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Infrared Ceiling Mount Sensor

The ULOS-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 m^2) 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.
- Assembled in the USA.

Models Available

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

Self-Adaptive Feature

The ULOS-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

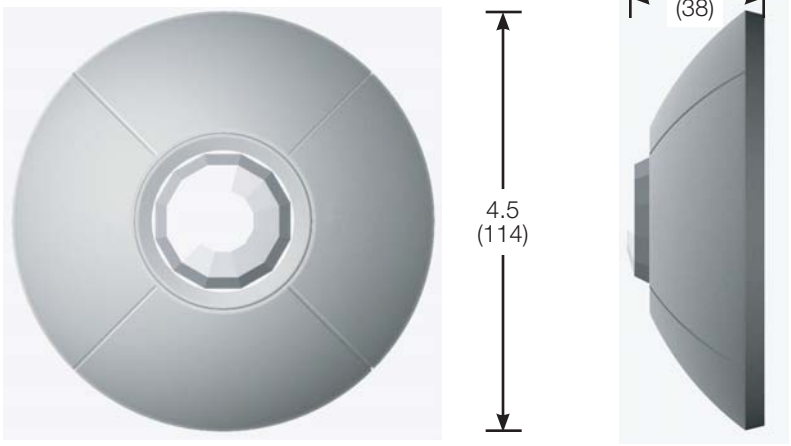
- Operating voltage: 20 - 24 V⎓ , PELV (Class 2: USA) low-voltage
- Operating current: 33 mA nominal
- Control output: 20 - 24 V⎓ active high logic control signal with short-circuit protection, open collector when unoccupied
- UL and CUL listed

Operating Environment

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

Dimensions

Measurements are in inches (mm)



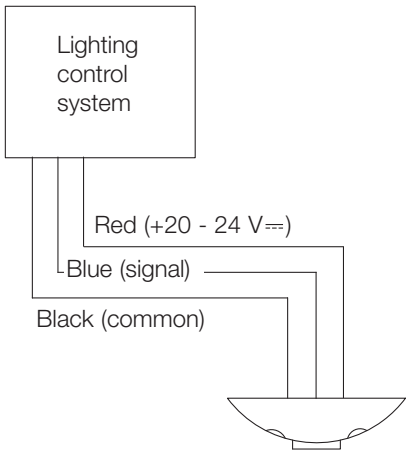
Front View Side View

Job Name:	Model Numbers:
Job Number:	

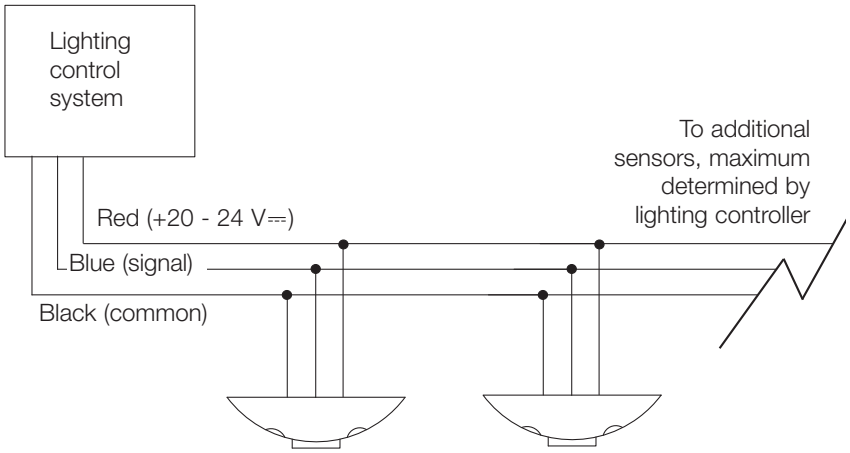
Wiring

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

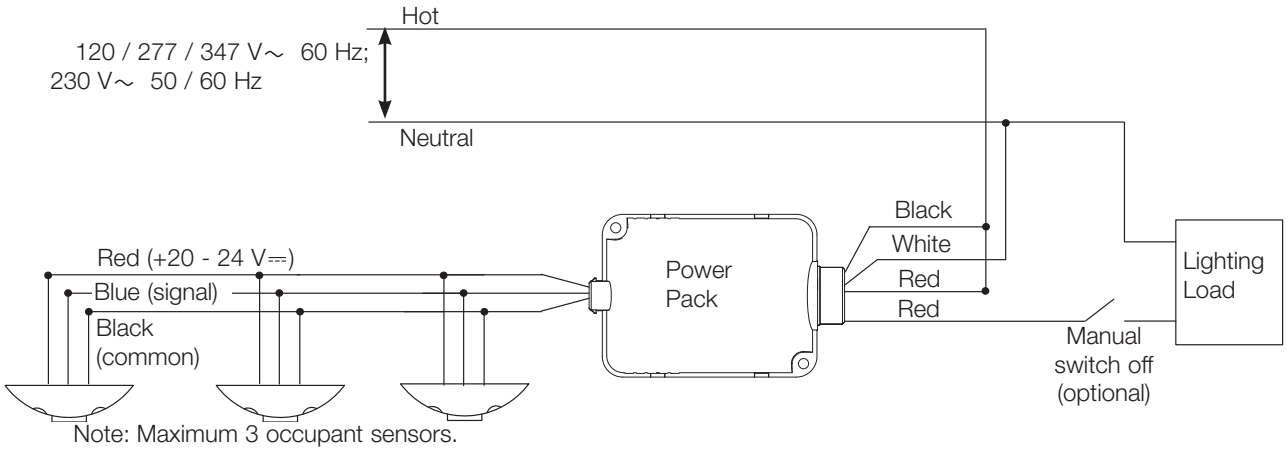
Lutron Lighting Control System	Power Pack Required?
Digital microWATT™	No
EcoSystem®	No
GRAFIK 5000 / 6000 / 7000™	No, when used with seeTouch® wallstations with occupant sensor connections.
GRAFIK Eye® 3000 / 4000	Yes
HomeWorks®	Yes
LCP128™	No, when used with seeTouch® wallstations with occupant sensor connections.
microWATT®	No
RadioRA®	Yes
RadioTouch®	No
Softswitch128®	No, when used with seeTouch® wallstations with occupant sensor connections.

NOTE: Power Pack may be required for more than one Occupant Sensor. Consult factory for multiple sensor requirements.

Job Name:	Model Numbers:
Job Number:	

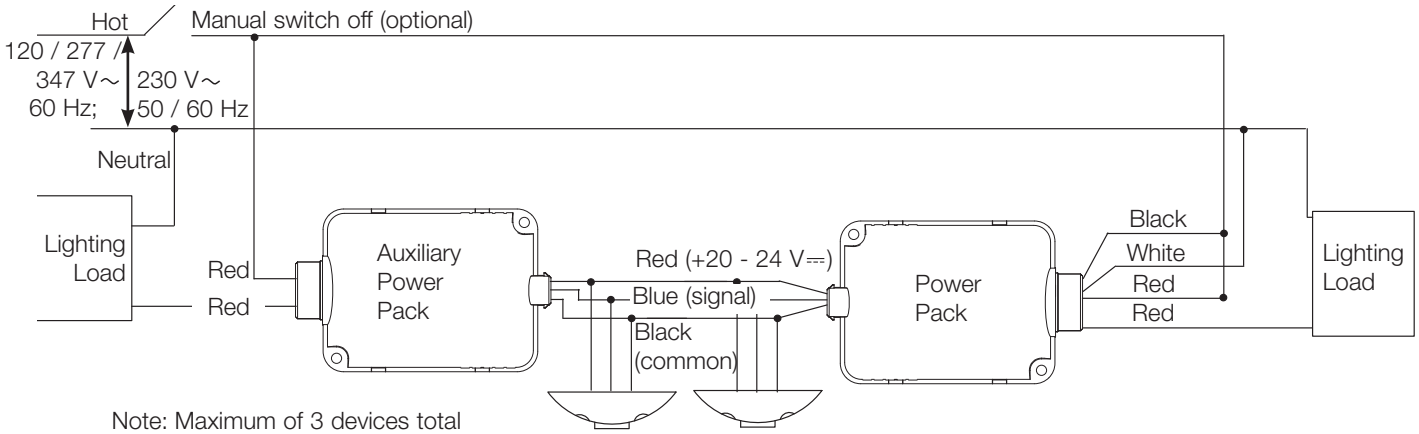
Wiring: Stand-Alone Control

1 to 3 Sensors with Power Pack



Note: Maximum 3 occupant sensors.

Switching Multiple Loads with Auxiliary Power Packs



Note: Maximum of 3 devices total (occupant sensors and auxiliary power packs) can be connected to a power pack.

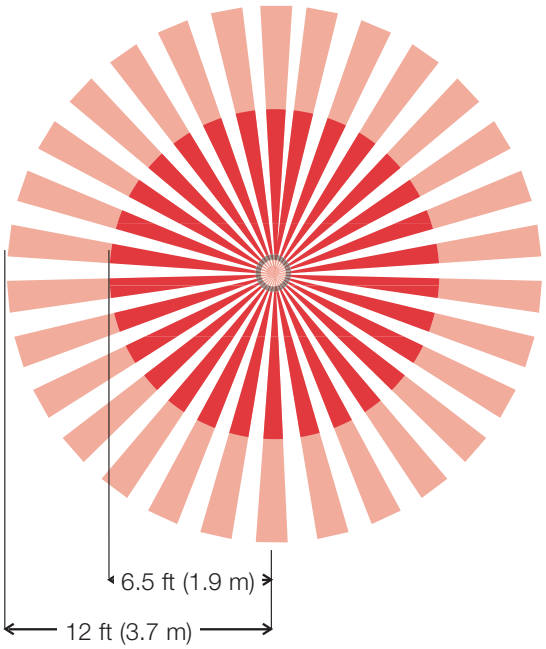
Job Name:	Model Numbers:
Job Number:	

Installation

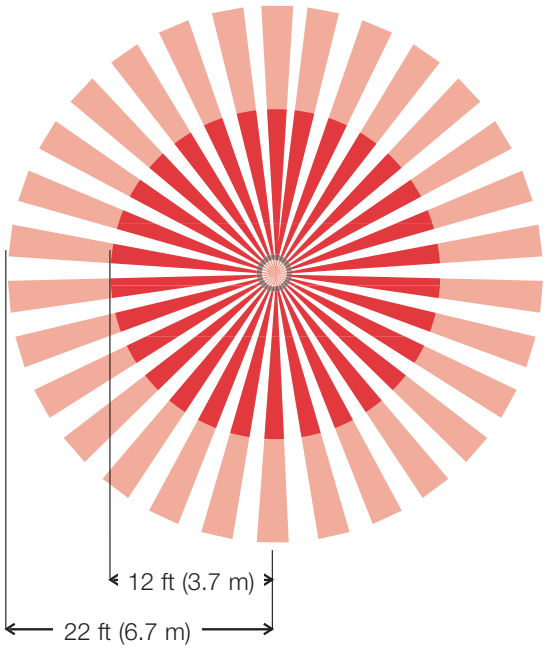
Sensor Placement

- The occupant sensor must have an unobstructed view of the room. Do not mount behind or near tall cabinets, shelves, indirect hanging fixtures, etc.
- Do not place sensor within 6 ft (1.8 m) of air vents, air handlers, windows, fans, etc., as this may cause false triggering.
- 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.

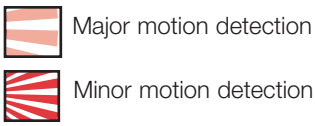
Range Diagrams



LOS-CIR-450



LOS-CIR-1500

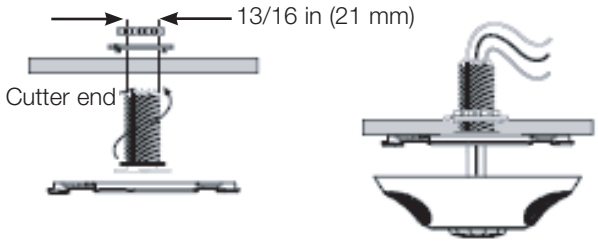


Job Name:	Model Numbers:
Job Number:	

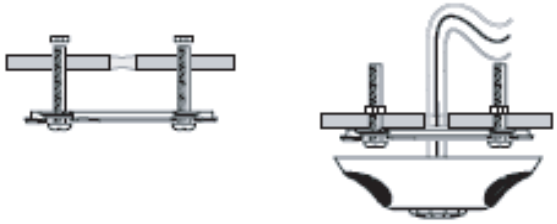
Installation

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.



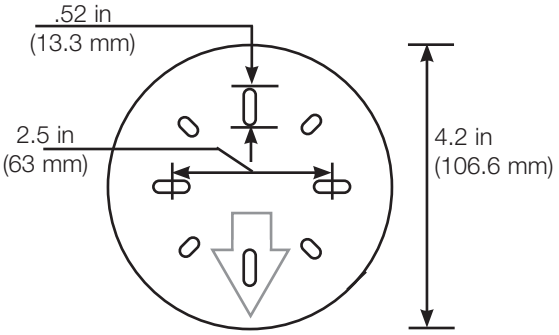
Mounting to Non-Standard Ceiling or Fixture
Mount twist-lock cover plate using mounting screws, nuts, and washers (included). Drill/punch wire routing hole through ceiling tile at center of cover plate.



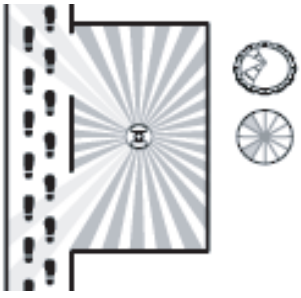
Wire Lengths

# 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

Mounting Plate Dimensions



Using the Infrared Mask



Center Ceiling Mount
(Mask blocks sensor seeing out doorway into hall)

Corner Ceiling Mount
(No mask needed)

Typical Mask Patterns

Conference Room Mask

180° Mask

Full Mask

Rectangular Areas

Over the Door

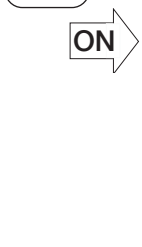
Specific Areas You Wish to Mask

Job Name:	Model Numbers:
Job Number:	

Sensor Adjustments

Override Settings

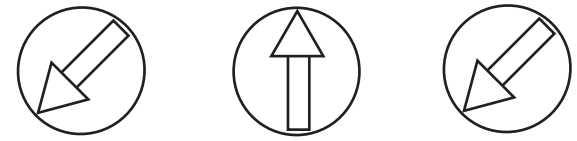
A		Off (Default)	On
Auto/Manual	1	Automatic (Normal)	Manual on/off (Override)
Threshold	2	Auto Threshold Adjustment	High Sensitivity (Low turn-on threshold)
LED Motion Indicator	3	Lights indicate motion	Disable LED Indicator
Reset Learned Settings	4	Retain Settings (Normal)	Erase all learned settings,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



B		Off	On
Strong Airflow Compensation	1	Disable Compensation (Normal)	Enable Compensation
Over Doorway Installation	2	No (Normal)	Yes (Use increased turn-on threshold)
Timer Adjust	3	Adjust Timer Automatically	Use Manual Setting (No adjustment)
Auto Sensitivity	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

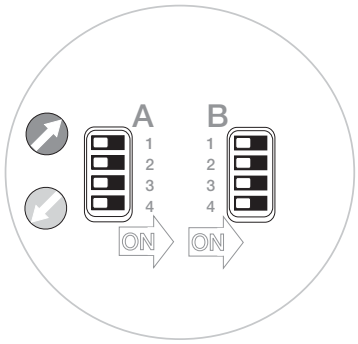
Note: The timer will remain in the 8-second test mode for 1 hour, then automatically reset to 8 minutes.

4. To manually take the timer out of the 8-second test mode, turn the timer adjustment approximately 1/16 in (1.5 mm) 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.



Job Name:	Model Numbers:
Job Number:	