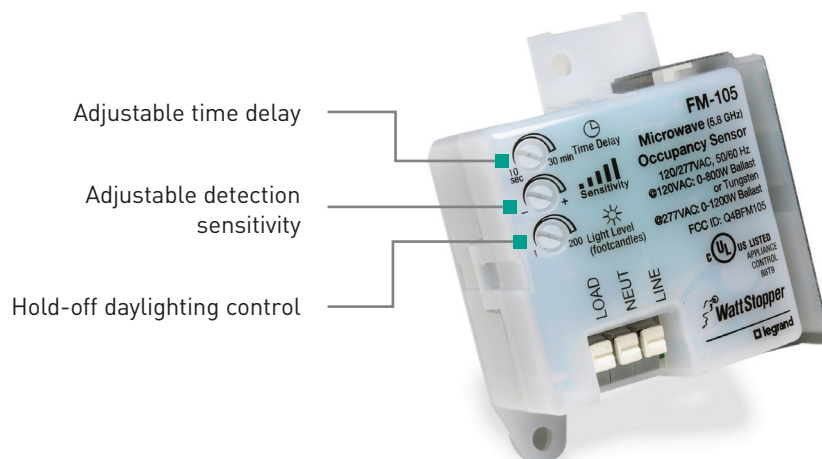


## HIGH FREQUENCY OCCUPANCY SENSOR

| FM-105



Mounting bracket for  
flexible installation

Line voltage  
occupancy sensor

Mounts behind fixture  
lens hidden from view



## Description

The FM-105 High Frequency Occupancy Sensor is a line voltage sensor that turns lighting on and off based on occupancy, and can hold lights off when sufficient daylight is available. It detects motion via high frequency electromagnetic waves and the Doppler principle. Because it can detect motion through many dense materials other than metal, the FM-105 can be installed behind fixture lenses and hidden from view.

## Operation

The FM-105 operates at 120 or 277 VAC and utilizes high frequency technology to control lighting based on occupancy. It sends out electromagnetic waves that bounce off nearby surfaces, and uses the Doppler principle to analyze changes in the return waves to detect motion in the area (similar to the way that ultrasonic sensor technology performs). When motion is detected, the FM-105 turns on the load, unless the ambient light level is greater than the daylighting setpoint (if enabled), or turns off the load when no motion is detected for the preset time delay.

## Features

- Detects movement when installed behind low-density fixture materials, such as polycarbonate, acrylic and glass diffusers
- Provides hold-off daylighting control when ambient light is greater than daylighting setpoint
- Can be mounted hidden from view
- Easy adjustment via trim pots

## Flexible Functionality

The FM-105 Sensor coverage pattern is omnidirectional. Depending on its installation, it can be adjusted to detect occupancy up to 20 feet away. The FM-105 can be placed inside a lighting fixture or behind an object made of wood or plastic so that it is completely hidden from direct view. Its integrated daylight sensitivity adjusts from 2 to 200 footcandles, and its time delay may be set from 10 seconds to 30 minutes.

## Applications

The FM-105 operates best when installed behind low-density fixture materials, such as polycarbonate, acrylic and glass diffusers. FM-105 technology also provides superior detection in hard surfaced areas such as stairwells and hallways. This sensor is also suited for installation behind lenses in outdoor wall sconces, wall packs and pedestrian-scale luminaires.

- Mounting bracket facilitates installation in various mounting positions
- Simple line voltage wiring does not require a power pack
- Time delay adjustable from 10 seconds to 30 minutes
- Adjustable sensitivity range up to 20 feet
- The product meets the materials restrictions of RoHS

PROJECT

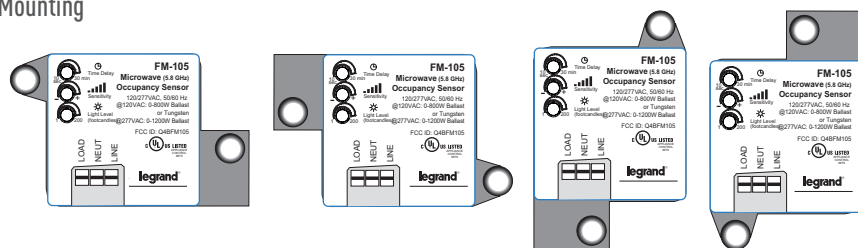
LOCATION/  
TYPE

## Specifications

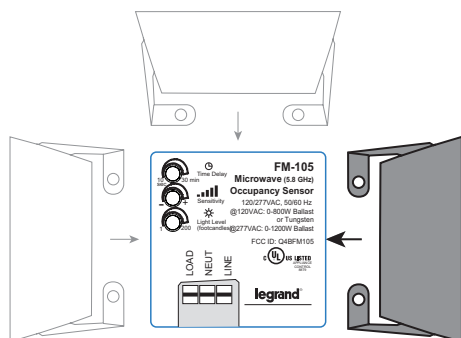
- 120/277 VAC, 50/60 Hz
- Load requirements  
@ 120 VAC, 60 Hz: 0-800 W ballast or tungsten  
@ 277 VAC, 60 Hz: 0-1200 W ballast
- Light Level: 2-200 fc
- Range/Sensitivity: Up to 20' (6.1m)
- Time delay: 10 seconds to 30 minutes
- Operating frequency: 5.8 GHz
- Power output: 1 mW
- Dimensions: 2.0" x 3.09" x 1.63"  
(51.0mm x 78.5mm x 41.4mm) L x W x D
- Weight: 2.3 oz (65.2 g)
- Operating temperature range: -4-131°F (-20-55°C)
- FCC approved
- UL and CUL listed
- Five year warranty

## Mounting & Wiring

### Mounting

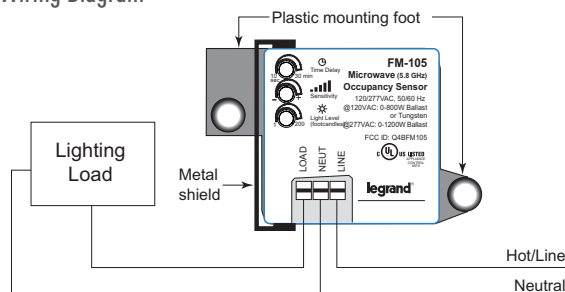


Mounting foot provides four different mounting positions.



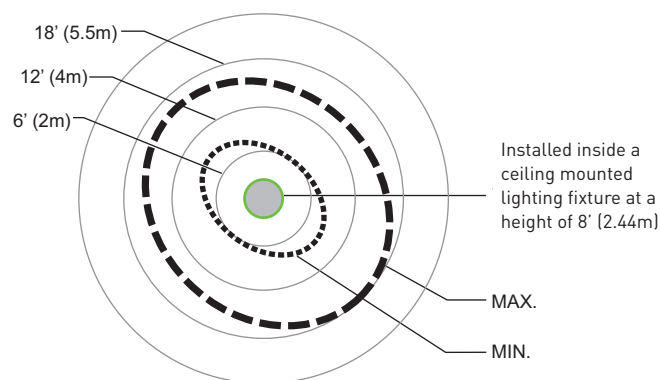
Position metal shield between FM-105 and lamp/ballast.

### Wiring Diagram

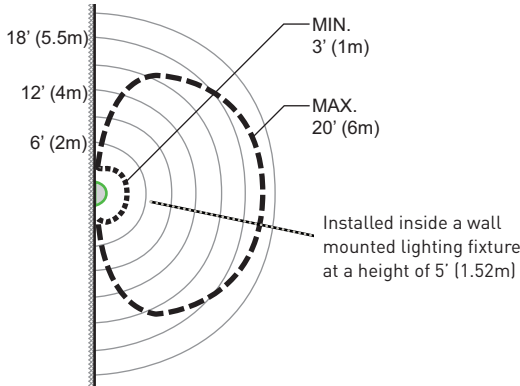


## Coverage

### Ceiling Mount



### Wall Mount



Coverage pattern will vary based on installation of sensor and surrounding materials.

## Ordering Information

| Catalog #                       | Description                     | Voltage          | Load Capacity                                 |
|---------------------------------|---------------------------------|------------------|-----------------------------------------------|
| <input type="checkbox"/> FM-105 | High Frequency Occupancy Sensor | 120 VAC; 277 VAC | 0-800 W ballast or tungsten; 0-1200 W ballast |