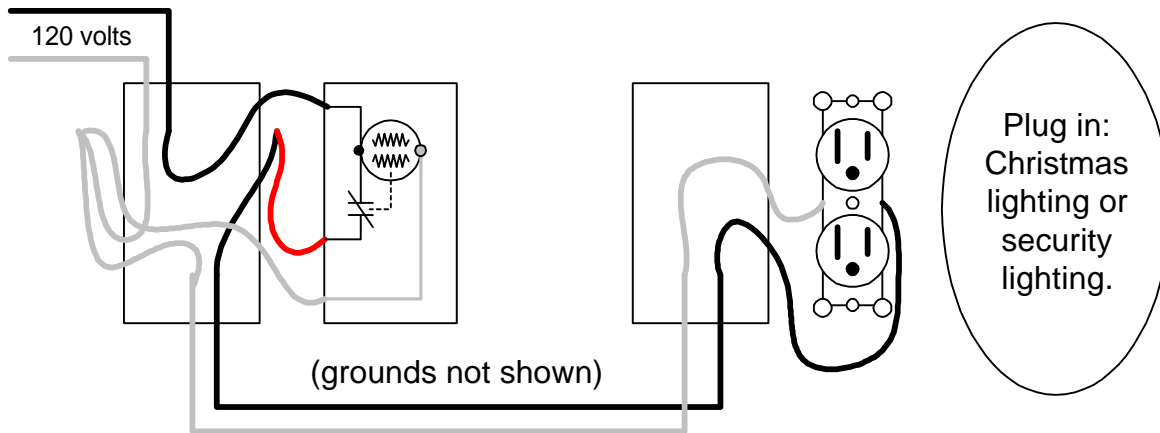


Photocell; On at Dusk, Off at Dawn

A very convenient application for photocell control is the automatic operation of Christmas lights on the outside of a house. The drawing below shows an installation that allows strings of lights to be plugged into an outlet that is controlled by the operation of a photocell. Care should be taken to insure that the wattage rating of the photocell is not exceeded by plugging too many strings of lights into the outlet.



This drawing shows the inner workings of the photocell. The photo-voltaic “window”, needs 120 volt supply to perform it’s design function, which is to collect light and open the switch contacts. The diagonal line through the switch contacts indicate that the switch is normally closed. When the “window” is able to collect enough light, the contacts open and the receptacle is de-energized. This sequence of operation is why the lights will come on when the photocell is first energized, even in the daytime. It takes anywhere from 2 to 45 seconds for the switch to open in bright sunlight, and when it’s dark, the switch stays closed.

Most mercury vapor ‘barn’ lights, and motion sensor controlled security lighting fixtures are equipped with built-in photocells. The life of the photo-voltaic “window” is sometimes shortened by intense and direct sunlight, so it’s a good idea to face the “window” to the North.

Whether troubleshooting electrical problems, or making a new installation, Safety should be the number one concern. The right tools and test instruments, and the knowledge to complete the task, are the ingredients for success.

There are countless sources of information that are available at little or no cost. Safeguard yourself and everyone that will use the electrical system you install, by being properly equipped before you begin an electrical project. Got questions? E-mail them to dclm@teleport.com

