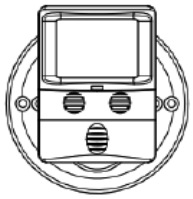
Specifications and Installation: RNET-OCC-HV-DT-WM Dual Technology Line Voltage Occupancy Sensor



Voltage	120/277VAC, 50/60Hz
Load Requirements:	
Incandescent	800W-120VAC, 50/60Hz
Fluorescent	600VA-120VAC, 1385 VA-277VAC, 50/60Hz
Motor	1/4HP-120VAC, 50/60Hz
Adjustment Time Delay	30 seconds to 30 minutes.
Walk-Through Mode	3 minutes if no activity after 30 seconds.
Test Mode	5 seconds at initial power up or DIP switch reset
PIR Coverage	1000 ft2
Sensitivity Adjustment	Automatic or Low (DIP switch setting)
Ultrasonic Coverage	800-1200 ft2
Sensitivity Adjustment	Minimum to Maximum (trimpot)
Frequency	40 kHz
Operation Temperature	32° to 131°F (0° to 55° C)

DESCRIPTION

This Dual Technology Occupancy Sensor combines advanced passive infrared (PIR) and ultrasonic technologies into one unit. The combined technologies help to avoid false triggering even in difficult applications. The RNET-OCC-HV-DT-WM turns lighting on and off based on occupancy and ambient light levels.

The sensor offers numerous operating modes that can be combined to create the ideal custom control. Selectable operating mode 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. A "walk-through" mode can turn the lights off after only 3 minutes, if no activity is detected after 30 seconds following an occupancy detection.

This sensor contains a light level sensor. If adequate daylight is present, the sensor holds the load OFF until light levels drop, even if the area is occupied.

COVERAGE PATTERN

The MWD-V provides an elliptical coverage pattern (see Figure 1). 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.

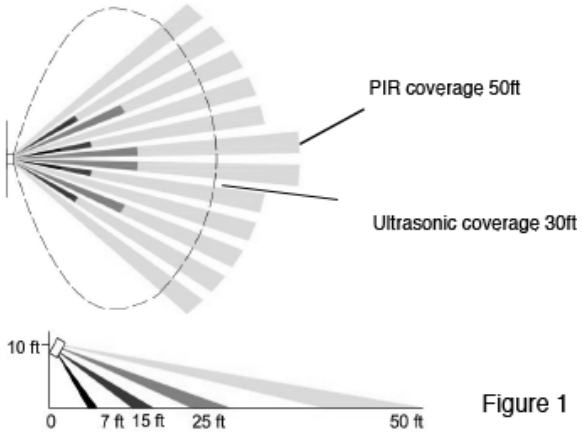


Figure 1

WARNING: TURN OFF THE CIRCUIT BREAKER BEFORE INSTALLATION.
INDOOR USE ONLY.
DO NOT EXCEED ELECTRICAL RATINGS.

INSTALLATION

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 to Line (Hot), Red lead to Load wire, White lead to Neutral wire.

Wiring Diagram:

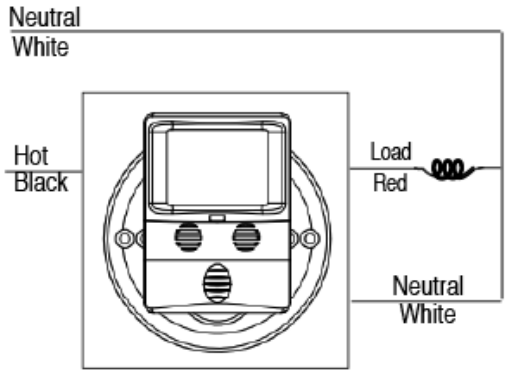


Figure 2

3. Mount device up to walls or ceilings.
4. Gently position wires in wall/octagon box:
    a. Attach the sensor switch to the box, and fix it to the wall/ceiling with two screws or
    b. Attach the 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 (Illustrated in Figure 3).
7. Locate the adjustment knob on the control panel to perform test and adjustment (illustrated in Figure 3 and 4).
8. Replace the small cover plate after testing and adjustment.

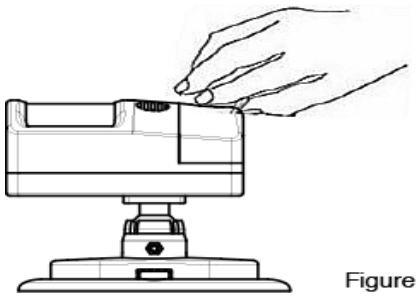


Figure 3

ADJUSTMENT

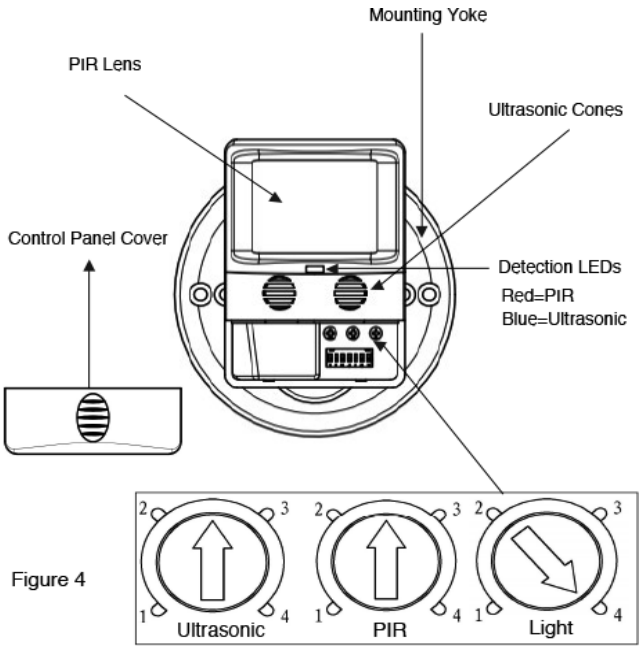


Figure 4

Ultrasonic & PIR Sensitivity Adjustment Knob

Default position: Center
Adjustable: 25% (Position 1) to 100% (Position 4)
Note: Turn toward the right for greater room space.
Turn toward the 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

DIP SWITCH SETTING

The RNET-OCC-HV-DT-WM has 7 DIP switches under the cover. They are used to set the trigger mode 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	↑	↓	↑	
	Option 6	Both	Either	Either	↑	↑	↓	
	Option 7	Both	Either	Either	↑	↑	↑	

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 ◀=Factory Setting

Trigger mode: Switches 1, 2, 3

The sensor has 6 trigger options, set with DIP switches1, 2 and 3.

In the trigger mode DIP switch setting table:

- **Both** require 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 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.

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.

TROUBLESHOOTING

For proper operation, the Sensor Switch has to consume power from hot and **Neutral** wires. Therefore, a **Secured Neutral Wiring is required.**

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 cannot 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 cannot 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

If within two (2) years from the date of purchase, this product fails due to a defect in material or workmanship, we will repair or exchange it, at its sole option free of charge. This warranty does not apply to:

a. Damage to units caused by accident, dropping or abuse in handling, acts of God or any negligent use;
b. Units which have been subject to un-authorized repair, opened, taken apart or otherwise modified;
c. Unit not used in accordance with instruction;
d. Damages exceeding the cost of the product;
e. Finish on any portion of the product, such as surface and weathering, as this is considered normal wear and tear;
f. Transit damage, initial installation costs, removal costs, or reinstallation costs.

This warranty service is available by returning the product with proof of purchase, purchase date and a description of the problem to the dealer from whom the unit was purchased.