

CIR-75



**1. General Information**

The CIR-75 PIR motion sensor is designed to provide detection of criminal intrusion through door frames and window frames into a protected area. Upon detection of intrusion, the CIR-75 automatically generates an alarm signal via a NC relay contact. The sensor also provides a tamper contact output. The unit is immune to interferences produced by small animals. The unit is compact, easy to install and maintain, and enclosed in an attractive housing. The unit can be wall-mounted by means of a bracket.

**2. Main features**

- Dual element PIR detector.
- Solid wall-mount curtain detection pattern.
- Selectable mode of operation according to mounting height: (2.5-3.5) meters or (3.5-5) meters.
- Possibility of mounting with detection pattern directed horizontally instead of downward. (Detection range in this case is 8 meters)
- Selectable sensitivity
- Disabling of LED indicators if required
- Modification of detection pattern starting position.
- 10...15 V DC operation
- High immunity to white light: 12 000 lux

**3. Principal Specifications**

Mounting height	up to 5 meters
Detection pattern	solid curtain
Sensitivity	specified by the position of jumper
Output contacts of relay	30 mA, 72 V DC
Output contacts of tamper microswitch	30 mA, 72 V DC
Alarm period	not less than 2 seconds
Supply voltage	10 ... 15 V DC
Current draw	not more than 20 mA
Operating temperature	-30...+50 °C
Relative humidity	up to 95% (25 °C)
Size	91x52x56 mm
Weight	120 g

**4. Mounting Location**

The CIR-75 PIR motion detector is designed for use indoors. The unit is ideal for commercial, office, museum and residential applications. When defining a mounting

-Jumper "LED" shall be placed (to enable the LED indication)

- b) Apply power to the unit (LED indication will switch ON) and wait for about one minute for unit stabilization (LED indication will switch OFF)

**9.2 Detection Pattern Verification**

- a) Begin walk-testing. Walk through the protected area at a rate between 0.5 meter/second and 1 meter/second to determine the edge of the protected area. At the edge of the zone the sensor will generate alarm signal (LED indication will switch ON). No alarm signal should occur when one is beyond the edges of the protected area. Walk into the protected area from the opposite direction to determine its other edge.
- b) If any sensor fields-of-view are blocked by any extraneous objects such as window cornices, door frame casings, painting frames and the sensor does not detect movement within the detection pattern, then the unit's spatial position must be changed. (See section 10.) and conduct tests according 9.2.a

**Note:** To increase false alarm immunity it is recommended to use the "Normal" sensitivity mode as the main operational mode (Place "Impulse" jumper into "2" position). In this case it is necessary to conduct again tests according 9.2.a

9.3 When all tests shall have been conducted, remove the "LED" jumper as required by the application.

**10. Modification of Detection Pattern Position**

The CIR-75 is designed to allow shifting of its detection pattern relative to a wall, by sliding the unit rear housing along the mounting bracket. (See figure 3.) In addition, it is possible to change the detection pattern position in a vertical plane to 10°. This is done by rotating the lens 180° as follows:

- Remove the front cover of the unit.
- Draw out the lens retainer frame, while at the same time lifting it slightly.
- Attention!** In the next step, handle the unit's lens by its edges whenever possible, and avoid leaving fingerprints on the lens.
- Draw out the lens, rotate it 180°, keeping its smooth side directed toward the outside of the front housing (fig.5).
- Replace it in the front cover so that the single slot of the lens is directed into the housing as shown.
- Replace the lens retainer frame, secure it, and replace the front cover onto the unit.

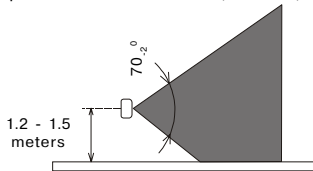


Fig.7

The CIR-75 is also designed to provide a horizontal detection pattern when mounted at a height between 1.2 and 1.5 meters, and rotated 90° (in a vertical plane) so that the detection pattern is directed horizontally instead of downward. Detection range in this case is 8 meters (fig.7).

**11. LED indicator disabling**

For disabling the LED indicator after unit adjustment, remove the "LED" jumper. Leave this jumper on one of the pins, for future use.

**12. Warranty**

Manufacturer warrants its product for 5 years from the date stamp control on the product. The unit will be replaced if failures or malfunctions of this product occur during warranty period.

location of the unit, ensure that the detector has a clear line-of-sight to the protected area. The unit cannot “see” through translucent or opaque objects such as cornices, curtains, potted plants and door liners. Do not allow air conditioners, heaters or heating radiators in the field of view of the unit. Maximum unit mounting height is 5 meters. Wiring to the unit should be laid apart from mains power cables.

### 5. Jumper Positions for Mode Selection

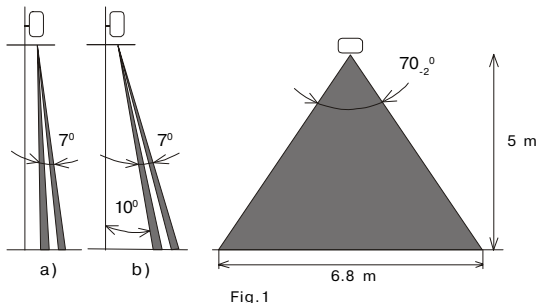
Jumpers should be positioned according to the specific application (Table 1.).

Monitored parameter	Jumper	Jumper position and the value of the monitored parameter	
		Jumper is placed	Jumper is removed
Sensitivity	Impulse	«1»- high «2»- normal	Removing of this jumper will cause improper sensor operation
Mounting height	Vertical detection pattern	Not less than 3.5 and greater than 5 meters	Not less than 2.5 and greater than 3.5 meters
	Horizontal detection pattern	Up to 8 meters	Removing of this jumper for horizontal detection pattern will cause improper sensor operation
LED indication	LED	Indication is enabled	Indication is disabled

### 6. LED Indications

The red LED at the front of the unit is used to indicate its operation status. The indication is ON during a warm-up period (not more than 60 sec) following power-up and also in case of alarm (for not less than 2 sec). In normal operational condition LED indication is OFF. LED indication can be disabled by removing LED jumper.

### 7. Detection pattern



### 8. Mounting procedure

**WARNING:** When mounting the unit, ensure that there is no damage to the PIR sensor's optical filter (a mirror-like object on the unit's circuit board). Scratches or even fingerprints on the filter will compromise detection performance!

1. To remove the unit front cover, insert a small screwdriver into the slot at the bottom of the unit housing and press down (fig.2).

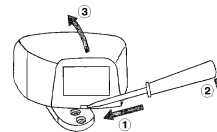


Fig.2

2. Release screws (clamping the bracket to the unit rear housing) and remove rear housing from the bracket (fig.3). Do not remove the circuit board from the rear housing.

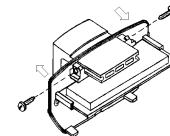


Fig.3

3. Remove blind flanges on the bracket to enable wire passage toward the unit where required. Route wires up or down as required, through wire channels in the bracket, so that the bracket will rest against the wall without pinching any wires. After routing wires, fix the bracket in position on the wall (fig.4).

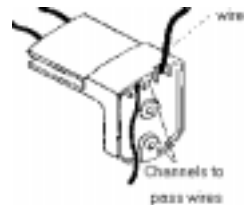


Fig.4

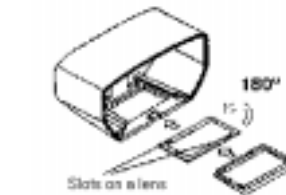


Fig.5

Place wires above the unit's circuit board. Connect wires to the unit according to fig.6. Replace the unit's front cover.

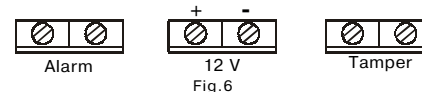


Fig.6

### 9. Preparation for Operation and Detection Pattern Verification

Before verification close doors, windows, switch off the forced ventilation.

#### 9.1 Preparation for operation

##### a) Placing the jumpers

- Jumper "Impulse" place to position "1" (high sensitivity)
- Jumper "2.5 m" place depending on selected unit mounting height (See table 1)