

**INTEGRATED HIGH FREQUENCY BI-LEVEL
MOTION SENSOR
MSITXLMD509SFCNTRL**



PRODUCT DESCRIPTION:

This sensor is a line voltage occupancy sensor with 0-10V output for bi-level dimming control. This occupancy sensor employs an advanced High Frequency Doppler (HFD) sensing technology, which operates high frequency radio waves that are capable of detecting the occupant's presence and movements without requiring unobstructed line-of-sight like a RIP sensor. Thus, the HFD sensor can detect through non-metallic material, such as plastic, glass, plywood or plaster board.

FEATURES:

- High Frequency Doppler sensing technology
- 120/230/277 VAC line voltage operation
- Hybrid switching for controlling loads with HIC
- 0-10V output for bi-level dimming control
- Accu-Set potentiometer for quick and easy setting
- 4 levels of HFD sensitivity setting programmable
- 4 lcontrol modes selectable via DIP switch setting
- Ambient light sensor to inhibit unneeded lighting

COMPATIBLE PRODUCTS:

- HP Round High Bay Gen 2 (MSM)
- HL Linear High Bay Gen 2 (MSM)

SPECIFICATIONS:

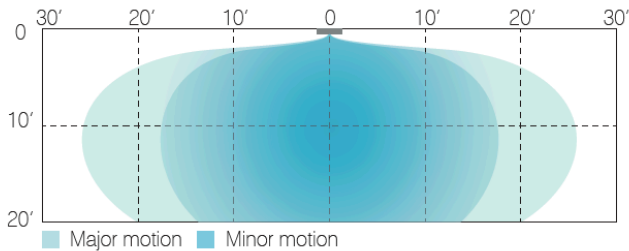
MSITXLMD509SFCNTRL

ITEM	SPECIFICATION	
GENERAL INFORMATION	Power Supply	120/230/277 VAC, 50/60HZ
	Max Load	Ballast Electronic (LED) 540/500VA@1200/*750VA
	HFD Sensitivity	25/50/75/100%, selectable via DIP switch setting
	Load Switching	Zero-cross Hybrid-Switching
	HIC Protection	MAX. 80A FOR 16.7 msec.
	Dim Control	0-10V, non-isolated, max 25mA
	Detection Range	Up to 180 sq. m. @ 3m (2,000 sq. ft. @10ft.)
	Mounting Height	2.4 ~ 6m (8~20ft.)
	Ambient light level	7 level Accu-Set digital potentiometer
	Delay Time Setting	T/1'/3'/5'/10'/20'/30', T=10 sec. for testing
	TIME-OFF Delay	10 min. OSLATO mode only
	OP Humidity	MAX 95% RH
	OP Temperature	-40°C~70°C (-40°F~158°F)
	Dimensions	60 x H42 mm (2.36 x H1.65")

DETECTION PATTERN

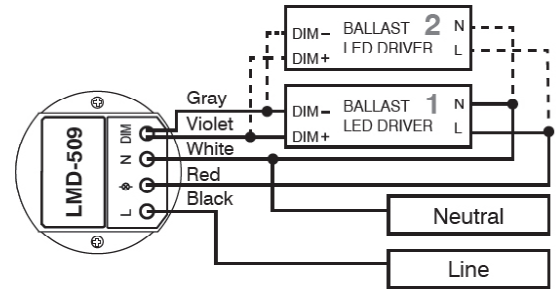
Mounting Height	10'	20'	
Coverage (sq. ft.)*	2,000	1,200	*Sensitivity 100%

Side View



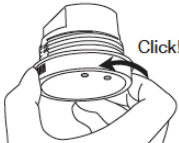
Wiring Diagram

Basic wiring diagrams are included as below for reference. Consult MaxLite if a more complex control is required.

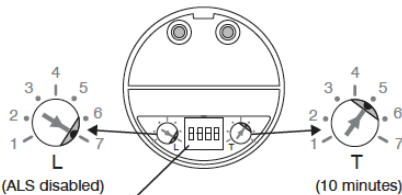


SENSOR SETTINGS

The LMD-509 series features 4 different control modes selectable via combination DIP switch #3 and #4, and 4 levels of sensitivity set via combination DIP switch #1 and #2. The LMD-509 series also provides 7 different light-Off delay time and daylight threshold settings via 2 Accu-Set digital potentiometers marked T and L respectively.



Click! To change the sensor setting, rotate the front cover counter-clockwise to remove. Replace the front cover after the setting complete.



(ALS disabled) (Factory set)

	1	2	3	4	5	6	7
T (min.)	T	1'	3'	5'	10'	20'	30'
L (lux)	5	10	15	20	25	60	24H

Factory Set

T - Delay Time

The potentiometer T sets the period of delay time that sensor will turn off the connected lights after the area is vacated.

L - Ambient Light Level

The potentiometer L sets the ambient light level that the sensor will activate occupancy sensing control.

Sensitivity - SW1 & 2

The sensitivity and detection pattern of HFD sensor may vary with the furniture placement, partition layout, wall material, and shape of the space. For example, the detection pattern will become long rectangular if sensor is placed in a long corridor. 4 levels of sensitivity can be set via combinations of DIP switch #1 and #2.

Sensitivity	100%	75%	50%	25%
DIP switch setting				
	ON-ON	ON-OFF	OFF-ON	OFF-OFF

Control Mode - SW3 & 4

The combination of DIP switch #3 and #4 determines the sensing control mode.

OSLATO : Occupancy Sensing at Low Ambient with Time-Off

OSLA : Occupancy Sensing at Low Ambient

OSO : Occupancy Sensing Only

ON/OFF : ON-OFF Switching

Mode	Control (LMD-509Sx)
 ON-ON	<ol style="list-style-type: none"> While ambient lux is higher than the level set, light stays OFF. While ambient lux is lower than the level set, and occupancy detected, switch the light ON. Dim the light to 30% after occupant leave and delay time elapses. Turn OFF the lights when 10 minutes TIME OFF delay elapses. When occupancy detected during TIME OFF, switch the light ON.
 ON-OFF	<ol style="list-style-type: none"> While ambient lux is higher than the level set, light stays OFF. While ambient lux is lower than the level set, dim the light to 30% under vacancy. While ambient lux is lower than the level set, and occupancy detected, switch the light ON. Dim the light to 30% after occupant leave and delay time elapses.
 OFF-ON	<ol style="list-style-type: none"> Ambient light is disabled with this mode. Dim the light to 30% at all time under vacancy. Switch the light to ON under occupancy. Dim the light to 30% after occupant leave and delay time elapses.
 OFF-OFF	<ol style="list-style-type: none"> While ambient lux is higher than the level set, light stays OFF. While ambient lux is lower than the level set, and occupancy detected, switch the light ON. Turn OFF the light after occupant leave and delay time elapses.

TESTING

To verify sensor control function normal, please proceed with the instructions as below to conduct test;

- Set the arrow of T (DELAY TIME) potentiometer pointing at position "1" (TEST) and other setting to the desired threshold.
- Walk within the expected range at normal speed. The sensor will switch ON the light for 10 seconds whenever sensor detects the movement, and then switch OFF or DIM to 30% for 10 seconds as per the selected mode. The LED of sensor will also blink to indicate every motion detected.
- After testing complete ensure to set the T potentiometer to the position of desired time. NOTE: The sensor will automatically control the light as per the selected mode with factory set time delay (10 minutes) if the T potentiometer has NOT been set to other position.