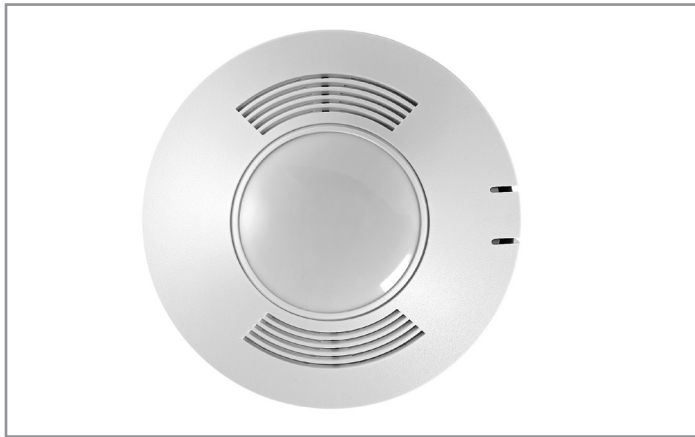| Project		Catalog #		Type	
Prepared by		Notes		Date	

Greengate

VAC-P-MicroSet PIR

Low Voltage Vacancy Ceiling Sensor

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

Interactive Menu

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

Product Certification

c(UL)us   RoHS COMPLIANT   FC

Product Features

PIR Activated   Self-Adjusting

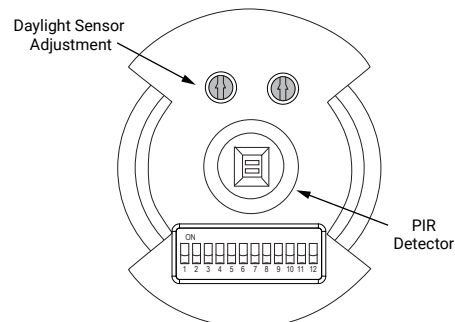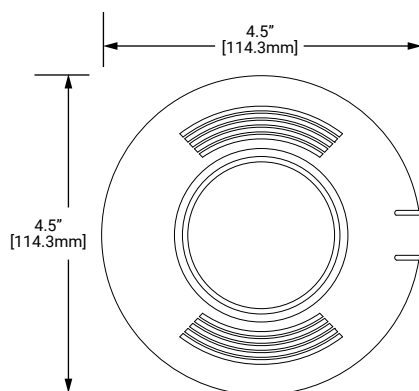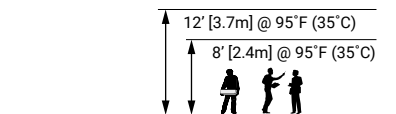## Top Product Features

- 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
- Requires Manual On for activation

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**

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Order Information

Catalog Number

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

Optional Accessory Components

Catalog Number

Catalog Number	Description
GMDS-W	Low Voltage Manual ON Switch(es)

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 Vacancy Ceiling Sensor increases energy savings by requiring a Manual On input to turn on the lighting.

The Passive Infrared (PIR) sensor monitors space occupancy to deliver maximum energy savings. 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. 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 prevents lights from turning ON when the room is adequately illuminated by natural light. 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.

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Lighting Solutions

Wiring Diagrams

VAC-P-1500-R Model

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
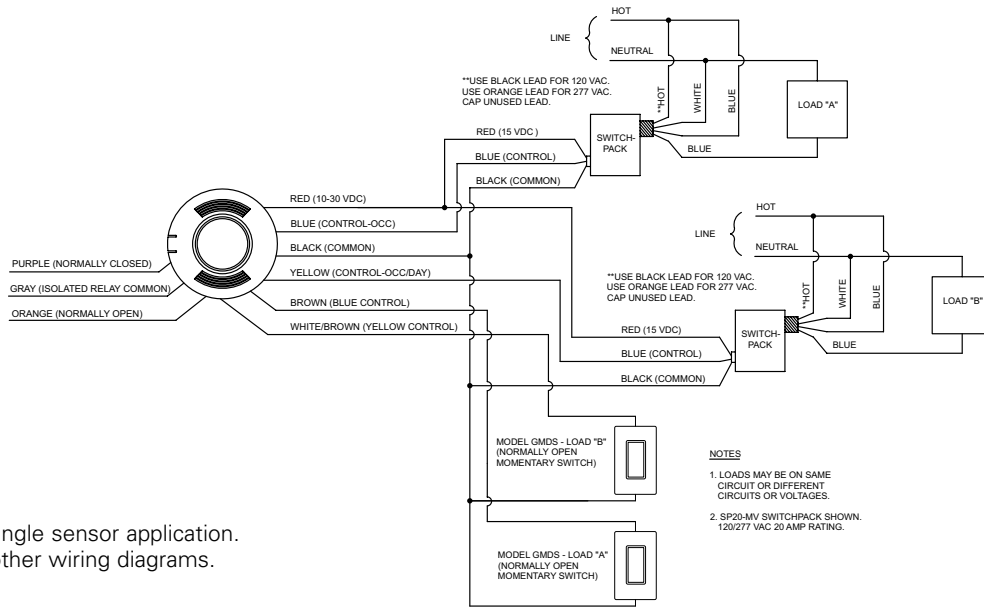
**HOT / WHITE / BLUE

LOAD "A"

BLUE

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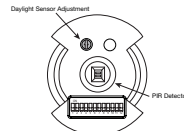18-3 AWG STRANDED WIRE SHIELDED OR NON/SHIELDED

RED (10-30 VDC)

BLUE (CONTROL-OCC)

BLACK (COMMON)

YELLOW (CONTROL-OCC/DAY)

BROWN (BLUE CONTROL)

WHITE/BROWN (YELLOW CONTROL)

PURPLE (NORMALLY CLOSED)

GRAY (ISOLATED RELAY COMMON)

ORANGE (NORMALLY OPEN)

HOT

LINE

NEUTRAL

**USE BLACK LEAD FOR 120 VAC.
USE ORANGE LEAD FOR 277 VAC.
CAP UNUSED LEAD.

**HOT / WHITE / BLUE

LOAD "B"

RED (15 VDC)

BLUE (CONTROL)

BLACK (COMMON)

SWITCH-PACK

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.

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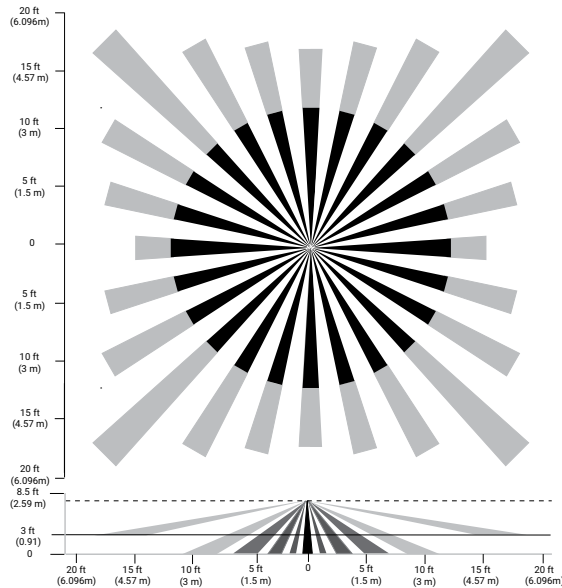Visit our website for other wiring diagrams.*

Controls

DIP Switch Legend

	Time Delay		Not Used		PIR Sensitivity	Not Used	LEDs		Override	Sweep	Full/Half Logic	HVAC/Tracking	Zero Time Delay
DIP Switch	1	2	3	4	5	6	7	8	9		10	11	12
Auto*	▼	▼			Full ▼		Enable ▼	Disable ▼	Disable ▼		Full ▼	Disable ▼	Disable ▼
5 Minutes	▼	▲			50% ▲		Disable ▲	Enable ▲	Enable ▲		Half ▲	Enable ▲	Enable ▲
15 Minutes	▲	▼											
30 Minutes	▲	▲									(–R model only)	(–R model only)	

Self-Adjusts to 10 min. user mode

Default =

Daylight Sensor Adjustment

PIR Detector

Field of View

VAC-P-1500-R
1500 sq. ft.

Recommended Mounting Height: 8 to 12 ft

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

Minor Motion, IR
Major Motion, IR
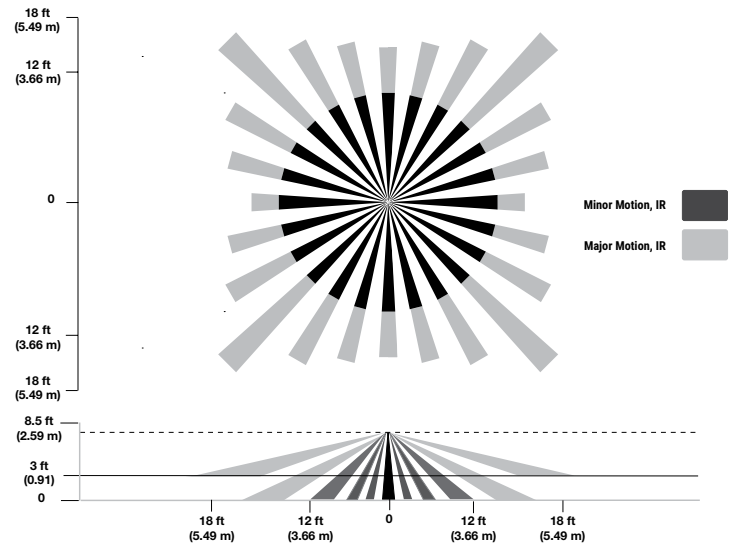
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