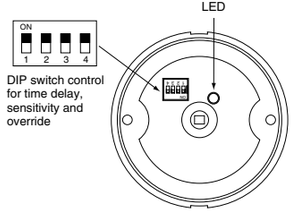
SENSOR ADJUSTMENT

The sensor comes factory preset and ready for operation.
If testing of operation is desired:

- Remove the sensor's cover (twist);
- Refer to the DIP switch settings chart below for switch configurations;

1. Confirm the override DIP switch is set to normal (DIP switch #4 to OFF);
2. Restore power and turn on the system interfacing with the isolated relay. There is a one minute warm-up when power is initially restored to the sensor before the sensor works properly.
3. Set time delay to minimum: DIP switches #1 and #2 to OFF (30 seconds).
4. Set sensitivity to maximum: DIP switch #3 to ON.
5. Replace the sensor's cover;
6. Move away from sensor and be still. The sensor should time-out after 30 seconds and the isolated relay contacts should return to their "normal" condition (normally open or closed, see wiring directions diagram). Note: If the sensor does not time-out or the isolated relay does not return to its normal condition, move farther away or out of sight of the sensor, or see Unwanted Sensor Activations under troubleshooting.
7. Reset the time delay to the desired delay (DIP switch #1 and #2).

DIP SWITCH SETTING



DIP switch #	1	2	3	4
Time delays				
▶ 30 seconds	—	—		
10 minutes	—	●		
20 minutes	●	—		
30 minutes	●	●		
Sensitivity				
▶ Minimum			—	
Maximum			●	
Override				
▶ Normal				—
Override				●

●= On — = Off ▶= Factory preset

TROUBLESHOOTING

CAUTION

When working on or near high voltage, use proper safety precautions.

LED does not flash with motion:

1. Determine if the lens is masked in the direction being tested (see masking).
2. Check that the sensitivity setting is set to maximum (DIP switch #3 to ON)
3. Check that the red and black wire connections from sensor are secure.
4. Check that 24VAC or 24VDC is between the red and black wire from the sensor.
   - If it is present, the problem may be with the sensor, try another sensor (if available).

Isolated relay not functioning properly:

1. Check that time delay setting are correct (DIP switch #1 and #2);
2. Check sensitivity setting. For unwanted sensor activations, see below.
3. Check that all wire connections from sensor are correct and secure.
4. Using proper precautions, check that there is voltage to the isolated relay.
5. Check that 24 VAC or 24 VDC is between the red and black wire from the sensor.
6. Use an ohmmeter to check the function of the isolated relay;
   - Turn off the power connected to the isolated relay wires (if applicable)
   - — With motion in front of the sensor's lens, check that the connection between the green and orange wires is open.
   - — With motion in front of the sensor's lens, check that the connection between the yellow and orange wires is closed.
   - Turn sensitivity and time delay to minimum, cover the sensor's lens with a cloth (not your hand), be still and allow the sensor to time-out.
   - — Check that the connection between the green and orange wires is closed.
   - — Check that the connection between the yellow and orange wires is open

Sensor Override:

Unwanted Sensor Activations (LED flashes):

Possible causes	Possible solutions
1. People moving or walking outside of the desired coverage area, but in view of the sensor and within its range (see coverage patterns and placement)	Mask the lens to reduce PIR coverage (see "masking the lens")
	Setting the sensitivity to minimum if necessary (DIP switch #3)
2. Sensor located too close to vents with heavy air flow	Relocate the sensor

If the sensor fails, set DIP switch #4 to override position (DIP switch #4 to on). This overrides the sensor and sets the circuit to "on".

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LX-24

Installation Instructions

360º PIR Occupancy Sensor

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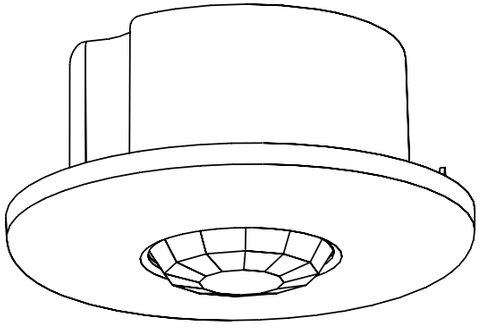
DESCRIPTION

The LX-24 is a 24 VAC or 24 VDC Passive Infrared (PIR) occupancy sensor. The LX-24 provides isolated relay contacts that are normally open or normally closed. This PIR-type sensor can integrate with HVAC or EMS systems.

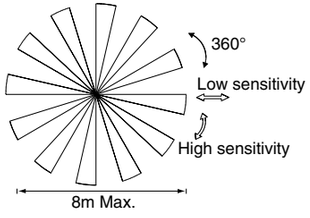


The LX-24 passive sensing system reacts to changes in infrared energy (moving body heat) within the coverage area. Sensor placement is important with PIR sensors; the sensor must directly "see" motion of an occupant in order for detection to occur.

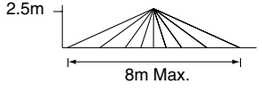
COVERAGE PATTERNS

It has a fresnel lens field of view of 360°. Coverage shown in the diagram below is maximum and represents coverage for half-step, walking motion, with no barriers or obstacles.

Top View



Side View



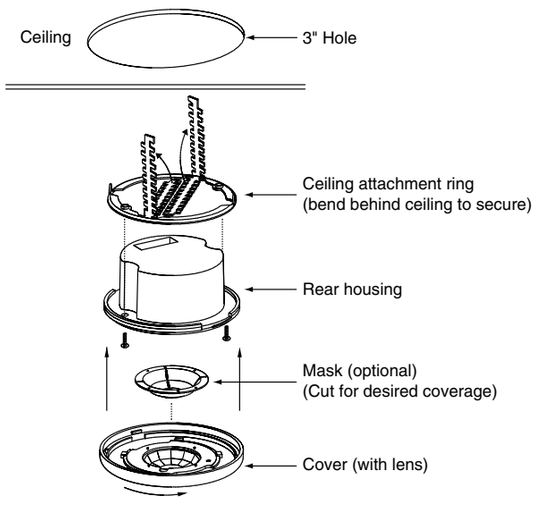
PLACEMENT

The effective coverage distances may be slightly less than the maximum sensing distance, depending upon obstacles such as furniture or partitions, and this must be considered when planning the number of sensors and their positioning.

The LX-24 sensor can be mounted at various heights. Mounting heights of less than 8 feet decrease the range and increase the sensitivity to smaller motions. Conversely, mounting heights greater than 8 feet increase the range and decrease the sensitivity to smaller motions. At heights greater than 12-14 feet, you risk reduced sensitivity.

INSTALLATION

1. If using the ceiling attachment ring, bend the securing straps up so the sensor housing can be inserted, and attach it to the sensor with the provided screws
2. Attach the mask, if using, into the lens recess and onto the securing pins of the cover.
3. Attach the cover to the rear housing; align tabs on inside of cover to notches on outside perimeter of rear housing, place cover on sensor, and twist clockwise to lock.
4. Insert the assembled sensor into the ceiling hole, and if using the mask turn the sensor so that the unmasked part of the lens is toward and centered on the area to be covered.
5. Bend the ceiling attachment ring straps behind the hole to secure.



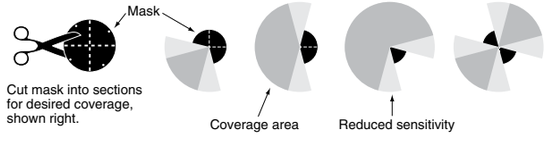
MASKING

An insert mask is supplied to allow elimination of coverage in unwanted spaces. The mask is cut as needed and mounted onto anchor pins in the sensor's cover.

Important: For full coverage, no mask is needed.

Important: The assembled sensor must be turned so the unmasked portion of the lens faces the coverage area prior to securing sensor to mounting location.

Note: There is a small area of reduced sensitivity corresponding to the lighter areas in the examples below.

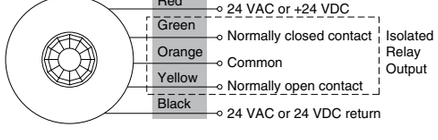


WIRING DIRECTIONS

CAUTION:

TURN POWER OFF AT CIRCUIT BREAKER BEFORE WIRING SENSOR.

- Connect 24 VAC or +24 VDC supply to the Red and return to the Black wire from the sensor.

Isolated relay (Rated for 1A@24 VDC or 24 VAC)
Connect the wires necessary to the application that requires this output.

- Green (normally closed) open when occupancy is detected
- Orange (common) must be used for proper operation
- Yellow (normally open) closed when occupancy is detected.