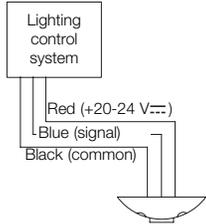
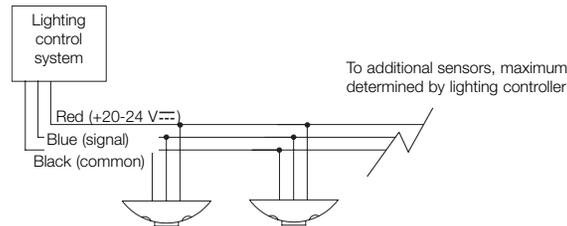


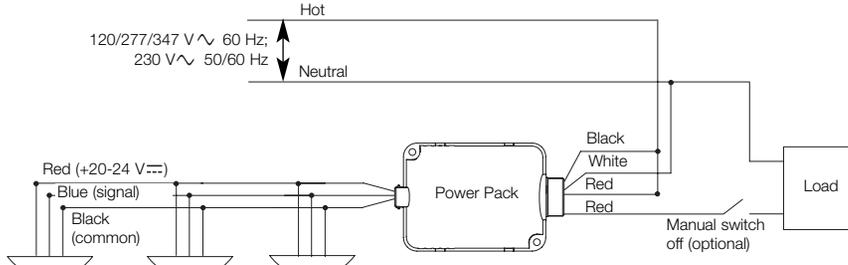
Single Sensor to System



2 or More Sensors to System

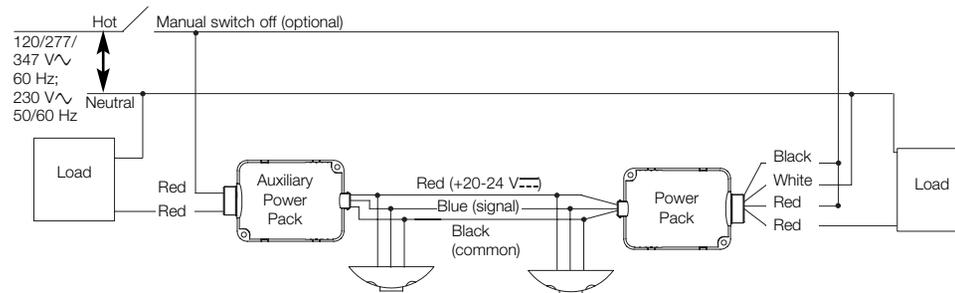


1 to 3 Sensors with Power Pack



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.

TROUBLESHOOTING

Problem	Possible Cause	Test	Result
Lights stay on	Air conditioning interference	Reduce both green and red knob by 15%	Move sensor; temporarily reduce sensitivity
Lights on too long	Timer setting too high	Check switch settings	Typical setting is 8 min.
Hallway traffic turns lights on	Sensor "sees" into hallway	Put in timer test mode; walk along hallway	Move sensor
Sensor not responding	Unit is locked up	--	Cycle power to sensor



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LIMITED WARRANTY

Lutron will, at its option, repair or replace any unit that is defective in materials or manufacture within one year after purchase. For warranty service, return unit to place of purchase or mail to Lutron at 7200 Suter Rd., Coopersburg, PA 18036-1299, postage pre-paid.

This warranty is in lieu of all other express warranties, and the implied warranty of merchantability is limited to one year from purchase. This warranty does not cover the cost of installation, removal or reinstallation, or damage resulting from misuse, abuse, or improper or incorrect repair, or damage from improper wiring or installation. This warranty does not cover incidental or consequential damages. Lutron's liability on any claim for damages arising out of or in connection with the manufacture, sale, installation, delivery, or use of the unit shall never exceed the purchase price of the unit.

This warranty gives you specific legal rights, and you may also have other rights which vary from state to state. Some states do not allow limitations on how long an implied warranty lasts, so the above limitation may not apply to you. Some states do not allow the exclusion or limitation of incidental or consequential damages, so the above limitation or exclusion may not apply to you.

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P/N 031-260 Rev. A 6/05

OCCUPANT SENSOR

LOS-C SERIES

Installation Instructions

Please Read

LOS-CUS-500/1000/2000
LOS-CIR-450/1500
LOS-CDT-500/500R/1000/1000R/2000/2000R
Class 2 (PELV) Devices

DESCRIPTION

The LOS-C Series of ceiling-mounted sensors incorporate ultrasonics (CUS), infrared (CIR), and dual technologies (CDT). They integrate into Lutron systems or function as stand-alone controls using a Lutron power pack.

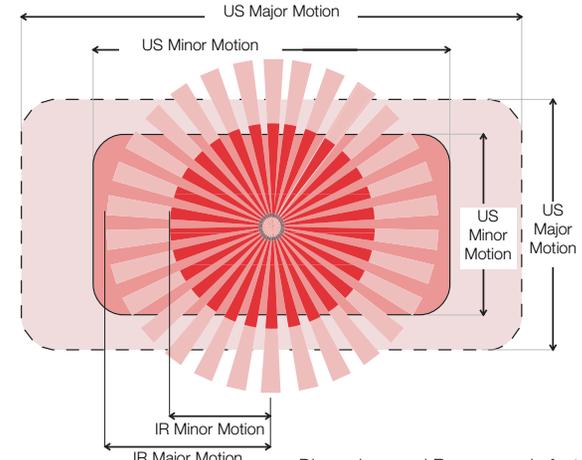
FEATURES

- Intelligent, continually adapting sensors
- 20-24V~ , Class 2 (PELV) low voltage, 33 mA nominal
- 450 to 2000 sq.ft. coverage, as indicated in model number (when mounted on 8 ft. ceiling)
- Second dry contact closure available on R models
- LED indicators: Ultrasonic (US)-green, Infrared (IR)-red, Dual Tech (DT)-red and green
- For indoor use only

COVERAGE AND PLACEMENT

- The occupant sensor must have an unobstructed view of the room. Do not mount behind or near tall cabinets, shelves, hanging fixtures, etc.
- Keep the occupant sensor away from air flow.
- If installing a 180° occupant sensor, place the sensor on the same wall as the doorway so that hallway traffic will not affect the sensor; otherwise, place in center of room.
- Closely follow the diagrams for major and minor motion coverage.
- Decrease total coverage area by 15% for "soft" rooms (for example, heavy draperies or heavy carpeting).
- Indicated range is when unit is mounted on an 8 ft. ceiling.

Motion Detection Ranges



Dimensions and Ranges are in feet (m).

Model	US Minor Dims.	US Major Dims.	IR Minor	IR Major
CUS-500*	16 x 16 (4.9 x 4.9)	22 x 22 (6.7 x 6.7)	NA	NA
CUS-1000*	23 x 23 (7.0 x 7.0)	32 x 32 (9.8 x 9.8)	NA	NA
CUS-2000**	23 x 45 (7.0 x 13.7)	32 x 64 (9.8 x 19.5)	NA	NA
CIR-450**	NA	NA	6.5 (1.9)	12 (3.7)
CIR-1500**	NA	NA	12 (3.7)	22 (6.7)
CDT-500*	23 x 16 (7.0 x 4.9)	32 x 22 (9.8 x 6.7)	12 (3.7)	22 (6.7)
CDT-1000*	23 x 23 (7.0 x 7.0)	32 x 32 (9.8 x 9.8)	12 (3.7)	22 (6.7)
CDT-2000**	23 x 45 (7.0 x 13.7)	32 x 64 (9.8 x 19.5)	12 (3.7)	22 (6.7)

*180° field of view

**360° field of view



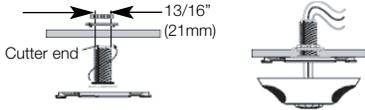
PRE-INSTALLATION

1. For installation by a qualified electrician in accordance with national and local codes and the following instructions.
2. For indoor use only.
3. **CAUTION: RISK OF ELECTRIC SHOCK. Disconnect power before installing. Never wire energized electrical components.**
4. **CAUTION: USE COPPER CONDUCTORS ONLY.**
5. **CAUTION: Do not connect this Class 2/PELV product to line voltage/mains cable.**
6. Check to see that the device type and rating is suitable for the application.
7. Do not install if product or lens have any visible damage.
8. If moisture or condensation is evident, allow the product to dry completely before installation.

INSTALLATION AND 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/Fixture:

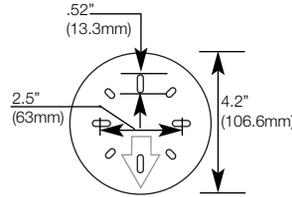
Mount twist-lock cover plate using mounting screws, nuts, and washers (included). Drill/punch wire routing hole through ceiling tile at center of cover plate.



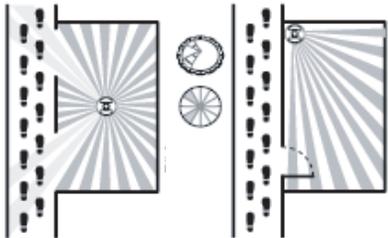
Wire Lengths (feet)

# Sensors	1	2	3	1	2	1
# Aux. PPs	0	0	0	1	1	2
22 AWG	750	375	250	375	250	250
20 AWG	1200	600	400	600	400	400
18 AWG	2400	1200	800	1200	800	800

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



SENSOR ADJUSTMENTS

Override Settings

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

ON

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

ON

SENSOR ADJUSTMENTS

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).



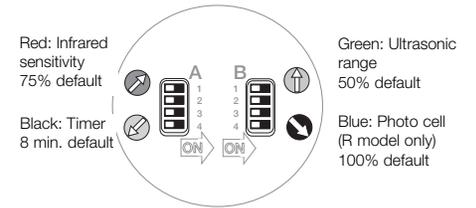
Note: The timer will remain in the 8-second test mode for 1 hour, then automatically reset to 8 minutes.

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).

Adjusting the "Lights Not On" Level: LOS-CDT-xxxxR only

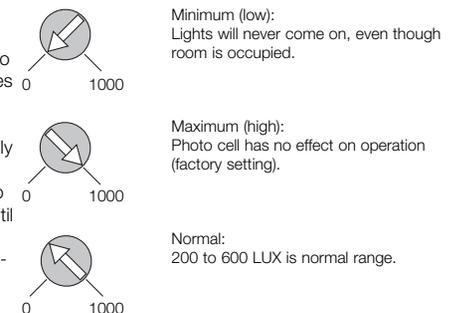
1. Ensure ambient light is at desired level.
 2. Place sensor in Test Mode as indicated above.
 3. Set photo cell: Turn the blue knob full clockwise (lights on no matter how bright the natural light is), then about 30 degrees counterclockwise.
 4. Check for Lights-Out: Move from underneath the sensor, and remain still until the lights turn off. Move around normally to turn the light on.
 5. Adjust to desired level: If lights turn on, adjust the blue knob another 30 degrees counterclockwise and repeat step 3 until the lights remain off.
- Note:** Set blue knob to 100% to disable photo cell functionality and leave secondary dry contact closure output functionality intact.

Factory Settings



Recommendation: Leave sensitivity settings as shipped. Note: Not all models have every knob.

Control Settings (Blue Knob): LOS-CDT-xxxxR only



WIRING DIAGRAMS

Relay Model Option: LOS-CDT-xxxxR only

