Greengate

Installation Instructions

High Bay Fixture Mount Sensor

120/277 VAC

Model # OEF-P-2MH0-MV-S

LISTED APPLIANCE CONTROL 36T0

RoHS

P/N 9850-000396-00

General Information

- Read all instructions on both sides of this sheet first
- Plan all component locations carefully
- Install in accordance with all local codes
- For indoor use only

Specifications

Technology:
- Passive Infrared (PIR)

Electrical Ratings:

120 VAC:
- Incandescent/Tungsten – Max. load: 6.7 amps, 800W, 60 Hz
- Fluorescent/Ballast – Max. load: 6.7 amps, 800W, 60 Hz

240-277 VAC:
- Fluorescent/Ballast only – Max. load: 4.3 amps, 1200W 60 Hz

Time Delays:
- Self-Adjusting, 15 seconds/test (10 min Auto), Selectable 2 min (approximate lowest setting) to 30 minute maximum time delay

Coverage:
- Up to 40 feet high with a coverage diameter of twice the mounting height (2MH)

Operating Environment:
- Temperature: 32° F – 104° F (0° C – 40° C)
- Relative Humidity: 20% to 90% non-condensing

Housing:
- Medium impact injection molded housing Polycarbonate resin complies with UL 94V0
- Size: 3.08"H x 3.08"W x 1.70"D (7.83cm x 7.83cm x 4.32cm)

LED Indicators:
- Red LED indicates PIR detection

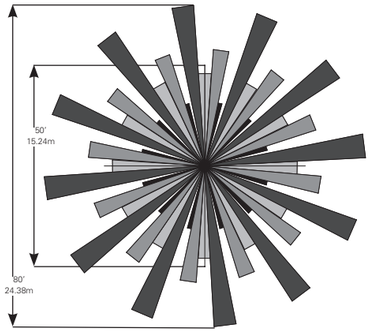
Description

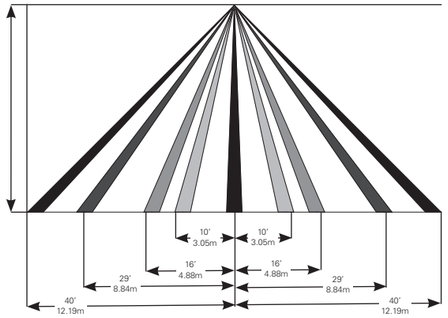
The OEF-P-2MH0-MV-* is designed to detect motion from a heat-emitting source (such as a person entering a room) within its field-of-view and automatically switch lights ON. Lights will remain ON until no motion is detected and the preset time delay expires. If no motion is detected during the time delay, the relay is opened, turning the load off.

The OEF-P-2MH0-MV-* includes a self-adjusting feature that will maintain optimum performance by automatically self-adjusting sensitivity and time delay in real time, based on occupant activity.

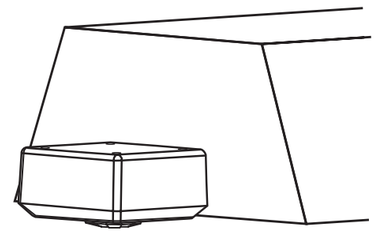
Coverage

Coverage testing has been performed according to the NEMA WD7 Guideline. The OEF-P-2MH0-MV-* is designed for applications up to 40 feet in height with a coverage diameter of twice the mounting height (2MH).





Location



OEF-P-2MH0-MV-S

Installation

These sensors control fluorescent fixtures including T5, T5HO, and T8 and can be mounted directly to the fixtures via a ½" knockout on the fixture or on a junction box. All wiring passes through the same knockout. For optimum performance the sensor lens must point directly at the floor.

Note: Shelving generally prevents coverage from spilling into adjacent aisles, but if needed, coverage limiting hoods can be used to mask the sensor lens to block portions of the coverage area.

To install coverage limiting hoods, slip a small flathead screwdriver under the lens lock cap and gently pry loose to remove. Match the tabs of the coverage limiting hood to the holes on the sensor and press to lock in place.

Aisle Coverage

180 Degree Coverage

Custom Coverage, sections may be cut-off to create custom coverage pattern

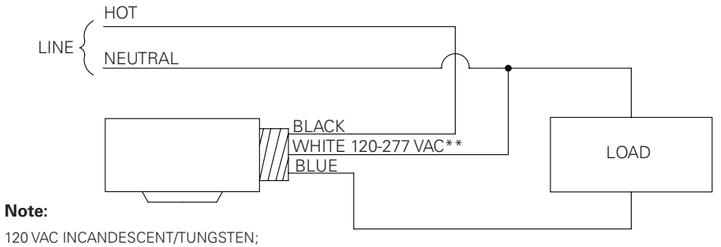
Wiring

CAUTION: Before installing or performing any service on a Greengate system, the power MUST be turned OFF at the branch circuit breaker. According to NEC 240-83(d), if the branch circuit breaker is used as the main switch for a fluorescent lighting circuit, the circuit breaker should be marked "SWD". All installations should be in compliance with the National Electric Code and all state and local codes.

NOTE REGARDING COMPACT FLUORESCENT LAMPS: The life of some compact fluorescent lamps (CFLs) is shortened by frequent automatic or manual switching. Check with CFL and ballast manufacturer to determine the effects of cycling.

1. Make sure power is turned OFF at the branch circuit breaker.
2. Wire units as shown in wiring diagrams per applicable voltage requirements. (Use twist-on wire connectors for all connections)
3. Mount unit to fixture or junction box.
4. Turn power back ON at the branch circuit breaker and wait 2 minutes for the unit to stabilize
5. If needed make necessary adjustments. (See Checkout and Adjustments section).

Wiring Diagram 1: 120/277 VAC



Note:

120 VAC INCANDESCENT/TUNGSTEN;
MAX. LOAD: 6.7 AMPS, 800VA, 60HZ

120 VAC FLUORESCENT/BALLAST;
MAX. LOAD: 6.7 AMPS, 800VA, 60HZ

240-277 VAC FLUORESCENT/BALLAST;
MAX. LOAD: 4.3 AMPS, 1200VA, 60HZ

Checkout and Adjustment

Immediately after applying power to the lighting circuit, wait approximately two minutes for the OEF-P-2MH0-MV-* to power up and stabilize. LED will continuously blink once every second for the duration of this period.

	Warm-UP/Stabilization Mode
LED Activity	1 blink per second
Mode Duration	2 min.

After the sensor stabilizes, the unit will go into a installer/test mode for five minutes. During this mode, LED blinks twice every second with each motion detected.

Self-Adjust – Time Delay

If no manual adjustments are made, lights will turn OFF 15 seconds from the last motion detected. At the end of the 5 minutes the unit will set the time delay automatically to a 10 minute time delay.

Installer/test Mode/ First 5 min. after Warm-up	User Mode Auto or Manual
2 blinks per second, when motion is detected	1 blink per second, when motion is detected
5 min.	Auto - (Full CCW) - 10 min. Manual - (Slightly above Full CCW to Full CW) 2 min. (approximately) to 30 min. maximum

Installer Adjustments

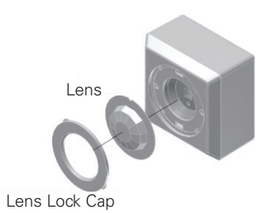
Manual Adjustment – Time Delay

If manual adjustments are made, lights will turn OFF after no motion is detected and the set time delay expires.

During Installer/Test mode leave the coverage area. Wait for the lights to shut-off. Walk normally back into the coverage area and verify that the lights turn ON automatically.

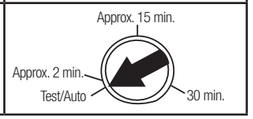
Making Manual Adjustments

To make changes to the time delay or daylight sensor, slip a small flathead screwdriver under the lens lock cap and gently pry loose to remove. Remove lens. Potentiometer time delay and daylight adjustments are located behind lens.



Time Delay Adjustments

Turn potentiometer clock-wise to increase time delay.

Symbol	Function	Knob Setting	Factory Default Setting
	Delayed - OFF Time	Full CCW = (Test/Auto10 min) Full CW = max. (30 min) Manual Adjustable between 2 min (approx.) and 30 min.	

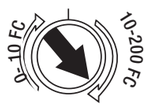
Ambient Light Adjustments

The light level setpoint is factory preset at maximum (override) with the potentiometer in the fully clockwise position. At this setting the sensor will always turn lights ON with occupancy regardless of daylight contribution.

To adjust daylight sensor follow steps below:

Note: Set the light level when the ambient light is at a level where artificial light is needed. If this feature is not needed, leave the light level at maximum (fully CW).

1. With the load ON, put the sensor into Test mode. To place into Test mode, turn the time delay potentiometer to the minimum (fully CCW) and pull the override jumper out then replace jumper back.
2. Set the light level to min. (fully CCW)
3. Let the sensor time-out so lights are OFF. Enter the space and lights should remain OFF.
4. Make sure not to block the sensor from the daylight source and adjust the light level potentiometer CW in small increments until the lights turn ON. (Pause 5 seconds between each adjustment)
5. Once the lights are ON, the load connected to the sensor will not turn ON if light levels are above the current illumination.

Symbol	Function	Knob Setting	Factory Default Setting
	Ambient Light Override	Full CCW - Lights stay OFF Full CW - Lights always turn ON (No ambient Light override) Range - 0-200 Footcandles	
			Foot-candle reading at sensor is different than Foot -candle reading at floor. Follow the procedure above to adjust level.

Note: In user mode, upon activating the sensor lights will only turn ON, if the light level is below the set level. During the first five minutes of occupancy, sensor will not change state, unless light levels change drastically. After five minutes of occupancy lights will either turn ON or OFF depending on light level changes. There is a 20% deadband to prevent lights from cycling rapidly ON/OFF, in days with cloudy skies.

Override

The OEF-P-2MH0-MV-* has a bypass jumper designed to turn the load ON in the event of sensor failure, remove the lens cap and lens and pull override jumper out.

Troubleshooting

Issue	Possible Causes	Suggestions
LED does not turn ON, lights will not turn ON	Power interruption	Check for switches or equipment that may be interrupting power to sensor. Check incoming voltage and/or wiring.
LED turns ON, but lights will not turn ON	Daylight Sensor may be in a position other than the maximum setting (Fully CW)	If this is not the desired light level, adjust the daylight sensor level or set to the maximum (Fully CW)
If lights will still not turn ON, set sensor to override mode and call Technical Services at 1-800-553-3879		
Lights will not turn OFF, no LED activity	Sensor in override mode	Check to make sure override jumper is inserted all the way in. If jumper is inserted properly check wiring.
Lights will not turn OFF	Wiring bypass	Check wiring to make sure the load is not being fed directly to incoming hot.
	Heat emitting source, other than an actual occupant (Space Heater, Heat vent, Etc.)	Make sure sensor is at least 6 feet away from heat source. Cover sensor lens with full coverage limiting hood or non reflective tape. If lights turn off, remove portions of cover or tape to block portion(s) of lens with view to heat-emitting source.
If lights will still not turn OFF, call Technical Services at 1-800-553-3879		

Warranties and Limitation of Liability

Please refer to www.coopercontrol.com under the Legal section for our terms and conditions.

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