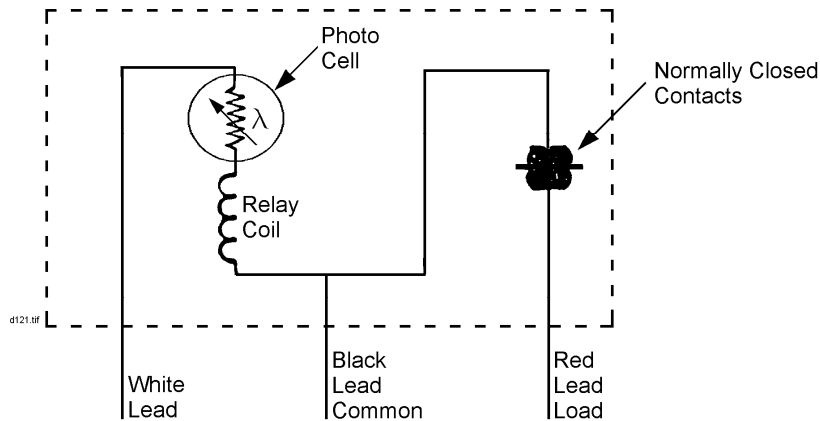


**NOT FOR NEW CONSTRUCTION
 STREETLIGHT WIRING DIAGRAMS**

PHOTOELECTRIC CONTROLS

Circuit: All photoelectric (PE) controls purchased by City Light are of the normally closed type. In this type the contacts are closed until the control is plugged in and energized; thus if connections are made properly, incandescent lamps should blink on momentarily when the control is plugged in. Then as the delay action in the control is overcome, it should go off until the light source to the cell is cut off.

Following is the fundamental circuit of a photoelectric control, although there may be built-in time delay circuits, lightning arresters and rectifiers which do not change the basic operation of the unit.



Operation: When light strikes the photocell the resistance of the cell is lowered, current flows through the cell energizing the relay coil which opens the relay contacts. The contacts will remain open as long as the light striking the cell is strong enough to keep the resistance of the cell sufficiently low to allow it to conduct. With increasing darkness, the resistance of the photocell increases to a point where it will no longer allow enough current to pass to hold the relay contacts open, the contacts close, turning the street lights on.

Connections: Looking at the bottom of the photoelectric control, the large pin connects to the white wire, the next pin clockwise connects to the red wire and the remaining pin connects to the black wire on the socket.

Installation: Always install the photoelectric control so that the photocell or photocell window faces north. Mount the unit in such a position that it is clear of floodlight and unusual lighting or shadow. Test each photoelectric installation.

| ORIGINATOR | STANDARDS COORDINATOR | STANDARDS SUPERVISOR | UNIT DIRECTOR |
|--------------------|---------------------------|----------------------|-------------------|
| <i>Jim S. Horn</i> | <i>Charles L. Shaffer</i> | <i>John Schinner</i> | <i>Harold Juy</i> |

STREETLIGHT WIRING DIAGRAMS, NOT FOR NEW CONSTRUCTION

Photoelectric Control of N.O. Contactor

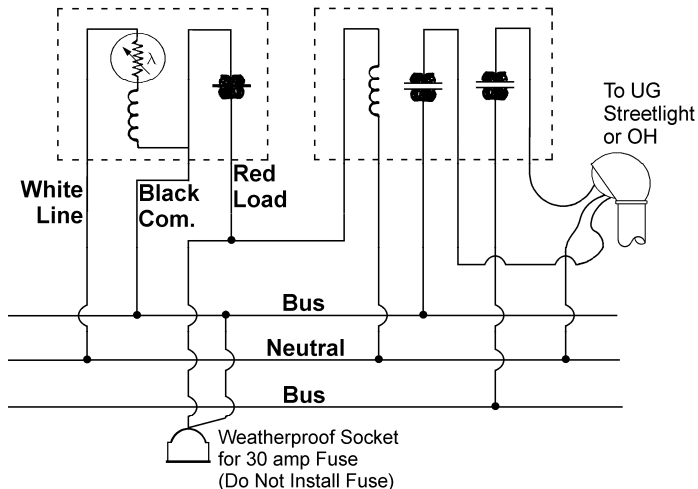
Photoelectric Relay

2P N.O. Contactor

Bracket Stock No. 568046

105-300V PE Stock No. 569333

100A Relay Stock No. 583388

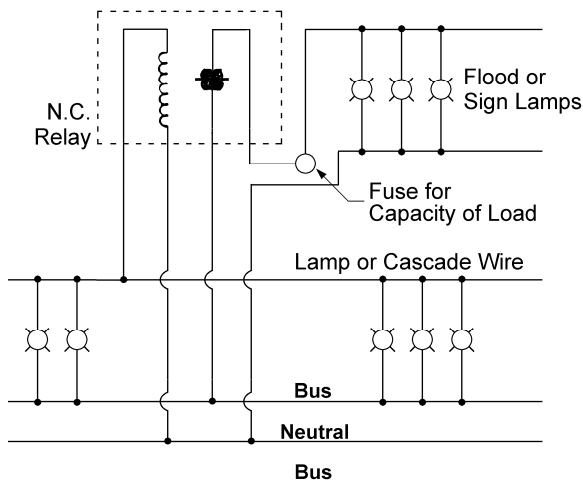


Flood Light Control

Circuit with N.C.

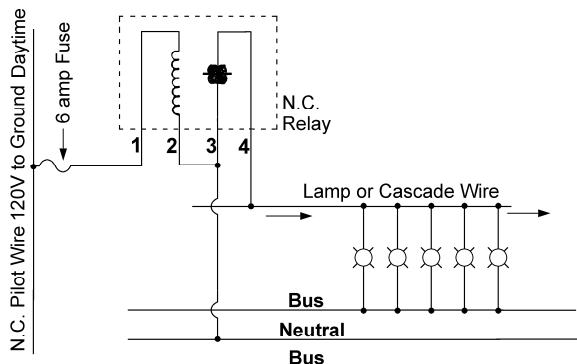
Streetlight Relay

N. C. Relay Stock No. 569300



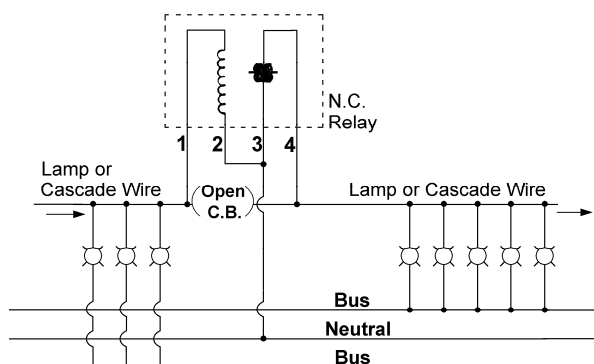
Pilot Wire to Lamp Wire with Normally Closed Streetlight Relay

N. C. Relay Stock No. 569300



Streetlight Cascading Circuit with Normally Closed Relay

N. C. Relay Stock No. 569300



STREETLIGHT WIRING DIAGRAMS, NOT FOR NEW CONSTRUCTION

Photoelectric Floodlight Control

Photoelectric Relay

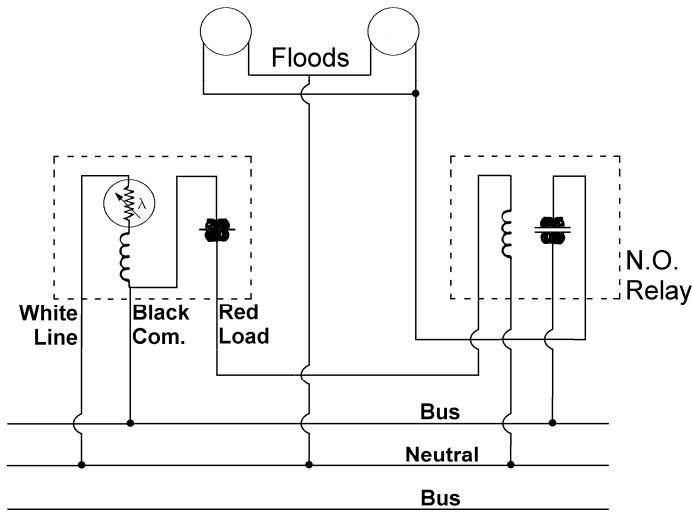
2P N.O. Contactor

N. O. Relay Stock No. 583388

Bracket Stock No. 568046

105-300V PE Stock No. 569333

Note: The N.O. relay may be eliminated on floodlight installations of 750 watts or less.



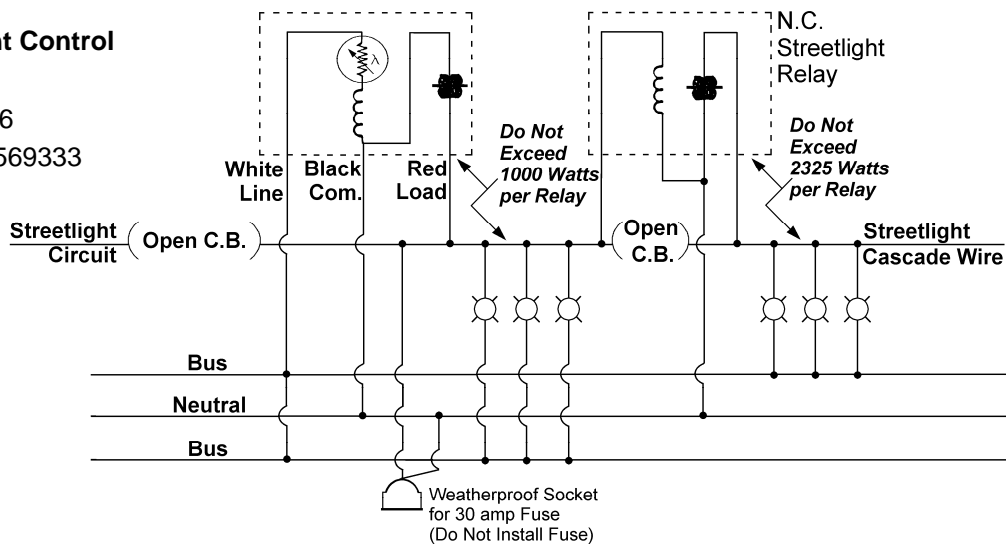
Photoelectric Streetlight Control

Photoelectric Relay

Bracket Stock No. 568046

105-300V PE Stock No. 569333

N. C. Streetlight Relay
 Stock No. 569300



PE Pilot Wire Control Installation

Photoelectric Relay

Bracket Stock No. 568046

105-300V PE Stock No. 569333

N. C. Streetlight Relay Stock No. 569300

