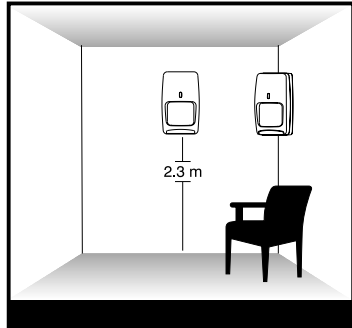


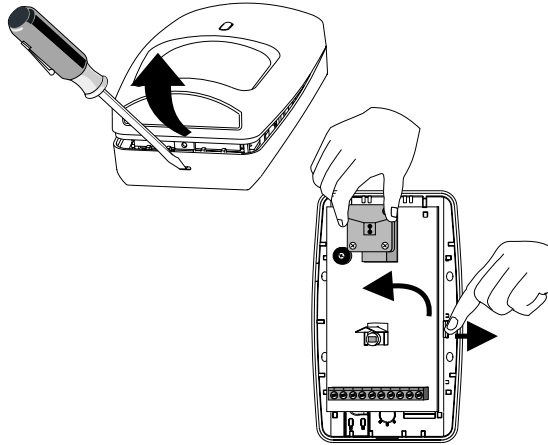
**1 Select the mounting location.**



**Mounting Location Guidelines**

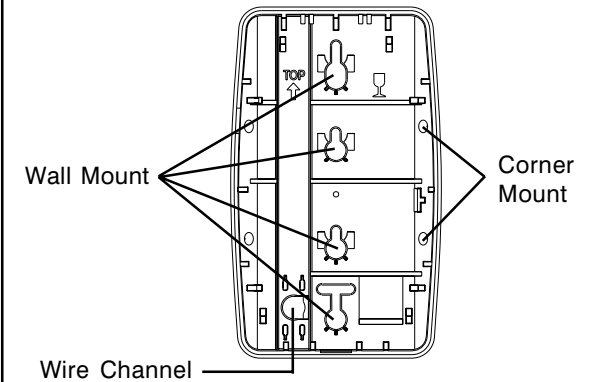
- 2.3 m mounting height
- Avoid direct or reflected sunlight
- Aim sensor away from windows or heating/cooling devices
- Sensor must have a clear line-of-sight to protected area

**2 Separate the sensor housings and remove the printed circuit board (PCB).**



- Use a small screwdriver to unfasten the housing latch. Gently pull apart the housings.
- Push outward on the PCB latch and lift the PCB out of the housing.

**3 Mount the unit.**

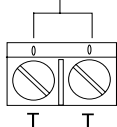


- Slide the wire through the wire channel in the back housing.
- Mount the back housing flat against a wall or in a corner.
- Replace the PCB.

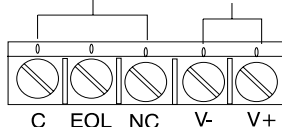
**4 Wire the unit.**

**DT-7450**

**Tamper**  
50 mA  
24 VDC



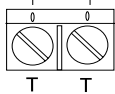
**Alarm**  
125 mA  
25 VDC



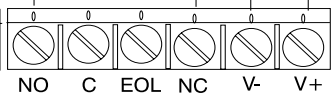
**Power**  
30 mA  
7.5-16 VDC

**DT-7450C**

**Tamper**  
50 mA  
24 VDC



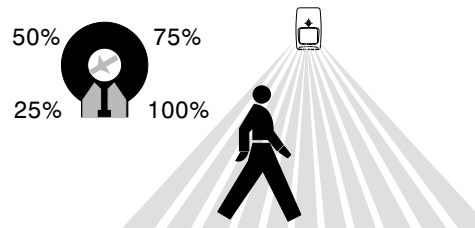
**Alarm**  
125 mA  
25 VDC



**Power**  
35 mA  
7.5-16 VDC

- Connect wires as shown using 0.3 - 1.0 mm<sup>2</sup> wire size. Observe proper polarity.

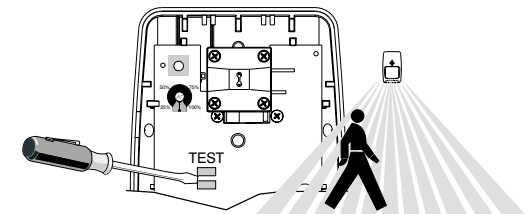
**5a Walk-test the sensor.**



- Use Switch 3 to select the appropriate fluorescent light filter (see Dip Switch Settings chart on the next page).
- Apply power to the unit. Initialization is complete when the LED stops flashing slowly.
- Adjust the microwave range to minimum setting (25%) by turning the range adjustment counterclockwise using a small screwdriver.
- Replace the front housing.
- Begin walking through the detection area.
  - The LED will turn red, indicating an alarm detection.
- Increase the microwave range as necessary.
- Repeat the items in step 5a until proper detection range is obtained.

**5b Optional: Walk-test using Zone Finder.**

Use the Zone Finder mode to identify the PIR and/or microwave pattern. In Zone Finder mode the red LED is disabled.



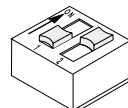
- Use a screwdriver to short the test pads.
- During the Zone Finder walk-test mode, the LED turns:
  - green for one second for every PIR detection;
  - yellow for two seconds for every microwave detection.
- Adjust the microwave range as necessary.
- Zone finder mode times out after ten minutes.

**LED INDICATORS**

LED	OPERATION MODE			
	Normal	Power Up	Trouble	Zone Finder
Red	ON Alarm	Slow Blink	Fast Blink	OFF
Yellow	ON Microwave	OFF	OFF	ON Microwave
Green	ON PIR	OFF	OFF	ON PIR

**DIP SWITCH SETTINGS (SW1)**

Factory default settings are shown in grey.



Switch	OFF	ON
1	Harsh Sensitivity	Standard Sensitivity
2	LED disabled	LED enabled

**TROUBLE SHOOTING**

**Problem:** Red LED is flashing rapidly.

**Explanation:** The sensor is in one of three conditions:

Microwave supervision failure: The sensor continues operating using PIR as the only detection method. When detection occurs on the PIR channel, the alarm relay will latch open until the Microwave trouble is removed.

PIR self-test failure: Alarm relay does not actuate.

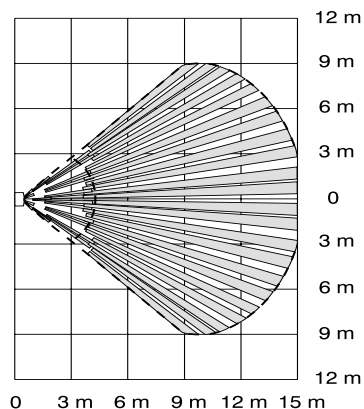
Temperature compensation failure: When alarm occurs, the alarm relay will latch open until the trouble is cleared.

**Solution:** Power down the sensor or enter the zone finder mode which will perform self-test. If the trouble does not clear, replace the sensor.

**DETECTION PATTERNS**

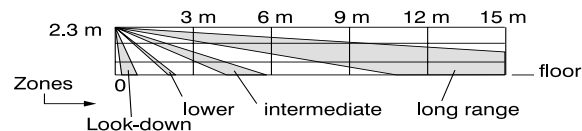
**DT-7450/7450C Top View**

Wall Mounted Wide Angle Lens with Typical Alarm Pattern



**DT-7450/7450C Side View**

Wide Angle Lens



**PRODUCT SPECIFICATIONS**

**Range:**

15 m x 18 m

**Alarm relay (DT-7450):**

Energized Form A  
125 mA, 25 VDC, 20 Ohm series resistor

**Alarm relay (DT-7450C):**

Energized Form C  
125 mA, 25 VDC, 20 Ohm series resistor

**Tamper switch:**

(NC) 50 mA, 24 VDC

**Power requirements:**

7.5 - 16 VDC  
DT-7450  
25 mA typical, 30 mA maximum, 12 VDC  
DT-7450C  
30 mA typical, 35 mA maximum, 12 VDC  
AC Ripple: 3 V peak-to-peak at nominal 12 VDC

**Microwave frequencies:**

24.125 GHz

**PIR white light immunity:**

6,500 Lux typical

**Fluorescent light filter:**

50 Hz

**RFI immunity:**

30 V/m, 10 MHz - 1000 MHz

**Operating temperature:**

-10° to +55° C (14° to +131° F)  
5 - 95% relative humidity (non-condensing)

**Self-test intervals:**

Microwave Supervision	Every 5 seconds
PIR self-test	Once every hour
Temp. Comp.	Every 30 seconds

**PIR fields-of-view:**

Standard Wide Angle Lens  
22 long range edges  
12 intermediate edges  
6 lower edges  
4 Look-down edges

**Dimensions:**

11.9 cm H x 7.1 cm W x 4.2 cm D

**Sensitivity:**

Standard 3 - 4 steps  
Harsh 4 - 5 steps