

# PSC-ID-M-FM-500 | Microwave Occupancy Sensor

## Basic Features

- Superior motion detection in a single compact unit
- Suitable for indoor or outdoor use
- Universal Input Voltage (120-277VAC, 60Hz)
- Does NOT require an additional power pack
- Fixture mount
- Time-delay and sensitivity controls
- Photocell for daylight sensing
- UL recognized component E341446



*Always test the sensor inside the fixture to verify functionality*

## Applications

The PSC-ID-M-FM-500 microwave occupancy sensor has a huge advantage over PIR sensors: it can “see” through many low density materials such as glass, wood, or plastic.

This makes it ideal for applications where an exposed PIR sensor/lens would negatively affect the aesthetic or the functionality of a lighting fixture.

Small form factor is also key in the design of this sensor. It can be easily mounted inside the lighting fixture and hidden from view.

**Decorative fixtures:** typical applications may include lobbies, restrooms, hallways, hotels, and any area where aesthetic feel is a key design consideration.

Photocell sensitivity, sensor range, and time delay settings can be adjusted using the dip switches on the side of the unit. Make sure power is disconnected when making adjustments.

## Sensor Operation

The PSC-ID-M-FM-500 occupancy sensor is a line voltage sensor that turns lights on/off depending on a room’s occupancy. It detects motion by sending out electromagnetic waves and measuring the relative change in frequency of the return waves, otherwise known as the Doppler Effect. The sensor operates at a frequency of 5.8Ghz.

It has design features that enable it to detect normal direction and tangential motion, but it is best at detecting motion in the normal direction (coming towards or away from the sensor).

For best performance the sensor should be installed at 2-3m height for wall mounting and 2.5-4m for ceiling mount. Sensing pattern will vary based on the particular mounting method used.

Sensor range (unobstructed) is up to 7m for ceiling mount and up to 12m for wall mount applications. However, range is adversely affected by the type and density of the material used in the fixture lens or cover. Some materials will completely block the sensor (e.g., metals) and some materials will significantly reduce the range.

## Photocell Operation

A photocell is integrated into each sensor unit for ambient light detection; it can be set to “on” or “off”.

ON: the signal from the photocell will prevent lighting from turning on if there is sufficient ambient light. This is sometimes called “Daylight” mode.

OFF: the signal from the photocell is ignored. Lighting is controlled only by motion detection. This is sometimes called “Night” mode.

Note: in applications where bi-level dimming is achieved by turning off one set of lamps while a second set of lamps stays on (e.g., fluorescent or LED tubes), rather than by dimming the light source, it is recommended that dipswitch 1 be set to OFF. Otherwise the sensor may interpret the light emitted by second set of lamps as “ambient” light and prevent the first set from turning back on when motion is detected.

Always test the PSC-ID-M-FM-500 inside the fixture to verify functionality.

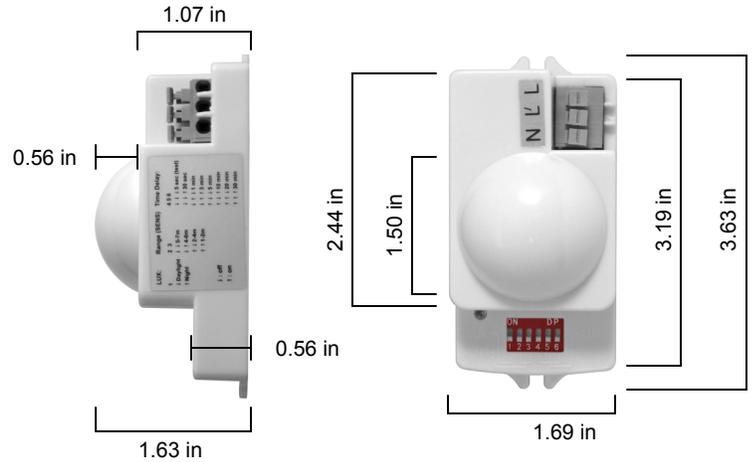
## How to Order

Model No.	Description	Input Voltage	Max Load
PSC-ID-M-FM-500	5.8 GHz Microwave Occupancy Sensor	120-277VAC, 60Hz	800VA @120VAC,6.7A Tungsten 400VA @120VAC,3.4A Ballast 600VA @277VAC,2.2A Ballast

**Summary**

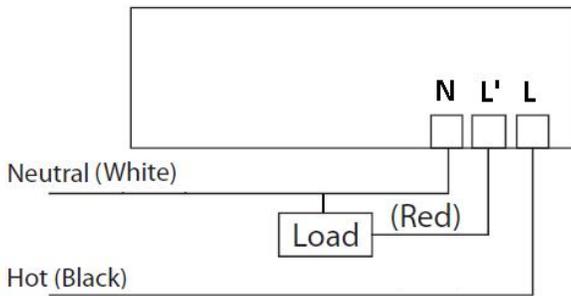
Sensor Type	Microwave / Doppler
Input Voltage	120-277VAC, 60Hz
Operating Frequency	5.8Ghz
Max Load (Tungsten)	800VA @ 120VAC, 6.7A
Max Load (Ballast)	400VA @ 120VAC, 3.4A
Max Load (Ballast)	600VA @ 277VAC, 2.2A
Sensor Range (Ceiling Mount)	Up to 7m
Sensor Range (Wall Mount)	Up to 12m
Time Delay	5 sec to 30 min
Photocell Sensitivity	20-200 Lux
Operating Temperature	-40° to 60°C
Storage Temperature	-10° to 60°C
Relative Humidity	20-90% non-condensing
Mounting	Fixture mount
Color	White
Warranty	5 years
Certifications	UL/cUL listed E341446

**Physical Dimensions**



Weight: 2.3 oz

**Wiring Diagram**



**N — Neutral      L' — Load      L — Hot**

**Settings Adjustment**

**Microwave Sensor Dipswitches**

Photocell:	Sensor Range:	Time Delay:
1	2 3	4 5 6
↓ OFF	↓ ↓ 5-7 m	↓ ↓ ↓ 5 sec (test)
↑ ON	↓ ↑ 4-6 m	↓ ↓ ↑ 30 sec
	↑ ↓ 2-4 m	↓ ↑ ↓ 1 min
	↑ ↑ 1-2 m	↓ ↑ ↑ 3 min
		↑ ↓ ↓ 5 min
		↑ ↓ ↑ 10 min
		↑ ↑ ↓ 20 min
		↑ ↑ ↑ 30 min

**Detection Area**

