

OAC-U, MicroSet Ultrasonic Ceiling Sensor Low Voltage



Ultrasonic
Activated



MicroSet
Self-Adjusting



California
Title 24
Compliant

- **MicroSet self-adjusting Time Delay and sensitivity**
- **Optional built-in light level sensor**
- **Optional BAS/HVAC isolated relay**
- **NEMA WD 7 Standard robotic method utilized to verify coverage patterns**
- **Selectable Walk Through Mode**

Specifications:

Technology: Passive Infrared (PIR) and Ultrasonic (US)

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.

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. (56 ft. x 16 ft. corridor)

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 94V0.

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

LED lamp: Green LED for Ultrasonic

Warranty: Five year

FCC Compliant

cULus Listed

RoHS Compliant  **RoHS**

| | |
|-------------|------|
| Catalog # | Type |
| Project | |
| Comments | |
| Prepared by | Date |



Overview

The MicroSet Ultrasonic Low Voltage Occupancy Sensing Ceiling Sensor is a motion sensing lighting control that is used for energy savings and convenience.

Technology

The ultrasonic sensor uses the Doppler principle. It produces a low intensity, inaudible sound and detects changes in sound waves caused by motion, such as walking into the room, reaching for the telephone, or turning in a chair. They are volumetric in nature and therefore not line-of-sight dependant. Since they fill the space with these sound waves, they are excellent in bathrooms with stalls, enclosed hallways, or other oddly shaped rooms. In addition, they are much more sensitive to smaller motions. 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 Ultrasonic Low Voltage Ceiling Sensor has an ambient light level sensor. When enabled, the daylighting feature (-R models only) prevents lights from turning ON when the room is adequately illuminated by natural light.

Applications

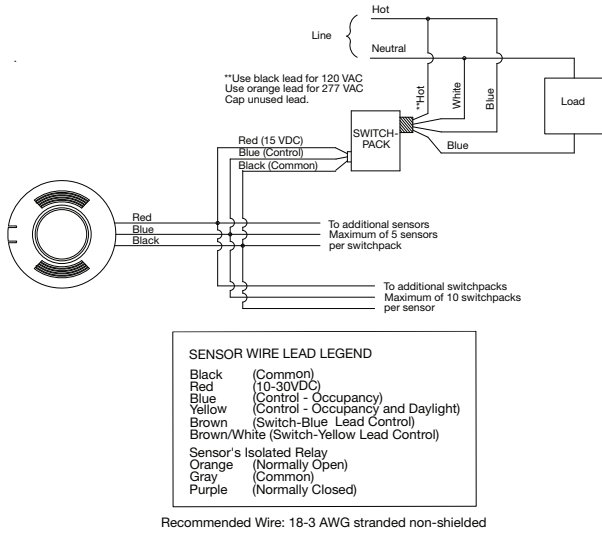
| | |
|-----------------------------|-----------------------------|
| conference rooms | restrooms (non partitioned) |
| open office areas | hallways |
| restrooms (with partitions) | other indoor office spaces |

Ordering

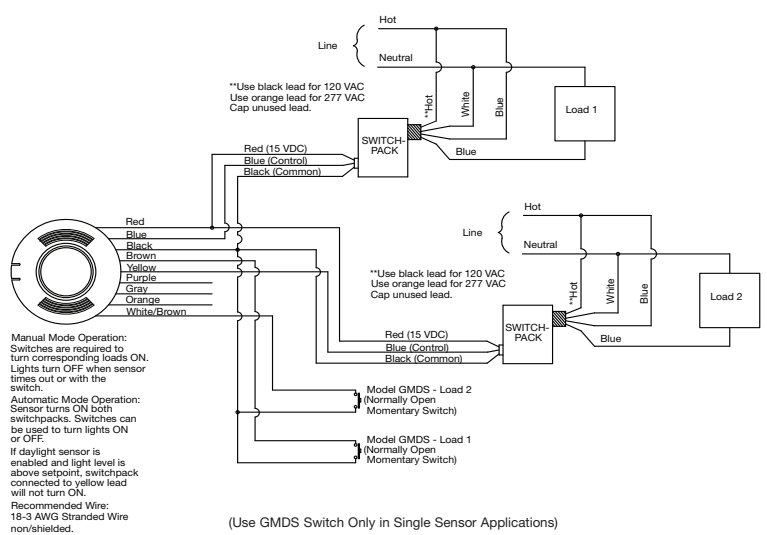
| Catalog # | Recommended Room Size | Field of View | Frequency | Features |
|--------------|--|----------------|-----------|-------------------------------|
| OAC-U-2000-R | 2,000 sq.ft. (56 ft. x 16 ft. corridor) | Two Way (360°) | 32 kHz | w/BAS Relay & Daylight Sensor |
| OAC-U-2000 | 2,000 sq.ft. (56 ft. x 16 ft. corridor) | Two Way (360°) | 32 kHz | |
| OAC-U-1000-R | 1,000 sq.ft. | Two Way (360°) | 32 kHz | w/BAS Relay & Daylight Sensor |
| OAC-U-1000 | 1,000 sq.ft. | Two Way (360°) | 32 kHz | |
| OAC-U-0501-R | 500 sq.ft. | One Way (180°) | 40 kHz | w/BAS Relay & Daylight Sensor |
| OAC-U-0501 | 500 sq.ft. | One Way (180°) | 40 kHz | |

OAC-U, MicroSet Ultrasonic Low Voltage

One Sensor, One Switchpack

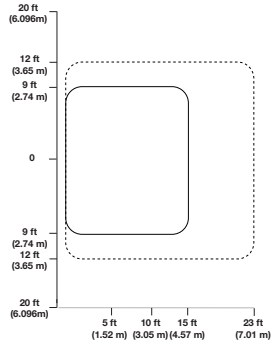


Manual or Automatic-On Control of Two Standard Switchpacks

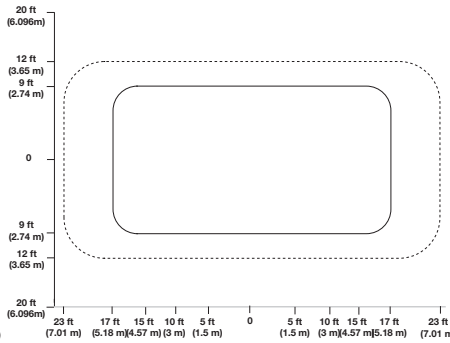


Coverage

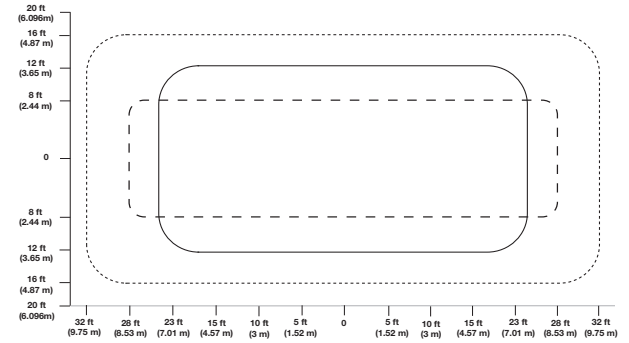
OAC-U-0501-R
500 sq. ft.



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



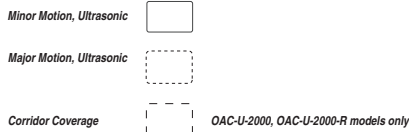
OAC-U-2000-R
2,000 sq. ft.



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

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

Recommended Mounting Height 8 to 12 feet



Controls

DIP Switch Legend

| DIP Switch | Time Delay | | Activation | | Not Used | Walk-Through Mode | | LEDs | Override | Sweep | Full/Half Logic | HVAC/Tracking | Zero Time Delay |
|------------|------------|---|-----------------|----------|----------|-------------------|-----------|-----------|-----------|-----------------|-----------------|-----------------|-----------------|
| | 1 | 2 | Relay 1 | Relay 2 | | 3 | 4 | | | | | | |
| Auto* | ▲ | ▲ | Auto ▼ | Auto ▼ | | Disable ▼ | Enable ▲ | Disable ▼ | Disable ▼ | Disable ▼ | Full ▼ | Disable ▼ | Disable ▼ |
| 5 Minutes | ▼ | ▼ | Manual ▲ | Manual ▲ | | Enable ▲ | Disable ▼ | Enable ▲ | Enable ▲ | Enable ▲ | Half ▼ | Enable ▲ | Enable ▲ |
| 15 Minutes | ▲ | ▲ | (-R model only) | | | | | | | (-R model only) | | (-R model only) | |
| 30 Minutes | ▲ | ▲ | | | | | | | | | | | |

*Self-Adjusts to 10 min. user mode

Default =

Daylight Sensor Adjustment Ultrasonic Sensitivity Adjustment

