http://waterheatertimer.org/How-to-install-and-troubleshoot-photo-eye.html



PHOTO CONTROLS

WITH TWIST LOCK MOUNTING

IMPORTANT OPERATING INSTRUCTIONS

RATING CHART				
	NORMAL			
	OPERATING	BALLAST	TUNGSTEN	
MODEL	VOLTAGE	VA	WATTS	
LC2000	110-277	1800	1000	

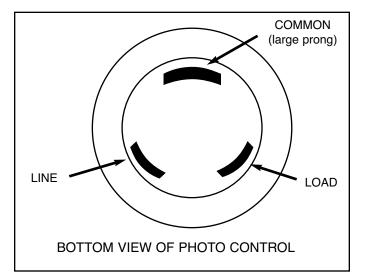
MOUNTING Insert prongs of Photo Control into female socket and twist in clock-wise direction with slight pressure until unit is secure. "Eye" (window in plastic housing) should be oriented in a northerly direction, if possible, for best operating results, and should be positioned so as to be unaffected by the controlled light, auto headlights, window lights, signs, etc.

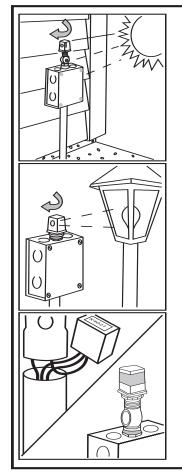
Wattage of controlled lights cannot exceed rated capacity

of Photo Control.

NOTE: Mount unit so that top of case is in an upright position.

TESTING: Make sure circuit is clear of shorts before applying power. Cover "EYE" with hand to activate unit. Repeat several times. Under extremely bright light it may be necessary to place an opaque item over the entire unit to activate it. Slight buzz from unit does not impair operation.





Common problems - read first!

- 1. Do not face the photocell into the midday sun. If installed on the south side of a building, face east or west or point the photo control down toward the ground. The best direction to face the photo control is north.
- 2. Do not face the photocell where it can see artificial light. Light from windows, signs, street lights, etc., will cause the photo control not to switch on. The photo control should not be positioned so that it sees the light it is controlling (or reflected light). These conditions will cause the light to cycle on and off.
- 3. When you are testing the photo control, be sure to turn on the power (load will come on) and wait up to 5 minutes for photocell to switch load off. For further testing cover the photo control completely with black tape or another dark material to simulate night conditions. If you can't cover the control with tape, try covering the photo control with the shipping carton to simulate night conditions.

Troubleshooting Chart

<u>Problem</u>	Cause	<u>Solution</u>
Fuse blows when power is connected.	Load exceeds fuse rating. Photo control is incorrectly wired. Short in wiring.	Reduce load to within fuse rating. Check wiring.
Load lamp blinks during the day, but is on at night.	Photo control is incorrectly wired.	Rewire as shown in wiring diagram.
Load lamp blinks at night, but is off during the day.	Too much light is striking photo eye. Light from load is shining or being reflected on eye of photo control. High pressure sodium lamp is at end of life.	Reorient or relocate photo control. Relocate or reorient light source. See high pressure sodium note below.
Load stays on.	Line voltage is exceptionally low. Photo control is not rated at voltage being used. Contacts are welded due to excessive load. Not enough light strikes photo control eye.	Have power company check voltage at control Replace control with unit of correct voltage Replace control and connect only rated load. Reorient or relocate photo control.
Load stays off.	Lamp and/or ballast is burned out. Line voltage is exceptionally high. Photo control is not rated at voltage being used. Too much light strikes eye of photo control at night.	Replace lamp and/or ballast Have power company check voltage at control Replace control with unit of correct voltage. Reorient or relocate photo control.
Photo control operates normally for a short time, then remains on.	Contacts are welded due to excessive load.	Replace photo control and connect only rated load or smaller.
Photo control fails to switch off and photo- cell shows evidence of burning or arcing across serpentine pattern.	Photo control damaged by lightning or other high- energy transient.	Replace photo control. Consider installing "LA' Model Control, lightning arrestor or surge protection device in circuit.
High pressure sodium or mercury vapor end- of-life failure.	With these lamps the end-of-life failure mode is one of cycling (the initial cycling period may be as long as one-hour but will shorten to as little as one minute).	Replace lamp and/or ballast.

IMPORTANT NOTE:

The load being controlled by your photo control will be on even if installation is done during daylight hours. Allow a few minutes for the photo control to operate and turn the load off. To test the control in daylight, cover the photo eye completely and wait for the load to switch on (up to five minutes may be needed). If this does not work, switch breaker off and wait ten minutes. Switch breaker on. The load should be on.

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