



Maintenance • Service • Safety

Recommendations and Installation Instructions Lumalier ADU Series



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EPA EST. NO. 91347-TN-002

Maintenance and Safety

Scheduled Maintenance Procedures

Quarterly – Visually inspect lamps through a viewing window to ensure all lamps are operational.

Semi-Annually – If the lamps show visual dust accumulation, they should be cleaned.

To clean lamps:

- De-energize by switching the toggle switch to the “off” position.
- Remove the chrome mesh lamp guard.
- Using soft cotton gloves, remove the lamps from the UV unit.
- Using a soft cotton cloth, with isopropyl alcohol, wipe the lamps and allow to dry. Replace the lamps.
- Reinstall the chrome mesh lamp guard.
- Turn on the exterior toggle switch. Read warnings.
- Inspect the lamps through a viewing window to insure all lamps are energized. .

Annually – Replace the lamps.

To replace lamps:

- De-energize by switching the toggle switch to the “off” position.
- Remove the chrome mesh lamp guard.
- Remove the used lamps from the UV unit.
- Wearing soft cotton gloves and using a soft cotton cloth, with isopropyl alcohol, wipe the new lamps and allow to dry.
- Install the new lamps.
- Turn on the exterior toggle switch.
- Inspect the lamps through the viewing port to insure all lamps are energized.

Service

Lumalier replacement parts and lamps can be purchased from authorized distributors. For information call 901-800-1709.

Safety

Personal Protective Equipment

Employees must wear personal protective equipment whenever UV radiation measurements are being made close to the lamp source in order to document lamp output, or when maintenance procedures must be performed in areas where UVC systems are activated.

Personal Protection Equipment includes:

- Safety glasses with side shields
- Head, neck and face covering opaque to UV radiation
- Soft cotton gloves
- Long-sleeved, tightly woven fabrics with SPF 15 or greater

Reporting UV Exposure

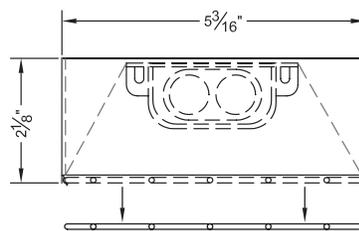
Should any temporary eye or skin irritation develop after acute exposure to UV radiation, one should contact their supervisor or physician.

Material Safety Data Sheets (MSDS)

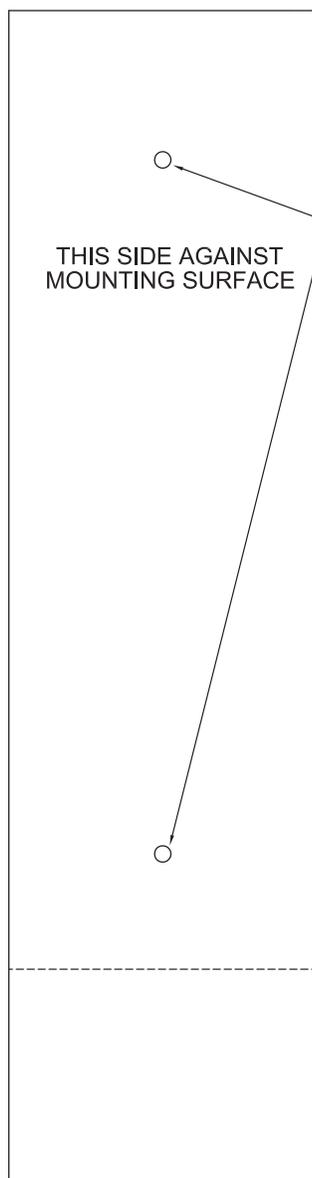
For MSDS sheets on our lamps, please contact your local Lumalier representative.

ADU SERIES UV UNIT INSTALLATION INSTRUCTIONS

CAUTION – This fixture is designed for use with UVC lamps and must be installed in compliance with competent technical directions so that the user's eyes and bare skin will not be subjected to injurious rays.

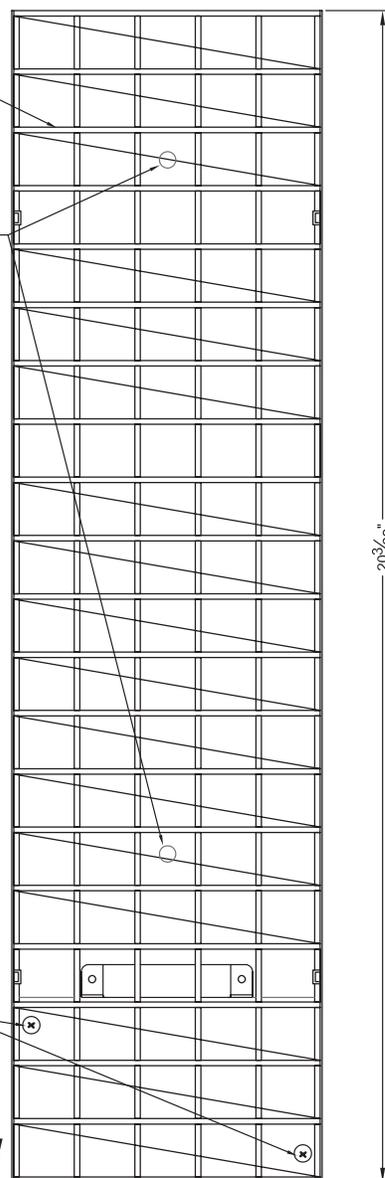


END VIEW



BACK VIEW

1. Remove the chrome lamp guard.
2. Using appropriate anchors (by others) & the holes in fixture housing, mount fixture to desired surface.
3. Disconnect power to fixture location and make-up wiring connections as per code. All electrical work to be performed by qualified personnel. See wiring diagram.
4. See lamping instructions & lamp fixture.
5. Reinstall chrome lamp guard.

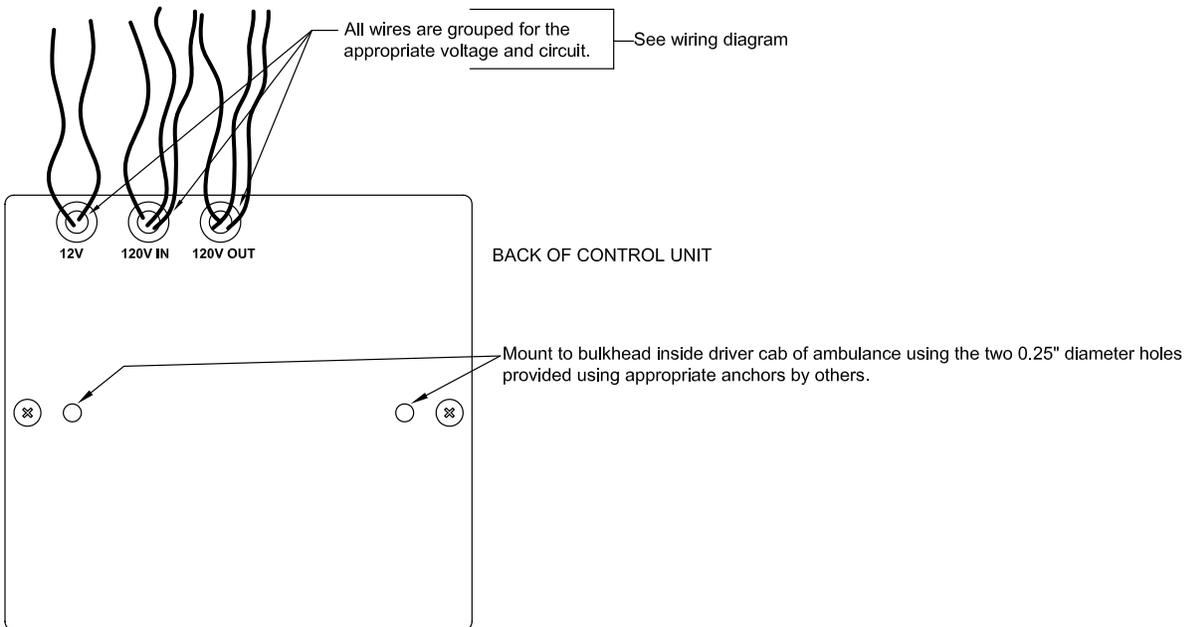
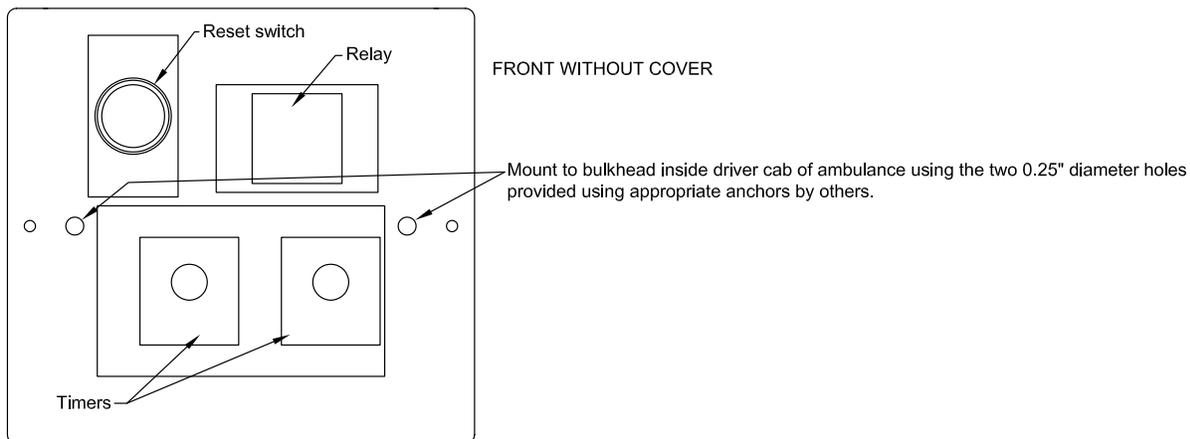
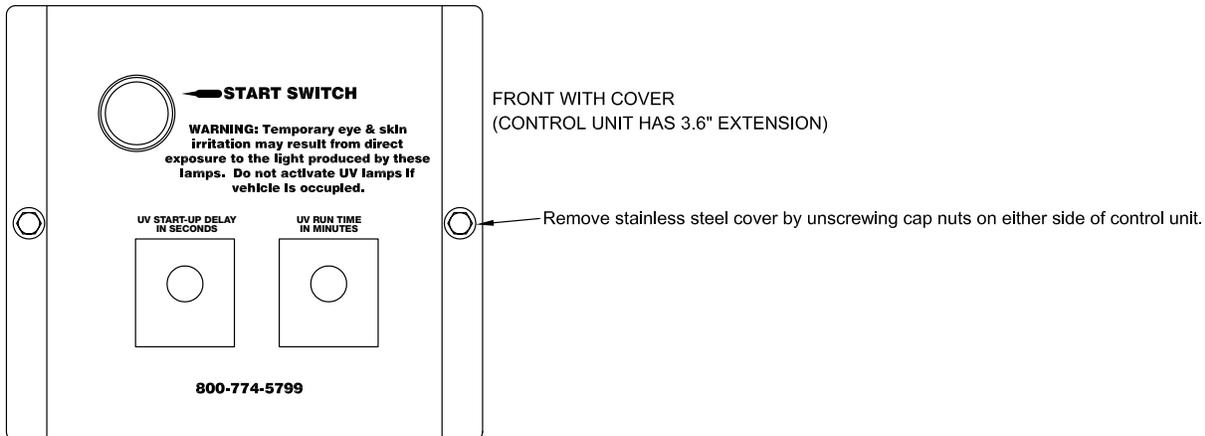


FRONT VIEW

Remove screws to access wiring compartment if necessary.

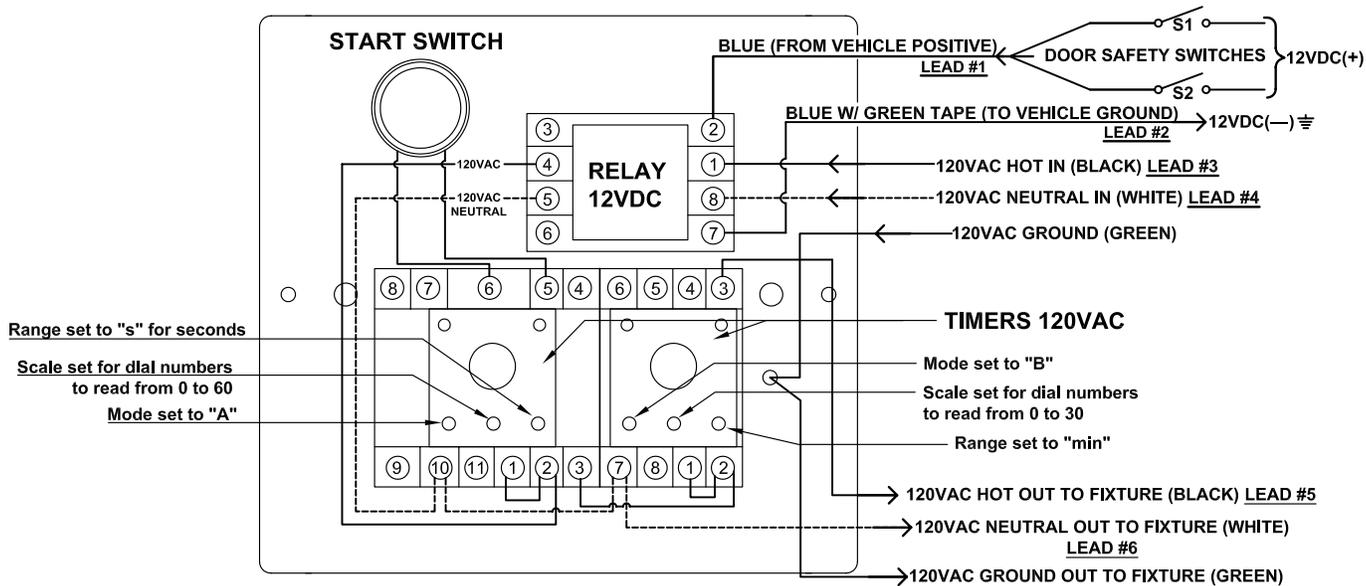
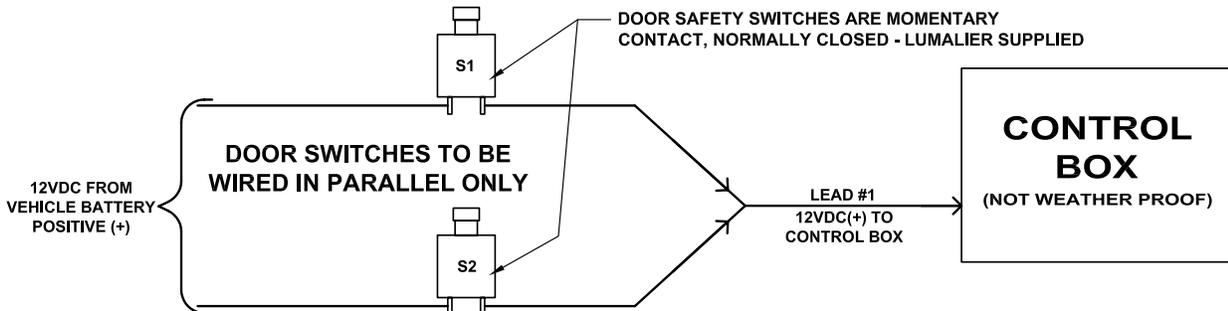
Fixture wiring:
Black = power, white = neutral, green = ground

ADU SERIES CONTROL UNIT OPTIONAL DIAL TIMER INSTALLATION



ADU SERIES CONTROL UNIT

OPTIONAL DIAL TIMER INSTALLATION (CONTINUED)



CONTROL UNIT

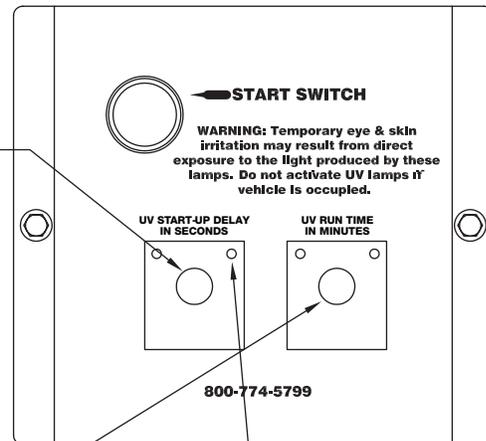
CAUTION: DO NOT CHANGE MODE, SCALE, OR RANGE ON TIMERS WHEN ENERGIZED.

ADU SERIES CONTROL UNIT

TESTING THE SYSTEM

After installation is complete, test system for proper operation.

1. Determine the length of time that is needed to evacuate the area before the UV unit is energized. (0 - 60 seconds)
This can be adjusted with the "UV START-UP DELAY" dial.
This installation, this timer has been set to minutes.

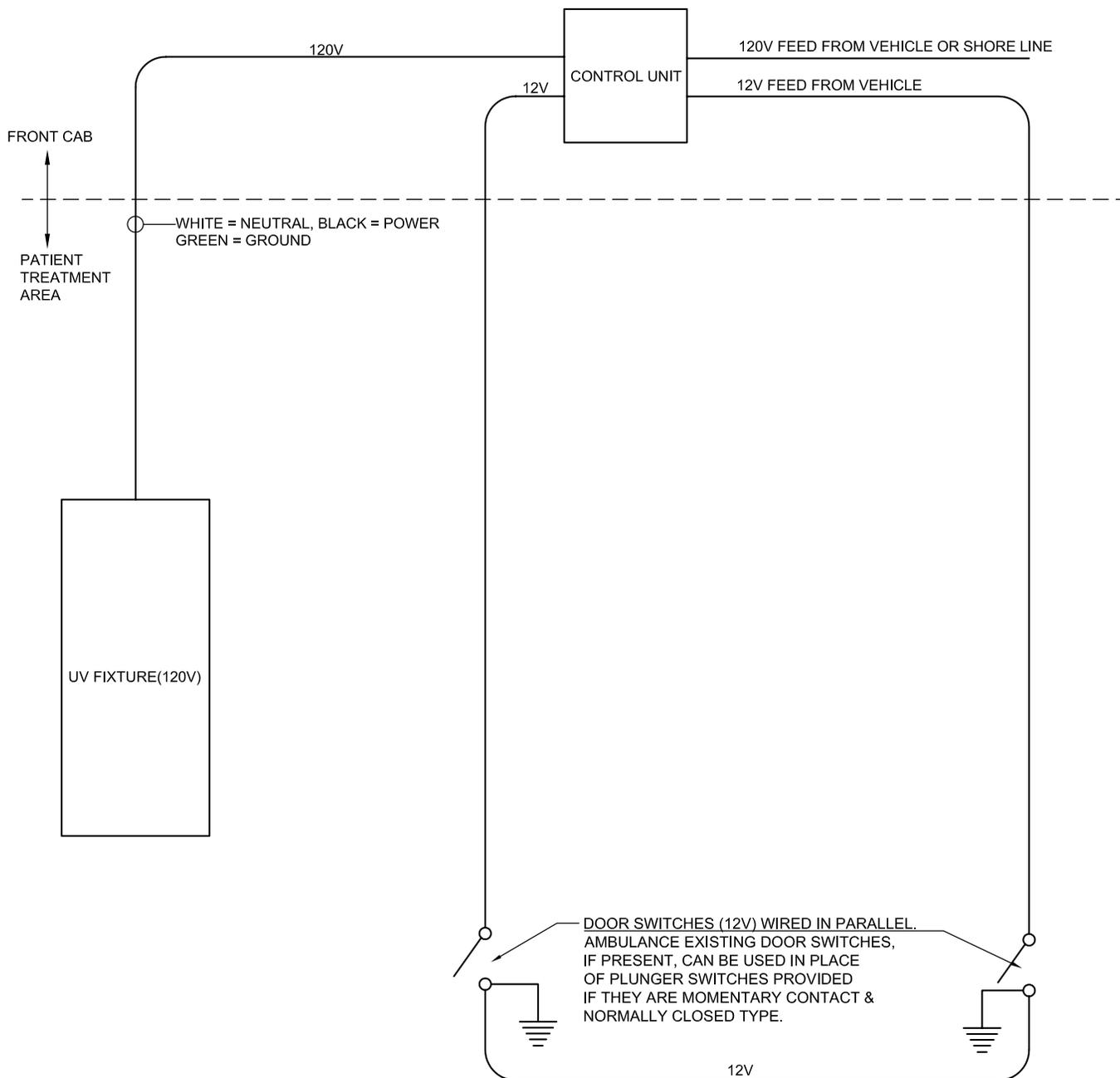


2. Determine the length of time that is needed for the UV unit to be energized. (0 - 30 minutes)
This can be adjusted with the "UV RUN TIME" dial.
3. Be sure that affected area of vehicle is unoccupied.
4. Be sure that all doors to affected area are closed. When doors are closed, the green "PWR" light on the UV START-UP DELAY will come on.
5. Push the "START SWITCH" and wait for UV fixture to energize. **CAUTION: VIEW THE OPERATION OF FIXTURE FROM A PROTECTED LOCATION OUTSIDE OF VEHICLE.**
UV fixture will de-energize at the end of the time interval as set on the "UV RUN TIME" dial.
When UV system is energized, both green & orange lights will illuminate on both dials.
6. Push the start switch again and allow the UV fixture to energize but this time open one of the doors to the affected area and check to see that the UV fixture de-energizes. During normal use, if a door to the applied area is opened and closed, the system will have to be restarted by pushing the start switch again.

CONTROL UNIT

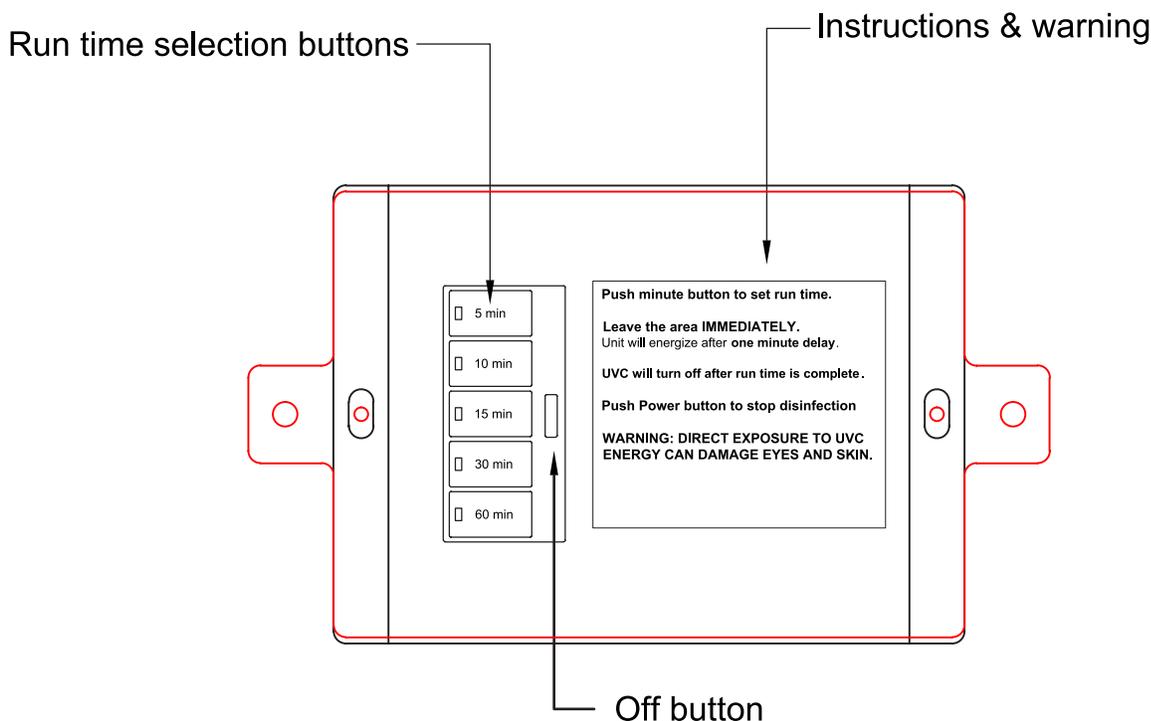
CAUTION: DO NOT CHANGE MODE, SCALE, OR RANGE ON TIMERS WHEN ENERGIZED.

ADU SERIES CONTROL UNIT OVERALL WIRING DIAGRAM



ADU SERIES CONTROL UNIT

OPTIONAL PUSH-BUTTON CONTROL PANEL



Mount control box **outside** of patient area and route wiring from there.

With the green light on the timer on/off button lit, select one of the run time buttons (left side of timer itself), 5 minutes, 10 minutes, 15 minutes, 30 minutes, or 60 minutes. Ensure that the exposure area is vacant and push that button.

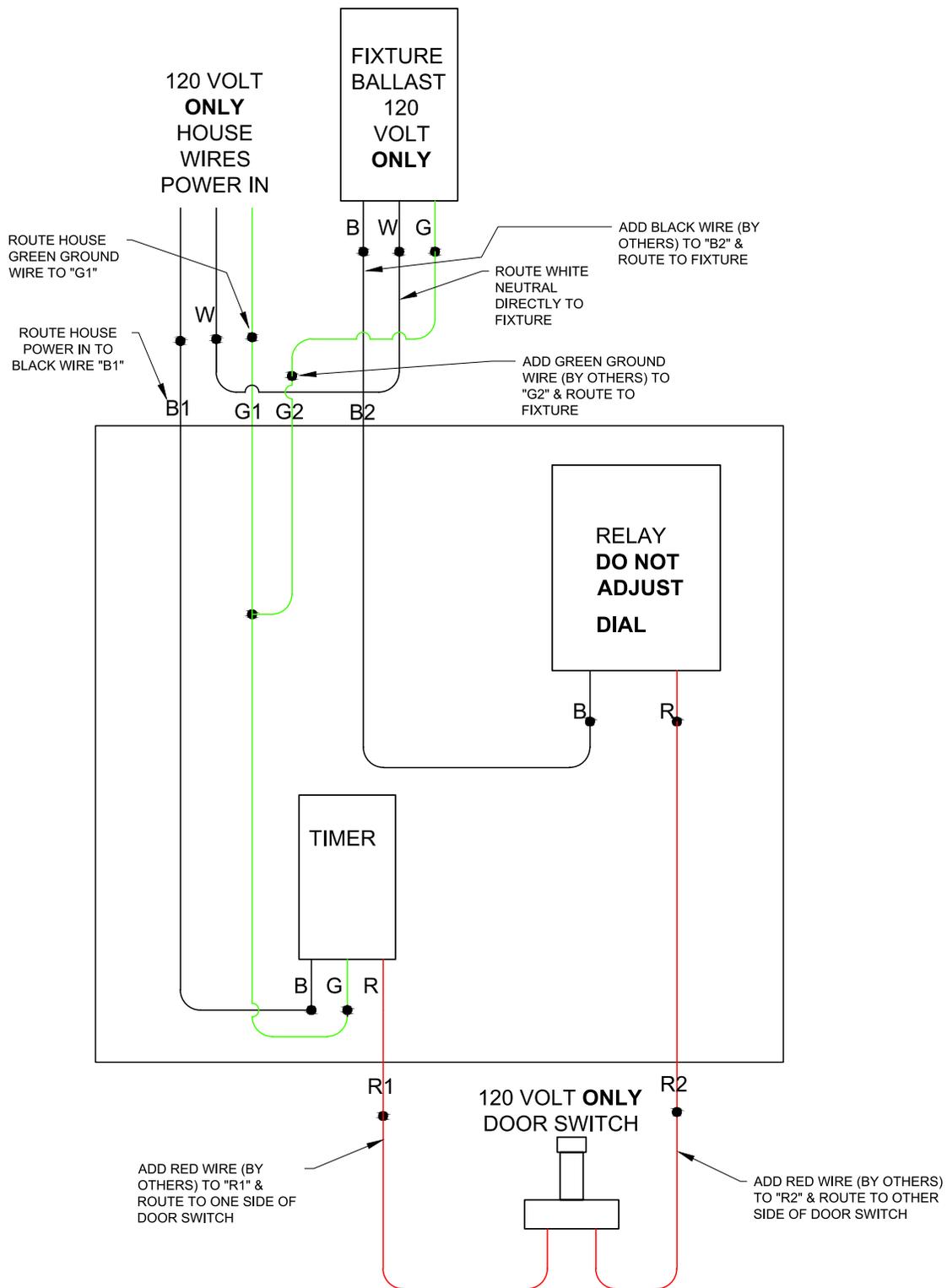
The 1-minute delay starts **NOW**. Make sure that the entry door(s) is closed, and the UV exposure area is vacant.

UV light must be installed with an integrated door switch.

If it's necessary to enter the UV exposure area before the UV exposure time times out, the UV lamp must de-energize when a door is opened. There is a 7-second delay in the timer to power down. If the door(s) is closed again within this 7-second time, the UV will instantly **energize again**. **Wait 7 seconds before closing the door again**. An optional factory 120V door switch is available.

When the area is vacated again, reset the timer by pushing the run time as before, the **1-minute delay will start**, and the selected run time will start over. The process will not start without a reset like this.

ADU SERIES CONTROL UNIT WIRING DIAGRAM



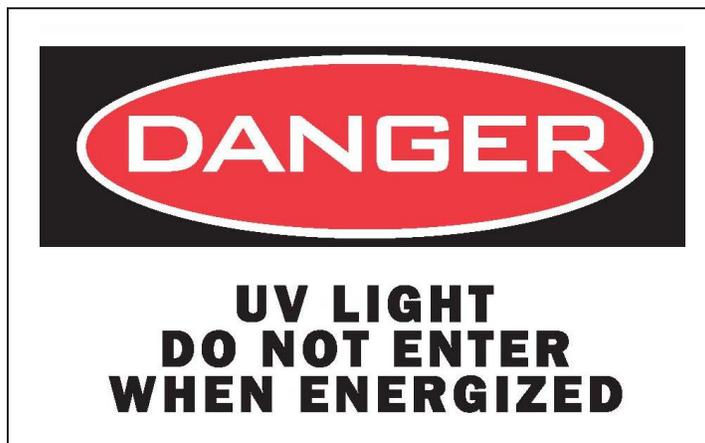
ADU SERIES**MANUFACTURER RECOMMENDED USE**

The UVC energy can only directly illuminate the air and surfaces. (Shaded areas, such as under the stretcher, will not be directly affected.) You'll need to integrate safety systems with the operation of the UVC to prevent inappropriate exposures. Brief exposure is not considered harmful but is not recommended because it may cause skin and eye irritation. Prolonged exposure to UVC is considered harmful to humans.

All patient compartment doors must be closed during the "on" phase, which is controlled by a timer switch mounted out of the way so it won't be confused for an interior light switch.

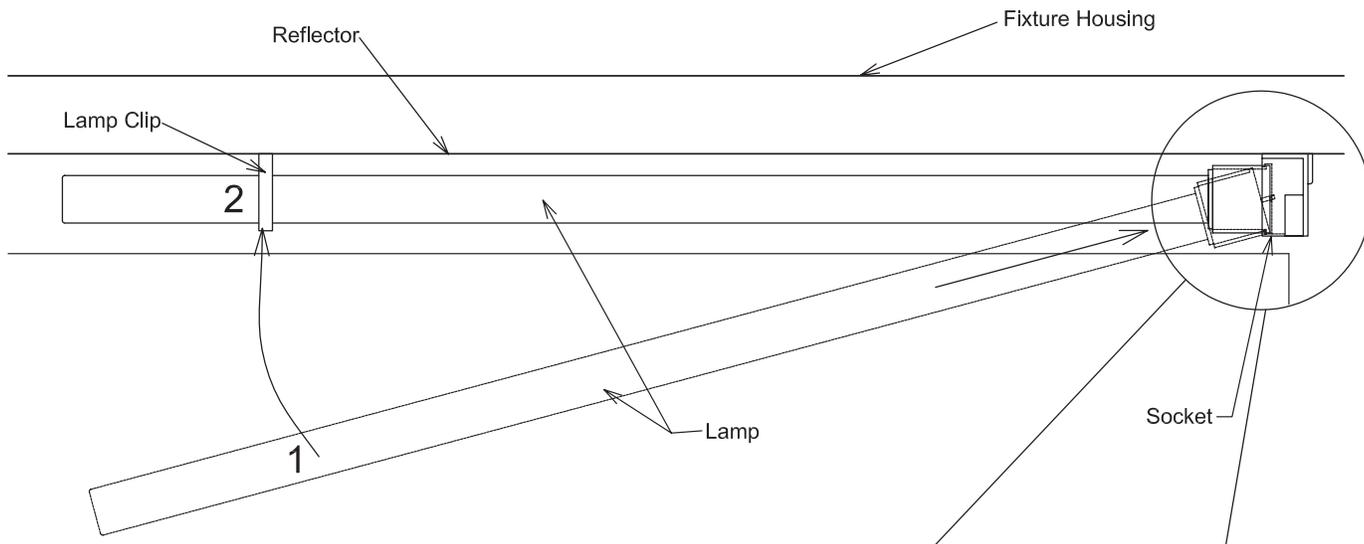
The patient compartment should be exposed to the UVC energy at least once per shift, and after any call with potentially infected patients. The manufacturer recommends that the UVC system runs for five to 10 minutes with the stretcher in place and reusable items such as BP cuffs and pulse oximeter probes on the bench so they're treated also. The UVC is then run again with the stretcher removed to capture any previously shaded areas.

The UVC light doesn't replace any current cleaning practices.



This placard/decals will be visible on ambulance exterior at every UV-C area window.

ADU SERIES LAMP INSTALLATION INSTRUCTIONS



TOP VIEW

