# CLIPSAL®

**by Schneider** Electric

**Wall-Mounted
Motion Detector**

## 752/WP, 752/WU & 752/WD

TWO YEAR WARRANTY 2

CE

Installation Instructions

# Contents

## **1.0** Description

The 752 Series motion detectors are Class 2 devices ideal for use in business and office settings to accurately detect occupancy and automatically control lighting.

There are three models of wall-mounted detectors:

* 752/WP Passive Infrared (PIR), 110° detection pattern
* 752/WU Ultrasonic
* 752/WD Dual Technology, PIR and Ultrasonic combined, 110° detection pattern.

### **1.1** Contents of the Box

| Item Description | Quantity |
|---|---|
| Motion detector | 1 |
| Mounting hardware for ceiling tile mount | 1 |
| Mounting screws | 2 |
| Long-range lens (PIR detector only) | 1 |
| High bay lens (PIR detector only) | 1 |
| Masking strips sheet (PIR and Dual detectors only) | 1 |

## **2.0** Safety

Follow all safety information on the motion detector and follow the safety warnings below.

## **DANGER**

**Hazard of Electric Shock, Explosion or Arc Flash**

This equipment must be installed and serviced by qualified electrical personnel. Apply appropriate personal protective equipment (PPE) and follow safe electrical work practices.

Turn off all electrical power supplying this equipment before working on or inside the equipment.

Always use a properly rated voltage sensing device to confirm power is off.

Replace all devices, doors and covers before turning on power to this equipment.

**Failure to follow these instructions could result in death or serious injury.**

Control power must be provided by a 752PP or 5752PP series occupancy controller, or an approved equivalent.

Changes or modifications to this device that are not expressly approved by Clipsal by Schneider Electric might void the warranty and void the user's authority to operate this equipment.

When wiring the unit, follow all applicable national and local codes.

## 3.0 Coverage Patterns

The figures that follow show the coverage patterns for the three types of motion detectors and the available lens options.

### 3.1 PIR with Wide-Angle Lens (standard lens)
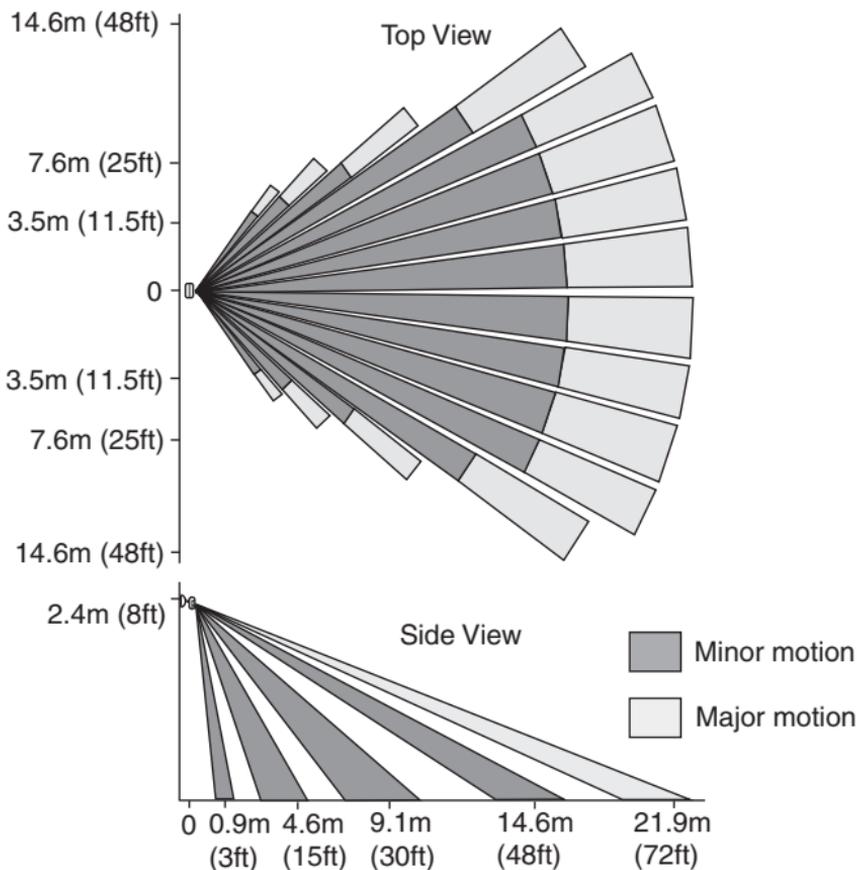
**3.2** PIR with Long-Range Lens

Top View

Side View

3.1m (10ft)

0     0.9m
      (3ft)

12.8m
(42ft)

31.1m
(102ft)
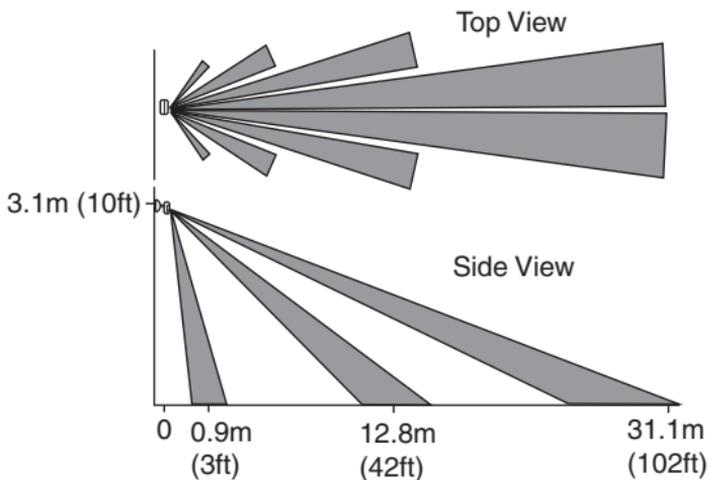
**3.3** PIR with High-Mount Lens

Top View

Side View

9.1m (30ft)

0     0.9m    3.1m    7.6m    11.0m    16.5m
      (3ft)   (10ft)  (25ft)  (36ft)   (54ft)
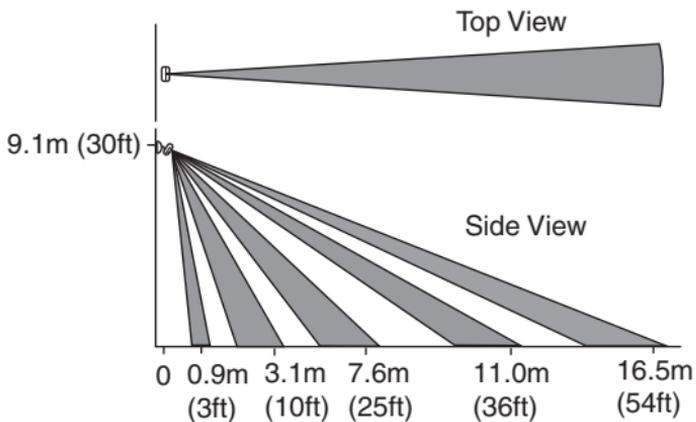
**3.4** Ultrasonic and Dual Technology

Top View

14.6m (48ft)

7m (23ft)

7.6m (25ft)

4.9m (16ft)
3.5m (11.5ft)

0

3.5m (11.5ft)
4.9m (16ft)

7.6m (25ft)

9.8m (32ft)

14.6m (48ft)
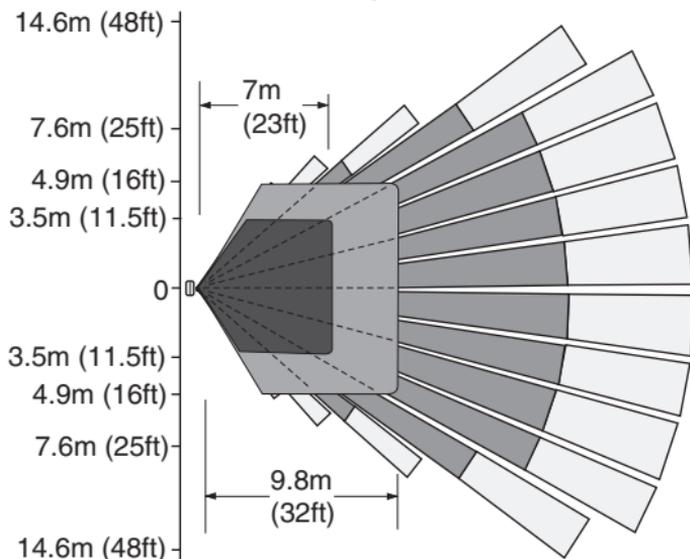
Minor motion, PIR

Major motion, PIR

Minor motion, Ultrasonic

Major motion, Ultrasonic

Side View

2.4m (8ft)

0   0.9m (3ft)   4.6m (15ft)   9.8m (32ft)   14.6m (48ft)   21.9m (72ft)
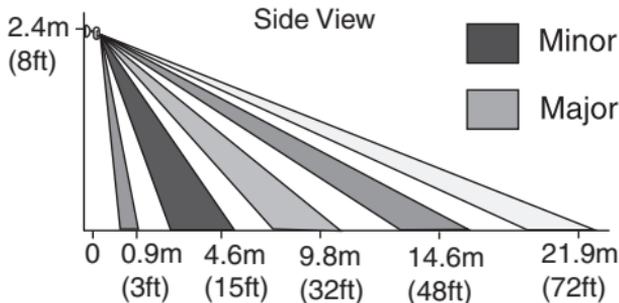
## 4.0 Replacing the Lens

Three lenses are provided with the PIR for customised coverage pattern needs: wide-angle, long-range and high-mount. To remove and replace a lens on the PIR follow these steps:

Use a flat-head screwdriver to gently pry the side of the lens holder from the detector body.
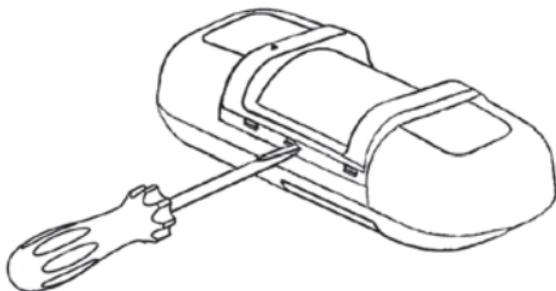


Squeeze together the two protruding clips located on the back of the lens holder.
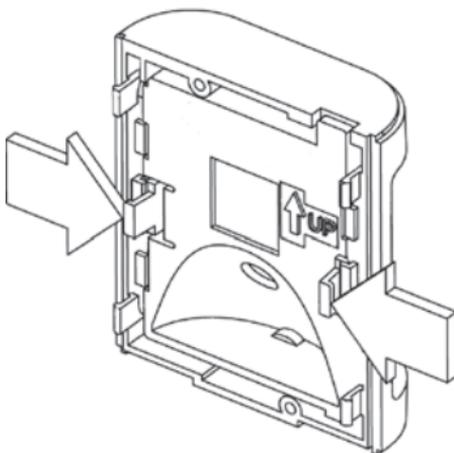


Remove the back of the lens holder.

Gently push the front side of the lens to remove the lens from the lens holder.
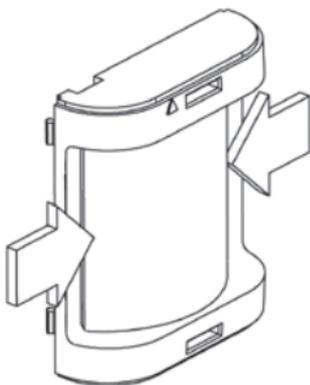
Select a new lens. The lens type is identified in clear lettering on the top of the lens.

Hold the new lens by the sides and gently bend to curve. The smooth surface is the outside of the lens, and the small notch indicates the bottom of the lens. Gently push the curved lens into the back of the lens holder.
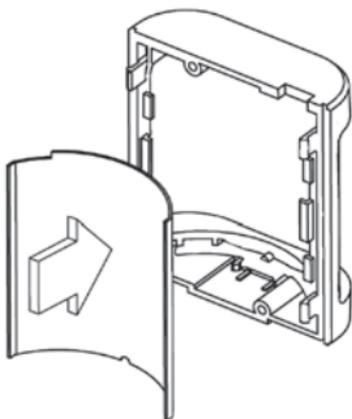
Make certain that the small notch on the bottom of the lens is aligned with the spur on the bottom of the lens holder. Verify that all sides of the lens are secured under the sides of the lens holder.

Push the back piece of the lens holder into the lens holder until the two clips snap in place.

Align the small triangle on the top of the lens holder with the triangle on the detector body.

Align the triangles on the body and the lens holder
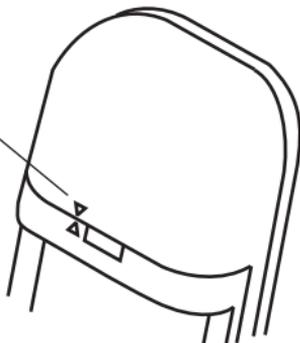


Push the lens holder back into the detector until it snaps in place.

## **5.0** Installation

The detector can be mounted to a variety of ceiling surfaces, such as acoustic tile, drywall or plywood. Refer to the following sections of this booklet, which show you how to mount the unit.

Refer to the figure that shows the mounting base, cover and adaptor plate.



Mounting Base

Base Cover

Adaptor Plate
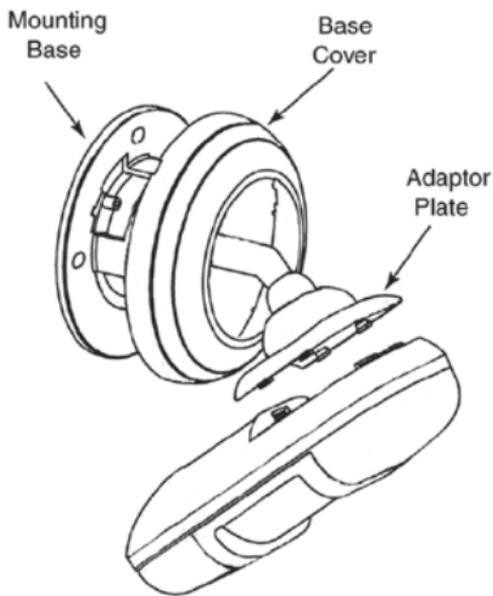
**Note:** Install the detector at least 1.5m (5 feet) away from sources of airflow, such as HVAC vents, ceiling fans, etc.

**5.1** Mounting with the Supplied Mounting Post

Ensure that the circuit breaker supplying power to the occupancy controller is turned off. Refer to the figure and the following instructions.

1. Drill a 23mm (7/8") hole in the mounting location.

**Note:** For acoustic tile, you can use the cutter on the end of the threaded mounting post to cut a hole. Press the cutter end of the mounting post firmly against the tile and twist to cut the tile.
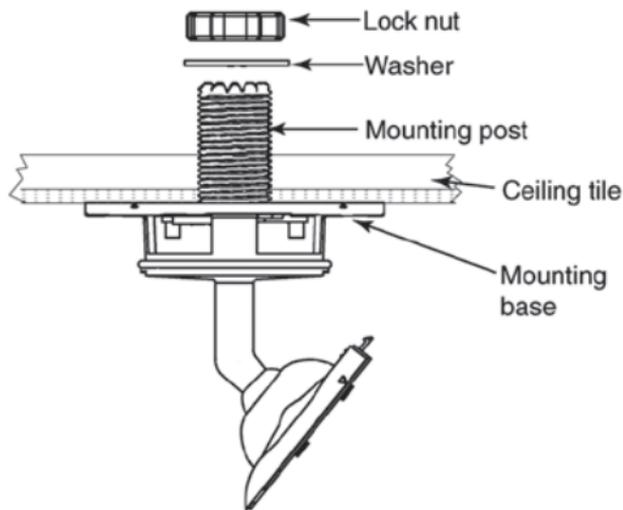


2. Feed the detector wire through the mounting post and then twist and lock the mounting post to the back of the detector.

3. Insert the mounting post into the hole drilled in Step 1. Secure the detector from the top of the ceiling tile using the supplied washer and locknut.

4. Wire the detector according to the wiring diagram in this booklet. Follow all applicable national and local electrical codes.

### 5.2 Flush Mounting

Ensure that the circuit breaker supplying power to the occupancy controller is turned off. Refer to the figure and the following instructions.

1. Drill a hole large enough to accommodate wiring at the mounting location.

2. Attach the mounting adapter plate to the ceiling using a secure method, such as with screws and wall anchors (not provided).

Mounting base

Screws
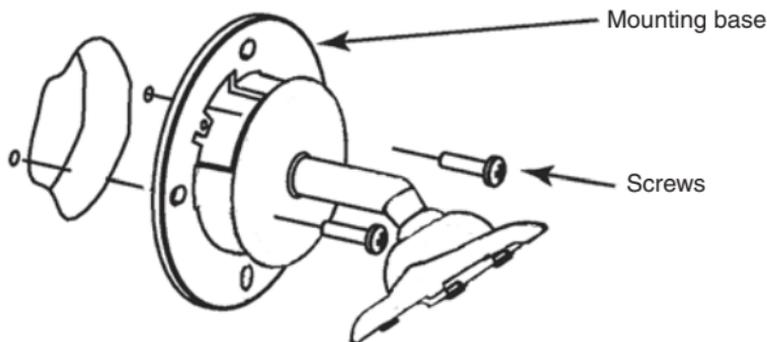
3. Wire the detector according to the wiring diagram in this booklet. Follow all applicable national and local electrical codes.

4. Attach the detector to the adapter plate by inserting the pins on the adapter plate into the keyholes on the back of the detector housing. Rotate the detector clockwise until it locks in place.

## 6.0 Wiring Diagram

The wiring diagram shows the maximum configuration of motion detectors on an occupancy controller.
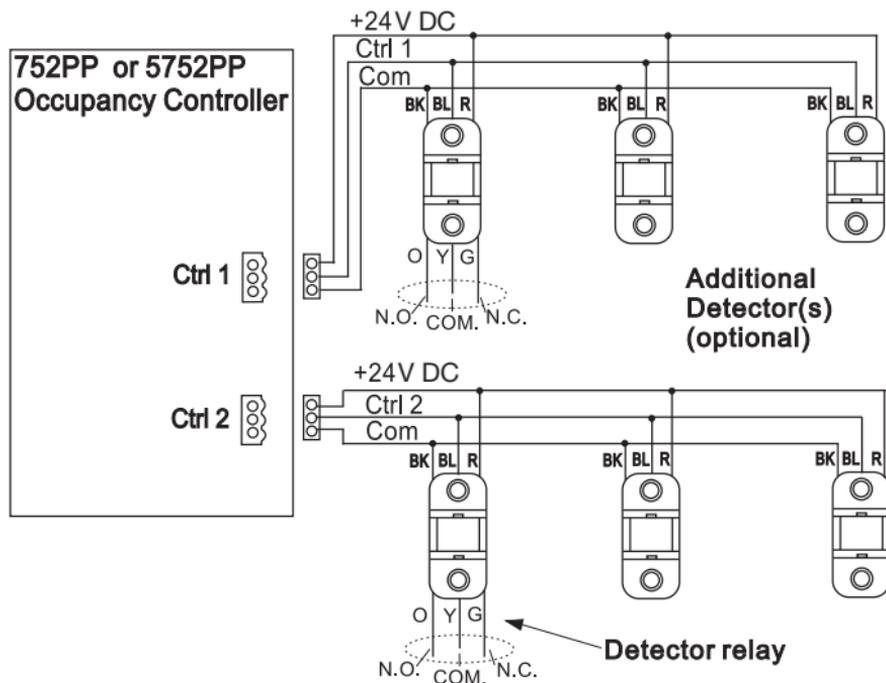


Follow the instructions in the Occupancy Controller Installation Instructions for wiring and operation of detectors, auxiliary switches and lighting loads.

## 7.0 Operation

The following steps describe the basic operation of the motion detector. Refer to the occupancy controller instructions for information about the interaction between the detectors and the controller.

1. Turn on the circuit breaker and any wall switches that may be supplying power to the occupancy controller.

2. Set the occupancy controller to turn on the associated lighting load when the motion detection signal is active. The factory settings in the occupancy controller will do this.

3. Whenever motion is detected, the LED(s) on the detector housing flash on for approximately 0.5 seconds, and a signal is sent to the controller to turn on the lights or keep them on.

   **Note:** When powered on, the detector may have to warm up for a few minutes before it is fully operational.

4.  Set the timer duration to the Test setting of 15 seconds (refer to Detector Adjustment in this booklet).

5.  Vacate the detection area until the lights turn off.

6.  Re-enter the detection area. Lights should turn on immediately. If the lights do not turn on immediately, verify that the detector wiring is correct and that the detector's signal is not being overriden by another control function.

    **Note:** Lighting loads connected to ballasts will ramp to full power over a period of four seconds.

7.  When the motion detector is operational, adjust the settings as described in Detector Adjustment.

## **8.0** Detector Adjustment

Before making adjustments, gently pry the sides of the access cover off with a flat blade screwdriver and pull the cover away from the detector. The cover is located below the detector's LED. After completing the adjustments, replace the cover.
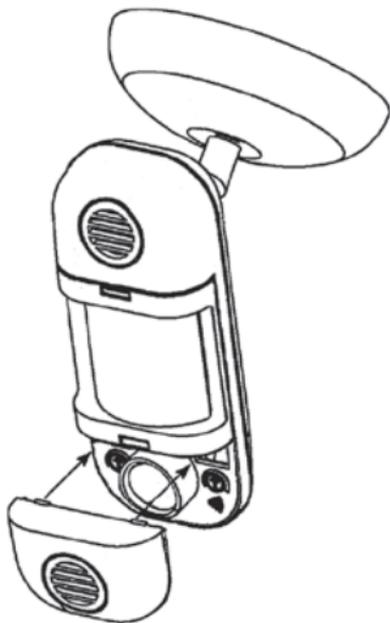


The adjustment controls for each type of detector vary slightly. The following figures show the location of switches and trimpots.

**8.1** PIR Detector
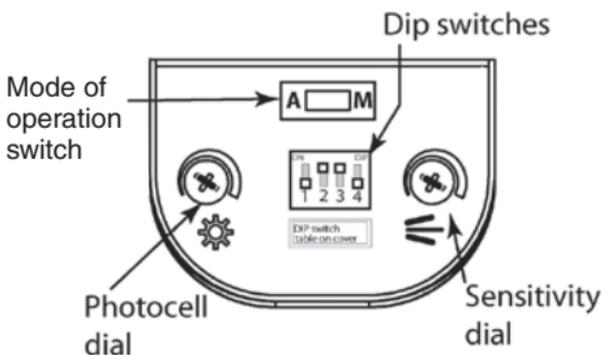


**8.2** Ultrasonic Detector
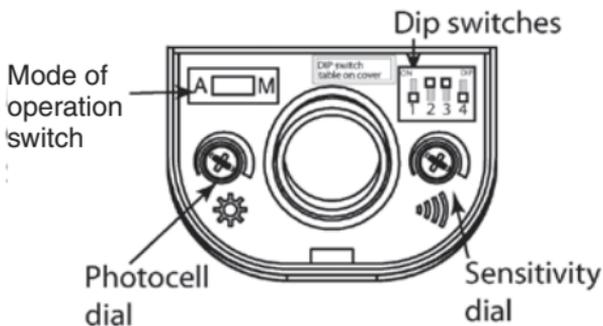


**8.3** Dual Detector
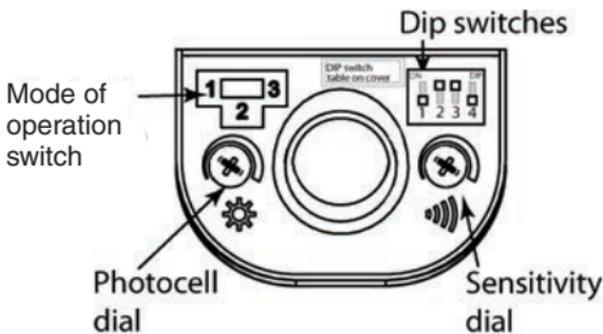
**8.4** Mode Switch

The Mode Switch determines when the lights are turned on or when the lights remain on.

| Detector | Mode | Description |
|---|---|---|
| PIR and Ultrasonic | A | Automatic mode. Normal, default setting. Lights turn on and stay on only when the detector senses motion. |
| | M | Manual override on mode. Lights are always on. |
| Dual Technology | 1 | Instant on setting. Either PIR or ultrasonic detection will turn the lights on or cause lights to remain on. |
| | 2 | Normal default setting. Only PIR detection will turn the lights on. Either PIR or ultrasonic detection will cause the lights to remain on. |
| | 3 | Override setting on. Lights are always on. |

**8.5** Sensitivity Dial

The Sensitivity Dial determines the amount of movement required to trigger the detector and the distance from which movement can be detected. The sensitivity can be adjusted from 60% to 100% of maximum coverage.

Turn the dial to the desired setting. The minimum setting (60%) is fully counter clockwise and the maximum setting (100%) is fully clockwise. The default setting is 100%.

**Note:** Consider the characteristics of the room when adjusting the sensitivity of the Ultrasonic and Dual Technology detectors. Hard surfaces (concrete, glass and tile) are reflective and create a higher sensitivity for ultrasonic detection.

Soft surfaces (carpet, drapes, cubicle walls and acoustic tile) absorb some of the ultrasonic energy and reduce the unit's sensitivity.

**8.6** Photocell Dial

This dial sets the level above which ambient light will not trigger the detector. The ambient light level can be set from 5 – 2700 lux.

Turn the dial to the desired setting from 5 lux (fully counter clockwise) to 2700 lux (fully clockwise). The default setting is 2700 lux. The default setting disables the photocell, such that ambient light does not inhibit detector operation.

**8.7** Time Delay DIP Switch

The four-position DIP switch determines how long the lights stay on after motion is no longer detected. Settings range from 15 seconds to 30 minutes. The default setting is 18 minutes. Refer to the following table.

| **Time Delay** | **DIP Switch position** | | | |
|---|---|---|---|---|
| | 1 | 2 | 3 | 4 |
| 15 seconds (test setting) | On | On | On | On |
| 2 minutes | On | On | On | Off |
| 4 minutes | On | On | Off | On |
| 6 minutes | On | On | Off | Off |
| 8 minutes | On | Off | On | On |
| 10 minutes | On | Off | On | Off |
| 12 minutes | On | Off | Off | On |
| 14 minutes | On | Off | Off | Off |
| 16 minutes | Off | On | On | On |
| 18 minutes (factory setting) | Off | On | On | Off |
| 20 minutes | Off | On | Off | On |
| 22 minutes | Off | On | Off | Off |
| 24 minutes | Off | Off | On | On |
| 26 minutes | Off | Off | On | Off |
| 28 minutes | Off | Off | Off | On |
| 30 minutes | Off | Off | Off | Off |

The detectors include a patented feature that senses occupancy patterns and adjusts the time delay to an optimal setting.

**8.8** Detector Masking

To help prevent unwanted detection, such as people moving in adjacent areas, you can partially mask the lens of the PIR and Dual Technology detectors. Use the supplied white masking strips as shown in the example below.

Adhesive masking strip
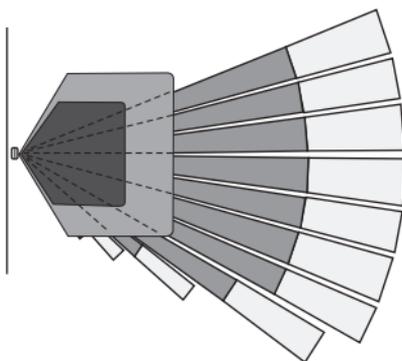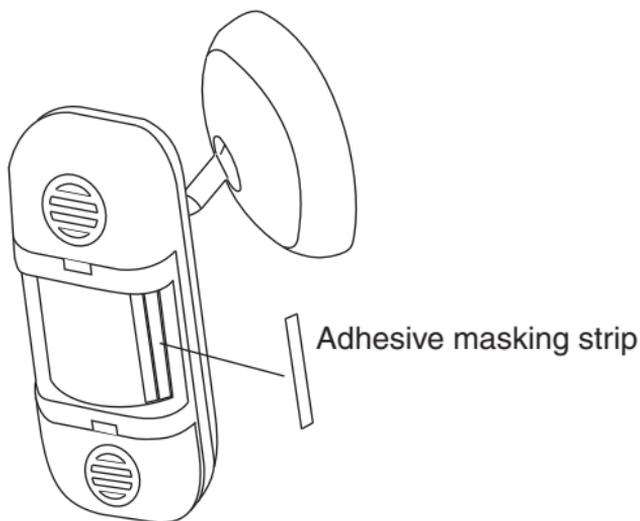
Coverage pattern with masking strips

**9.0** Specifications

| Parameter | Description |
|---|---|
| Operating voltage | 24V DC |
| Power requirement | PIR 21 mA nominal |
| | Ultrasonic 34mA nominal |
| | Dual Technology 37mA nominal |
| Coverage | PIR Wide: 232m² (2500ft²) |
| | PIR Long Range: 31m (102 lin. ft) |
| | PIR High Mount: 16.5m (54 lin.ft) |
| | Ultrasonic: 93m² (1000ft²) |
| | Dual: 232m² (2500ft²) |
| Isolated relay | Class 2, rating 1 A @ 24V DC |
| Adjustable time delay | 15 seconds to 30 minutes |
| Ambient light level sensing | 5 lux to 2700 lux |
| Sensitivity range | 60% to 100% of maximum coverage |
| Motion indicator LEDs | |
| PIR | Red |
| Ultrasonic | Red |
| Dual Technology | Red/Green |
| Operating temperature | 0 to 50°C (32 to 122°F) |
| Operating humidity | 90% maximum (non-condensing) |

## **10.0** Two-Year Warranty

The 752/Wx series motion detectors carry a two-year warranty against manufacturing defects.

## **11.0** Warranty Statement

The benefits conferred herein are in addition to, and in no way shall be deemed to derogate, either expressly or by implication, any or all other rights and remedies in respect to the Clipsal by Schneider Electric product, which the consumer has in the location where the product is sold.

The warrantor is Schneider Electric with offices worldwide.

This Clipsal by Schneider Electric product is guaranteed against faulty workmanship and materials for a period of two (2) years from the date of installation.

Schneider Electric reserves the right, at its discretion, to either repair free of parts and labour charges, replace or offer refund in respect to any article found to be faulty due to materials, parts or workmanship.

This warranty is expressly subject to the Clipsal by Schneider Electric product being installed, wired, tested, operated and used in accordance with the manufacturer's instructions. Any alterations or modifications made to the product without permission of Schneider Electric might void the warranty.

Schneider Electric shall meet all costs of a claim. However, should the product that is the subject of the claim be found to be in good working order, all such costs shall be met by the claimant.

When making a claim, the consumer shall forward the Clipsal by Schneider Electric product to the nearest Schneider Electric office. Provide adequate particulars of the defect within 28 days of the fault occurring. The product should be returned securely packed, complete with details of the date and place of purchase, description of load, and circumstances of malfunction.

For all warranty enquiries, contact your local Clipsal and Schneider Electric Partner Business Representative.

The address and contact number of your nearest sales office can be found at http://www.clipsal.com/locations or by telephoning Clipsal CIS Technical Support 1300 722 247 (CIS Technical Support Hotline).

**Schneider Electric (Australia) Pty Ltd**

**Contact us: clipsal.com/feedback**

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