

Infrared Ceiling Mount Sensor



The LOS-CIR Series ceiling-mount passive infrared sensors can integrate into Lutron systems or function as stand-alone controls using a Lutron power pack. The sensor uses a small semiconductor heat detector that resides behind a multi-zone optical lens. The sensor's detector is sensitive to the heat emitted by the human body. In order to trigger the sensor, the source of heat must move from one range of detection to another. Non-moving hot objects will not cause the lights to turn on.

Features

- Intelligent, continually adapting passive infrared (PIR) sensor
- Passive infrared sensing
- Reliable motion detection with high error immunity
- Snap-locks to ceiling-mounted cover plate
- Non-Volatile Memory: settings saved in protected memory are not lost during power outages
- 450 to 1500 sq.ft. (42 to 140 m²) coverage when mounted on an 8 - 12 ft. (2.4 - 3.7 m) ceiling
- Affords choice of turning lights off or dimming to a preset level in the unoccupied state when integrated with a Lutron system.

Models Available

Cat. No.	Color	Coverage	Field of View
LOS-CIR-450-WH	White	450 sq.ft. (42 m ²)	360°
LOS-CIR-1500-WH	White	1500 sq. ft. (140 m ²)	360°

Self-Adaptive Feature

The LOS-CIR Series ceiling-mount occupant sensors provides reliable detection with high error immunity. The internal microprocessor analyzes the information from the PIR technology and determines the optimum setting to use in order to properly cover the space.

Job Name:	Model Numbers:
Job Number:	

Specifications

Timer Adjustment

- Automatic mode: Continually adapting sensor automatically adjusts settings to the space
- Manual mode: 8 to 30 minutes
- Test mode: 8 seconds

LED Lamp

- Red: infrared motion detected

Housing

- Rugged, high-impact, injection-molded plastic
- Color-coded leads 6 in. (15 cm)

Power

- Operating voltage: 20 - 24 V_{DC}, PELV (Class 2: USA) low-voltage
- Operating current: 33 mA nominal
- Control output: 20 - 24 V_{DC} active high logic control signal with short-circuit protection, open collector when unoccupied
- UL and CUL listed

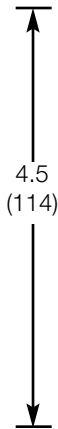
Operating Environment

- Temperature: 32 to 104 °F (0 to 40 °C)
- Relative humidity: less than 95%, non-condensing
- For indoor use only

Dimensions



Front View



Side View

Measurements are in inches (mm)

Job Name:

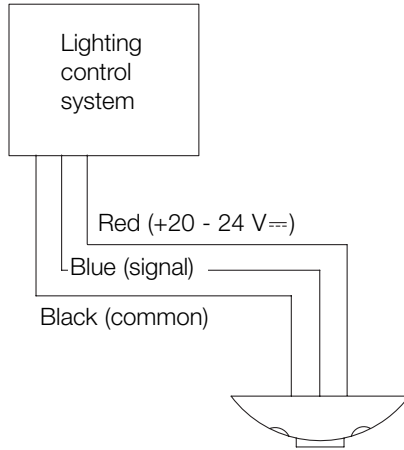
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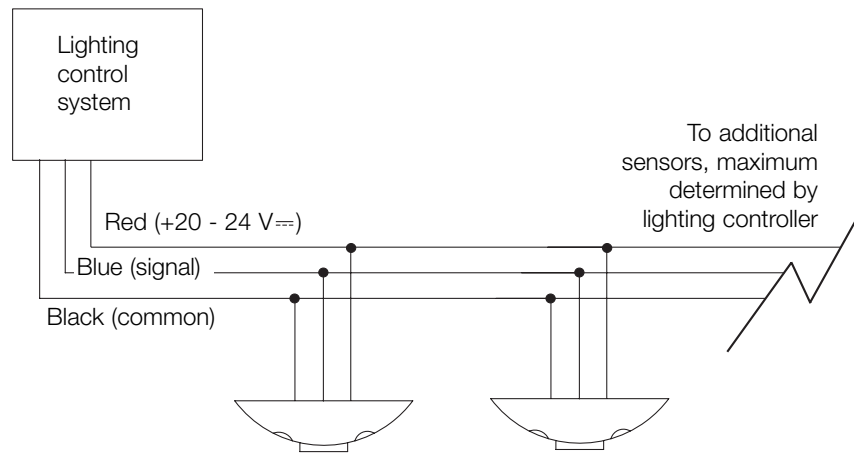
Wiring

Note: Power pack may be required when interfaced to lighting control system; see below.

Single Sensor to System



2 or More Sensors to System



Power Supply Options

Lutron Lighting Control System

Digital microWATT™

EcoSystem®

GRAFIK 5000 / 6000 / 7000

GRAFIK Eye® 3000 / 4000

HomeWorks®

LCP128™

microWATT®

RadioRA®

RadioTouch®

Softswitch128®

Power Pack Required?

No

No

No, when used with seeTouch® wallstations with occupant sensor connections.

Yes

Yes

No, when used with seeTouch wallstations with occupant sensor connections.

No

Yes

No

No, when used with seeTouch wallstations with occupant sensor connections.

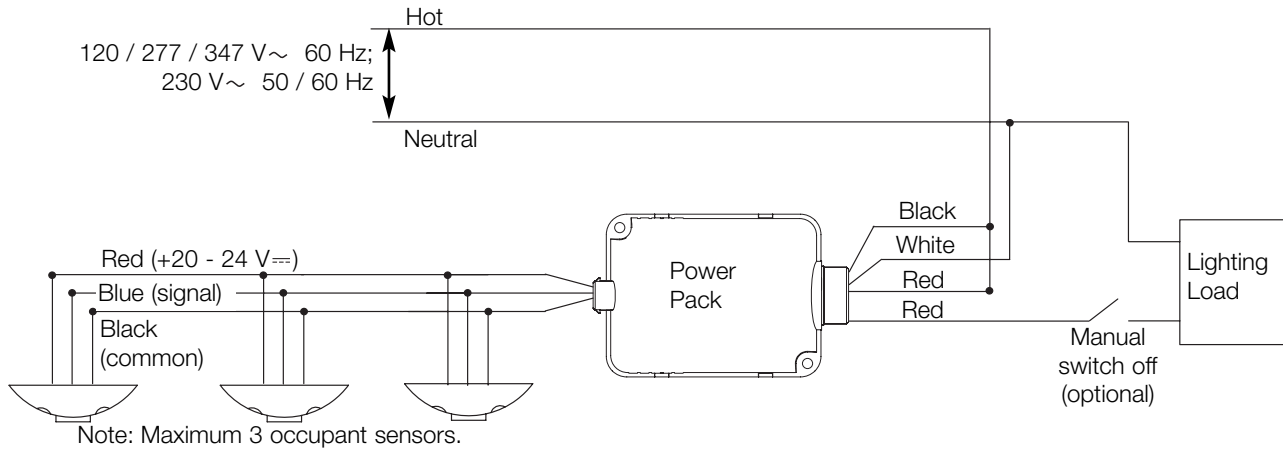
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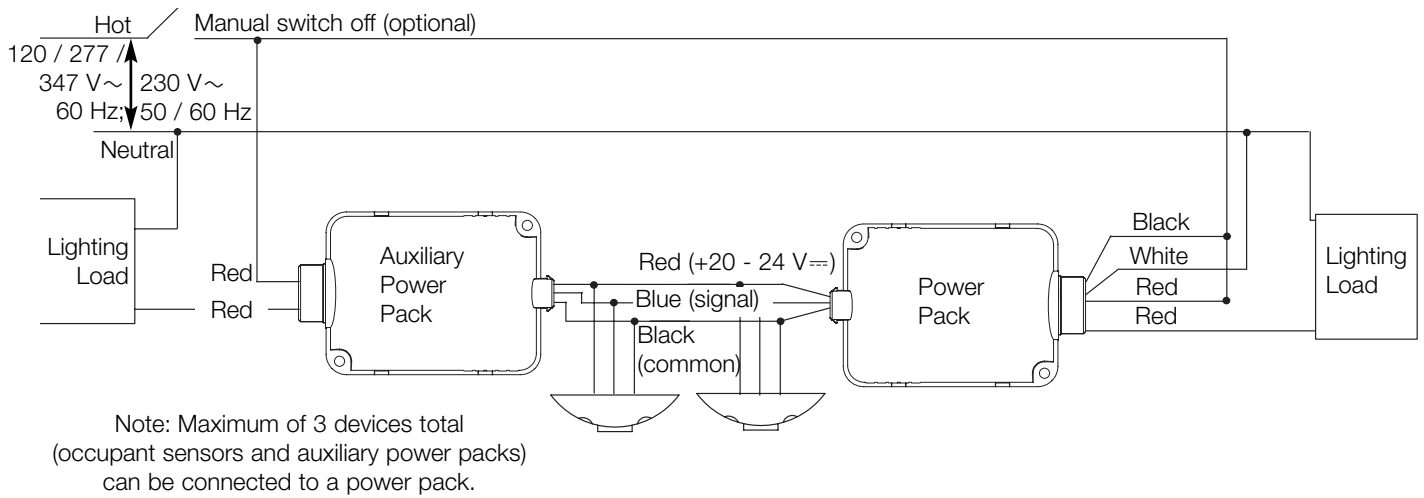
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Wiring: Stand-Alone Control

1 to 3 Sensors with Power Pack



Switching Multiple Loads with Auxiliary Power Packs



Job Name:

Model Numbers:

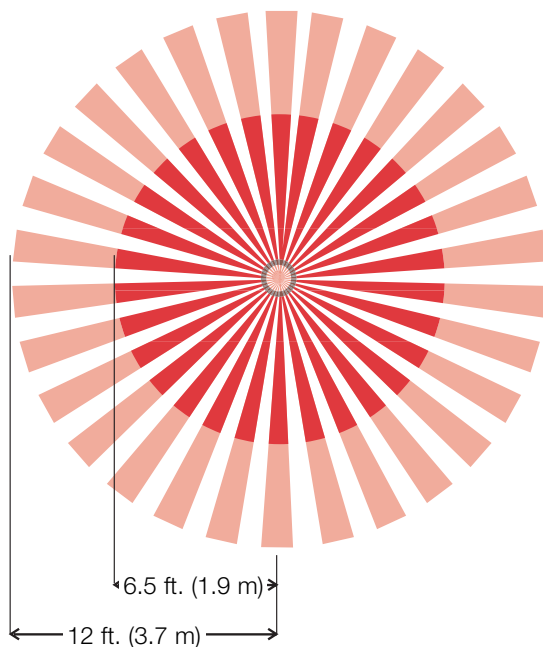
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Installation

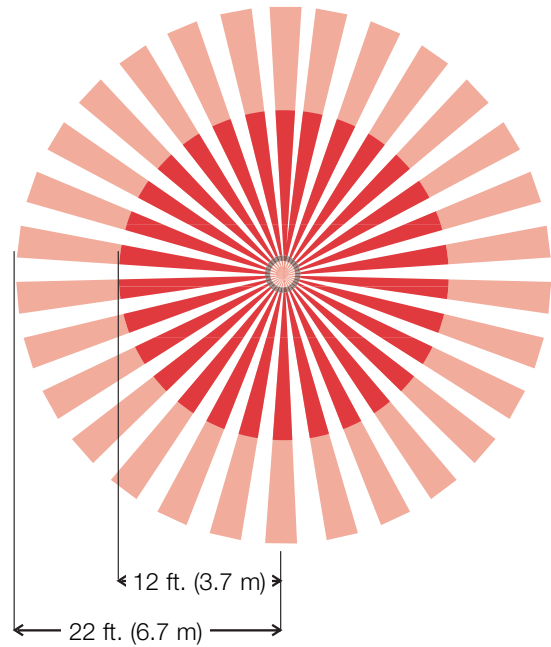
Sensor Placement

- The occupant sensor must have an unobstructed view of the room. Do not mount behind or near tall cabinets, shelves, indirect hanging fixtures, etc.
- Keep the occupant sensor away from air flow from ventilation outlets, windows, fans, etc.
- Closely follow the diagrams shown concerning major and minor motion coverage. The sensor can detect major motion (such as a person taking a half-step) at a greater distance than it can detect minor motion (such as writing or typing at a desk).
- May not detect occupancy with no significant difference between ambient and body temperatures.

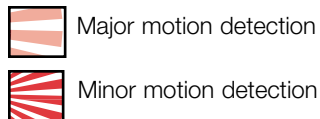
Range Diagrams



LOS-CIR-450



LOS-CIR-1500



Job Name:

Model Numbers:

Job Number:

Installation

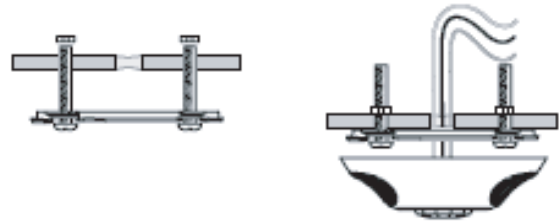
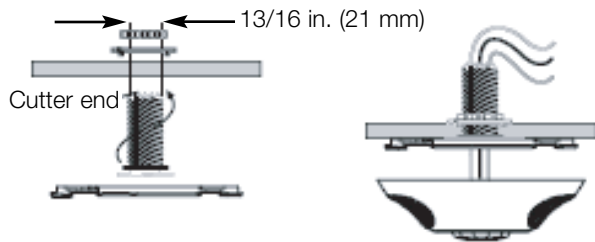
Mounting

Normal Mounting

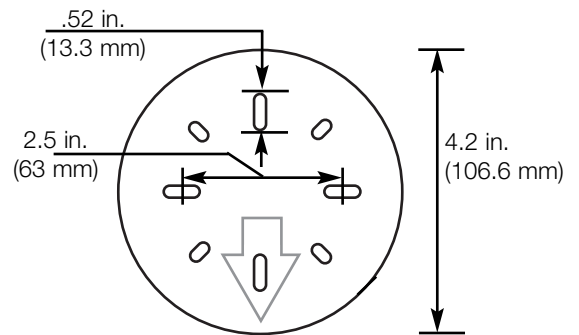
Twist and lock threaded mounting post onto cover plate. Drill through ceiling tile with assembly, using cutter end of the threaded mounting post. Secure with washer and nut.

Mounting to Non-Standard Ceiling or Fixture

Mount twist-lock cover plate using mounting screws, nuts, and washers (included). Drill/punch wire routing hole through ceiling tile at center of cover plate.



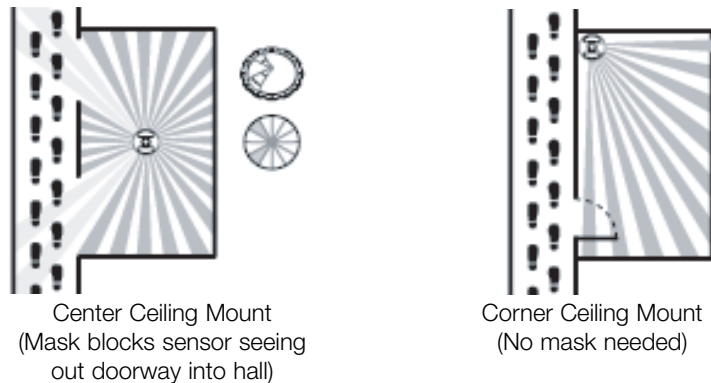
Mounting Plate Dimensions



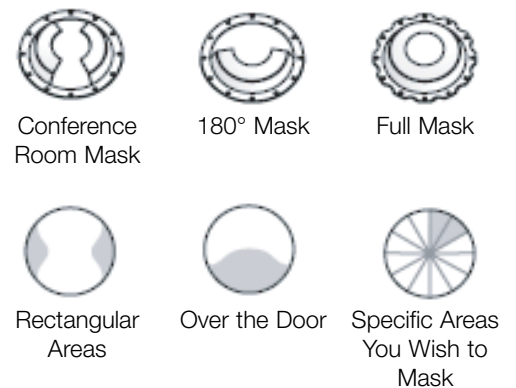
Wire Lengths

# Sensors	1	2	3	1	2	1
# Aux. PP	0	0	0	1	1	2
22 AWG	750 ft.	375 ft.	250 ft.	375 ft.	250 ft.	250 ft.
0.5 mm ²	365 m	180 m	120 m	90 m	120 m	120 m
20 AWG	1200 ft.	600 ft.	400 ft.	600 ft.	400 ft.	400 ft.
0.75 mm ²	730 m	365 m	240 m	365 m	240 m	365 m
18 AWG	2400 ft.	1200 ft.	800 ft.	1200 ft.	800 ft.	800 ft.

Using the Infrared Mask



Typical Mask Patterns



Job Name:	Model Numbers:
Job Number:	

Sensor Adjustments

Override Settings

	A	Off (Default)	On
Auto/Manual	<input type="checkbox"/>	1 Automatic (Normal)	Manual on/off (Override)
Threshold	<input type="checkbox"/>	2 Auto Threshold Adjustment	High Sensitivity (Low turn-on threshold)
LED Motion Indicator	<input type="checkbox"/>	3 Lights indicate motion	Disable LED Indicator
Reset Learned Settings	<input type="checkbox"/>	4 Retain Settings (Normal)	Erase all learned settings, Restart Learning (Toggle On)



	B	Off	On
Strong Airflow Compensation	<input type="checkbox"/>	1 Disable Compensation (Normal)	Enable Compensation
Over Doorway Installation	<input type="checkbox"/>	2 No (Normal)	Yes (Use increased turn-on threshold)
Timer Adjust	<input type="checkbox"/>	3 Adjust Timer Automatically	Use Manual Setting (No adjustment)
Auto Sensitivity	<input type="checkbox"/>	4 Adjust Sensitivity Automatically	Adjust Sensitivity Manually



Timer Test Mode

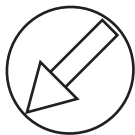
1. Remove the retainer cover.
2. Rotate the black timer adjustment knob to about midway (12 o'clock).
3. Return setting to minimum setting (full CCW).



Factory Settings



12 o'clock



Full CCW

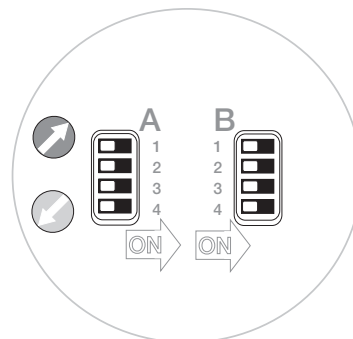
Note: The timer will remain in the 8-second test mode for 1 hour, then automatically reset to 8 minutes.

4. To manually take the timer out of the 8-second test mode, turn the timer adjustment approximately 1/16" clockwise to make the setting slightly above minimum (just above the 8-minute setting).

Factory Settings

Red: Infrared sensitivity
75% default

Black: Timer
8 min.



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Job Number:	