

Project		Catalog #		Type	
Prepared by		Notes		Date	



Greengate

OAC-DT-MicroSet Dual Tech

Low Voltage Ceiling Sensor

Typical Applications

Classrooms • Conference Rooms • Office Spaces • Common Areas • Computer Rooms • Break Rooms • Hallways • Other Indoor Office Spaces

Interactive Menu

- Order Information page 2
- Additional Resources page 2
- Wiring Diagrams page 3
- Connected Systems page 4
- Product Warranty

Product Certification



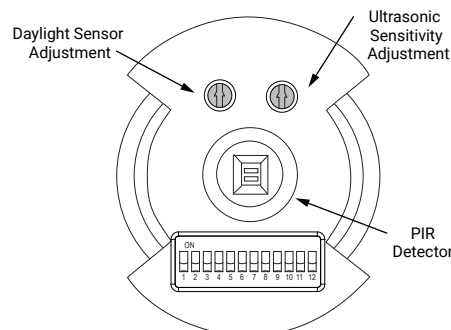
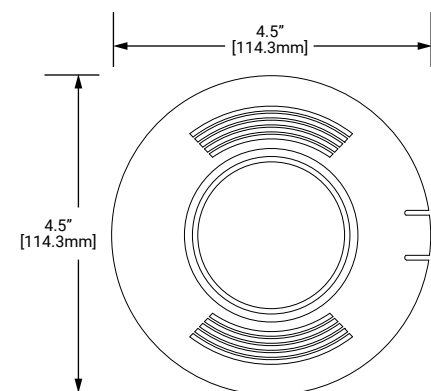
Product Features



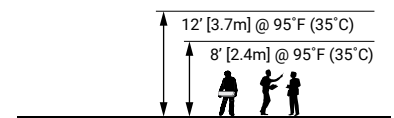
Top Product Features

- MicroSet self-adjusting Time Delay and sensitivity
- Optional built-in light level sensor
- Optional BAS/HVAC isolated relay
- Products tested to NEMA WD 7 - 2011 Occupancy Motion Sensors Standard
- Selectable Walk-Through Mode
- Dual Relay control

Dimensional and Mounting Details



Scale or Mounting Height



[additional product diagrams](#)

Order Information

SAMPLE ORDER NUMBER: **OAC-DT-2000-R, OAC-DT-2000, OAC-DT-1000-R, OAC-DT-1000, OAC-DT0501-R, OAC-DT-0501**

One single gang wallplate included

Catalog Number	Maximum Room Size	Field of View	Frequency	Features
OAC-DT-2000-R	2,000 sq. ft.	Two Way (360°)	30 kHz	w/ BAS Relay & Daylight Sensor
OAC-DT-2000	2,000 sq. ft.	Two Way (360°)	32 kHz	
OAC-DT-1000-R	1,000 sq. ft.	Two Way (360°)	32 kHz	w/ BAS Relay & Daylight Sensor
OAC-DT-1000	1,000 sq. ft.	Two Way (360°)	32 kHz	
OAC-DT-0501-R	500 sq. ft.	One Way (180°)	40 kHz	w/ BAS Relay & Daylight Sensor
OAC-DT-0501	500 sq. ft.	One Way (180°)	40 kHz	

Product Specifications

Technology

- Passive Infrared (PIR) and Ultrasonic (US)

Mechanical

Size: 1.42" H x 4.5" W (36.068mm x 114.3mm)

Mounting: Mounts directly to ceiling tile, to a 4" square box and round mud ring or to 4" octagon box

Environment:

- Operating temperature:** 32°F to 104°F (0°C to 40°C)
- Relative humidity operating:** 20% to 90% non-condensing
- For indoor use only

Housing: Durable, injection molded housing. Polycarbonate resin complies with UL 94V-0

Electrical

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
 - BAS with Isolated Form C Relay in (-R) model
 - Isolated Form C Relay Ratings: 1A 30 VDC/VAC

Hardware Specifications

LED Indicators:

- Red LED for PIR detection; Green LED for Ultrasonic detection

Controls and Performance

Time delays:

- Self-adjustable, 15 seconds/test (10 minutes Auto), or Selectable 5, 15, 30 minutes, or Zero Time Delay

Coverage:

- 500, 1000, and 2000 sq. ft.

Light sensing level (-R Models):

- 0 to 300 foot candles

Standards/Ratings

- cULus Listed - Energy Management Equipment (UL916)
- FCC Compliant
- RoHS Compliant

Warranty

Five year warranty standard

Overview

The Dual Technology sensor's combination of Ultrasonic and Passive Infrared technologies offers the most complete sensing equipment available today. MicroSet self-adjusting Dual Technology sensors drastically simplify and reduce a contractor's installation and adjustment time period.

The MicroSet self-adjusting technology continuously monitors multiple sub-frequencies in the event that if a continuous Doppler shift occurs, such as those created by airflow from an air duct, the sensor will identify the noise as continuous and then block it out of view at a select sub-frequency. It will continue to monitor other sub-frequencies for human motion. This avoids false-activation, while still maintaining the high level of sensitivity that is necessary for sensing minor motion in a changing environment. Separate concurrent time delays for both Passive Infrared and Ultrasonic technologies avoid false activations or deactivations. In Automatic On Mode, the lights turn ON when a person enters the room. In Manual On Mode (-R model only), the lights are turned ON by activating a momentary switch (model # GMDS-*) that is connected to the sensor. When enabled, the daylighting feature (-R models only) prevents lights from turning ON when the room is adequately illuminated by natural light.

Wiring Diagrams

OAC-DT-2000-R Model

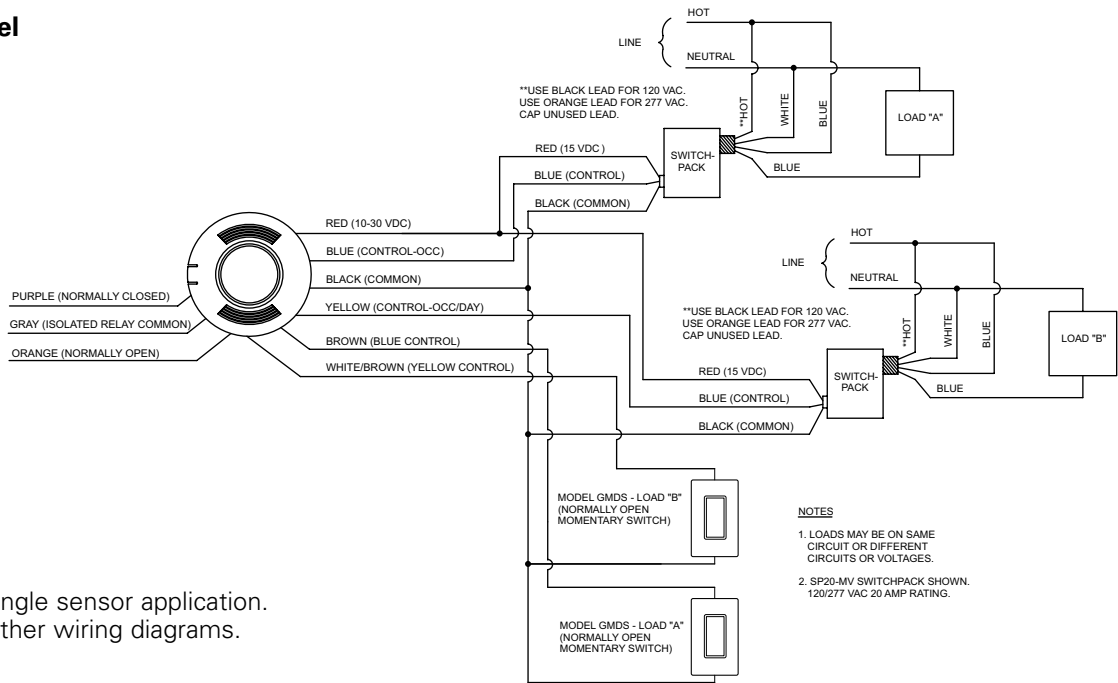
OAC AND VAC MANUAL MODE OPERATION:

- SWITCHES ARE REQUIRED TO TURN CORRESPONDING LOADS ON.
- LOADS TURN OFF WHEN SENSOR TIMES OUT OR WITH SWITCHES.
- IF DAYLIGHT SENSOR IS ENABLED AND LIGHT LEVEL IS ABOVE SETPOINT, SWITCHPACK CONNECTED TO YELLOW LEAD WILL NOT TURN LOAD ON.

OAC AUTOMATIC MODE OPERATION:

- WHEN SENSOR ACTIVATES, BOTH LOADS TURN ON.
- SWITCHES CAN BE USED TO TURN LOADS ON OR OFF.
- IF DAYLIGHT SENSOR IS ENABLED AND LIGHT LEVEL IS ABOVE SETPOINT, SWITCHPACK CONNECTED TO YELLOW LEAD WILL NOT TURN LOAD ON.

RECOMMENDED WIRE:
18-3 AWG STRANDED WIRE SHIELDED OR NON/SHIELDED



*Wiring diagram for single sensor application.
Visit our website for other wiring diagrams.

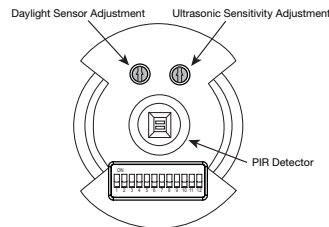
- NOTES**
- LOADS MAY BE ON SAME CIRCUIT OR DIFFERENT CIRCUITS OR VOLTAGES.
 - SP20-MV SWITCHPACK SHOWN. 120/277 VAC 20 AMP RATING.

Controls

DIP Switch Legend

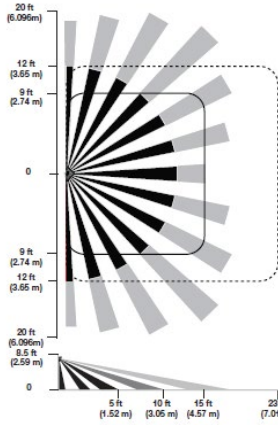
DIP Switch	Time Delay		Activation		PIR Sensitivity	Walk-Through Mode	LEDs	Override	Sweep	Full/Half Logic	HVAC/Tracking	Zero Time Delay
	1	2	Relay 1	Relay 2								
Auto*	▼	▼	Auto ▼	Auto ▼	Full ▼	Disable ▼	Enable ▼	Disable ▼	Disable ▼	Full ▼	Disable ▼	Disable ▼
5 Minutes	▼	▲	Manual ▲	Manual ▲	50% ▲	Enable ▼	Disable ▲	Enable ▼	Enable ▲	Half ▼	Enable ▲	Enable ▲
15 Minutes	▲	▼	(-R model only) (-R model only)							(-R model only)		(-R model only)
30 Minutes	▲	▲										
*Self-Adjusts to 10 min. user mode												

Default =

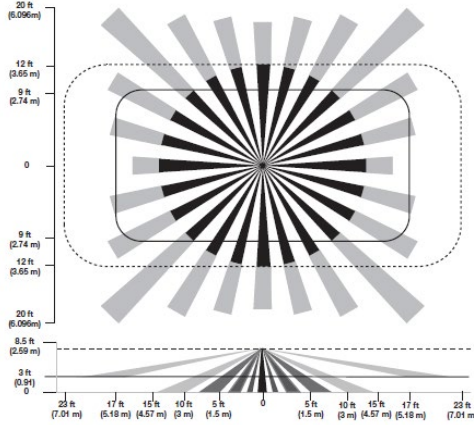


Field of View

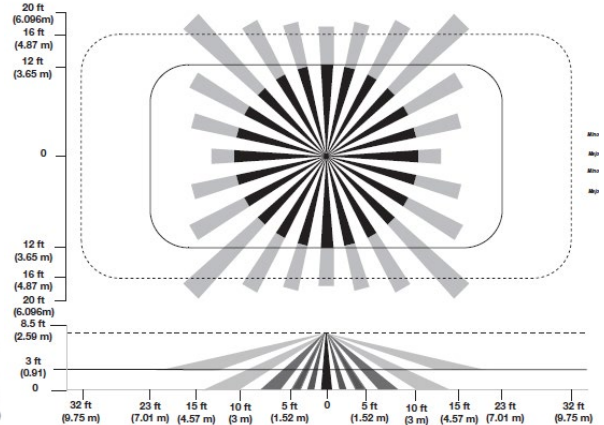
OAC-DT-0501-R
500 sq. ft.







OAC-DT-1000-R
1,000 sq. ft.



OAC-DT-2000-R
2,000 sq. ft.



- Minor Motion, IR 
- Major Motion, IR 
- Minor Motion, Ultrasonic 
- Major Motion, Ultrasonic 

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

The NEMA WD 7 Guide and robotic method were utilized to verify coverage patterns.

Ceiling Height = 8.5 ft

 **Control Systems**
• Greengate