

**INSTALLATION INSTRUCTIONS FOR GERMICIDAL LIGHT KIT
38V31 USED WITH LG/LC/LH/LD 302, 360 UNITS****⚠ WARNING**

Improper installation, adjustment, alteration, service or maintenance can cause property damage, personal injury or loss of life. Installation and service must be performed by a licensed professional HVAC installer or equivalent, service agency, or the gas supplier.

⚠ WARNING**WARNING UV LIGHT SOURCE**

Ultraviolet (UVC) Radiation Hazard.

This cover is provided with an Interlock to reduce the risk of ultraviolet radiation exposure.

Any exposure will cause eye and skin damage. Do not look into UV light source.

Access panels must be in place during appliance operation. Disconnect all power sources from UV Light, the Air Handling Equipment or Duct System.

Shipping and Packing List

Package 1 of 1 contains the following:

- 1 - Germicidal light
 - 2- UVC light assemblies
 - 2- UVC lamps
 - 1- UVC light shield
 - 2- UVC Danger labels
 - 2- Wire harnesses
- 1 - Bag assembly containing:
 - 1- Warranty sheet
 - 8- Wire ties
 - 8- #10-16 x 5/8" sheet metal screws
 - 2- Dual quick connect adapters
 - 2- Wiring diagrams
 - 1- Door switch
 - 1- Door bracket
 - 2- #10-16 x 5/8" Self drilling screws
 - 1- UVC field kit label

An additional, separately ordered T49 transformer is required on LGH/LCH 460/575V units.

NOTE - Not all components provided in kit are used in each application.

Check packaging for shipping damage. Contact the last carrier immediately if any shipping damage is found.

⚠ CAUTION

As with any mechanical equipment, contact with sharp sheet metal edges can result in personal injury. Take care while handling this equipment and wear gloves and protective clothing.

General

Germicidal lights emit ultraviolet (UVC) energy that has been proven effective in reducing microbial life forms (viruses, bacteria, yeasts, and molds) in the air.

UVC germicidal lamps greatly reduce the growth and proliferation of mold and other bio-aerosols (bacteria and viruses) on illuminated surfaces.

Germicidal lamps are NOT intended to be used for removal of active mold growth. Existing mold growth must be appropriately removed PRIOR to installation of the germicidal lamp.

A door switch is provided which de-energizes the UVC light when the door is opened.

IMPORTANT - Cotton gloves or a cotton cloth must be used when handling the new UVC lamp.

Application

The UVC light kit is specifically designed for LG/LC/LH/LD 302-360 units. In addition, the light is equipped with shields to focus the UVC light on the coil surface where it is needed and reduce the exposure of light on other components and access panels for improved safety and overall effectiveness.

Lamps operate on 110-230V single-phase power supply. A step-down transformer may be ordered separately for 460V and 575V rooftop units. Alternately, 110V power supply may be used to directly power the UVC ballast(s).

⚠ WARNING

Potential Mold Spore Release.

Application of UVC lamps to existing mold growth can cause respiratory irritation and allergic symptoms.

Do not use UVC lamps where active mold growth exists. Remove active mold growth from surfaces prior to operation of UVC lamps.

NOTICE

Potential odor emissions.

Odors may be present when some materials are exposed to UV light.

These materials may include Technicoated or E-Coated Coils. Other materials may include chemicals, solvents, polymers and organic materials.

Some occupants may notice irritation or discomfort.

If odors are present, the UV Lights should be turned off and fresh air should be introduced into the occupied space immediately. Contact your Independent Lennox Dealer.

⚠ CAUTION

Potential Risk of Degradation of Materials.

Potential of degraded wire insulation may cause human injury through electrical shock.

UVC light may damage plastics and rubber materials. May cause fabric discoloration.

Avoid UVC light exposure to plastic drain pans, wire insulation, flex duct or other plastic/rubber components.

Before installation, confirm that any corrosion resistant coating (if applied to the coil) will not be negatively impacted by the UVC light exposure.

Specifications

Lamp assembly dimension	37" L x 4.5" W x 4.5" H (940mm x 114mm x 114mm)
Sheet metal panel	42" L x 12" W x 0.875" H (1067mm x 305mm x 22mm)
Electrical power supply	10/230V, 50/60Hz, 1A

NOTE - For 460V & 575V rooftop units, order separate step-down transformers.

Power consumption	110 Watts
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Lamp/Ballast Operating Environment (All Models)

Temperature (outside of duct):	5°F to 140°F (-15°C to 60°C)
Relative humidity	<95%

Specifications subject to change without notice.

Part No.	Replacement Part Description
50W91	UVC lamp
50W92	Enhanced ballast

Before Installation

- Turn off power to the rooftop unit.
- Open access to the control box, blower compartment and the filter section.

⚠ WARNING



Electric shock hazard.

Can cause injury or death.

Disconnect all remote power supplies before opening any unit access panels.

Unit may have multiple power supplies.

Do not operate without access panels in place.

UVC Exposure Protection

The UVC light is equipped with a unique directional shield to focus the UVC light on the coil surface and drain pan where it is needed and reduce the exposure of light on other components such as wiring, plastic parts etc. If there is any concern, aluminum foil tape can be used to cover up any exposed component.

⚠ WARNING

Potential Risk of Fire.

Dust, lint and other debris may cause fire if allowed to come in contact with illuminated UVC lamp.

Remove any dust, lint or other debris from lamps and surrounding duct system.

Install UVC Light Assembly

The lamp for the UVC light assembly comes separately packaged in a foam sleeve.

- 1 - Wear cotton gloves or use a cotton cloth when handling the new lamp. To install the lamp, remove two black plastic splash guards from the lamp holders on each end of the UVC assembly. Gently but firmly push in the splash guards on each end of the lamp. See FIGURE 1.
- 2 - Align and insert the splash guards (now connected to the lamp) back onto the UVC assembly lamp holders. Click into place.
- 3 - Add UV light assembly to bracket. Use #10 screws provided to mount the UVC light assembly to the bracket.
- 4 - Pull out the blower deck to reveal both blower wrappers. Carefully place the UVC assembly on the blower wrapper. Line up the mounting holes on the UVC assembly with the mounting holes on the blower wrapper. See FIGURE 2. Use the #10 screws provided to secure the UVC assembly in place.
- 5 - Repeat steps 1-4 for the second light assembly.
- 6 - Push blower deck back into the unit and secure any screws taken out during installation.

⚠ CAUTION

DO NOT allow the UVC light to hit plumbing parts during installation.

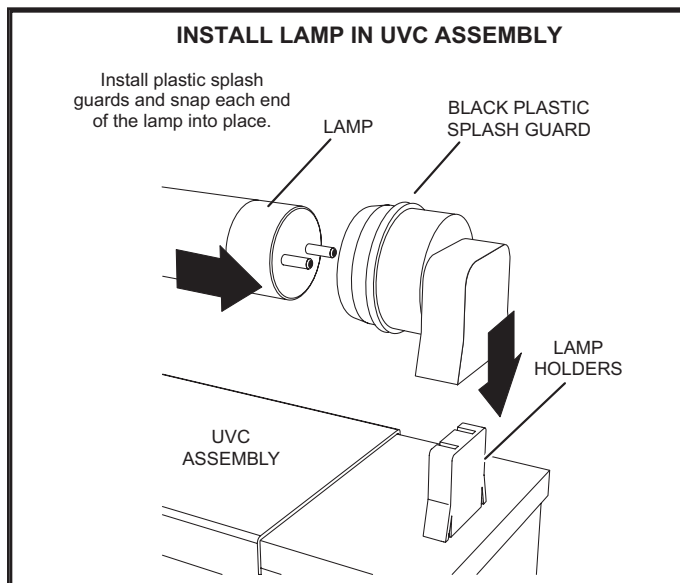


FIGURE 1

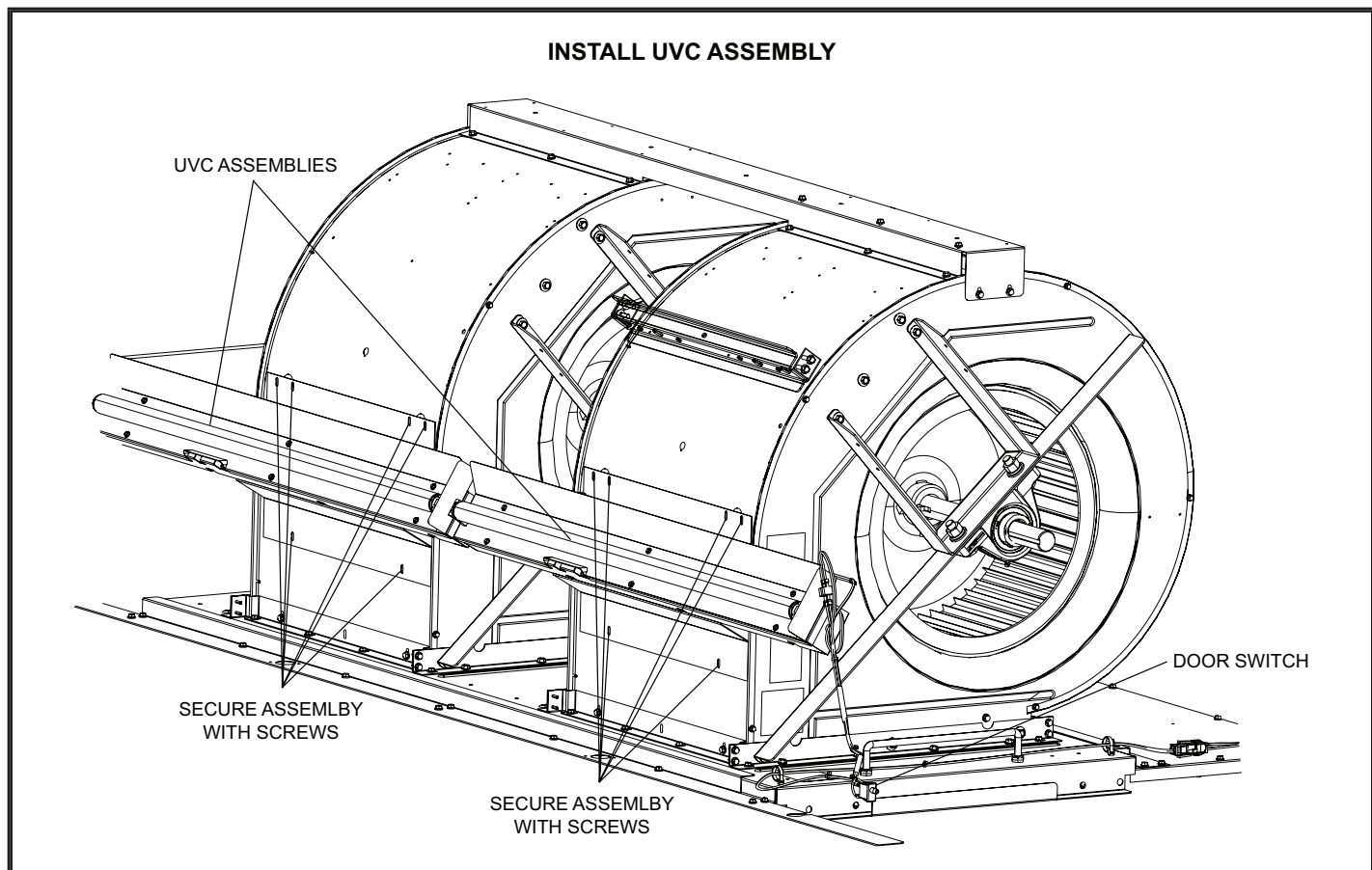


FIGURE 2

Install Door Switch

Install switch on front of UVC door shield as shown in FIGURE 2. Wire as shown in FIGURE 3.

Wiring Connections

- 1 - Refer to the wiring diagram in FIGURE 9 before proceeding to ensure proper connections.
- 2 - Route the power cable wires as shown in FIGURE 4.

- 3 - Wire tie the cable at multiple locations along the existing wire harness.
- 4 - Make wiring connections in the control section as shown in:
FIGURE 5 - 230V LG/LC/LH/LD
FIGURE 6 - 460/575V LG/LC/LH/LD
- 5 - Secure all harnesses using the wire ties provided in the unit.

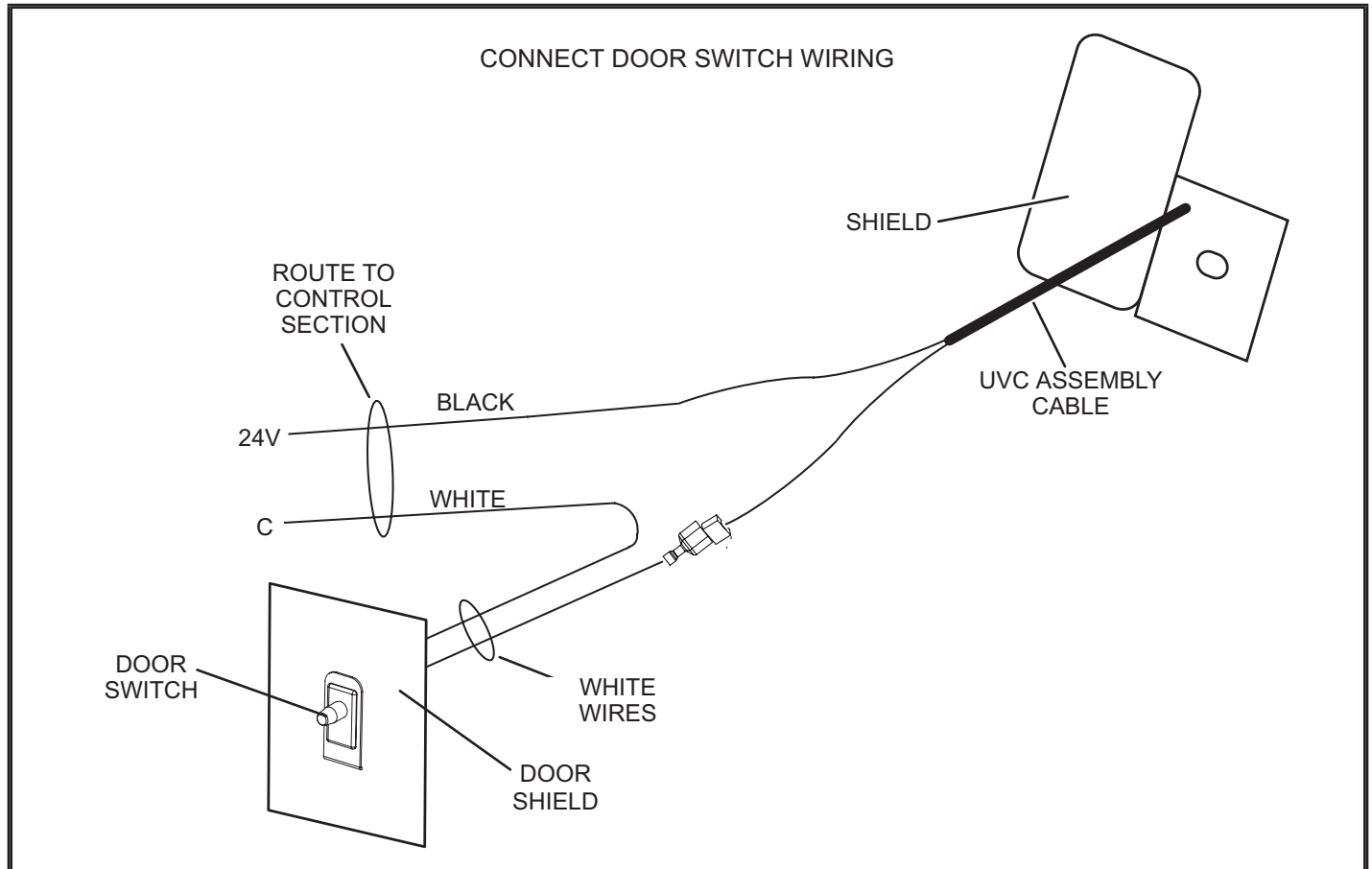


FIGURE 3

ROUTE UVC CABLE

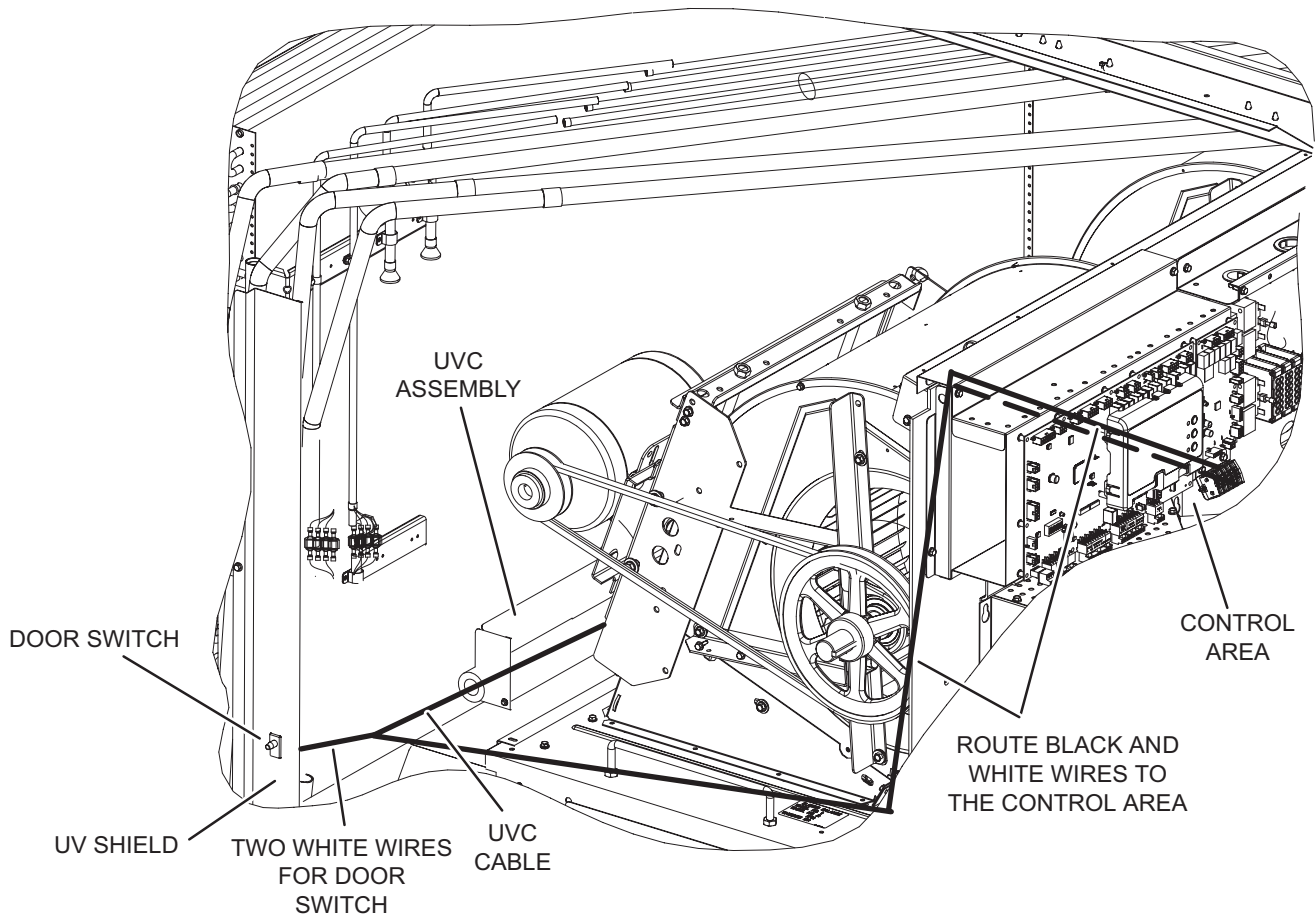


FIGURE 4

WIRE CONNECTIONS - 230V UNITS

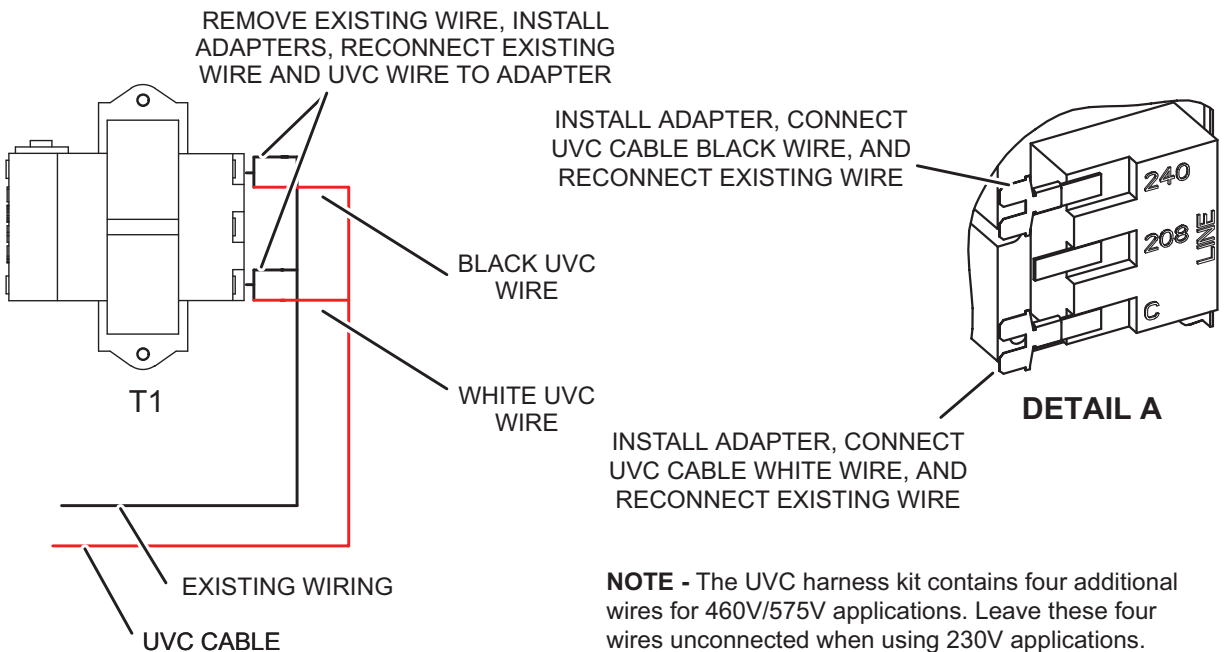


FIGURE 5

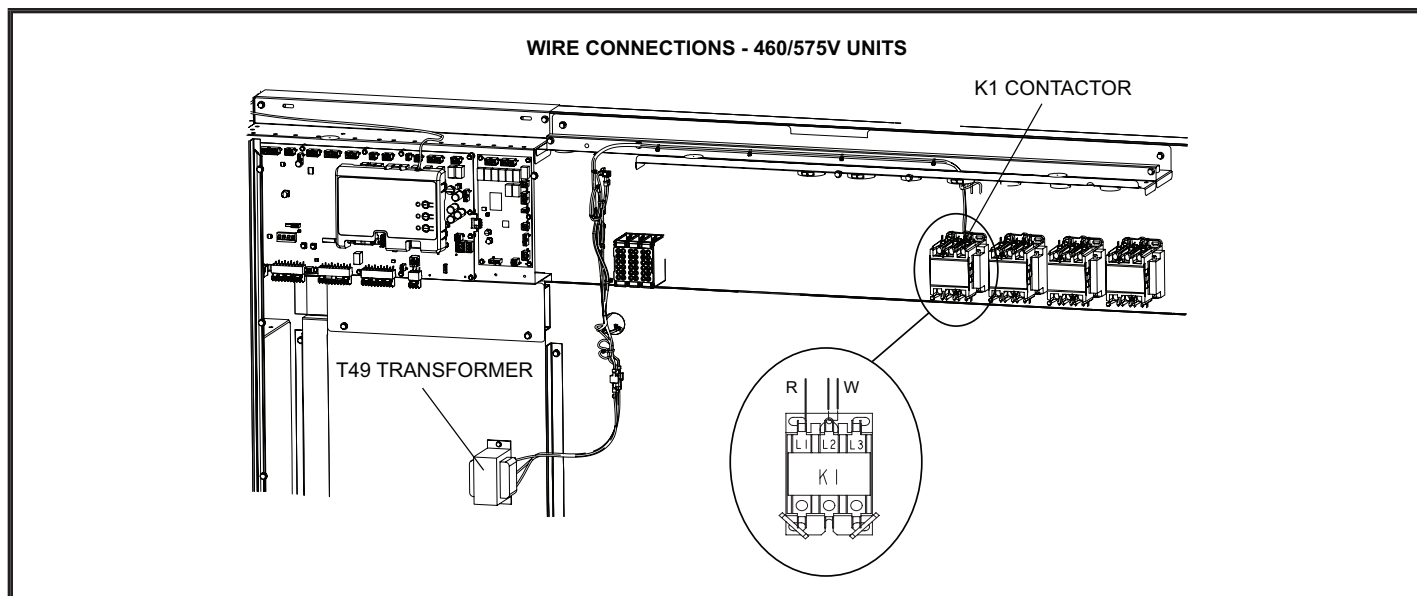


FIGURE 6

Install UV Shield

To block the UVC light from reaching the filter access door, install the sheet-metal panel. See FIGURE 7.

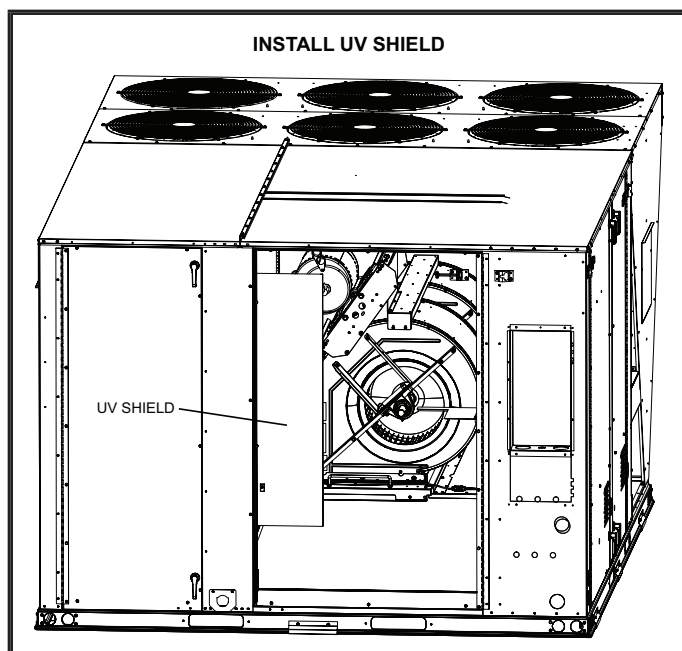


FIGURE 7

With the left flange of the sheet metal panel facing out (see FIGURE 7), insert and lower the bottom of the panel through the opening in the filter access door, to the right of the coil and ahead of the refrigerant lines. Slide the panel against the coil bracket and align the holes of the panel using dimples on drain pan mullion. Use #8-18 x 1/2" screws (included) to attach the panel to the coil bracket.

NOTE - The view port in the panel provides a visual verification when the UVC lamp is turned on. Do not remove the view port as it shields UVC light and protects eyes from UVC exposure.

Finish Installation

Close all access doors before powering UVC lamp. Apply UVC Danger label and UVC Field Kit label to blower access door so that it is clearly visible. See FIGURE 8.

Configure M4 For UVC Light

- 1 - Use the following mobile service app menu to configure the Unit Controller.

SETUP > INSTALL > RTU INFORMATION > CONFIGURATION ID2

- 2 - Set position 6 to the appropriate setting to enable the UVC:

2=UV Lamp Only Installed

3=Both UV Lamp and Ionizer Installed

M3 Unit Controller Configuration

Configure the Unit Controller to enable the UVC Lamp using the following menu:

SETUP . INSTALL

Navigate through the various setup questions until Configuration ID 2 appears. Set position six to the following to enable the UVC feature:

1=UV Lamp only installed

3=BOTH UV Lamp and Ionizer installed.

Operation

For optimal performance, continuous operation of the UVC germicidal lamp is recommended.

Maintenance

For all maintenance, contact a licensed HVAC technician.

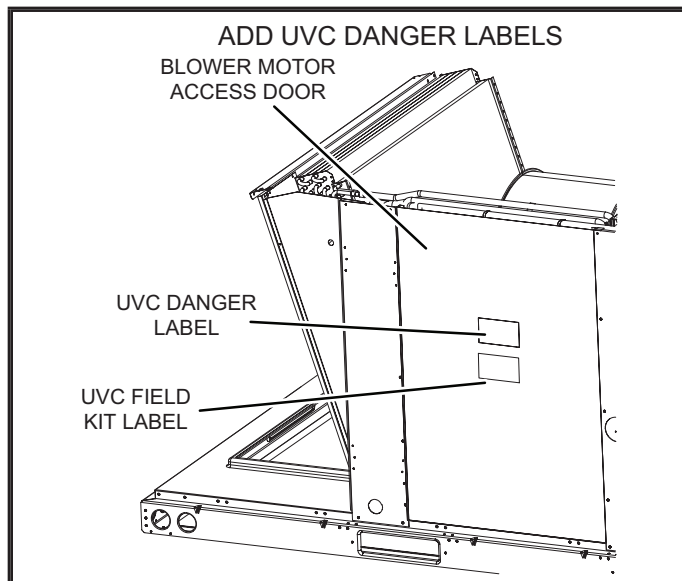


FIGURE 8

If UVC lamp does not come on:

- 1 - Check Power Wiring: Disconnect 1/4" QC (quick connects) of the UVC cable near the UVC assembly. With Power ON, use multimeter to test 110-230V at the 1/4"QC quick connects from the control panel.
- 2 - Check Lamp: Carefully remove the UVC assembly out of the rooftop unit. Use multimeter to test for continuity across each pair of pins at each end of the lamp.
- 3 - Check Lamp Installation: Make sure that lamp's pins snap properly into the lamp holder.

Annual Lamp Replacement

!WARNING

Personal Burn Hazard.

Personal injury may result from hot lamps. During replacement, allow lamp to cool for 10 minutes before removing lamp from fixture.

The lamp should be replaced every 12 months, as UVC energy production diminishes over time.

- 1 - Obtain the correct replacement lamp for the proper germicidal light model.
- 2 - **Disconnect power to the rooftop unit before servicing the UVC kit.**
- 3 - **Open the blower access door.**

Lamp Disposal

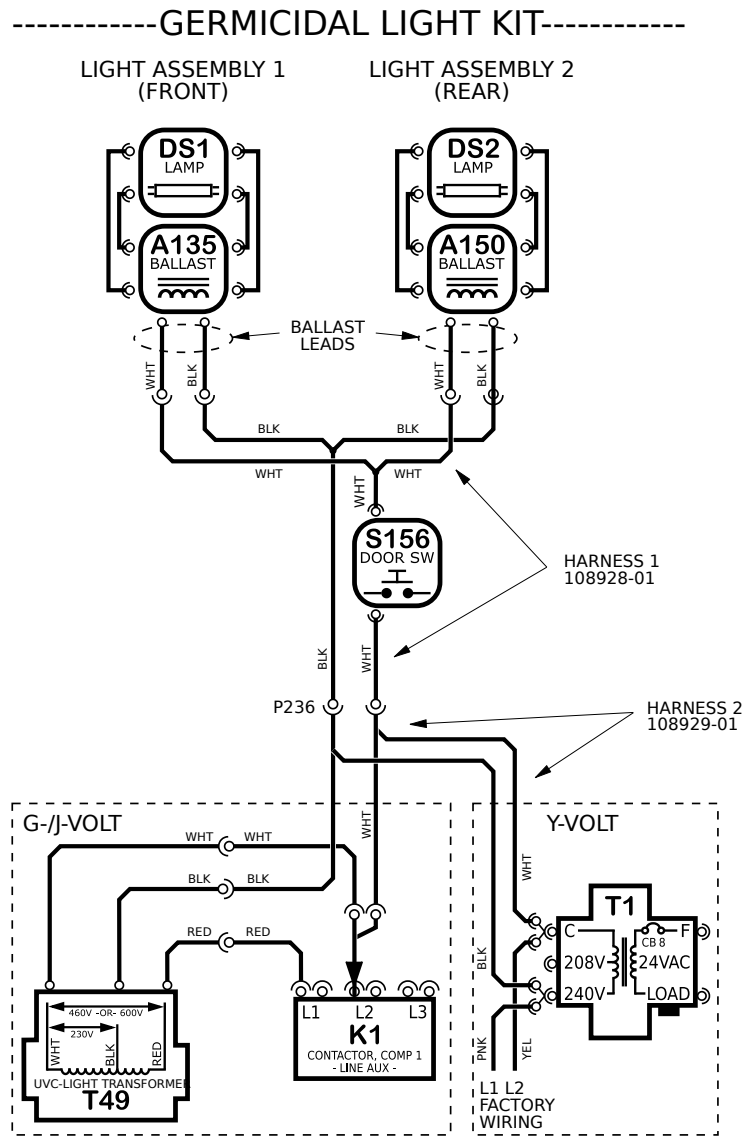
Hg-LAMP Contains Mercury.—Manage in accordance with local, state and federal disposal laws. Refer to www.lamprecycle.org.

Proper Clean-up Technique in Case of Lamp Breakage

Wear protective gloves, eye wear and mask.

Sweep the broken glass and debris into a plastic bag, seal the bag, and dispose of properly. Contact your local waste management office for proper disposal.

Do not use a vacuum cleaner. Do not incinerate.



Model: IAQ WIRING DIAGRAM
 D-BOX UVC KIT

Voltage: Y, G, J VOLT

Supersedes: N/A

Form No: 538357-01 Rev: 0



FIGURE 9