Greengate

P/N 9850-000353-01

Installation Instructions

NeoSwitch Passive Infrared (PIR) Single Relay Vacancy Sensing Wall Switch with Night Light

(Neutral Required)

PIR Activated | Self-Adjusting | cULus LISTED APPLIANCE CONTROL 36T0 | RoHS

Model # VNLW-P-1001-MV-N-W
Model # VNLW-P-1001-MV-N-V
Model # VNLW-P-1001-MV-N-LA

General Information

- Read all instructions on both sides of this sheet first
- Install in accordance with ALL local codes
- For indoor use only

Specifications

Technology: Passive Infrared (PIR)
Electrical Ratings:
120 VAC:
- Incandescent/Tungsten – Max. load: 6.7 amps, 800W, 50/60 Hz
- Fluorescent/Ballast – Max. load: 10 amps, 1200W, 50/60 Hz

Motor Load: ¼ HP @ 125 VAC
277 VAC:
- Fluorescent/Ballast – Max. load: 9.8 amps, 2700W, 50/60 Hz

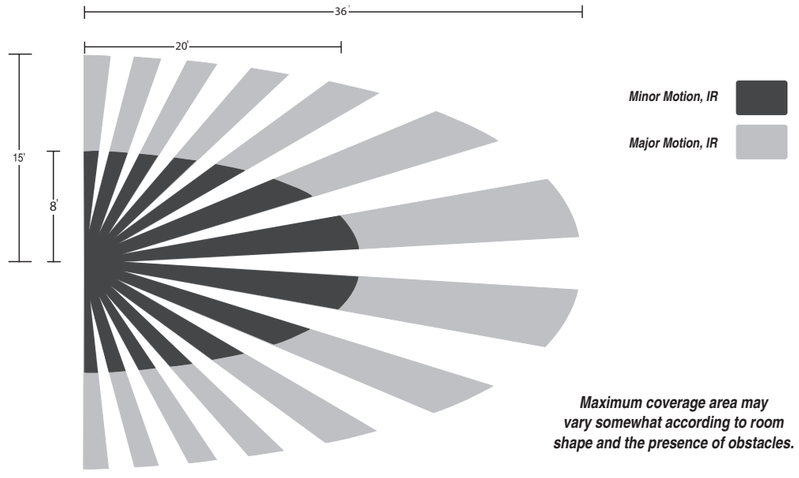
Ballast Compatibility: Compatible with magnetic and electronic ballasts
No Minimum Load Requirement
Time Delays: Self-Adjusting, 15 seconds/test, 1, 5, 15, 20, 30 minutes, 1 hour, 2 hours
Coverage: Major motion – 1000 sq. ft.
Minor motion – 300 sq. ft.
Operating Environment:
- Temperature: 32° F – 104° F (0° C – 40° C)
- Relative Humidity: 20% to 90% Non-condensing

Housing: Durable, injection molded housing. Polycarbonate resin complies with UL94V0.
Size:
- Mounting Plate/Strap Dimensions: 4.195" H x 1.732" W (106.553 mm x 44 mm)
- Product Housing Dimensions: 2.618" H x 1.752" W x 1.9" D (66.5 mm x 44.5 mm x 48.26 mm)

LED Indicators: Red LED indicates PIR detection; Amber LED night light.

Coverage

The VNLW-P-1001-MV-N is designed for offices up to 300 square feet.



Maximum coverage area may vary somewhat according to room shape and the presence of obstacles.

Description

The Passive Infrared (PIR) Single Relay Vacancy Sensing Wall Switch with Night Light is a lighting control and Wall Switch all-in-one that is used for energy savings and convenience.

PIR Technology

The Passive Infrared (PIR) Single Relay Vacancy Sensing Wall Switch with Night Light uses Passive Infrared (PIR) sensor technologies to monitor a room for occupancy.

The VNLW-P-1001-MV-N allows the control of one load with one vacancy sensor switch.

The lights are turned ON by pressing the universally recognized light icon Pushbutton. The lights stay ON as long as the sensor detects motion in the room. When the room is vacated, the lights turn OFF automatically after a preset Time Delay interval.

A 30 second grace period is added after the lights shut OFF to give the occupant time to move again in case the lights shut OFF. This prevents the occupant from having to walk-up to press the Pushbutton to reactivate the sensor.

The night light activates when sensor turns lights OFF. This feature can be disabled, see DIP Switch Settings.

The sensor includes self-adaptive technology that continually adjusts to conditions by adjusting sensitivity and Time Delay in Real-time. By adjusting sensitivity and Time Delay automatically, the sensor is maximizing the potential energy savings that are available in the particular application.

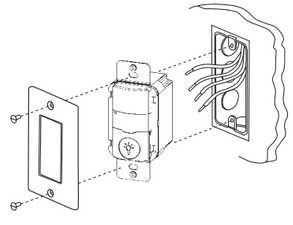
Location

When installing the VNLW-P-1001-MV-N in a new junction box, choose the switch location carefully to provide optimum coverage of the occupied area. When replacing an existing Wall Switch, bear in mind that there must be a clear Line-of-sight between the sensor and the area to be covered. Avoid pointing the VNLW-P-1001-MV-N directly into the hallway where it may detect passers-by.

Installation

The VNLW-P-1001-MV-N can be installed in any standard single gang box. It may be installed in the same manner as an ordinary Wall Switch.

- Wire the VNLW-P-1001-MV-N as described in the wiring section.
- Mount the VNLW-P-1001-MV-N in the junction box.



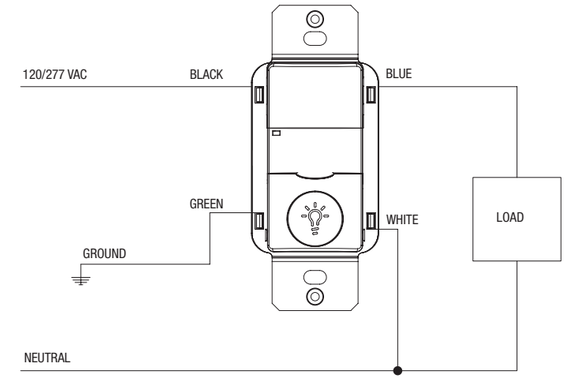
Wiring

CAUTION: Before installing or performing any service on a Greengate system, the power MUST be turned OFF at the branch circuit breaker. According to NEC 240-83(d), if the branch circuit breaker is used as the main switch for a fluorescent lighting circuit, the circuit breaker should be marked "SWD." All installations should be in compliance with the National Electric Code and all state and local codes.

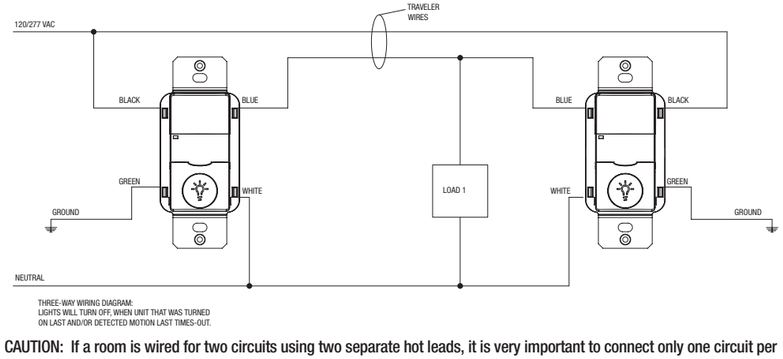
NOTE REGARDING COMPACT FLUORESCENT LAMPS: The life of some compact fluorescent lamps (CFLs) is shortened by frequent automatic or manual switching. Check with CFL and ballast manufacturer to determine the effects of cycling.

1. Make sure power is turned OFF at the branch circuit breaker.
2. Wire units as shown in wiring diagrams per applicable voltage requirements.
3. Mount unit to Wall Box.
4. Turn power back ON at the branch circuit breaker and wait 2 minutes for the unit to stabilize.
5. Make necessary adjustments. (See Checkout and Adjustments section)
6. Install Wall Switch plate.

Wiring Diagram 1: 120/277 VAC single level single circuit wiring diagram



Wiring Diagram 2: 120/277 VAC single level single circuit three-way wiring diagram



CAUTION: If a room is wired for two circuits using two separate hot leads, it is very important to connect only one circuit per relay. Both circuits must be fed from the same phase.

COOPER Lighting Solutions

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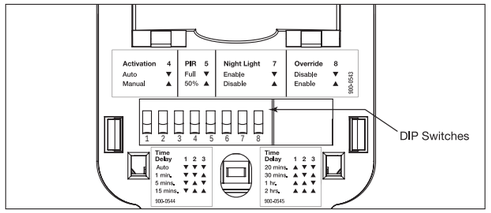
DIP Switch Settings

DIP Switch Legend

	Time Delay			Not Used	PIR Sensitivity	Not Used	Night Light	Override
DIP Switch	1	2	3	4	5	6	7	8
Auto*	▼	▼	▼		Full ▼		Enable ▼	Disable ▼
1 Minute	▼	▼	▲		50% ▲		Disable ▲	Enable ▲
5 Minutes	▼	▲	▼					
15 Minutes	▼	▲	▲					
20 Minutes	▲	▼	▼					
30 Minutes	▲	▼	▲					
1 Hour	▲	▲	▼					
2 Hours	▲	▲	▲					

*Self-Adjusts to 10 min. user mode

Default =



Checkout and Adjustment

Adjustments should be made with the HVAC system on so that the installer will be able to detect the effect of airflow on the operation of the VNLW-P-1001-MV-N. Use only insulated tools to make adjustments.

Immediately after applying power to the lighting circuit, wait approximately two minutes for the switch to power up and stabilize.

Self-Adjust

Sensor is shipped in self-adjust mode. This applies to Time Delay and PIR sensitivity. In preparation for the Installer Test, the Time Delay is set to 15 seconds, after the sensor is installed, powered ON and has stabilized the unit will Time-out 15 seconds after the last motion detected. Coverage and sensitivity can be confirmed by watching the Red (PIR) indicator LED on the front of the sensor, while moving around the room.

1. Walk around the room and monitor LED.
2. Stand in different parts of the room and wave your hands. LED should only turn ON for one second with each motion. (If LED does not turn ON, go to Installer Adjustments – Sensitivity Adjustment Section)
3. Stand still three to four feet away from the sensor for five seconds. LED should not turn ON. (If LED turns ON, go to Installer Adjustments – Sensitivity Adjustment Section)
4. Walk outside the room and wait 30 seconds for the lights to turn OFF. (If lights do not turn OFF go to Installer Adjustments Section)
5. Re-enter the room and manually activate the sensor. (If lights do not turn ON go to Troubleshooting Section)
6. At this point you can exit the room and let the sensor Time-out. When the sensor Times-out and is inactive for five minutes, the unit will go to a 10 minute Time Delay user mode setting.

Note: To place into Test Mode, toggle DIP Switch 8 out of its current position, wait 3 seconds, and then back into its original position.

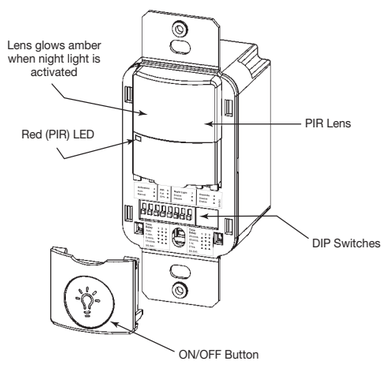
Installer Adjustments

PIR Sensitivity

1. Press the Pushbutton to activate sensor.
2. Stand in different areas of the room and wave your hands.
3. If the Red LED does not turn ON, check for any obstructions.
4. Stand still three to four feet away from sensor for five seconds. LED should not turn ON.
5. If Red LED turns ON without motion or is constantly ON adjust PIR sensitivity to 50 % by moving DIP Switch 5 up.

Field-of-view outside the space

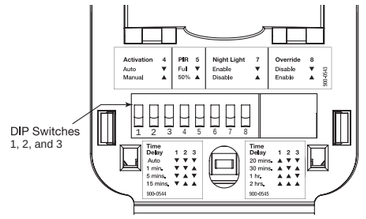
1. Adjust PIR sensitivity to 50 % by moving DIP Switch 5 up.
2. Use non-reflective tape strips to cover the portions of the sensor lens that view outside the space.



Time Delay Adjustments

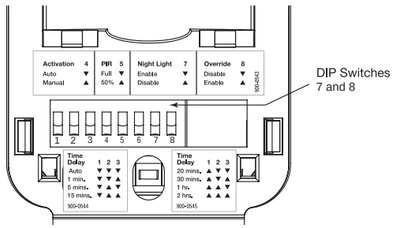
People who remain very still for long periods of time may need a longer Time Delay than the default setting of 10 minutes. As long as the self-adjusting feature is enabled, the switch will respond to each pair of False-offs with no normal OFF in between by alternately making slight adjustments to either Time Delay (by 2 minute increments) or sensitivity, so there should be no need for manual adjustment. If manual adjustment is desired, refer to Time Delay settings in DIP Switch legend.

Reset sensor Time Delay to factory settings by moving DIP Switches 1, 2, and 3 down. (If DIP Switches 1, 2, and 3 are already down, toggle DIP Switch 1 out of its current position, wait 3 seconds, and then back to its original position)



Night Light

Unit is shipped with Night Light featured enabled. When sensor turns the lights OFF, Night Light is activated. To disable this feature move DIP Switch 7 up.



Override

The Override setting allows the sensor to operate as a service switch in the unlikely event of failure.

1. Move DIP Switch 8 up.
2. The Pushbutton can be used to manually turn lights ON or OFF.

Troubleshooting

Issue	Possible Causes	Suggestions
Lights Will Not Turn ON automatically	Sensor is in Manual ON mode	Press Pushbutton. If Auto Mode is desired change Activation Mode to Auto.
	Sensor was turned OFF manually. If the Sensor was turned OFF manually before the Time Delay expired, lights will remain OFF for the remainder of the Time Delay.	Check EcoMeter LED, if LED is ON this is an indication that the lights were turned OFF manually. Press the Pushbutton to turn the lights back ON.
	Power interruption	Check incoming voltage and/or wiring.
Lights Will Not Turn ON manually	Power interruption	Check incoming voltage and/or wiring.
If lights will still not turn ON, set sensor to override mode and call Technical Services at 1-800-553-3879		
Lights Will Not Turn OFF automatically	Override	Make sure sensor is not in Override Mode. Check DIP Switch 8 to make sure it is down.
	Self Adjust	If sensor is in Self-Adjust Mode. It may be possible for the unit to have increased the Time Delay to a 30 minute delay. If the lights do not turn OFF after 30 minutes follow next step.
	2 hour Delay	Maximum Time Delay is 2 hours. Check DIP Switches to verify DIP Switch settings. If lights do not turn OFF at the set Time Delay, check next step.
	PIR activated by heat source other than occupant	Move DIP Switch 5 up.
Lights Will Not Turn OFF manually		Call Technical Services
If lights will still not turn OFF, call Technical Services at 1-800-553-3879		

Warranties and Limitation of Liability

Please refer to www.cooperlighting.com under the Legal section for our terms and conditions.

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