

# **Occupancy Sensor Configuration** Reference Guide for Optimal Sensor Settings



# OPTIMAL CONFIGURATION FOR AN OCCUPANCY SENSOR

# • Location/Rotation of Sensor

• Passive Infrared (PIR is a line of sight beam that reacts to heat motion across a field of view.

• Stand or sit at the entry point spots in the room (can you see the sensor lens?).

• Ultrasonic (U/S) is a reflective wave form that reacts to room disturbances in return view form.

• Stand or sit in the most used spot in the room (can the signals reflect your movement?).

#### • Angle of Sensor

• Sensor range is optimally designed at 90°. Any variance to the angle will result in less range.

WHILE CONFIGURING AN OCCUPANCY SENSOR, REMEMBER THAT IF YOU CANNOT SEE IT, IT CANNOT SEE YOU. ADJUST TO ACCOMODATE THE AREAS THAT ARE MOST LIKELY TO BE USED, IF NECESSARY.





# PREFERRED ANGLE = MAX RANGE (SPECIFIED FIELD OF VIEW)

**Minor Motion, IR:** Typing, stationery sitting or standing with few gestures or movements, reading, writing

**Major Motion, IR:** Walking, running, dancing, sitting or standing with constant gestures or movements

**Minor Motion, U/V:** Typing, stationery sitting or standing with few gestures or movements, reading, writing

**Major Motion, U/V:** Walking, running, dancing, sitting or standing with constant gestures or movements



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## **COMMON CUSTOMER CONCERNS**

#### 1. Sensor not turning the lights on when I walk in the room

- a. Auto-ON mode + correct configuration = lights will turn ON within two steps of entry.
- b. Adjust location/rotation or angle of the sensor to better cover the entry points.
- c. If (b.) has not corrected, then increase PIR (red dial) slightly until desired reaction at entry.

Red	Ś	Sets the infrared range	Range setting Full CCW = min. (OFF) Full CW = max.	75%

## 2. Lights are turning off on me = false-OFF

a. Adjust location/rotation or angle of the sensor to better cover the user's location.

	b.	lf (a.) has not c	corrected, then incre	ease time de	elay (black dial) = improves probability of sensing motion.
Black	0	Delayed- Off Time	Full CCW = min. (30 sec.) Full CW = max. (30 min.)	50% (10 min)	

c. If (a.) and (b.) have not corrected, then increase U/S (green dial) slightly until desired reaction at user location.

	¢	Green	3	Sets the ultrasonic range	Range setting Full CCW = min. (OFF) Full CW = max.	50%
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## 3. Lights are on when no one is in the room = false-on

- a. Adjust location/rotation or angle of the sensor to block or remove the offending object (such that the sensor cannot detect this unwanted motion: minimum 6 feet from air vents and 4 feet from fixtures).
- b. PIR will turn the lights ON with any heated motion (oscillating fans, moving parts, pets, etc.).
  - i. If (a.) has not corrected, then decrease PIR (red dial) slightly until lights turn off (no longer detecting unwanted motion).

Range setting					
Red     Sets the infrared range     Full CCW = min. (OFF)     75%       Full CW = max.     Full CW = max.     Full CW = max.     Full CW = max.     Full CW = max.	75%	Range setting Full CCW = min. (OFF) Full CW = max.	Sets the infrared range	Щ.	Red

c. U/S will keep the lights ON with any room disturbance (high air flow, flag or cloth blowing, fans, etc.).
i. If (a.) and (b.) have not corrected, then reduce U/S (green dial) slightly until lights turn OFF after appropriate time setting

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Green	31	Sets the ultrasonic range	Range setting Full CCW = min. (OFF) Full CW = max.	50%

#### 4. Lights turn on in a room when someone walks past in the hallway

- a. Auto-ON mode + correct configuration = lights will turn ON within two steps of entry.
- b. Adjust location/rotation or angle of the sensor so that you cannot see it from the hallway.
- c. If (b). has not corrected, then decrease PIR (red dial) slightly until hallway motion does not activate.

0.1	JULY,	Cata the informal serves	Range setting	750
кеа		Sets the infrared range	Full CW = max.	/5%

#### **ADVANCED OPERATIONS**

1. Maximize energy savings with Auto Adapting Technology (factory default settings).

DIP SWITCH SETTINGS					
SWITCH		SWITCH FUNCTIONS	SWITCH SETTINGS		
	BANK A	OFF	ON		
Aı	N/A	Multi-Tech	Single Tech		
Az	N/A	PIR	Ultrasonic		
A3	Manual Mode	Auto Adapting Enabled	Auto Adapting Disabled		
A4	Walk-Thru Disable	Walk-Thru Enabled	Walk-Thru Enabled		
	BANK B				
Bı	Override to On	Auto Mode	Lights forced ON		
B2	Override to Off	Auto Mode	Lights forced OFF		
B3	Test Mode	OFF'ON'OFF	Enter/Exit Test Mode		
B4	LED Disable	LEDs Enabled	LEDs Disabled		

2. For fixed (stable) settings, the Auto Adapting and Walk-Thru feature must be disabled.

- Not desirable for maximizing energy savings.
- Desirable in educational environments due to vacation periods.
- Desirable if end user expectations are that all lights will operate ON/OFF the same way all the time.
- Desirable if troubleshooting, this will eliminate strange time delays and U/S sensitivity.

#### TO DISABLE ADVANCED FEATURES

a. To disable Auto Adapting, flip the A3 dip switch to the rght (ON Position).b. To disable Walk-Thru, flip the A4 dip switch to the right (ON Position).

# Leviton Mfg. Co., Inc. Lighting & Energy Solutions