Greengate

OAC-P-MicroSet PIR

Low Voltage Ceiling Sensor

Typical Applications

Conference Rooms • Open Office Spaces • Small Private Offices • Common Areas • Computer Rooms • Break Rooms • Restrooms (Non Partitioned) • Utility Closets

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Product Certification

c(UL)us RoHS COMPLIANT FC
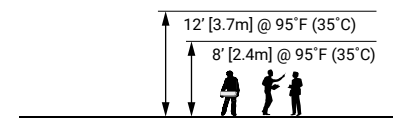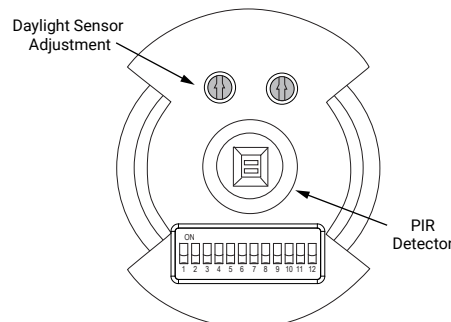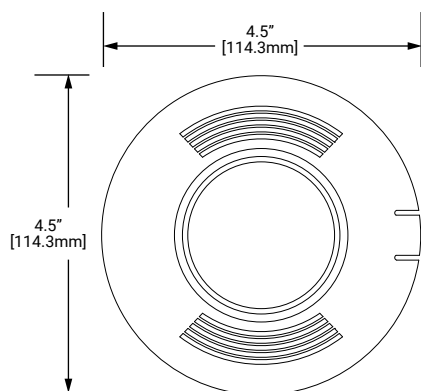
Product Features

PIR Activated   Self-Adjusting

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

4.5"
[114.3mm]

4.5"
[114.3mm]

Daylight Sensor
Adjustment

PIR
Detector

ON
1 2 3 4 5 6 7 8 9 10 11 12

Scale or Mounting Height

12' [3.7m] @ 95°F (35°C)
8' [2.4m] @ 95°F (35°C)

additional
product diagrams

COOPER
Lighting Solutions

Order Information

Catalog Number

Catalog Number	Maximum Room Size	Field of View	Features
OAC-P-0500-R	500 sq. ft.	360°	w/ BAS Relay & Daylight Sensor
OAC-P-0500	500 sq. ft.	360°	
OAC-P-1500-R	1,500 sq. ft.	360°	w/ BAS Relay & Daylight Sensor
OAC-P-1500	1,500 sq. ft.	360°	

Product Specifications

Technology
- Passive Infrared (PIR)

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 10mA 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

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 and 1,500 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 MicroSet Passive Infrared Low Voltage Occupancy Sensing Ceiling Sensor is a motion sensing lighting control that is used for energy savings and convenience.

The sensor is designed to detect motion from a heat-emitting source (such as a person entering a room) within its field-of-view and automatically switch lights ON. These sensors have multi-segmented lenses. For units to sense motion, the person must cross between two segments. The distance between segments increases the farther you are from the sensor, so motion has to be larger the farther you are from the unit. PIR sensors are considered line-of sight sensors, meaning that the sensor must be able to have a direct line-of-sight to the person making the motion. The sensor includes self-adaptive technology that continuously self-adjusts sensitivity and Time Delay in real-time, maximizing the potential energy savings that are available in the particular application. 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. The MicroSet Passive Infrared Low Voltage Ceiling Sensor has an ambient light level sensor. When enabled, the daylighting feature (-R units only) prevents lights from turning ON when the room is adequately illuminated by natural light.
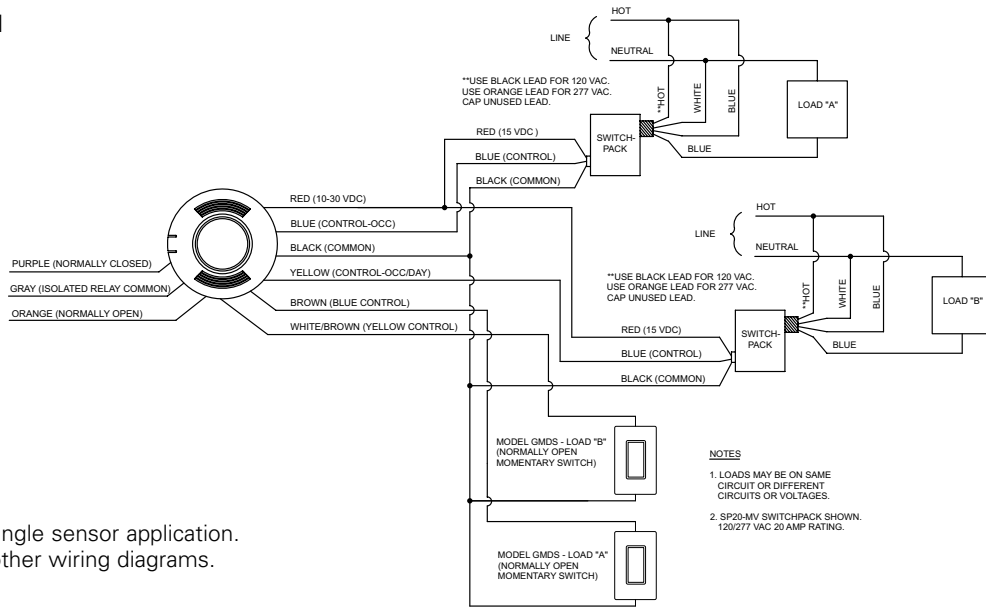
Wiring Diagrams

OAC-P-1500-R Model

OAC AND VAC MANUAL MODE OPERATION:

1. SWITCHES ARE REQUIRED TO TURN CORRESPONDING LOADS ON.

2. LOADS TURN OFF WHEN SENSOR TIMES OUT OR WITH SWITCHES.

3. 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:

1. WHEN SENSOR ACTIVATES, BOTH LOADS TURN ON.

2. SWITCHES CAN BE USED TO TURN LOADS ON OR OFF.

3. 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.
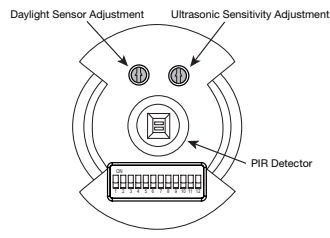Visit our website for other wiring diagrams.

Sensor leads:
- PURPLE (NORMALLY CLOSED)
- GRAY (ISOLATED RELAY COMMON)
- ORANGE (NORMALLY OPEN)
- RED (10-30 VDC)
- BLUE (CONTROL-OCC)
- BLACK (COMMON)
- YELLOW (CONTROL-OCC/DAY)
- BROWN (BLUE CONTROL)
- WHITE/BROWN (YELLOW CONTROL)

Top switchpack:
- HOT / LINE / NEUTRAL
- **USE BLACK LEAD FOR 120 VAC. USE ORANGE LEAD FOR 277 VAC. CAP UNUSED LEAD.
- RED (15 VDC)
- BLUE (CONTROL)
- BLACK (COMMON)
- SWITCH-PACK — **HOT, WHITE, BLUE — LOAD "A" — BLUE

Bottom switchpack:
- HOT / LINE / NEUTRAL
- **USE BLACK LEAD FOR 120 VAC. USE ORANGE LEAD FOR 277 VAC. CAP UNUSED LEAD.
- RED (15 VDC)
- BLUE (CONTROL)
- BLACK (COMMON)
- SWITCH-PACK — **HOT, WHITE, BLUE — LOAD "B" — BLUE

MODEL GMDS - LOAD "B" (NORMALLY OPEN MOMENTARY SWITCH)

MODEL GMDS - LOAD "A" (NORMALLY OPEN MOMENTARY SWITCH)

NOTES

1. LOADS MAY BE ON SAME CIRCUIT OR DIFFERENT CIRCUITS OR VOLTAGES.

2. SP20-MV SWITCHPACK SHOWN. 120/277 VAC 20 AMP RATING.

Controls

DIP Switch Legend

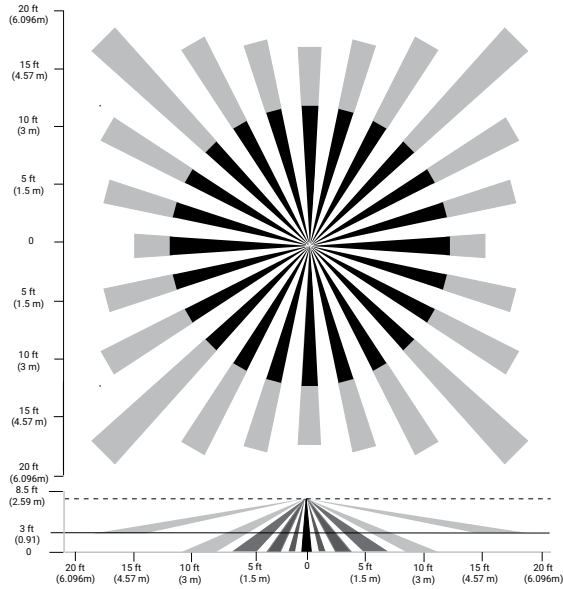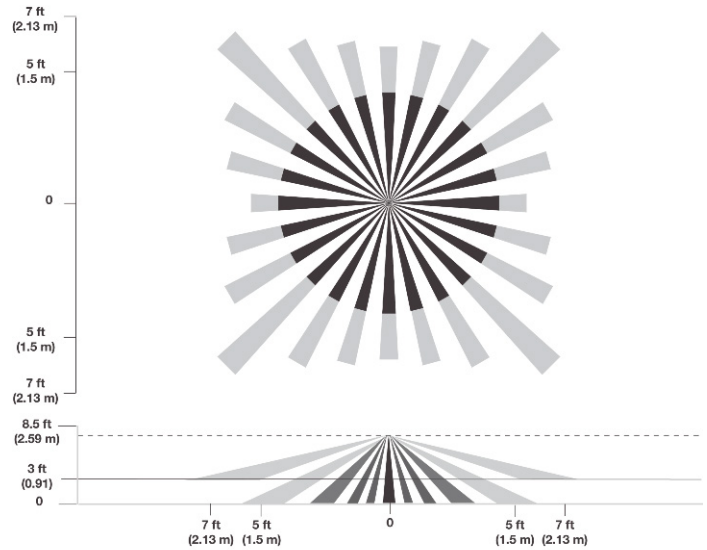|	Time Delay		Not Used		PIR Sensitivity	Walk-Through Mode	LEDs	Override	Not Used	Daylighting	Bathroom Mode	Relay Swap
DIP Switch	1	2	3	4	5	6	7	8	9	10	11	12
Auto*	▼	▼			Full ▼	Disable ▼	Enable ▼	Disable ▼		**Relay 2** ▼	Disable ▼	Disable ▼
5 Minutes	▼	▲			50% ▲	Enable ▲	Disable ▲	Enable ▲		**Relay 1 & 2** ▲	Enable ▲	Enable ▲
15 Minutes	▲	▼										
30 Minutes	▲	▲										
										(DMV model only)	(DMV model only)	(DMV model only)

*Self-Adjusts to 10 min. user mode

Default =

- Daylight Sensor Adjustment
- Ultrasonic Sensitivity Adjustment
- PIR Detector

Field of View

OAC-P-1500-R
1500 sq. ft.

Recommended Mounting Height: 8 to 12 ft

OAC-P-0500-R
500 sq. ft.

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

Minor Motion, IR

Major Motion, IR

⚲ Control Systems
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