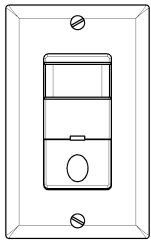


# INSTALLATION INSTRUCTIONS



## WAVE-PIR-120/277-N VACANCY SENSOR SWITCH



Part Number: 97332

### ◆ SPECIFICATIONS

Voltage .....	120/277VAC, 60Hz
Incandescent .....	800W
Fluorescent/Ballast/LED.....	800VA@120VAC /1600VA@277VAC
Motor .....	1/4HP
Time Delay.....	15Sec to 30Mins
Light Level.....	30 Lux--Daylight
Operation Temperature.....	32 F--131 F

### ◆ DESCRIPTION

The passive infrared sensors work by detecting the difference between heat emitted from the human body in motion and the background space. If no motion is detected for the set time delay, the load turned off automatically. The sensor switch has one relay (equal to single pole switch), also includes Ambient Light Level Sensor.

#### Coverage Area

The coverage range of the sensor switch is specified and illustrated in Figure 1. Large objects and some transparent barriers like glass windows will obstruct the sensors' view and prevent detection, causing the light to turn off even though someone is still in the detection area.

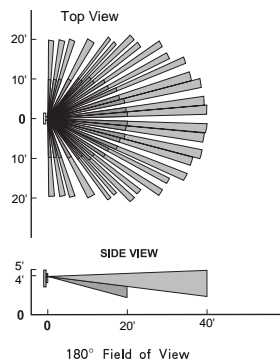


Figure 1

Best: 320 sq.ft.  
Regular: 800 sq.ft.  
Maximum: 1200 sq.ft.

**WARNING:** Turn off the circuit breaker before installation;



In door use only;  
Do not exceed electrical ratings.

### ◆ INSTALLATION

1. Connect lead wires as WIRING DIAGRAM (see Figure 2): Black lead to Hot wire, Red lead to Load wire, White lead to Neutral wire, and Green lead to Ground wire.

Wiring Diagram:

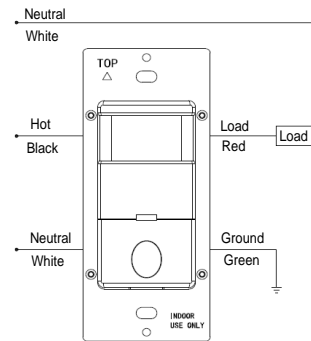


Figure 2

**NOTE:** DO NOT connect RED & WHITE wires on device together! It may cause short circuit!

2. Gently position wires in wall box, attach sensor switch to the box.
3. Mount device "TOP" up.
4. Restore power at circuit breaker or fuse, wait *one* minute.
5. Remove the small cover plate. (Illustrated as Figure 3.)
6. Locate the adjustment knobs on the control panel to perform test and adjustment. (Illustrated as Figure 3.)
7. Replace the small cover plate after testing and adjustment.
8. Attach the wallplate.

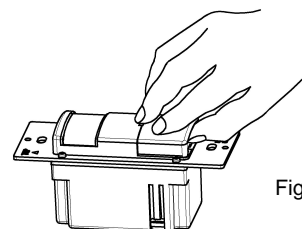


Figure 3

### ◆ ADJUSTMENT

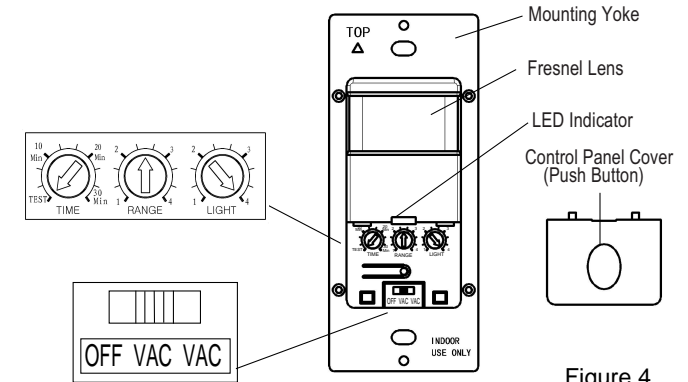


Figure 4

#### Band switch prescription.

Mode	Position	Description	Function of the push-button
OFF	Left	Circuit is permanently opened. (switched off)	None
VAC	Center	Vacancy Mode: Manual On only, Automatic Off after set time delay.	Manually toggles On / Off the load.
VAC	Right	Vacancy Mode: Manual On only, Automatic Off after set time delay.	Manually toggles On/Off the load.

#### Time Delay knob

Default position: 15 Seconds (Test mode)

Adjustable: from 15 Seconds to 30 Minutes (clockwise)

#### Sensor Sensitivity Range Knob

Default position: Center at 65%

Adjustable: 30% (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 Knob

Default position: Daylight (100% at position 4)

Adjustable: Daylight to 30Lux (Counter clockwise)

Note: to avoid wasting energy by turn-on the light under daylight.

# INSTALLATION INSTRUCTIONS

## ◆ OPERATION

The Sensor Switch is programmed independently for Vacancy Mode as refer to the Band Switch position under the control panel cover.

### Manual On/Off Button

By Pushing the Control Panel Cover, the Load can be turned On/Off under VAC mode. (Illustrated as Figure 5)

### Turning On the Load under Vacancy Mode

Manual On/Off Button has to be pushed to turn On the Load.

### Automatic Turning Off the Load

Under either mode, the Sensor keeps the Load On until no motion is detected plus the set time delay, load(s) to be Off automatically.

### Manual Turning Off the Load

By pushing the Manual On/Off button, the Load can be turned Off under by any mode.

**NOTE :** For **WAVE-PIR-120/277-N**, there is **night light behind the Fresnel Lens as follows:**

**OFF** ---- The Night Light keeps on constantly;

**VAC** ---- the Night light will turn on under occupancy when load is off. Conversely, the NIGHT LIGHT will turn off when load is on.

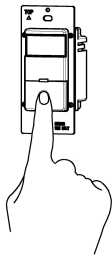


Figure 5

## ◆ TROUBLESHOOTING

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

### Initial run

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

The Time Delay knob is default set on 15 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 three minutes for initial run.
2. Check the wiring connections, especially the **Ground Wiring** .

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

1. Push Manual On/Off Button, if the load turns On; verify that Sensitivity Range is on high. If the Load does not turn On, go to Step 2.
2. Check the wiring connections.

### 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. Push Manual On/Off Button, if the load turns On; verify that Sensitivity Range is on high. If the Load does not turn On, go to Step 3
3. Check the wiring connections, especially Hot Line and Ground 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 Knob to 15s (Test Mode), make sure there is no motion (no LED flashing), the Load should turn Off in 15 seconds.
2. Check if there is any significant heat source mounted within six feet (two meters) that may cause false detection such as high wattage light bulb, portable heater and HAVC device.
3. Check the wiring connections, especially the Ground wiring to the sensor switch.

### The Load turns On while no desired

1. Mask the Sensor Switch's lens to eliminate unwanted coverage area.
2. Turn the Sensitivity Level knob toward left to avoid false alert in smaller room and near the door way.

## ◆ WARRANTY INFORMATION

B.E.G. Controls warranties its products to be free of defects in materials and workmanship for a period of five (5) years. There are no obligations or liabilities on the part of our company for consequential damages arising out of or in connection with the use or performance of this product or other indirect damages with respect to loss of property, revenue, or profit, or cost of removal, installation or reinstallation.

Feb, 2017

For technical support please call (770) 349-6341 and press "2" at the prompt, or email [support@begcontrols.com](mailto:support@begcontrols.com). Technical support is available Monday through Friday, 8:00 AM to 5:00 PM Eastern time.



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