Technical Data

Effective November 5, 2014

Greengate

VAC-DT – MicroSet Dual Tech Low Voltage Vacancy Ceiling Sensor

Catalog#	Prepared by
Project	Date
Comments	Type

PIR Activated | Ultrasonic Activated | MicroSet Self-Adjusting

Overview

The MicroSet Dual Technology Low Voltage Vacancy Ceiling Sensor increases energy savings by requiring a Manual On input to turn ON the lighting.

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

COOPER Lighting Solutions

Specifications

Technology	Passive Infrared (PIR) and Ultrasonic (US)
Power Requirements	120 to 347 VAC, 50/60 Hz - Neutral Required
	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
Time Delays	Self-adjustable, 15 seconds/test (10 min. Auto), or Selectable 5, 15, 30 minutes, or Zero Time Delay
Coverage	500, 1000 and 2000 sq. ft.
Light Level Sensing (-R Models)	0 to 300 foot-candles
Operating Environment	Temperature: 32°F - 104°F (0°C - 40°C)
	Relative humidity: 20% to 90%, non-condensing
	For indoor use only
Housing	Durable, injection molded housing. Polycarbonate resin complies with UL 94V-0
Size	1.42"H x 4.5"W (36.068mm x 114.3mm)
Mounting	Mounts directly to a 4" square box with a round mud ring or a 4" octagon box
LED Indicators	Red LED for PIR detection; Green LED for Ultrasonic detection
Standards	FCC Compliant cULus Listed RoHS Compliant

Description/Operation

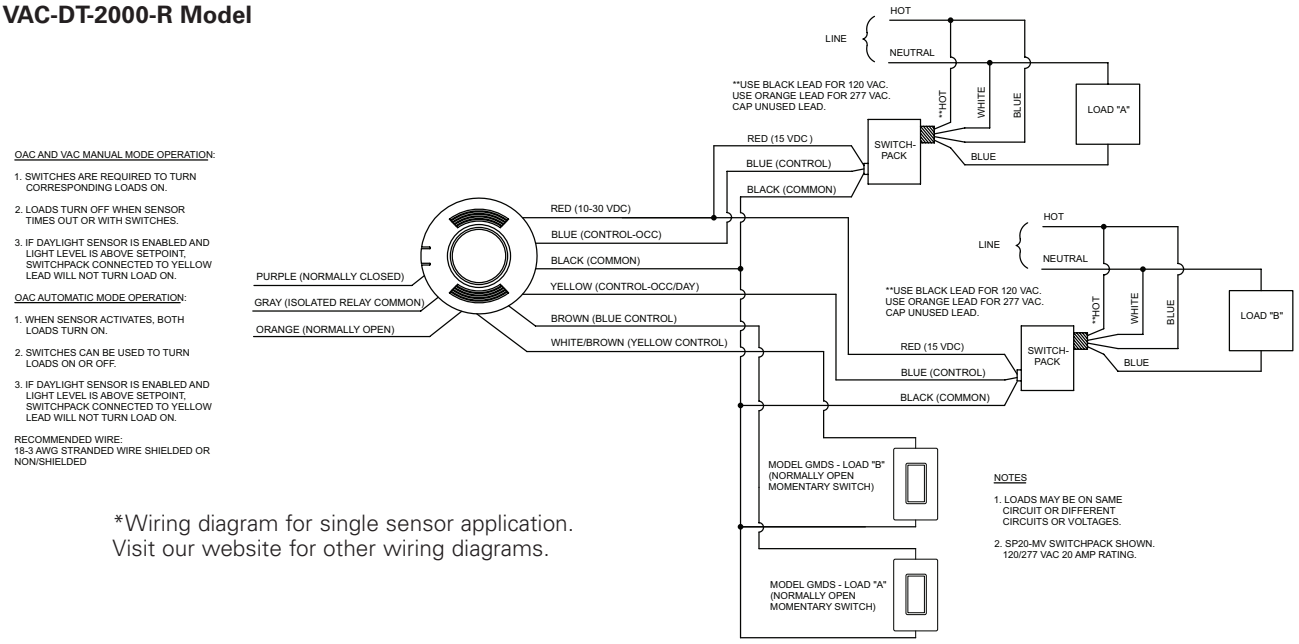
The Dual Technology sensor's combination of Ultrasonic and Passive Infrared technologies offers the most complete sensing equipment available today. This pairing helps eliminate false deactivations for additional energy savings. The MicroSet self-adjusting technology continuously monitors multiple sub-frequencies 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. The lights are turned ON by activating a momentary switch (model # GMDS-*) that is connected to the sensor. When enabled, the Daylighting feature prevents lights from turning ON when the room is adequately illuminated by natural light.

Applications

- Classrooms
- Conference Rooms
- Office Spaces
- Common Areas
- Computer Rooms
- Break Rooms
- Other Indoor
- Office Spaces

Wiring Diagrams

VAC-DT-2000-R Model



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

Coverage

VAC-DT-0501-R

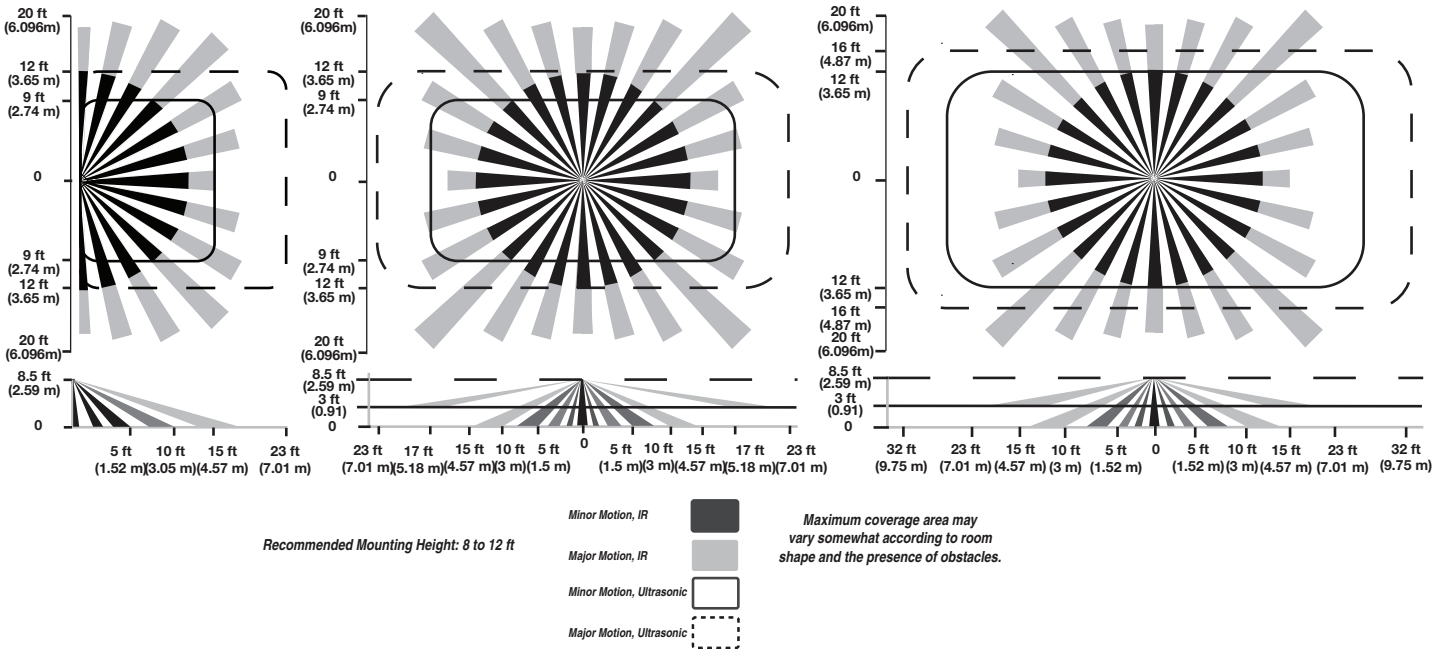
500 sq. ft.

VAC-DT-1000-R

1,000 sq. ft.

VAC-DT-2000-R

2,000 sq. ft.



Recommended Mounting Height: 8 to 12 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.

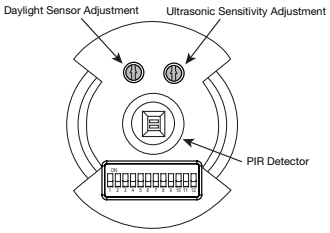
Controls

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	▲	▼								(-R model only)	(-R model only)	
30 Minutes	▲	▲										

**Self-Adjusts to 10 min. user mode*

Default =



Ordering

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

Accessory Components

Suggested Low Voltage Manual ON Switch(es)
GMDS-W

Cooper Lighting Solutions
1121 Highway 74 South
Peachtree City, GA 30269
P:770-486-4800
www.cooperlighting.com

Printed in USA
Publication No. ACC141011
November 5, 2014