NeoSwitch Dual Technology Dual Relay Occupancy Sensing Wall Switch

(Ground Required)

The Daylighting feature prevents lights from turning ON, when the room is adequately illuminated by natural light. Walk Through feature maximizes energy savings by not leaving the lights ON after a momentary occupancy. The sensor will switch the lights ON when it detects a person entering the area. If the sensor does not continue to detect motion 20 seconds following the initial activation, it will automatically go up to a shorter 2 minute time delay.

Bathroom Mode – When selected, bathroom mode keeps the second relay ON for an additional 8 minutes, after the first relay has been turned OFF. Combine this with changing the pushbutton to the light/fan graphic and you now have the universally recognized and easy to use bathroom solution.

Relay Swap Option – A common problem in electric wiring is wiring the wrong switch to the wrong load. This can make control of loads confusing to an end user. The Relay Swap option solves the problem by allowing the switch buttons on the face of the unit to be swapped, after the unit is wired and installed.

Coverage

The ONW-D-1001-DMV is designed for offices up to 300 sq. feet.

Location

When installing ONW-D-1001-DMV 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 ONW-D-1001-DMV directly into the hallway where it may detect passers-by.

Installation

The ONW-D-1001-DMV 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 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

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 “SWG.” All installations should be in compliance with the National Electric Code and all state and local codes. NOTE REGARDING COMPACT FLUORESCENT LAMPS: The M4 of some compact fluorescent lamps (CFL) is shortened by frequent automatic or manual switching. Check with CFL and ballast manufacturer to determine the effects of cycling.

1. Wire the ONW-D-1001-DMV as described in the wiring section
2. Mount the ONW-D-1001-DMV in the junction box.

Installation Instructions

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

Wiring Diagram 2: 120/277 VAC dual level dual circuit wiring diagram

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) and Ultrasonic (US)
Electrical Ratings:
- 120 VAC: Incandescent/Tungsten – Max. load: 6.7 amps, 850W, 50/60 Hz
- Fluorescent/Ballast – Max. load: 10 amps, 1200W, 50/60 Hz
Motor Load: ¼ HP @ 125 VAC
for 277 VAC
- Fluorescent/Ballast – Max. load: 9.6 amps, 2700W, 50/60 Hz
Bailast Compatibility: Compatible with magnetic and electronic ballasts
No Minimum Load Requirement

Time Delays:
- Auto), Selectable 5, 15, 30 minutes
- Self-Adjusting, 15 seconds/ test (10 minutes

Housing:
- Durable, injection molded housing.
- Polycarbonate resin complies with UL 94VO.

Operating Environment:
- Temperature: 32°F – 104°F (0°C – 40°C)
- Relative Humidity: 20% to 90% non-condensing

Electrical Ratings:
- 120 VAC: Max. load: 10 amps, 1200W, 50/60 Hz
- 277 VAC:
  - Motor Load: ¼ HP @ 125 VAC
  - Fluorescent/Ballast – Max. load: 6.7 amps, 800W, 50/60 Hz

LED Indicators:
- Red LED indicates PIR detection;
- Green LED indicates Ultrasonic detection.

Location

When installing ONW-D-1001-DMV 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 ONW-D-1001-DMV directly into the hallway where it may detect passers-by.

Coverage

The ONW-D-1001-DMV is designed for offices up to 300 sq. feet.

Product Housing Dimensions:
- 4.195" H x 1.732" W (106.553 mm x 44 mm)
- 2.618" H x 1.752" W x 1.9" D (66.5 mm x 44.5 mm x 48.26 mm)

Installation

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6. Install wall switch plate.
### Installer Adjustments

#### Sensitivity Adjustments

1. **Ultrasonic Sensitivity:**
   - Use a small flathead screwdriver to turn the green potentiometer so that the arrow points UP.

2. **PIR Sensitivity:**
   - Stand in different areas of the room and wave your hands.

3. **Time Delay Adjustments:**
   - Stand still three to four feet away from sensor for five seconds. LED should not turn ON.

   - Green LIGHT turns ON without motion or is constantly ON decreases the US sensitivity by turning green potentiometer clockwise in small increments. Repeat Step 3.

   - Stand still three to four feet away from sensor for five seconds. LED should not turn ON.

   - Green LIGHT turns ON without motion or is constantly ON increases the US sensitivity by turning green potentiometer counter clockwise in small decrements. Repeat Step 3.

1. **Note:** Do not adjust sensitivity higher than necessary.

#### 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.

3. Adjust Ultrasonic sensitivity.

#### Daylighting Adjustments

**The Daylighting feature presents the lights from turning ON when the room is adequately illuminated by natural light. If there is enough light in the room, regardless of occupancy, the sensor will hold the lights OFF. If there is not enough light in the room, the sensor will allow the lights to turn ON when occupied. The Daylighting feature allows the selection of which relay to control via daylighting (dual load models only). The sensor will allow the Daylighting feature to turn the load OFF until the space is vacant if the light level rises above the setpoint and the time delay expires.**

1. Stand in different areas of the room and wave your hands.

2. If the Red LED does not turn ON, check for any obstructions.

3. Stand still three to four feet away from sensor for five seconds. LED should not turn ON.

4. If Red LIGHT turns ON without motion or is constantly ON adjust PIR sensitivity to 50 % by moving DIP switch 5 up.

#### 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 alternating 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.**

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

2. Move DIP Switch 8 up.

#### Warranties and Limitation of Liability

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