GreenGate

NeoSwitch Dual Technology Single Relay Vacancy Sensing Wall Switch
(Ground Required)

General Information
- Read all instructions on both sides of this sheet first
- Plan all component locations carefully
- Install in accordance with ALL local codes
- For indoor use only

Specifications
- Technology: Passive Infrared (PIR) and Ultrasonic (US)
- Electrical Ratings:
  - 120 VAC:
    - Incandescent/Tungsten – Max. load: 6.7 amps, 800W, 50/60 Hz
    - Fluorescent/Ballast – Max. load: 10 amps, 120W, 50/60 Hz
  - Motor Load: ¼ HP @ 125 VAC
  - Fluorescent/Ballast – Max. load: 9.8 amps, 277 VAC
  - Motor Load: ¼ HP @ 125 VAC
- Ballast Compatibility: Compatible with magnetic and electronic ballasts
- No Minimum Load Requirement
- Time Delays:
  - Auto), Selectable 5, 15, 30 minutes

Coverage
- Major motion – 1000 sq. ft.
- Minor motion – 300 sq. ft.
- Light Level Sensing: 0 to 200 foot-candles
- Operating Environment:
  - Temperature: 32°F – 104°F (0°C – 40°C)
  - Relative Humidity: 20% to 90% non-condensing
- Housing: Durable, injection molded housing. ABS resin that complies with UL94VO.
- 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 1.732” W x 1.9” D (66.5 mm x 44.5 mm x 48.26 mm)

Description
The VNW-D-1001-MV Vacancy Sensing Wall Switch is a Passive Infrared (PIR) and Ultrasonic (US) motion sensing lighting control and conventional wall switch all-in-one, used for energy savings and convenience.

The sensor combines PIR and US technologies to monitor a room for occupancy.

PIR Technology
The sensor’s segmented lens divides the field of view into sensor zones, and detects the changes in temperature that are created when a person, or part of a person as small as a hand, passes into or out of a sensor zone.

US Technology
The sensor produces a low intensity, inaudible sound. It detects occupancy from changes in the acoustic waves caused by motion, such as reaching for a telephone, turning a page in a book, walking into a room, turning in a swivel chair, etc. The sensor does not respond to audible sound.

The VNW-D-1001-MV allays the control of one load with one occupancy 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.

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

The Daylighting feature prevents lights from turning ON, when the room is adequately illuminated by natural light.

Location
When installing the VNW-D-1001-MV 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 VNW-D-1001-MV directly into the hallway where it may detect passers-by.

Installation
The VNW-D-1001-MV can be installed in any standard single gang box. It may be installed in the same manner as an ordinary wall switch.

1. Make sure power is turned OFF at the branch circuit breaker.
2. Wire load as shown in wiring diagrams per applicable voltage requirements. (Use twist-on wire connectors for all connections.)
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 switch dual level wiring using a toggle switch wiring diagram

Wiring Diagram 3- 120/277 VAC single level single circuit three-way wiring diagram

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.

Eaton's Cooper Controls Business
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Peachtree City, Georgia 30269
www.coopercontrol.com
DIP Switch Settings

<table>
<thead>
<tr>
<th>DIP Switch Setting</th>
<th>Description</th>
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</table>
| **Self-Adjust**     | Sensor is shipped in Self-Adjust Mode. This applies to Time Delay, US 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 Green (US) and Red (PIR) indicator LEDs on the front of the sensor, while moving around the room.
| 12 34 56 78       | Power interruption Check incoming voltage and/or wiring |
| 12 34 56 78       | 30 Minute Delay Maximum Time Delay is 30 Minutes. Check DIP Switches to verify DIP Switch settings. If lights do not turn OFF at the set Time Delay, check next step. |
| 12 34 56 78       | Override Make sure sensor is not in Override Mode (DIP Switch 8 up). |
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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 VNW-D-1001-MV. Use only insulated tools to make adjustments.

1. Walk around the room and monitor LEDs. Stand in different parts of the room and wave your hands. LEDs should only turn ON for one second with each motion. (If LEDs do not turn ON, go to Installer Adjustments – Sensitivity Adjustment Section)
2. Stand still three to four feet away from sensor for five seconds. LED should not turn ON. If any LED turns ON, note LED and go to Installer Adjustments – Sensitivity Adjustment Section
3. Stand still three to four feet away from sensor for five seconds. LED should not turn ON. If any LED turns ON, note LED and go to Installer Adjustments – Sensitivity Adjustment Section
4. Walk outside the room and wait 15 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 OFF 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. (Pause 5 seconds between each adjustment)

Self-Adjust

Sensor is shipped in Self-Adjust Mode. This applies to Time Delay, US 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 Green (US) and Red (PIR) indicator LEDs on the front of the sensor, while moving around the room.

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4. Walk outside the room and wait 15 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)
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Troubleshooting

### Issue

<table>
<thead>
<tr>
<th>Issue</th>
<th>Possible Causes</th>
<th>Suggestions</th>
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<tbody>
<tr>
<td>Daylight Feature Enabled</td>
<td>If all lights are required to turn ON adjust daylight potentiometer.</td>
<td></td>
</tr>
<tr>
<td>Power interruption</td>
<td>Check incoming voltage and/or wiring</td>
<td></td>
</tr>
<tr>
<td>ON/OFF Button Disabled</td>
<td>Move DIP Switch 7 down</td>
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If lights will not turn OFF, call Technical Services at 1-800-553-3879

Warranties and Limitation of Liability

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