# **1125 PIR Motion Detector**

### Description

The 1125 PIR (Passive Infrared) Motion Detector is a wireless, low current sensor for use with the 1100D Wireless Receiver. Using mirrored optic technology the 1125 PIR is highly immune to multiple false alarm sources. In addition to switch-selectable sensitivity and range adjustment, you can use masking to modify coverage patterns for various applications.

# **Parts Included**

- One PIR detector
- Three 3V lithium CR-123A batteries
- Two plastic masks
- One screw to secure the unit to the wall mounting bracket
- One wall-mounting bracket
- One sheet of adhesive masking labels
- One cardboard undercrawl window mask

For your convenience, two additional pre-printed serial number labels are included. Verify the serial numbers on the labels match the serial number located on the back of the device housing. Prior to installing the device, record the serial number located on the back of the device housing or place one of the pre-printed serial number labels on the panel programming sheet. This number is required during programming.





# Selecting a Location

Mount the unit:

- On a rigid vibration-free surface
- 6 to 10 feet (1.8 to 3m) high, but at least 6 inches (15cm) from the ceiling
- So the expected intruder movement is across the detection pattern fields, see Figure 2

Do not locate the unit:

- On a surface exposed to moisture
- In any area containing excessive metallic surfaces
- Where it may be exposed to false alarm sources such as: direct sunlight, heat sources (heater, radiators, etc.) in the field of view or strong air drafts (fans, air conditioner, etc.)
- Where the ambient temperature is below 32° F (0°C) or above 131°F (55°C)



Figure 2: Detection Pattern



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## **Selecting the Coverage Pattern**

The unit coverage pattern can be modified to fit specific applications by masking mirror curtains. Mask curtains to avoid sources of false alarms, such as heaters, air conditioners, and windows. Open the unit by pushing the opening tab up. If necessary, use one or more of the following methods to modify the coverage pattern.

#### Using the plastic masks

Use one or both of the plastic masks provided to mask off large coverage areas as shown in Figure 3.



Figure 3: Plastic Masks

### Using the adhesive labels

Mask the appropriate mirror curtains with the provided adhesive labels. See the example shown in Figure 4. Do not use sharp objects to remove unwanted labels. If necessary, carefully peel off the label.



Figure 4: Adhesive Labels

### Using the cardboard masks

Use the cardboard undercrawl window mask as shown in Figure 5. The undercrawl mask allows objects to be placed within 5 feet of, or directly below, the detector. When not using the mask as described here or in the Pet Alley configuration, remove the mask completely.



Figure 5: Cardboard Masks

## Setting the Sensitivity and Range Switches

Use the switches located on the unit back to set sensitivity and range, as shown in Figure 6. Use the following to determine the appropriate switch settings for an application.

#### Mode

**BI** = **Bi-curtain Mode** (factory default) increases false alarm immunity in smaller areas and requires an intruder to pass through two curtains to trigger an alarm. Do not use for single curtain applications or ranges under 5 feet (1.5 m).

**STD = Standard Mode** is used for wide-angle or single-curtain applications. This requires the intruder to only pass through one curtain to trigger an alarm.

#### Range

Program the switch for a range under 33 feet (10.1 m) or up to 50 feet (15.2 m). It is important to program the unit correctly for optimum sensitivity. Walk test the unit regularly by walking across the fields of view and checking that the LED lights and that an alarm is indicated at the control panel. See Walk Testing.

**Note:** The LED only lights if the unit is placed in Walk test Mode by the installer and the unit is enrolled in the system.

### **Mounting the Unit**



**Caution:** You must be free of static electricity before handling sensor circuit boards. Touch a grounded, bare metal surface before touching circuit boards or wear a grounding strap.

Prior to permanently mounting the PIR unit, access the device address label and check that the PIR and control panel communication is working. See the Walk Testing section.

#### **FCC Considerations**

The antenna used for this transmitter must be installed to provide a separation distance of at least 20 cm from all persons. It must not be co-located or operated in conjunction with any other antenna or transmitter.

- 1. Separate the PIR unit from the mounting bracket. Refer to Figure 1 for details.
- 2. Insert a small flat-head screwdriver between the tabs at the unit bottom and turn the screwdriver to push the tabs apart.
- 3. Select the appropriate knockout mounting holes on the mounting bracket for either corner or flat wall mounting.

Note: Holes near the tamper actuator are not mounting knockouts.

- 4. Use screws and wall anchors, if necessary, to attach the mounting bracket to the wall. Do not over-tighten.
- 5. Snap the unit to the mounting bracket.

# **Installing or Replacing Batteries**

**Note:** You must remove all batteries to reset the low battery signal before installing new batteries. Always replace all three batteries. Allow three minutes after installing the batteries for the sensor to become operational before initiating a Walk Test.

Use only 3V lithium CR-123A batteries. Use the following steps to install the batteries:

- 1. Remove the unit from the wall mounting bracket. See Mounting the Unit.
- 2. Remove all batteries (if installed) before installing new batteries.
- 3. Observe polarity and insert the three lithium batteries into the battery holder where indicated in Figure 6.

V

**Caution:** Risk of fire, explosion, and burns. Do not recharge, disassemble, heat above  $212\degree F$  ( $100\degree C$ ), or incinerate. Properly dispose of unused batteries.



Figure 6: 1125 PIR Switches

### **Programming the PIR in the Panel**

Refer to the panel programming guide as needed. Program the device as a zone in **Zone Information** during panel programming. Typically select the Night or Exit zone type for the 1125 PIR. At the Serial Number: prompt, enter the serial number recorded from the back of the device case. Continue to program the zone as directed in the panel programming guide.

**Note:** When a receiver is installed or powered down and powered up or the panel is reset, the supervision timer cycle restarts.

**Note:** You can re-use a device in another system after the serial number has been previously programmed. Remove the device battery, press and hold the tamper switch for one second to clear the panel house code from the device memory and set the device back to factory defaults.

# **PIR Walk Testing**

A Walk test Mode for testing the unit operation and coverage pattern is provided. Use the following instructions to walk test the unit:

- 1. Ensure the 1125 PIR is programmed in the Command Processor™ panel.
- 2. Lift the unit from the bracket until the tamper switch opens to enable the Walk test Mode.
- 3. When the unit is remounted on the bracket, the unit remains in the Walk test Mode for 3-4 minutes. If additional time is required, depressing and releasing the tamper switch resets the Walk test timer. Depending on switch settings (see Selecting the Coverage Pattern), the Walk test Mode allows the unit to alarm whenever one or two curtain areas are entered. The LED visible on the front cover lights to indicate an alarm.
- 4. Walk test the detection pattern and make any necessary adjustments.
- 5. Replace and walk test the unit to verify the unit is communicating with the control panel.

**Note:** After Walk test Mode times out (3 to 4 minutes), the unit returns to normal operating mode. In normal operating mode, the PIR unit activates approximately once every three minutes, and the LED disables to reduce battery drain.

### Maintenance

When installed and used properly, the unit provides years of service with minimal maintenance. To ensure proper operation, you should walk test the unit annually as described in Walk Testing. Clean the inside of the unit with a soft bristled brush or compressed air. Clean the cover with a water dampened cloth as needed to keep it free of dust and dirt. Always test the unit after cleaning.

### **Pet Alley Application**

To create a detection-free area close to the floor, mount the unit 3 feet (0.9 m) above the floor, upside down with the detector window toward the ceiling. The undercrawl mask should be in place to reduce ceiling exposure. Coverage distance is 25 feet in Bi-curtain Mode. As shown in Figure 7, pets are free to roam below the unit mounting height without causing alarms. When not using the mask as described here or in the Using the cardboard masks configuration, remove the mask completely.



Figure 7: Pet Alley

# **FCC Information**

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:

(1) This device may not cause harmful interference, and

(2) this device must accept any interference received, including interference that may cause undesired operation.

Changes or modifications made by the user and not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

- **NOTE:** This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:
  - Reorient or relocate the receiving antenna.
  - Increase the separation between the equipment and receiver.
  - Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
  - Consult the dealer or an experienced radio/TV technician for help.

Specifications Battery Life Type Transmit condition Detection range Mounting height Number of curtains Operating temp. Relative humidity Dimensions Color Housing material	1 year (min) 3.0V Lithium CR-123A Alarm, tamper 50 feet (15.2 m) 6 to 10 feet (1.8 to 3m) 9 32 to 131° F (0 to 55° C) 10 to 93% non-condensing 5.1" H X 2.9" W X 2.2" D White Flame retardant ABS	Patent Information Protected under pending U.S. and foreign patents.	2004 Digital Monitoring Products. Inc.
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