



# LC-100PI

## PIR Motion Detector with Pet Immunity up to 25kg

### Installation Instructions



The LC-100PI detector uses a special designed optical Lens with unique Quad (Four element) PIR Sensor and new ASIC based electronics optimized to eliminate false alarms, caused by small animals and Pets. The LC-100PI provides unprecedented levels of immunity against visible light. The Detector offers an exceptional level of detection capability and stability for every security installation. The LC-100PI is supplied with Wide Angle lens.

The LC-100PI provides Pet immunity up to 25Kg (55 lbs). For better immunity avoid installation in areas where pets can reach upwards.

#### TYPICAL INSTALLATION

##### Select mounting location

Choose a location most likely to intercept an intruder. See detection pattern(Fig.5). The Quad high quality sensor detects motion crossing the beam; it is less sensitive detecting motion towards the detector. The LC-100PI performs best when provided with a constant and stable environment.

##### Avoid the following locations

\* Facing direct sunlight. \* Facing areas subject to rapid temperature changes. \* Areas with air ducts or substantial air flows.

#### MOUNTING THE DETECTOR

1. To remove the front cover (Fig.4), unscrew the holding screw (Fig.4-11) and gently raise the front cover.
2. To remove the PC board, carefully unscrew the holding screw (Fig.4-9) located on the PC board (Fig.4-10).
3. Break out the desired holes (Fig.2-B or C) for proper installation (flat or corner).
4. The circular and rectangular indentations at the bottom base are the knockout holes (Fig.2-D) 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 (Fig.1 & 3)(Fig.4-7), lead wire through the bracket)
5. Mount the detector base to the wall, corner or ceiling. (For options with bracket install bracket).
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 (Fig.6)

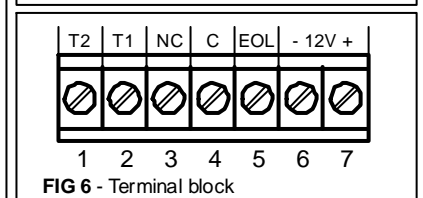
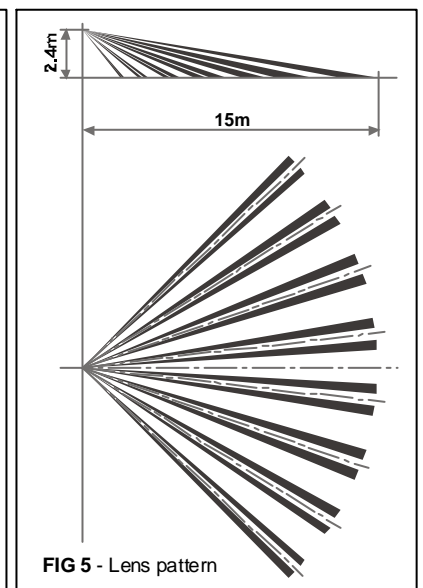
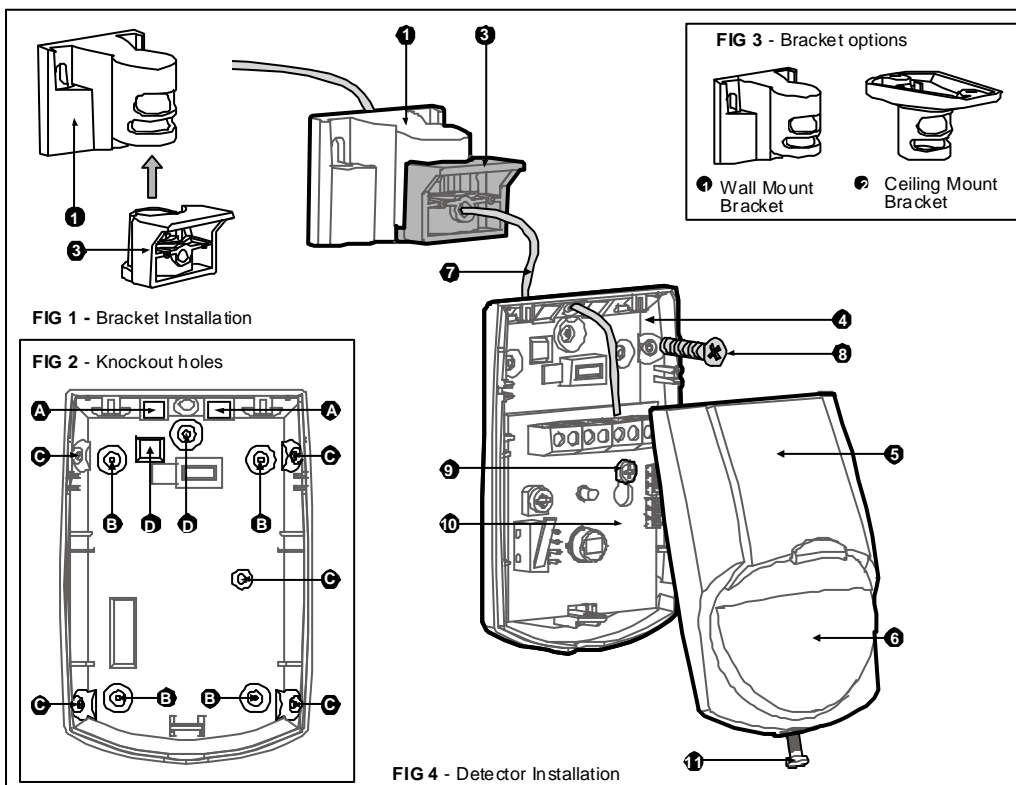
**Terminals 1 & 2 - Marked T2 and T1 (TAMPER)** If a Tamper function is required connect these terminals to a 24-hour normally closed protective zone in the control unit. If the front cover of the detector is opened, an immediate alarm signal will be sent to the control unit.

**Terminals 3 & 4 - Marked NC and C (RELAY )** These are the output relay contacts of the detector. Connect to a normally closed zone in the control panel.

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

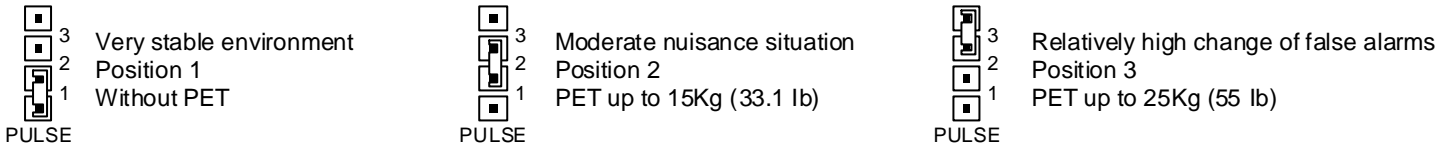
**Terminal 6 - Marked " - " (GND)** Connect to the negative Voltage output or ground of the control panel.

**Terminal 7 - Marked " + " (+12V)** Connect to a positive Voltage output of 8.2 -16Vdc source (usually from the alarm control unit).



## SETTING - UP THE DETECTOR

### PULSE WIDTH JUMPER SETTING



### LED ENABLE JUMPER SETTING



### PET IMMUNITY JUMPER SETTING



### PIR sensitivity adjustment

**POTENTIOMETER "SENS"** - adjustment according to protected area range. Use the potentiometer to adjust the detection range between 68% and 100% (factory set to 84%). Rotate the potentiometer clockwise to increase range, counter-clockwise to decrease range.

### Wire size requirements

Use #22 AWG (0.5 mm) or wires with a larger diameter. Use the following table to determine required wire gauge (diameter) and length of 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	AWG	22	20	18	16

### TESTING

#### Test procedures

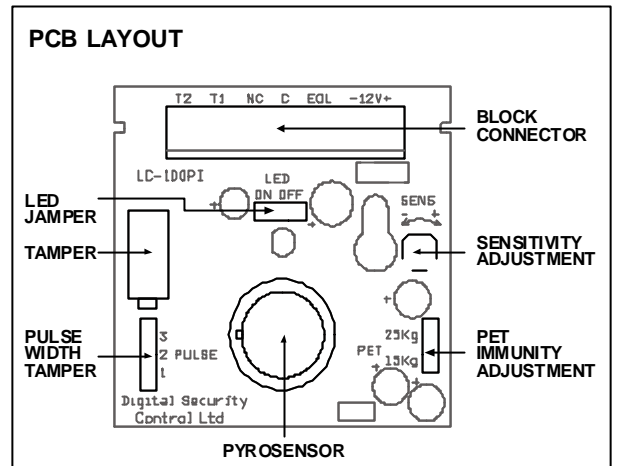
Wait one minute - warm up time after applying 12 Vdc power. Conduct testing with the protected area cleared of all people.

#### Walk test

1. Remove front cover. The pulse jumper must be in position 1. The LED must be enabled.
  2. Replace the front cover.
  3. Start walking slowly across the detection zone.
  4. Observe that the detector's 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, the LED may be disabled.
- Note:** Walk tests should be conducted, at least once a year, to confirm proper operation and coverage of the detector.

### TECHNICAL SPECIFICATION

<b>Model</b>	LC-100PI	<b>Tamper Switch</b>	N.C 28VDC 0.1A with 10 Ohm series protection resistor - open when cover is removed
<b>Detection Method</b>	Quad (Four element) PIR	<b>Warm Up Period</b>	60sec (± 5sec)
<b>Power Input</b>	8.2 to 16 VDC	<b>LED Indicator</b>	LED is ON during alarm
<b>Current Draw</b>	Standby: 8mA (± 5%) Active: 10mA (± 5%)	<b>RFI Protection</b>	30V/m 10 - 1000MHz
<b>Temp.</b>		<b>EMI Protection</b>	50,000V of electrical interference from lightning or power through
<b>Compensation</b>	YES	<b>Dimensions</b>	92mm x 62.5mm x 40mm (3.62" x 2.46" x 1.57")
<b>Alarm Period</b>	2 sec (± 0.5sec)	<b>Weight</b>	40g (1.4oz)
<b>Alarm Output</b>	N.C 28VDC 0.1 A with 270 Ohm series protection resistor		



**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 return 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 can not 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, or 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.