

△SETTING LEVELS

Setting the LS-100X should be performed in daylight conditions where the ambient light level is high enough that the lights would be kept off due to enough light. A footcandle meter is helpful.

- 1) The pre-set time delay of three minutes is an excellent starting point for most applications. You can shorten the delay in areas such as hallways, lobbies, and warehouses where users won't be confused by a sudden change in lighting levels. The time delay adjustment is at its maximum when the adjustment is turned fully counterclockwise (as seen from the back of the unit).
- 2) To begin the adjustment process, turn the "S" adjustment fully clockwise (to the right) and the "D" adjustment fully counterclockwise (to the left). The LED should be red. The lights should be on.
- 3) Next, turn the "S" counterclockwise until the LED turns green. This represents the OFF level, or the lighting level at which the lights will be turned off.
- 4) To adjust the deadband level turn the "D" adjustment clockwise about 50% until it is pointing straight up. If you notice that the lights seem to be cycling on and off too much, turn "D" slightly clockwise and continue this until the cycling stops. If you think the space is getting too dark before the lights turn back on, turn "D" slightly counterclockwise.
- 5) Once all adjustments have been made, permanently mount the sensor to the mounting surface with the screws provided. (See **INSTALLATION** for more information on the final installation process.)

△TROUBLESHOOTING

Lights will not turn on:

1. Make sure the power has been turned on at the circuit breaker.
2. Check all wire connections between the sensor and power pack.
3. If there is still a problem, check to see if there is 24VDC at the sensor (RED and BLK).
 - If 24VDC is present, replace the sensor.
 - If 24VDC is not present, make sure the power pack is functioning.
4. If lights still do not go on, call (800) 879-8585 for technical support.

Lights will not turn off:

1. Is the LED GREEN or RED?
 - If RED, make sure that the override jumper is not installed.
 - If GREEN, see next step.
2. To test if unit is operating properly, set the time delay to minimum. Lights should turn off after 3 seconds.
3. If lights still do not go off, call (800) 879-8585 for technical support.

ON-Bypass

The ON/Bypass pin is the rectangular cutout located next to the sensitivity adjustment. When the bypass jumper is inserted in this slot, lighting systems are overridden into the ON position. They remain on as long as the ON/Bypass pin remains inserted.

△ORDERING INFORMATION

LS-100XA	LightSaver® Controller (10-200FC range)
LS-100XB	LightSaver® Controller (50-1000FC range)
A120E-P	Power Pack: 120VAC, 60Hz, 20A ballast/13A incandescent
A277E-P	Power Pack: 277VAC, 60Hz, 20A ballast
A347D-P	Power Pack: 347VAC, 60Hz, 15A ballast
S120/277/347E-P	Slave Pack: 120/277VAC, 60Hz, 20A ballast 347VAC, 60Hz, 15A ballast

△WARRANTY INFORMATION

The Watt Stopper®, Inc. warrants its products to be free of defects in materials and workmanship for a period of five years. There are no obligations or liabilities on the part of The Watt Stopper®, Inc. for consequential damages arising out of or in connection with the use or performance of this product or other indirect damages with respect to loss of property, revenue, or profit, or cost of removal, installation or reinstallation.

The Watt Stopper®

Putting a Stop to Energy Waste

Santa Clara CA 95050 (800) 879-8585
86-0403-00

LightSaver® Controller

Model #- LS-100XA & XB



△SPECIFICATIONS

Voltages	24VDC
Power Supply	Watt Stopper Power Pack
Control Output	120mA maximum
Time Adjustment	3 seconds-5 minutes
Sensitivity Adjustment	Minimum-Maximum
Light Level Adjustment	
LS-100XA	10-200FC
LS-100XB	50-1000FC



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Installation Instructions

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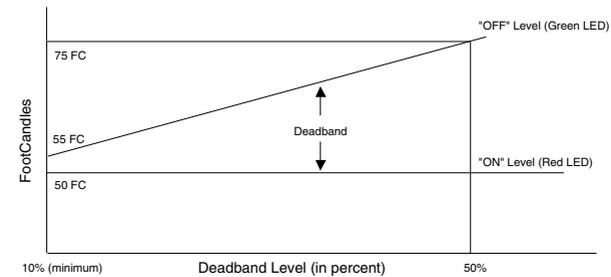
△ UNIT DESCRIPTION

The LightSaver® Controller (LS-100X version A & B) automatically switches artificial lighting systems off when enough natural light is available to illuminate an area. The Controller will also automatically turn lighting systems back on again when needed. The LS-100XA operates within a range of 10 to 200 footcandles and is generally used in office areas with vertical panes of glass. The LS-100XB operates within a range of 50 to 1000 footcandles and is often used in skylights and solar/atrium areas.

The LS-100X remotely controls lighting systems through low-voltage wiring which is connected to Watt Stopper power packs. These power packs are capable of switching a wide range of different lighting configurations and loads on the command of the LS-100X.

△ DEADBAND/LEVEL SETTING ILLUSTRATION

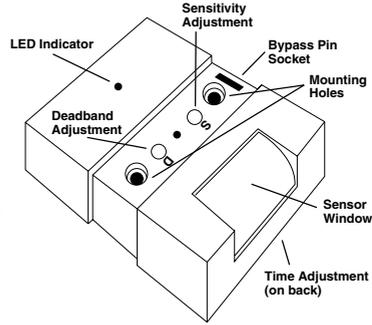
If lighting levels drop below the ON level (here set to 50 Footcandles), the LED will turn red and the lights will go on after the user-adjustable time delay has expired. Light levels may increase after the lights are turned on, but the lights will remain ON until the OFF level is reached. Should light levels climb above the OFF level, the signal LED will turn green, and the lights will turn off when the time delay has expired. This deadband feature prevents lighting system from cycling on cloudy days.



△ UNIT CONTROLS

Time Delay Control-

The time delay control is found on the back of the unit. It is necessary to set the time delay prior to final mounting of the unit. The time delay controls the amount of time that the sensor waits before it changes the condition of the lights. That way, the sensor will not rapidly cycle lighting systems when the sun is alternately shining and hiding behind cloud cover. The time-delay adjustment is at its minimum (three seconds) when fully clockwise, and at its maximum (five minutes) when fully counter-clockwise. The time delay is preset at three minutes.



LED Indicator- The LED indicator is a dual-color LED which will be green when ambient light levels are above the setpoint, and red when ambient light levels are below the setpoint.

Sensitivity Control- Under the front cover, the trimpot (flathead screwdriver fitting) marked "S" determines at what light level the LS-100X will turn lights on. Decreasing (turning counter-clockwise) the setting decreases the amount of light required before the sensor will turn lights on.

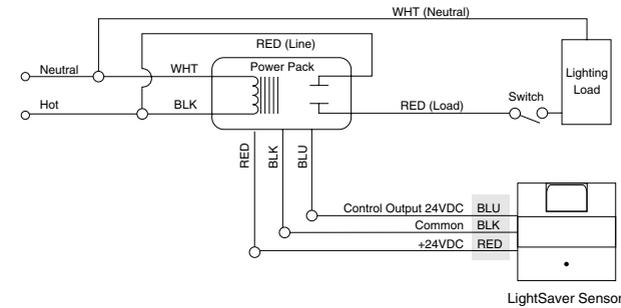
Deadband Control- The trimpot marked "D" determines at what point the lights will turn off. This adds to the sensitivity setpoint a deadband of non-activity from 10% to 100% above the ON level. Light levels that fall within the deadband will have no effect on the condition of electrical lighting. This feature also prevents rapid lighting system cycling on partly-cloudy or marginal days. See the section **Setting Levels** for more information.

ON/Bypass- The ON/Bypass pin is the rectangular cutout located next to the sensitivity adjustment. When the bypass pin is inserted in this slot, lighting systems are overridden into the ON position. They remain on as long as the ON/Bypass pin remains inserted.

△ WIRING DIRECTIONS

For normal Installation, connect:

- Red wire from light sensor to Red wire from power pack.
- Black wire from light sensor to Black wire from power pack.
- Blue wire from light sensor to Blue wire from power pack.



△ INSTALLATION

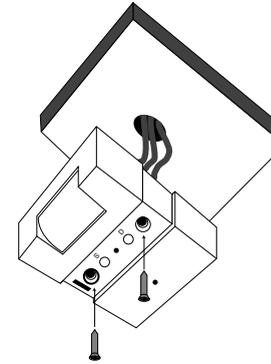


TURN THE POWER OFF AT THE CIRCUIT BREAKER BEFORE INSTALLING POWER PACK AND SENSOR!

The unit should be mounted so that the center of the LS-100X's window rests at a 45° angle to the natural light source.



Do not place sensor in or point sensor at direct sunlight.



1. Wire the sensor to the power pack as described in the section **WIRING DIRECTIONS**.
2. Since the time delay trimpot is located on the back of the sensor, the sensor must be adjusted before it has been permanently mounted to the ceiling. Adjust the sensor as described in the section **SETTING LEVELS**.
3. After the sensor has been adjusted, attach the sensor to the mounting surface with the two screws provided.