**General Information**
- Read all instructions on both sides of this sheet first.
- Install in accordance with all local codes.
- For indoor use only.
- For use with Greengate Switchpacks & Systems Only.
- Do not run any Greengate Low Voltage Wiring in the same conduit as power conductors.

**Specifications**

**Power Requirements:**
- Input: 10-30 VDC from Greengate Switchpack or Greengate system. Maximum current needed is 25mA per sensor.
- Output: Open collector output to switch up to ten Greengate Switchpacks.
- BA5 with isolated Form C Relay (R-M model).
- Isolated Form C Relay Ratings: 1A 30 VDC/VAC.
- Open collector output to switch up to ten Greengate switchpacks.
- BA5 with isolated Form C Relay (R-M model).
- Isolated Form C Relay Ratings: 1A 30 VDC/VAC.

**Operating Environment:**
- Temperature: 32° F – 104° F (0° C – 40° C).
- Relative Humidity: up to 90% non-condensing.
- Voltage Occupancy Sensor

**Coverage**
- The OAC-DT Ceiling Mount Low Voltage Occupancy Sensor is a Passive Infrared (PIR) and Ultrasonic (US) motion sensing lighting control, used for energy savings and convenience. PIR is used to turn the lights ON and then either technology is used to keep the lights ON. When motion is detected, the blue wire is electronically connected to the red wire, energizing the relay in the switchpack to turn on the load. If vacancy is detected, the blue wire is disconnected from the red, causing the relay to open turning OFF the load. The red lead is 10-30 VDC supply, the black lead is common, and the blue is the relay control.

**Location**
- The maximum coverage area may vary somewhat according to room shape and the presence of obstacles. Decrease total coverage area by 15% for “tight” rooms (for example, heavy draperies or heavy carpeting). The sensor must have a clear view of the area to be controlled. The sensor will not “see” through glass. Mounting height should not exceed 12 feet. Optimum mounting height is 8 to 10 feet. Mount the sensor so the grilles face the open portion of the room and are not facing a nearby wall, door, window, or other obstructing object. Avoid pointing into hallways. Mounting at fixture height is most effective. To prevent false activation, the sensor should be mounted away from the air supply duct a minimum of 4 to 6 feet.

**Installation**
- The OAC-DT sensor can be mounted to the ceiling, junction box, or round fixture with raceway.

**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 240-43(B), if the branch circuit breaker is used as the main switch for a fluorescent lighting circuit, the circuit breaker should be marked “SW”. 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.

**Manual or Automatic-On Control of Two Standard Switchpacks**

**Battery Backup**
- Manual Mode Operation: Switches are regulated through the Battery Backup Mode control panel. Lights turn ON and OFF with the Automatic Mode Operation only. Selecting Battery Backup Mode can be done any time the lights are ON. If daylight sensor is enabled and light level is too high, or too low, the sensor will turn the lights ON and OFF. The sensor will turn the lights ON and OFF if it is programmed to do so.

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**Diagram and Illustrations**
- OAC-DT-0501-R Coverage Diagram
- OAC-DT-1000-R Coverage Diagram
- OAC-DT-2000-R Coverage Diagram
- OAC-DT-2000-01 Coverage Diagram
- OAC-DT-0501 Coverage Diagram
- OAC-DT-1000 Coverage Diagram
- OAC-DT-2000 Coverage Diagram

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**Legend**
- Red (15 VDC)
- Black (Common)
- Brown (Switch-Blue Lead Control)
- Blue (Control)
- Yellow (Control - Occupancy and Daylight)
- Orange (Normally Open)
- White (Neutral)
- **Hot**
- **Neutral**
- **Line**
- **Switch-**

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**Model Numbers**
- Model # OAC-DT-0501
- Model # OAC-DT-0501-R
- Model # OAC-DT-1000
- Model # OAC-DT-1000-R
- Model # OAC-DT-2000
- Model # OAC-DT-2000-R

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**Contact**
- Eaton’s Cooper Controls Business
- 203 Cooper Circle
- Peachtree City, Georgia 30269
- www.coopercontrol.com
Daylight Adjustments: (R Model Only 0 to 300-foot candles) If this feature is not selected, leave the light level at maximum (fully clockwise).

- The daylighting feature prevents the lights from turning ON when the room is adequately illuminated by natural light. If there is enough light in the room, 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.

- Full and Half Logic Modes (See DIP Switch legend; in both Full and Half Logic modes, lights connected to the yellow control lead will not turn ON upon occupancy activation, should the ambient light level exceed the preset foot-candle level).

After activation:
- Full Logic Mode - Should the ambient light level exceed the preset foot-candle level, the lights connected to the yellow control lead will turn OFF. The lights will remain OFF, until the ambient light level falls below the set point. Half Logic Mode – The output state of the yellow control lead will not change with ambient light changes, after occupancy activation. If the amount of natural light available rises above the setpoint, the daylight sensor will not turn the lights OFF while occupancy is being detected.

Note: The light level will drop until the ambient light is below the level where no artificial light is revealed. In order for this feature to function, the ambient control lead must be connected.

- With the load ON, put the sensor into Test Mode. To place into Test Mode, toggle DIP Switch 10 out of its current position, wait 3 seconds and then back to its original position.
- 2. Set DIP Switch 10 to Full or Half Logic Mode.
- 3. Set the Light Level to Minimum (Fully CW).
- 4. Leave the room and let the sensor Time-out so lights are OFF. Enter the space and lights should remain OFF.
- 5. Make sure not to block the sensor from the daylight source and adjust the light level potentiometer CW in small increments until the lights are ON. (Pause 5 seconds between each adjustment).
- 6. Once the lights are ON, the load connected to the sensor will not turn OFF while light levels are above the current illumination.

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 Auto is enabled, the sensor will respond to each pair of False-offs without any 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 Switch 1 and 2 down. (If DIP Switch 1 and 2 are already down, toggle DIP Switch 10 out of current position, wait 3 seconds and then back to its original position)

- Automatic Mode

- In Automatic-On Mode, the lights turn ON when a person enters the room. If optional manual low voltage switch settings are used along with Automatic-On Mode, activating the switch will turn ON the load. When the load is turned OFF manually, as long as the sensor continues to detect occupancy the load stays OFF. After the Time Delay expires, the lights stay OFF and the sensor goes back to Automatic-On Mode. For wiring information for the optional manual low voltage switch settings, please see the wiring section of the installation instructions.

- Manaul Mode (-R Model Only)

- In Manual-On Mode, the optional manual low voltage switch settings are required to turn the load(s) ON. Once activated the sensor will maintain the lights ON until motion ceases and the Time Delay expires. While the room is occupied the BAC relay remains active. After the Time Delay expires, the lights will automatically be turned OFF and the switch settings must be used to turn ON the load(s) ON unless there is motion detected within the 10 second re-trigger period.

Lighting Sweep Option

- If selected, this DIP Switch option forces an initial 60 second delay upon "power up" to prevent false activation in buildings with computer control systems.

- Move DIP Switch 9 up. If not selected (Dip Switch 9 down), upon initial "power up" or restoration of power the sensor will force the lights ON no matter the state of occupancy.

Warranty and Limitation of Liability

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