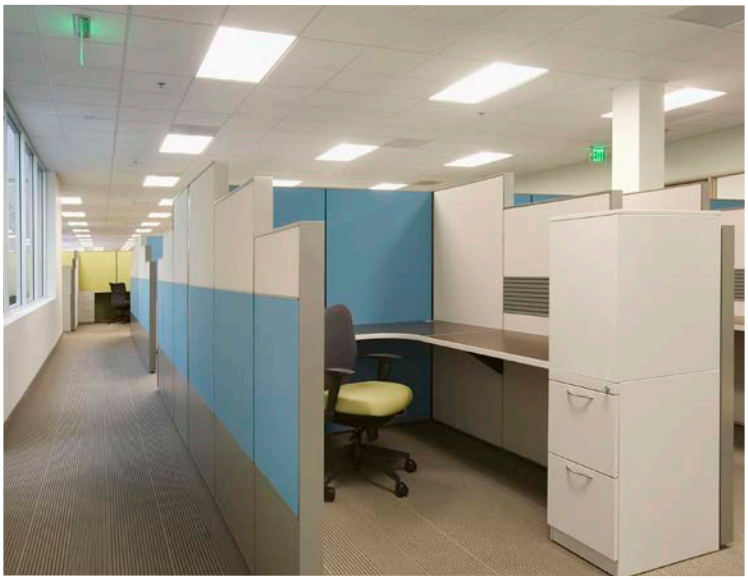
LMS-109

Line Voltage Occupancy Sensor



OVERVIEW

The LMS-109 is a line voltage occupancy sensor designed for OEM lighting fixture integration to provide occupancy sensing control. This occupancy sensor employs an advanced High Frequency Doppler (HFD) sensing technology to provide superior sensing performance of minor motion like typing, writing, or reading. The HFD technology operates with high frequency radio waves which are capable of detecting the occupant's presence and movements without requiring unobstructed line-of-sight like PIR sensors. Thus, the HFD sensor can detect through non-metallic material like plastic, glass, plywood or plaster board.

The Accu-Set digitalized potentiometers make setting the sensor easier, faster and more accurate than conventional analog ones. 4 levels of sensitivity can be selected via DIP switch settings to provide different coverage. An exclusive Hybrid Switching technology makes the LMS-109 perfect to control lighting with exceptionally high inrush current (HIC) during switching, such as multiple LED lights connected in parallel. The sensor comes with an ambient light sensor (ALS) to inhibit switching on the light if the ambient light level is higher than the threshold set.

FEATURES

- High Frequency Doppler sensing technology
- 120/240/277 VAC line voltage operation
- Hybrid switching for controlling loads with HIC
- Accu-Set potentiometer for quick and easy setting
- 4 levels of programmable HFD sensitivity settings
- Ambient light sensor to inhibit unneeded light
- Low profile case for slim lighting fixture assembly

APPLICATIONS

☑ Lighting fixture integration

The LMS-109 occupancy sensor can be assembled in an OEM fixture to control the light by sensing the presence of the occupant without requiring unobstructed line-of-sight.

NOTE: Do NOT place the sensor behind a metal plate or within an enclosure surrounded by a metallic wall.

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OPERATION

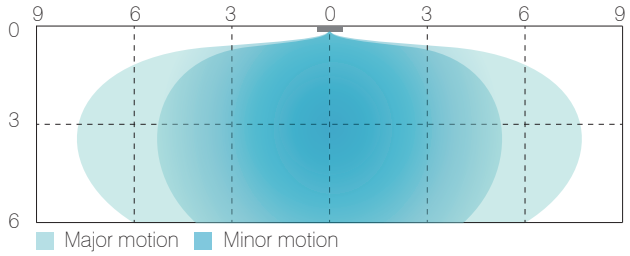
The LMS-109 is a line voltage operating occupancy sensor with hybrid switching output to control the operation of connected load. The sensor will switch on the light when it detects the presence and movement of a moving object (human, or vehicle) within its coverage, and automatically shut off the light after the delay time elapses. Different delay times can be programmed by an Accu-Set digital potentiometer. An ambient light sensor is built-in to inhibit switching on the light when ambient light level is higher than the threshold set.

DETECTION PATTERN

Mounting Height (m)	3	6
Coverage (sq. m)*	180	100

*Sensitivity 100%

Side View



SPECIFICATIONS

Power supply	120/240/277VAC, 50/60 Hz		
Maximum Load	120VAC	240VAC	277VAC
-Incandescent/Halogen	800/*500W(VA)	5A	1200/*750W(VA)
-Fluorescent Ballast/CFL	800/*500W(VA)	5A	1200/*750W(VA)
-Ballast Electronic (LED)	540/*500VA	5A	1200/*750VA
HFD sensitivity	25/50/75/100% selectable via DIP switch setting		
Load switching	Zero-cross Hybrid-Switching		
HIC protection	Max. 80A for 16.7msec.		
Detection range	Up to 180 sq. m @ 3 m		
Mounting height	2.4 ~ 6 m (8 ~ 20 ft)		
Ambient light level	7 level Accu-Set digital potentiometer		
Delay time setting	T/1'/3'/5'/10'/20'/30' , T=10 sec. for testing		
Op. humidity	Max. 95% RH		
Op. temperature	-40°C~70°C (-40°F~158°F)		
Dimensions	H92 x W43 x D29mm (H3.6"x W1.69"x D1.14")		

*Max load for operating temperature at 55°C~70°C (131°F~158°F)

Wiring Diagram

Various control modes may be achieved by different wiring connections. Basic wiring diagrams are included as below for reference. Consult with an IR-TEC team member if a more complex control is required.