OAC-DT – MicroSet Dual Tech Line Voltage Ceiling Sensor

Catalog#	Prepared by
Project	Date
Comments	Type

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.

Features

- MicroSet self-adjusting time delay and sensitivity
- Built-in light level sensor
- Units available for control of single or two separate loads
- Products tested to NEMA WD 7 - 2011 Occupancy Motion Sensors Standard
- LED Rated

PIR
Activated

Ultrasonic
Activated

AUTO
MicroSet
Self-Adjusting

California
Title 20
Compliant

COOPER
Lighting Solutions

Specifications

Technology	Passive Infrared (PIR) and Ultrasonic (US)
Power Requirements	120 to 347 VAC, 50/60 Hz - Neutral Required
	120 VAC
	Incandescent/Tungsten - 0 to 800W, 50/60 Hz
	Fluorescent/Ballast - 0 to 1200W, 50/60 Hz
	Electronic Ballast (LED) 3A
	Motor Load: ¼ HP @ 125 VAC
	230 VAC
	Fluorescent/Ballast - 0 to 1200W, 50/60 Hz
	Electronic Ballast (LED) 3A
	277 VAC
	Fluorescent/Ballast - 0 to 2700W, 50/60 Hz
	Electronic Ballast (LED) 3A
	347 VAC
	Fluorescent/Ballast - 0 to 1500W, 50/60 Hz
	Electronic Ballast (LED) 3A
Time Delays	Self-adjustable, 15 seconds/test (10 minutes Auto), or Selectable 5, 15, 30 minutes
Coverage	2000 sq. ft.
Light Level Sensing	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 ceiling tile, to a 4" square box and round mud ring or to 4" octagon box
LED Indicators	Red LED for PIR detection; Green LED for Ultrasonic detection
Standards	FCC Compliant cULus Listed RoHS Compliant c(UL)us RoHS

Description/Operation

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. When enabled, the daylighting feature prevents lights from turning ON when the room is adequately illuminated by natural light.
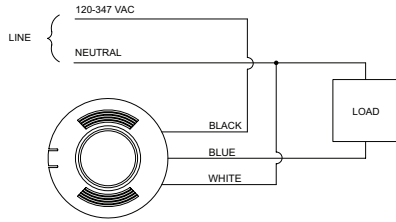
Applications

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

Wiring Diagrams

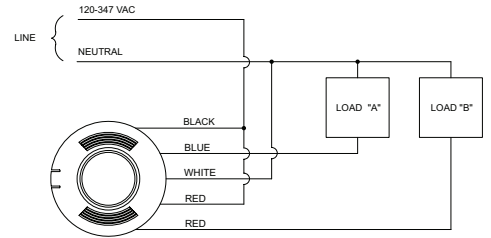### Single Relay

AUTOMATIC MODE OPERATION:

1. WHEN SENSOR ACTIVATES LOAD TURNS ON.

2. LOAD TURNS OFF WHEN SENSOR TIMES OUT.

120-347 VAC

LINE

NEUTRAL

BLACK

BLUE

WHITE

LOAD

Dual Relay

AUTOMATIC MODE OPERATION:

1. WHEN SENSOR ACTIVATES, BOTH LOADS TURN ON.

2. LOADS TURN OFF WHEN SENSOR TIMES OUT.

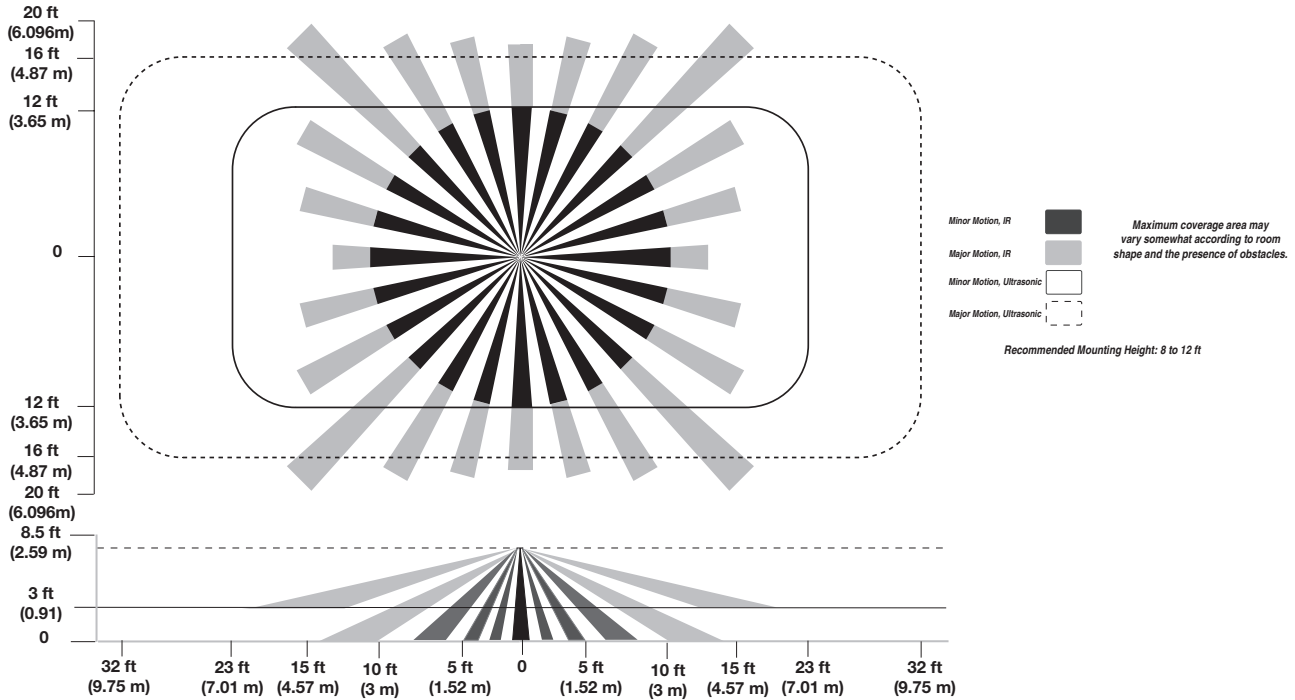120-347 VAC

LINE

NEUTRAL

BLACK

BLUE

WHITE

RED

RED

LOAD "A"

LOAD "B"

RED LEADS ARE NON-POLARITY SENSITIVE.

Coverage

OAC-DT-2000-MV/DMV
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.

Recommended Mounting Height: 8 to 12 ft

20 ft (6.096m)
16 ft (4.87 m)
12 ft (3.65 m)
0
12 ft (3.65 m)
16 ft (4.87 m)
20 ft (6.096m)
8.5 ft (2.59 m)
3 ft (0.91 m)
0

32 ft (9.75 m)   23 ft (7.01 m)   15 ft (4.57 m)   10 ft (3 m)   5 ft (1.52 m)   0   5 ft (1.52 m)   10 ft (3 m)   15 ft (4.57 m)   23 ft (7.01 m)   32 ft (9.75 m)

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
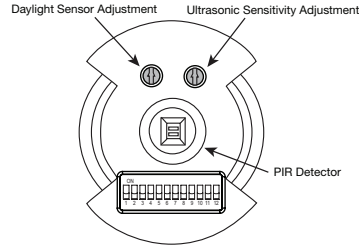
Ordering

Catalog #	Maximum Room Size	Field of View	Freqency	Features
OAC-DT-2000-MV	2,000 sq. ft.	Two Way (360°)	32 kHz	w/ Daylight Sensor
OAC-DT-2000-DMV	2,000 sq. ft.	Two Way (360°)	32 kHz	Dual Relay w/ Daylight Sensor

Specifications and
dimensions subject to
change without notice.

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