

## MDW-V

150° Dual Technology • Line Voltage  
Occupancy Sensor

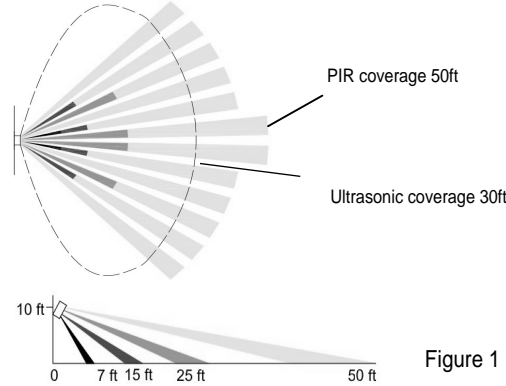
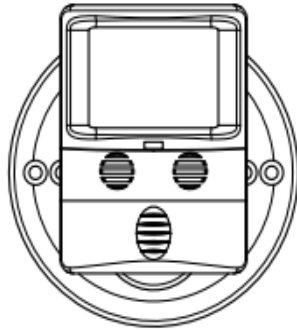


Figure 1

## SPECIFICATIONS

Voltage .....	120-277VAC, 50/60 Hz
Maximum Load.....	6.6A
Operating Temperature .....	32° to 131°F (0° to 55°C)
Adjustable Time Delay.....	30 Sec. to 30 Min.
Adjustable Light Level .....	100 Lux -daylight
PIR Adjustment.....	Minimum to Maximum
Ultrasonic Adjustment .....	Minimum to Maximum (trimpot 1)
PIR Coverage.....	1000ft <sup>2</sup>
Ultrasonic Coverage.....	800ft <sup>2</sup>

## DESCRIPTION

The MDW-V 150° Dual-Technology Occupancy Sensor combines advanced passive infrared (PIR) and ultrasonic technologies into one unit. The combined technologies help to avoid false triggering. Selectable operating modes allow the sensor to turn a load on, and hold it on as long as either or both technologies detect occupancy. After no movement is detected for the selected time delay, the lights switch off.

## COVERAGE

The MDW-V provides a 150° coverage pattern. The coverage shown represents walking motion at a mounting height of 10 feet. For building spaces with lower levels of activity or with obstacles and barriers, coverage size may decrease.

## WARNING

**Turn the POWER OFF at the circuit breaker before installing the sensor**

Read and understand these instructions before installing. This device is intended for installation in accordance with the National Electric Code and local regulations. It is recommended that a qualified electrician performs this installation. Make sure to turn off the circuit breaker or fuse(s) and make sure power is off before wiring the device.

Use copper wire only.

## WIRING DIRECTIONS

1. Make sure that the power has been turned OFF at the circuit breaker
2. Connect lead wires as WIRING DIAGRAM (see Figure 2): Black lead Line(Hot), Red lead to Load wire, White lead to Neutral wire.

Wiring Diagram:

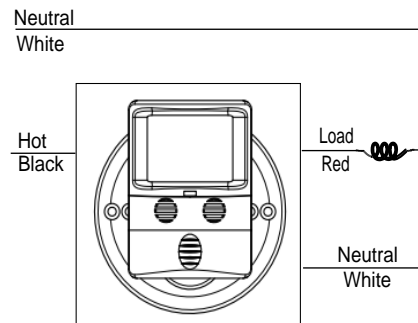


Figure 2

3. Mount device up to walls or ceiling
4. Gently position wires in wall/octagon box
  - a. attach sensor switch to the box, and fix it to the wall/ceiling with two screws.

- b. attach sensor switch to the mounting yoke with wires through its central hole, and fix the yoke to the wall/ceiling.
5. Restore power at circuit breaker or fuse, wait *one* minute.
  6. Remove the small cover plate.
  7. Locate the adjustment knob on the control panel to perform test and adjustment.(illustrated as Figure 3. )
  8. Replace the small cover plate after testing and adjustment.

## SETTINGS ADJUSTMENT

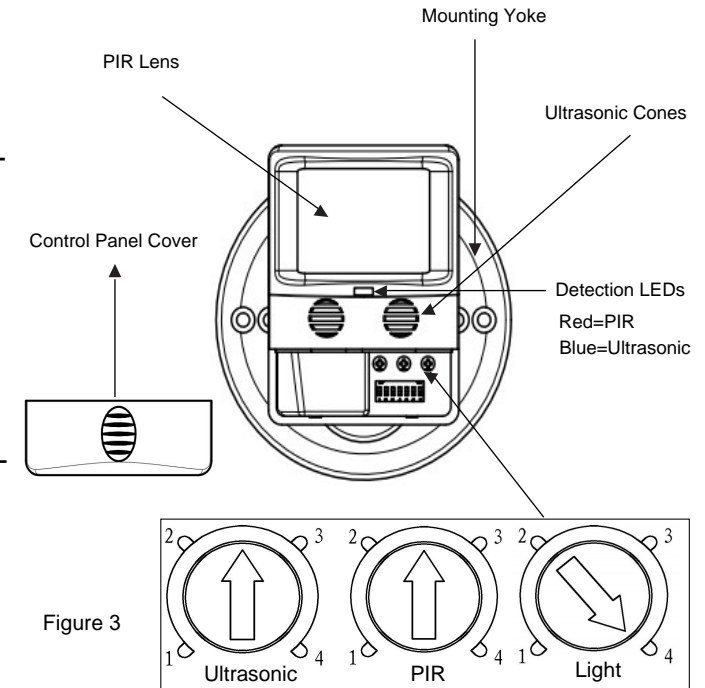


Figure 3

## ULTRASONIC/PIR LEVEL ADJUSTMENT

### Ultrasonic & PIR Sensitivity Adjustment Knob

Default position: Center

Adjustable: 25% (Position 1) to 100% (Position 4)

Note: Turn toward right for greater room space.

Turn toward left to avoid false alert in smaller room and near the door way or heat source.

### Ambient Light Level Adjustment Trimpot

Default position: Daylight (100% at position 4)

Adjustable: Clock wise

## OPERATION

The Sensor Switch is programmed for Occupancy Mode only.

### Automatic Turning On/Off the Load

Once the power is on, the load will be turned On according to the occupancy settings. The sensor time delay operates as programmed.

When the load turns OFF due to the lack of motion detection, the load can be turned ON again by occupancy detection or switch activation.

The Sensor keeps the Load On until no motion is detected plus the set time delay, load(s) will be turned Off automatically.

## DIP SWITCH SETTING

The MDW-V has 7 DIP switches under the cover. They are used to set trigger mode, time delay and walk through mode feature settings.

	Trigger	Initial Occupancy	Maintain Occupancy	Re-trigger (seconds duration)	1	2	3
Occupancy Logic	Default	Both	Either	Either	↓	↓	↓
	Option 1	Either	Either	Either	↓	↓	↑
	Option 2	PIR	Either	Either	↓	↑	↑
	Option 3	Both	Both	Both	↓	↑	↑
	Option 4	PIR	PIR	PIR	↑	↓	↓
	Option 5	Ultra	Ultra	Ultra	↑	↓	↑

Time Delay	4	5	6
5 Sec Test	↓	↓	↑
30 Sec	↓	↓	↑
3 Min	↓	↑	↓
5 Min	↓	↑	↑
10 Min	↑	↑	↑
15 Min	↑	↓	↑
20 Min	↑	↑	↑
30 Min	↑	↑	↑

Walk-Through	7
Disabled	↓
Enabled	↑

↓=OFF ↑=ON ◀=Fac

### Trigger mode: Switches 1, 2, 3

The sensor has 6 trigger options, set with DIP switches 1, 2 and 3. In the trigger mode DIP switch setting table:

- **Both** requires motion detection by the PIR and the Ultrasonic.
- **Either** requires motion detection by only one technology.
- **PIR** requires motion detection by the PIR.
- **Ultra** requires motion detection by the Ultrasonic.

**Initial Occupancy:** The method that activates a change from "Standby" (area unoccupied and loads are off) to "Occupied" (area occupied and loads are on).

**Maintain Occupancy:** The method indicating that the area is still occupied and the lights should remain on.

**Re-trigger:** After the time delay elapses and the lights turn off, detection by the selected technology within the number of seconds indicated turns the lights back on.

**To turn off a technology:**

Option 4 turns off the Ultrasonic detection

Option 5 turns off the PIR detection

### Time Delay: Switches 4, 5, 6

The sensor will hold the lights on as long as occupancy is detected. The time delay countdown starts when no motion is detected. After no motion is detected for the length of the time delay, the sensor will turn the lights off.

### Walk-through mode: Switch 7

Turns the lights off three minutes after the area is initially occupied, if no motion is detected after the first 30 seconds. If motion continues beyond the first 30 seconds, the selected time delay applies.

## TROUBLESHOOTING

### Initial run

The Sensor Switch needs **initial run within one minute**. During the initial run, the load might be turned On and Off several times.

The Time Delay Switch is default set on 5 seconds, do not adjust it until initial run is finished and proper operation function confirmed.

### The Load is out of control (frequently flashing)

1. It can take up to one minute for initial run
2. Check the wiring connections, especially the **Neutral Wiring**.

### The Load does not turn On without LED flashing or LED flashing regardless of motion

1. Turn the load On, verify that Sensitive Range is on high. If the Load Range is on high. If the Load can not be turned On, go to Step 2.
2. Check the wiring connections, especially Hot line and Neutral wiring

### The Load does not turn On while LED flashing with motion detected

1. Check to see if Ambient Light Level is enable by covering the lens by hand.
2. Turn the load On, verify that Sensitivity Range is on high. If the Load can not be turned On, go to Step 3.
3. Check the wiring connections, especially Hot Line and Neutral wiring

### The Load does not turn Off

1. There can be up to a 30 minutes time delay after the last motion detected. To verify proper operation, turn the Time Delay Switch to 5s (Test Mode), make sure there is no motion (no LED flashing), the Load should turn Off in 5 seconds.
2. Check the wiring connections, especially the Neutral wiring to the sensor switch.

## WARRANTY INFORMATION

This device is warranted to be free of material and workmanship defects for 2 years from the date of purchase. Original receipt or proof of purchase from an authorized retailer must be presented upon warranty claim. ALL claims must be verified and approved by Enerlites, Inc. Warranties from other Enerlites products may vary. This warranty is nontransferable and does not cover normal wear and tear or any malfunction, failure, or defect resulting from misuse, abuse, neglect, alteration, modification, or improper installation. To the fullest extent permitted by the applicable state law, Enerlites shall not be liable to the purchaser or end user customer of Enerlites products for direct, indirect, incidental, or consequential damages even if Enerlites has been advised of the possibility of such damages. Enerlites' total liability under this or any other warranty, express or implied, is limited to repair, replacement or refund. Repair, replacement or refund are the sole and exclusive remedies for breach of warranty or any other legal theory.



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