of glass by a diamond causes only the red LED to light. If the red LED does not light try adjusting the sensitivity until the red LED lights.

FINAL TESTING

* Set the jumpers as follows: **LED=ON, SHOCK=OFF.**

* To ensure maximum protection against false alarms, activate any device in the area, which might automatically activate, like cycle pumps, generators, heating/air conditioning units, etc. If thes devices trigger an alarm, mount the unit in a different location.

* Set the jumpers to their normal working position: SHOCK = ON.

WIRE SIZE REQUIREMENTS

Use #22 AWG (0.5mm) or wires with a larger diameter. Use the following table to determine required wire gauge (diameter) and length of the wire between the detector and the control panel.

Wire Length	m	200	300	400	800
Wire Diameter	mm	.5	.75	1.0	1.5
Wire Length	ft	800	1200	2000	3400
Wire Gauge	#	22	20	18	16

TECHNICAL SPECIFICATION

Power Input	9-16VDC
Current Consumption	**Standby:** 15mA at 12 Vdc **Active:** 40mA at 12Vdc
Detection Range	10m (33ft), Max. Cutting 3m
Mounting	Ceiling or Wall
Alarm Output Relay	N.C. 50mA/24Vdc 10 Ohm in line resistor
Tamper Switch	N.C. 50mA/24Vdc with 10Ohm in line resistor
Operating Temperature Range	-20°C to 50°C (-4°F to 122°F)
Operating Humidity Range	95% max relative humidity non condensing
Storage Temperature Range	-30°C to 70°C (-22°F to 158°F)
RFI Protection	30V/m 10 -1000 MHz
EMI Protection	50,000V electrical interference from lightning
Dimensions	79mm x 48mm x 21mm
Weight	40gr. (1.41oz.)

Fig. 5 - PCB Layout

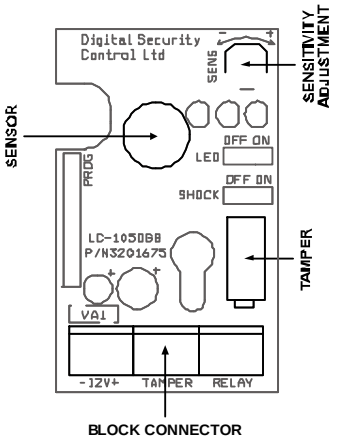
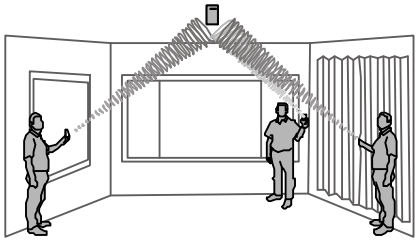


Fig. 6 - Detector test



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, barbeques, 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.

P/N 7 0 1 675 Rev A

©2005 Digital Security Controls Ltd
Toronto, Canada
www.dsc.com

Downloaded from www.Manualslib.com manuals search engine