



# ALCR20

*Lighting Relay Control Device*

## INSTALLATION INSTRUCTIONS

### IMPORTANT SAFEGUARDS

When using electrical equipment, basic safety precautions should always be followed including the following.

### READ AND FOLLOW ALL SAFETY INSTRUCTIONS

1. This product is for use with generator-supplied (or central inverter system-supplied) lighting loads. Make sure all connections are in accordance with the National Electrical Code and any local regulations.
2. To reduce the risk of electric shock, disconnect all power sources before servicing.
3. This product is for factory or field installation.
4. This product is for use in indoor or damp locations where the Ambient Temperature Range is -20°C to 55°C.
5. An unswitched, normal AC power source (120 through 277 VAC, 50/60 Hz) and a direct, separate connection to a generator-supplied (or central inverter system-supplied) emergency panel are required.
6. Do not mount near gas or electric heaters.
7. Equipment should be mounted in locations and at heights where it will not be subjected to tampering by unauthorized personnel.
8. The use of accessory equipment not recommended by the manufacturer may cause an unsafe condition.
9. Do not use this product for other than intended use.
10. Servicing should be performed by qualified service personnel.

**SAVE THESE INSTRUCTIONS**



**WARNING** – This product can expose you to chemicals including lead and lead compounds, which are known to the State of California to cause cancer and birth defects or other reproductive harm. For more information go to [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov).



## INSTALLATION

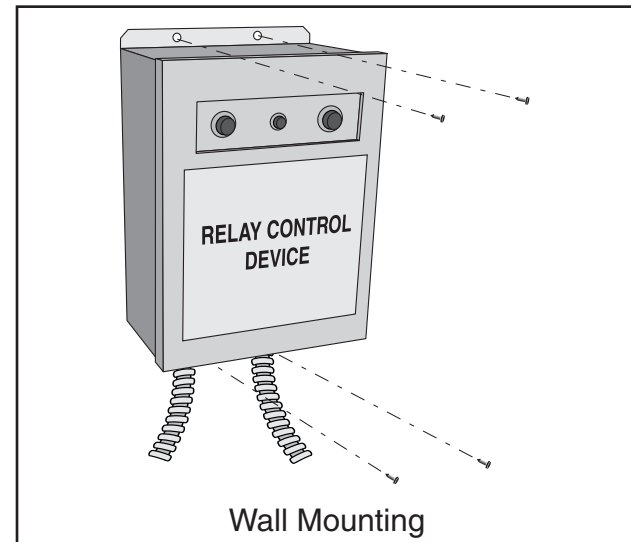
**CAUTION: THIS UNIT HAS MORE THAN ONE POWER SUPPLY CONNECTION POINT. TO REDUCE THE RISK OF ELECTRIC SHOCK, DISCONNECT ALL POWER SOURCES BEFORE INSTALLING OR SERVICING THIS UNIT.**

NOTE: SERVICE BY QUALIFIED PERSONNEL ONLY.

NOTE: BEFORE INSTALLING THE RELAY CONTROL DEVICE, Make sure that the necessary branch circuit wiring is available. An unswitched source of normal power is required. A SEPARATE CONNECTION TO A CENTRAL INVERTER SYSTEM-SUPPLIED OR GENERATOR-SUPPLIED CIRCUIT MUST ALSO BE PROVIDED.

1. FAMILIARIZE YOURSELF WITH THESE INSTRUCTIONS BEFORE BEGINNING INSTALLATION.
2. Mount the device in a convenient location using appropriate hardware (not supplied). See Illustration 1 for a typical installation. **Do not mount with lid facing down.**

### ILLUSTRATION 1

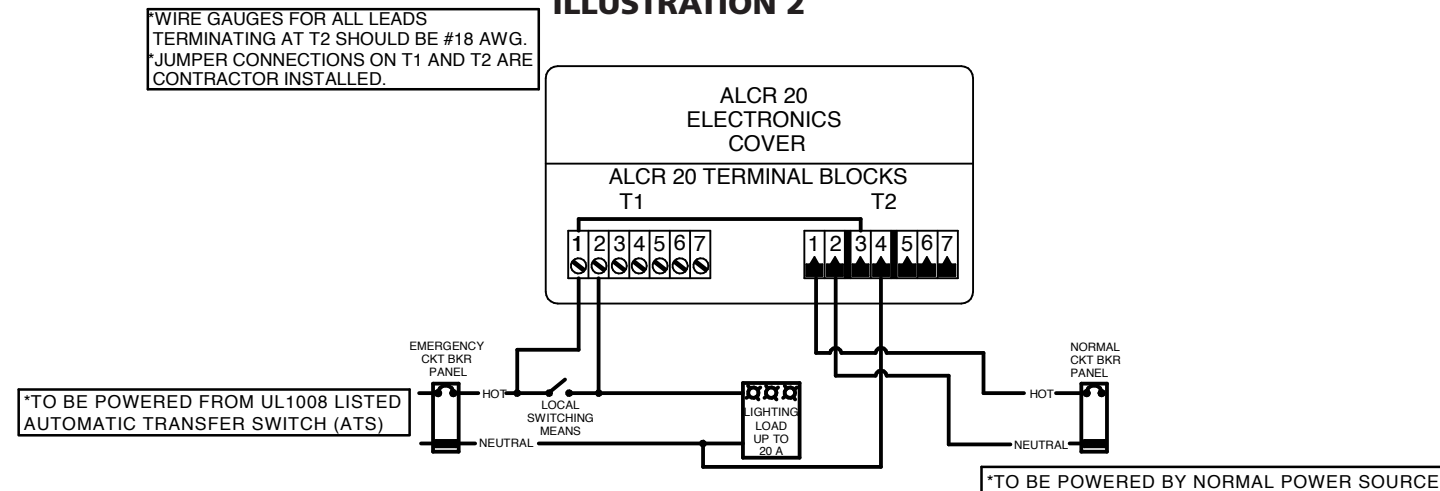


3. Disconnect AC power from all supply circuits
4. Remove device lid and install necessary conduit and wiring (not supplied) to the device (refer to illustrations 1 to 4 following proper wiring connections).

**NOTE:** When using class 2 power limited circuits, remember to keep this wiring separate from high voltage wiring by using separate conduit and the enclosure knockout supplied.

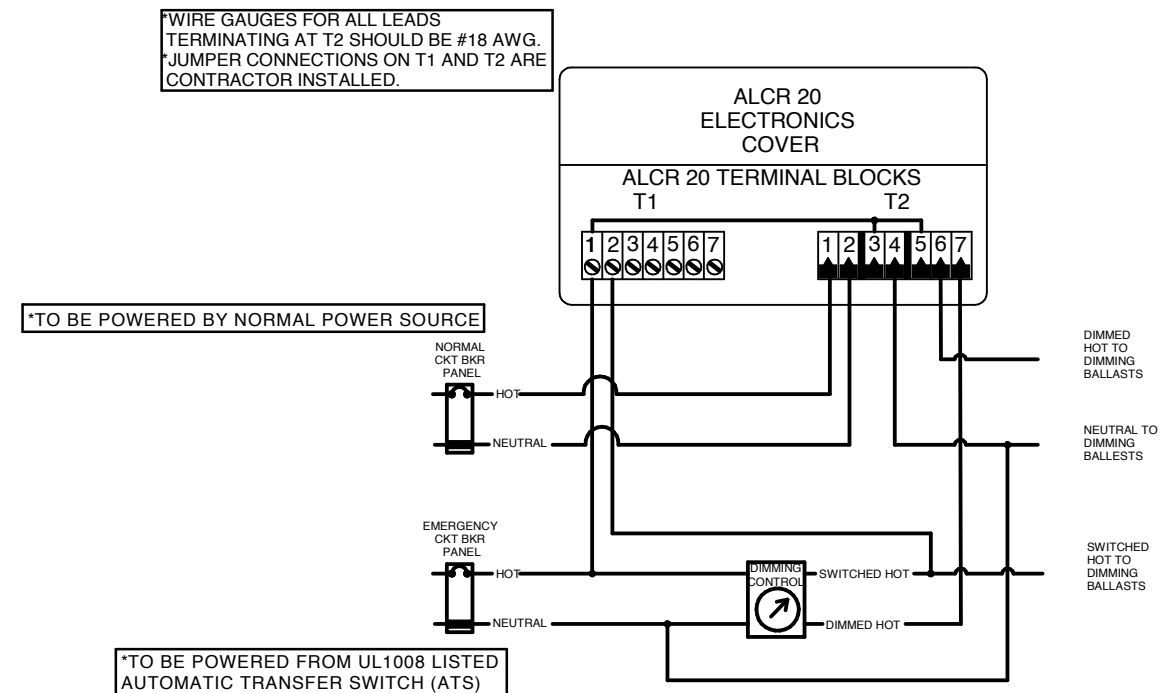
5. Replace device lid and secure.

### ILLUSTRATION 2



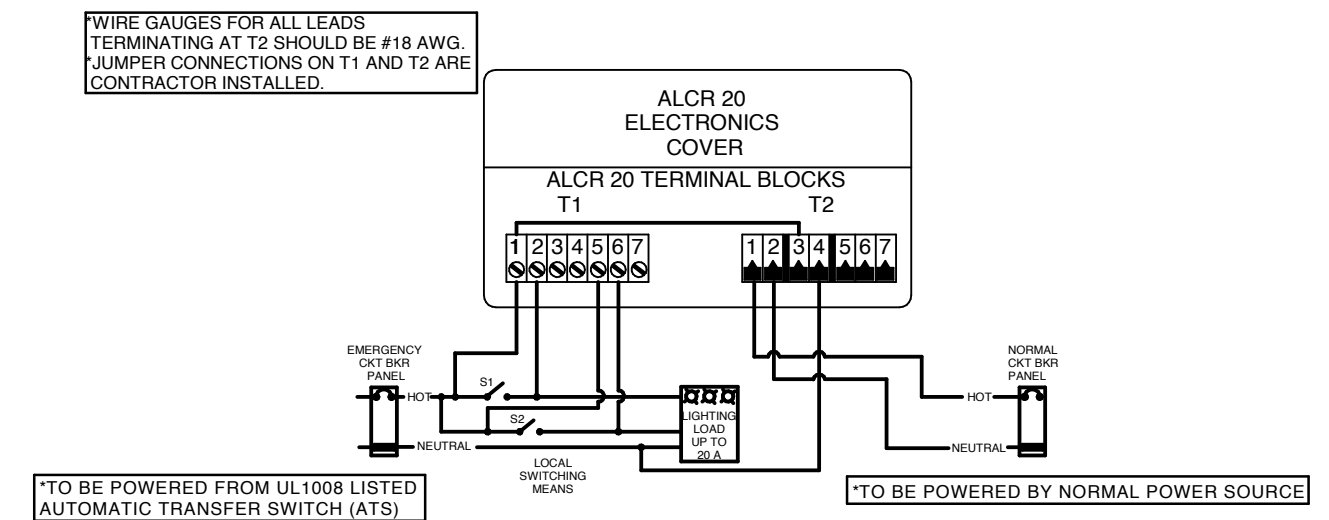
### ALCR20 AS A LIGHTING RELAY CONTROL DEVICE

### ILLUSTRATION 3



### ALCR20 AS A LIGHTING RELAY CONTROL DEVICE FOR A DIMMING RACK

### ILLUSTRATION 4

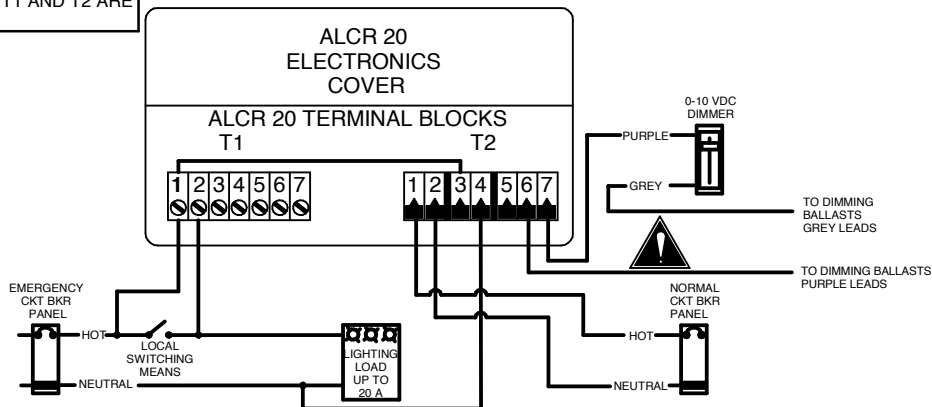


### ALCR20 AS A LIGHTING RELAY CONTROL DEVICE

**\*NOTE: WIRE GAUGES FOR ALL LEADS TERMINATING AT T2 SHOULD BE #18 AWG. WIRE GAUGES FOR ALL OTHER CONNECTIONS SHOULD BE SIZED ACCORDING TO TOTAL CONNECTED LIGHTING LOAD. GROUND UNIT USING SUPPLIED GREEN LEAD WIRE. ALL TERMINALS ARE SUITABLE FOR BOTH COPPER AND ALUMINUM WIRE (CU-AL) JUMPERS FROM T1 TO T2 MUST BE INSTALLED BY CONTRACTOR**


## ILLUSTRATION 5

WIRE GAUGES FOR ALL LEADS  
TERMINATING AT T2 SHOULD BE #18 AWG.  
\*JUMPER CONNECTIONS ON T1 AND T2 ARE  
CONTRACTOR INSTALLED.



\*TO BE POWERED FROM UL1008 LISTED  
AUTOMATIC TRANSFER SWITCH (ATS)

\*TO BE POWERED BY NORMAL POWER SOURCE

 If Class 2 circuit, use knockout provided on enclosure and separate conduit to route these wires (see Note in Step 4 on Page 2).

## ALCR20 AS A LIGHTING RELAY CONTROL DEVICE WITH A 0-10 VDC DIMMING SYSTEM

- \*NOTE: WIRE GAUGES FOR ALL LEADS TERMINATING AT T2 SHOULD BE #18 AWG.**
- WIRE GAUGES FOR ALL OTHER CONNECTIONS SHOULD BE SIZED ACCORDING TO TOTAL CONNECTED LIGHTING LOAD.**
- GROUND UNIT USING SUPPLIED GREEN LEAD WIRE.**
- ALL TERMINALS ARE SUITABLE FOR BOTH COPPER AND ALUMINUM WIRE (CU-AL)**
- JUMPERS FROM T1 TO T2 MUST BE INSTALLED BY CONTRACTOR**

## FOLLOW UP AND QUICK TEST OF THE INSTALLATION

1. Mark each designated Standby lighting fixture with the warning labels, 20 provided.
2. Apply AC power to all circuits. The green “Normal Power Present” and the red “Emergency Power Available” LED’s should be illuminated.
3. Perform a quick test as described on the unit label to check for proper operation. When the test button is depressed, the green “Normal Power Present” LED should extinguish and the controlled lighting load should illuminate regardless of the local switch position provided emergency power is available (check red LED).
4. During a quick test on a device installed with a dimming system, the fluorescent lighting load should illuminate at full lumen levels when the test switch is depressed regardless of the lumen level during normal operation.
5. The entire central inverter or generator system, including all designated emergency loads, should be exercised to ensure proper operation (e.g., power up the emergency supply, throw the transfer switch to the inverter or generator position, and check the lighting loads to verify that they are operating properly from the central Inverter/Generator Supply

## OPERATION

The device uses an internal relay contact to control the AC power feeding the lighting load. When the central inverter or generator supplies AC power to the lighting fixture, the device bypasses the local switching means. This ensures the lighting load will be energized during central inverter or generator operation regardless of switch position.

## MAINTENANCE

No routine maintenance is required to keep the device functional. However, it should be checked periodically to ensure that it is working properly. Note: Make sure to disconnect both the normal and emergency panel circuit breakers before servicing.

**! REFER ANY SERVICING INDICATED BY THESE CHECKS TO QUALIFIED PERSONNEL !**