



506413-01
12/10
Supersedes 10/09

HEALTHY CLIMATE® GERMICIDAL LIGHT KIT

INSTALLATION & USER INSTRUCTIONS FOR HEALTHY CLIMATE® GERMICIDAL LIGHT MODELS C1UVCL10C-1- (54W65)

⚠ WARNING

**Risk of property damage, injury, or death.
Installation, adjustments, alterations, service and
maintenance must be performed by a licensed pro-
fessional service technician (or equivalent).**

General

The Healthy Climate® germicidal light emits 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.

Model C1UVCL10C-1- is covered by this document.

⚠ DANGER

**Ultraviolet (UVC) Radiation Hazard.
Any exposure will cause significant eye damage
and may cause skin damage.
DO NOT look into UVC light source.
Access panels must be in place during appliance
operation.
Disconnect power to UVC appliance before general
servicing air handler.**

Application

The Healthy Climate® UVC light kit is specifically designed for the Lennox rooftop models: LCH156-300S, LGH156-300S, KCA180-300, KGA180-300, and KHA180-240. 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.

Enhanced rapid start ballast provides UVC lamp operation at a full range of operating conditions.

Lamps operate on 110-230V single-phase power supply. 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).

Shipping & Packing List

Contents

- 1 - Healthy Climate® germicidal light consisting of:
 - 1 - UVC light assembly
 - 1 - UVC lamp
 - 1 - 40" long, 1" diameter convoluted tubing
 - 4 - 9" long, 1" diameter convoluted tubing
 - 1 - 28" long, 1" diameter convoluted tubing
- 1 - Bag assembly, includes:
 - 1 - Installation instructions
 - 1 - Warranty sheet
 - 1 - UVC Danger label
 - 20- Wire ties
 - 6 - #10-16 x 5/8" screws
 - 2 - dual quick connect adapters
 - 1 - wire harness

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

Check parts for shipping damage. Receiving party should contact last carrier immediately if shipping damage is found.



⚠ 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.

Required Tools and Unique Supplies

- Drill
- Phillips screw bit or screwdriver
- Cotton cloth and gloves

Part No.	Replacement Part Description
54W66	UVC lamp, 48" T8
X7625	Enhanced ballast

Dimensions/Specifications

Dimensions (All models)

Lamp Assembly	49" L x 3" W x 4.5" H (1245mm x 76mm x 114mm)
Sheet metal panel	31" L x 5" W x 1" H (787mm x 127mm x 25mm)

Electrical Power Supply

C1UVCL10C-1-	110/230V, 50/60Hz, 0.7A
--------------	-------------------------

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

Power Consumption

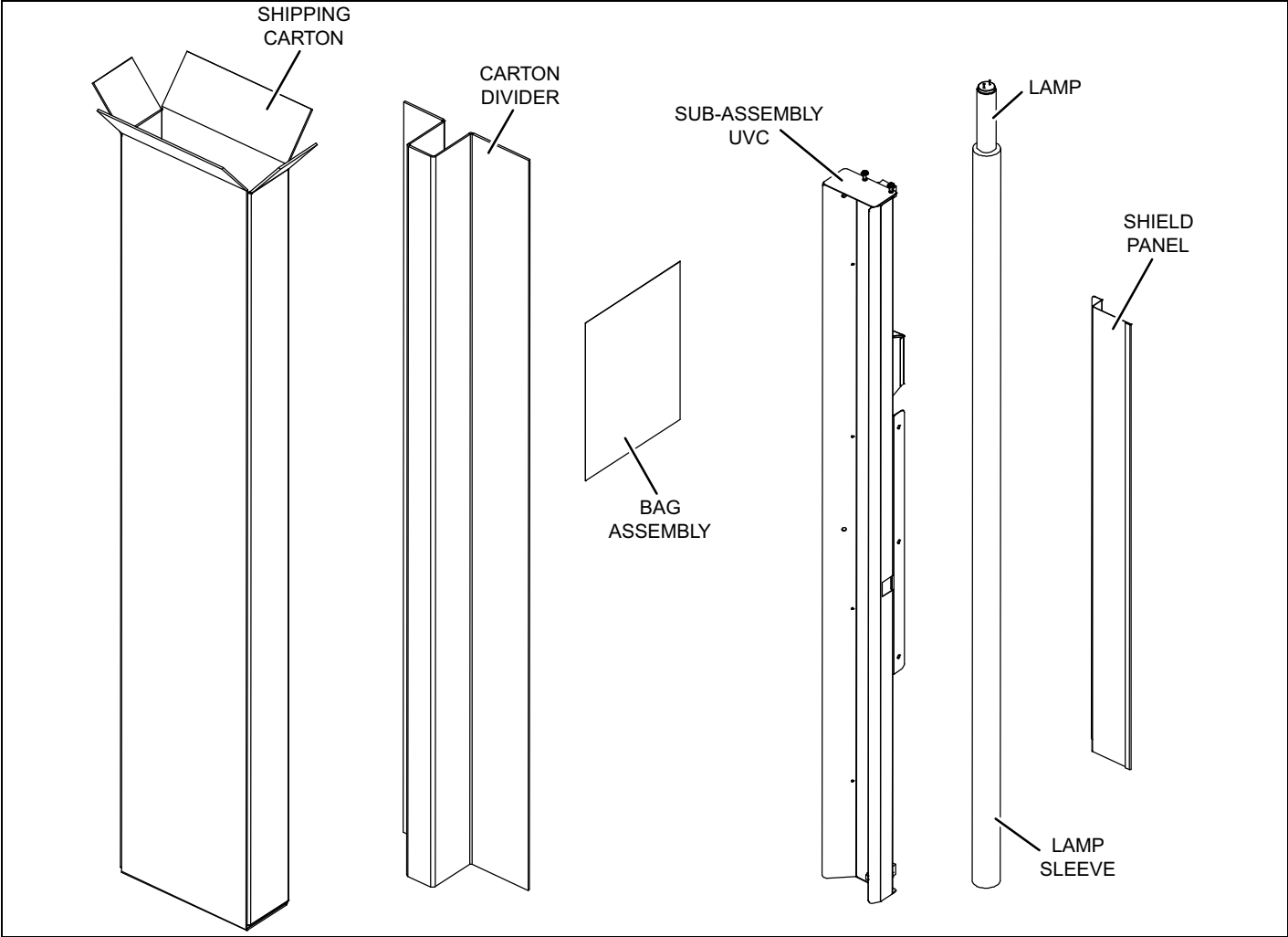
C1UVCL10C-1-	75 Watts
--------------	----------

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.

Unpacking List



Parts Arrangement

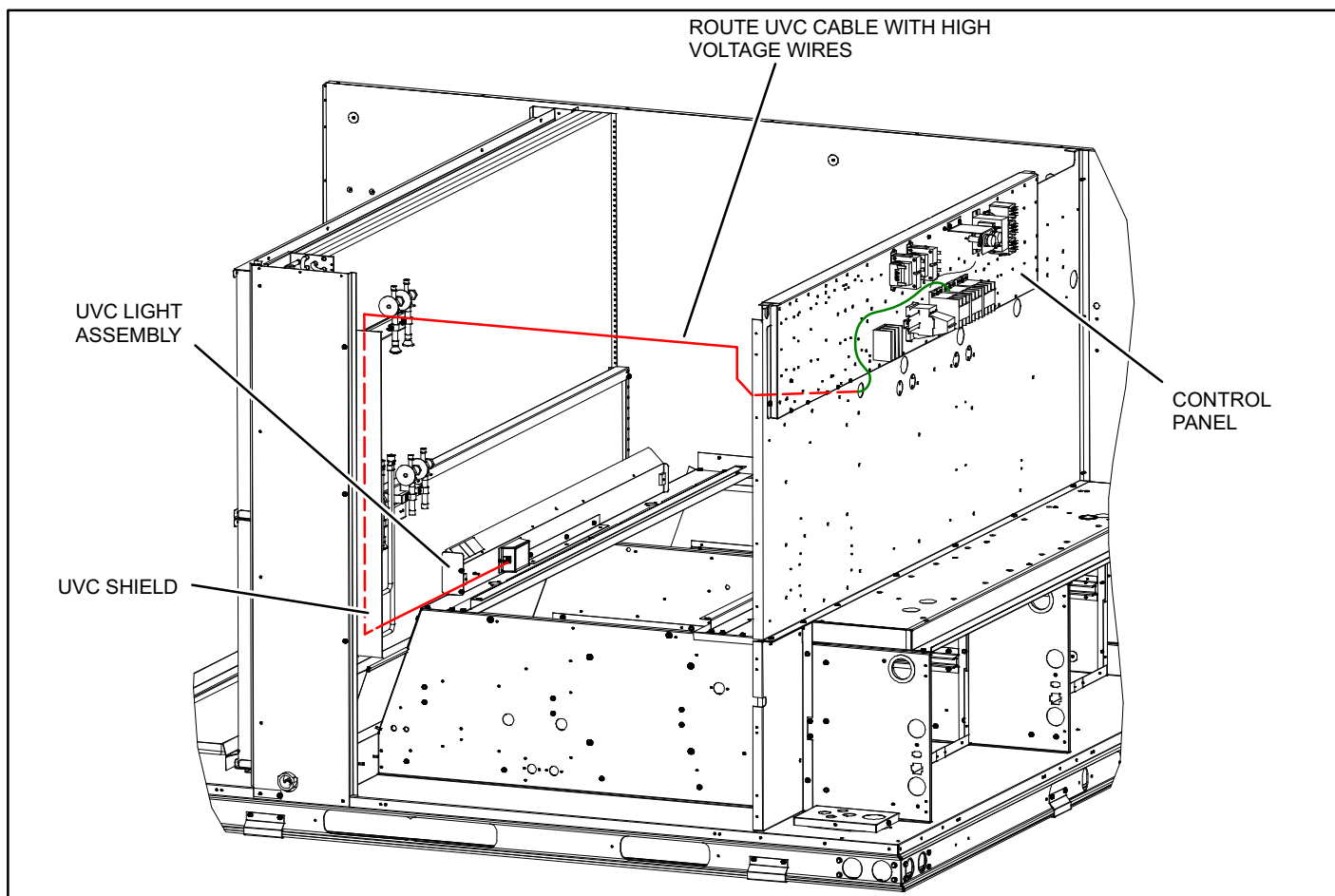


Figure 1. Parts arrangement with wire routing (Typical)

Installation

Preparing for installation

Before installing the UVC devices:

- Turn off power to the rooftop unit.
- Open access to the control box, blower compartment and the filter section.
- Review unpacking list and parts arrangement and wire routing as shown in figure 1.

⚠ 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. For shielding of electrical wiring in the rooftop unit, black convoluted tubing is included with the kit. However, if there is any concern, aluminum foil tape can also 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.

⚠ CAUTION

Sharp Edges Hazard.

Equipment sharp edges can cause injury. Use protective gloves when grasping equipment edges.

Installation of UVC light assembly

The lamp for the UVC light assembly comes separately packaged in a foam sleeve. Install the lamp to the UVC assembly prior to installing it in the rooftop unit.

1. Wear cotton gloves or use a cotton cloth when handling the new lamp. To install the lamp, remove black

plastic splash guards from the (2) lamp holders of the UVC assembly. Gently but firmly push in the splash guards on each end of the lamp (see figure 2). Align and insert the lamp with splash guard into the lamp holders of the UVC assembly until each end clicks into place (see figure 2).

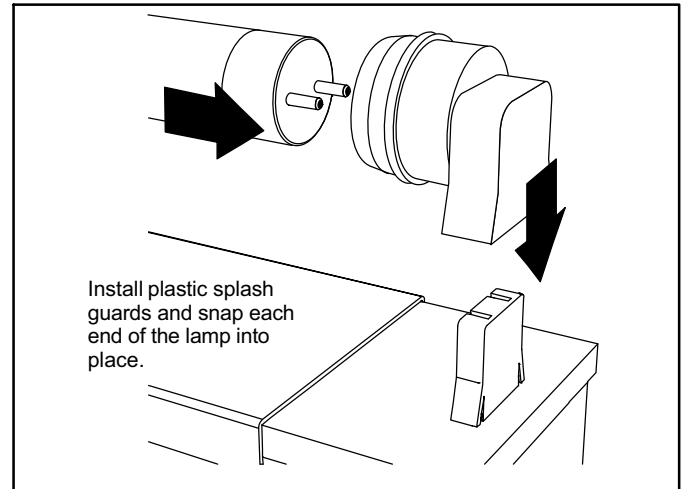


Figure 2. Installing Lamp in Holder Clips

2. Carefully place the UVC assembly on the blower deck. Line up the mounting holes on the UVC assembly with the mounting holes on the blower deck (see figure 3). Use the #10 screws provided to attach the UVC assembly in place.

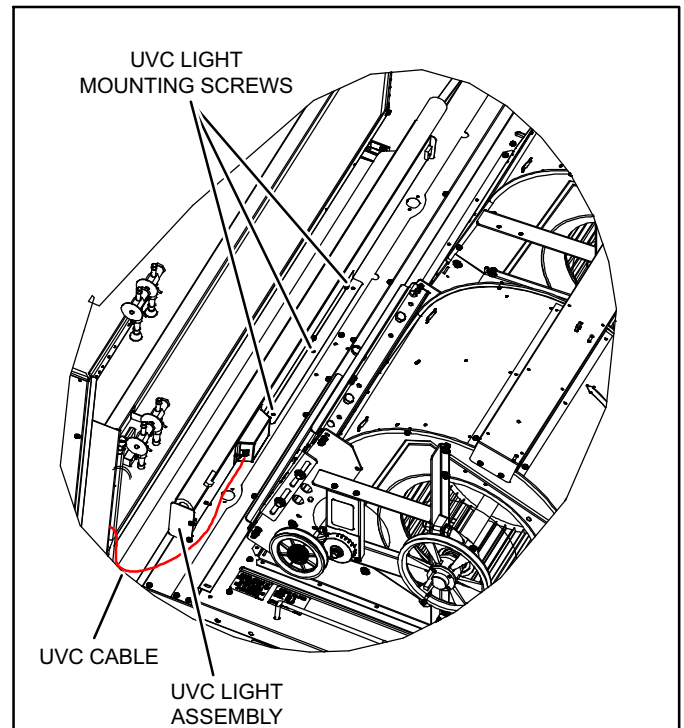


Figure 3. Attaching UVC Light Assembly

Installation of Lamp Cable

1. Run the UVC cable along the limit switch wire harness.
2. Route the UVC cable along the path shown (see figure 4) into the controls section. Wire tie the cable at multiple locations along the existing wire harness.
3. Connect the UVC cable to the control panel based on the applicable section described below in sections A through C.
 - A** For all 230V rooftop models, connect the black and white conductors of the UVC cable to transformer T1 using (2) quick-connect adapters included in the kit (see figure 5).
 - B** For 460V or 575V rooftop models without T13

transformer, install new step-down transformer T49 (ordered separately: 460/230, 75VA minimum or 575/230, 75VA minimum). Connect the black conductor of the ballast power cable to the black conductor of the T49 transformer (see figure 6). Connect the white conductor of the ballast power cord to the L2 terminal of the K1 contactor using the adapter provided in the kit.

- C** For 575V rooftop models with T13 transformer (for gas heat), connect the black conductor of the ballast power cable to the black conductor of the T13 transformer using the wire harness provided in the kit (see figure 7). Connect the white conductor of the ballast power cord to the L2 terminal of the K1 contactor using the adapter provided in the kit.

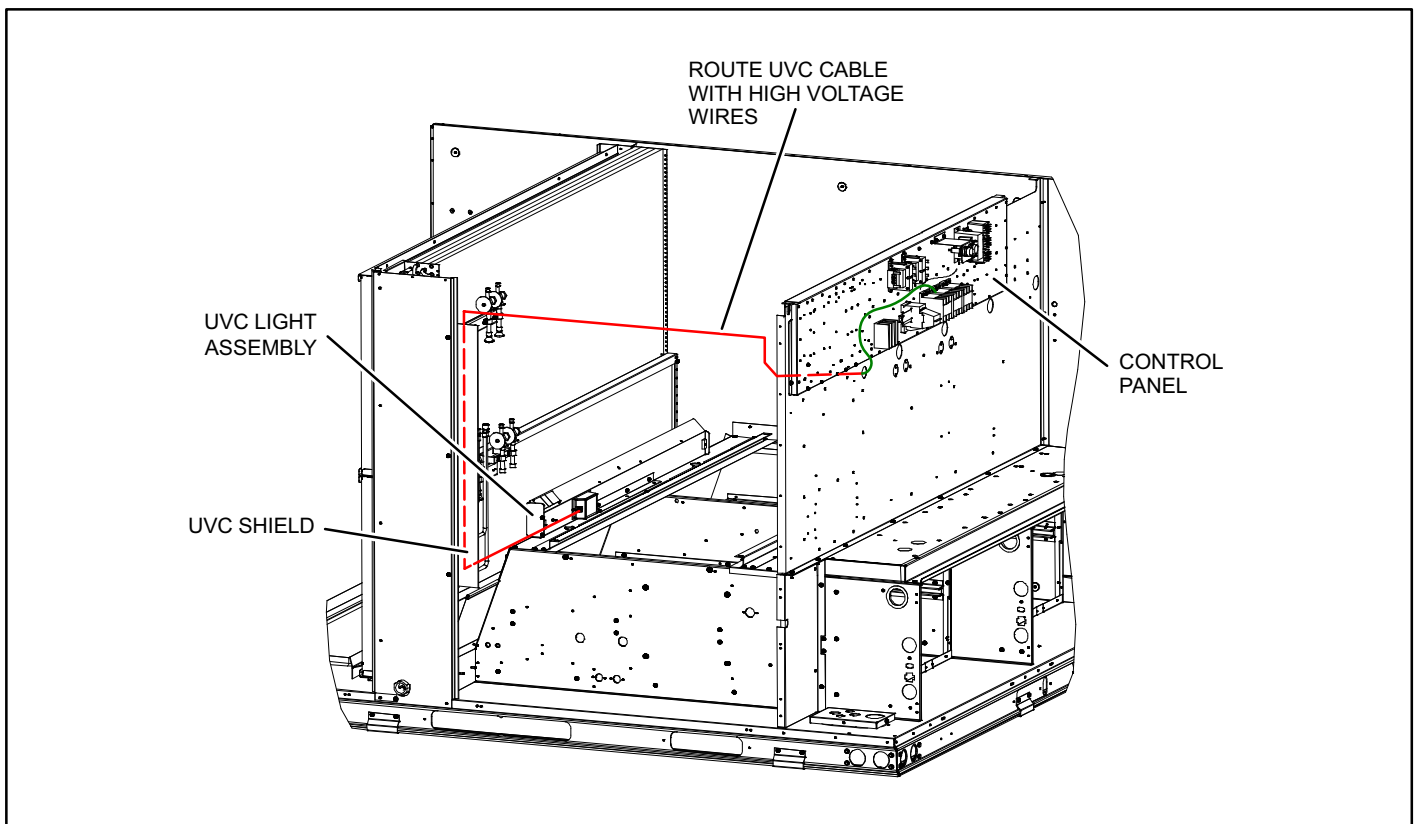


Figure 4. UVC Wire Routing

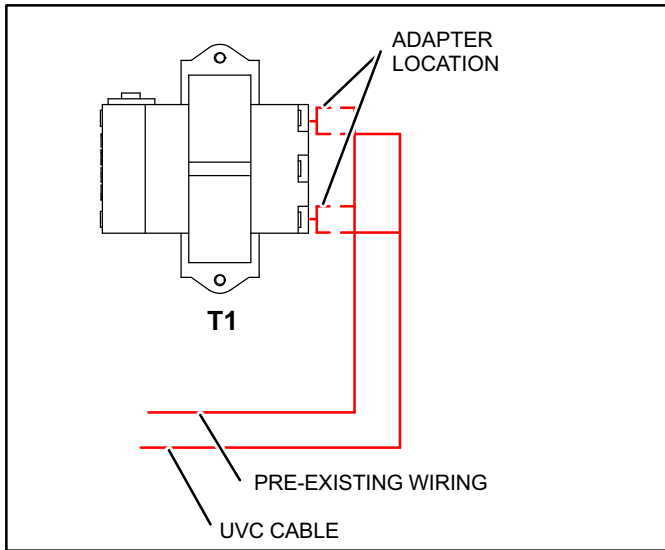


Figure 5. Connect cable to transformer T1 (230 Volt units)

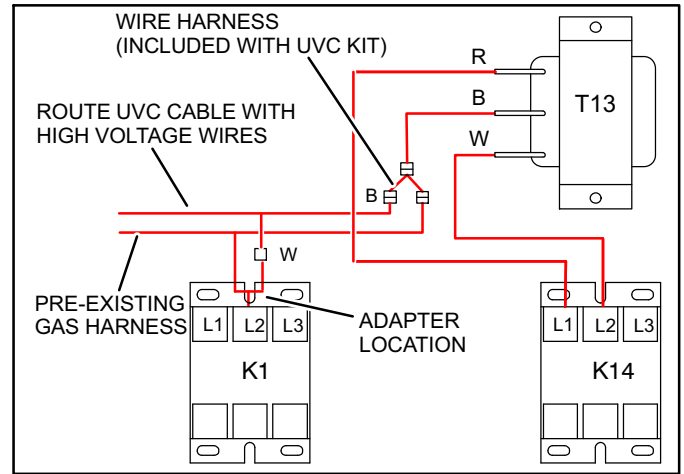


Figure 7. Connect cable to transformer T13 (575 Volt units)

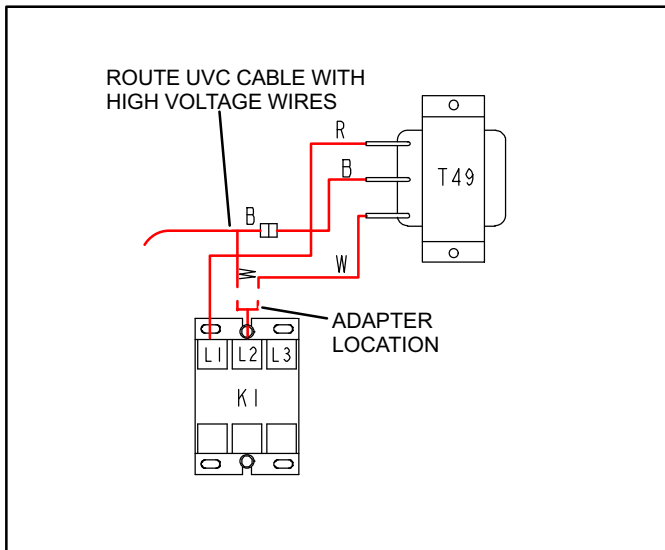


Figure 6. Connect cable to Step-down Transformer T49 (460/575 Volt units)

Installation of Convuluted Tubing for Shielding Electrical Wiring

1. Install up to (4) 9" long, 1" diameter convuluted tubing (included in the kit) to shield freezestat wiring (if applicable) (see figure 8). Black wire ties are provided to tie the tubing in place.
2. Install (1) 28" long, 1" diameter convuluted tubing (included in the kit) to shield electrical wiring for the motor (see figure 8) and tie using black wire ties.
3. Install (1) 40" long, 1" diameter convuluted tubing (included in the kit) to shield electrical wiring harness running vertically from the blower deck to the top of roof-top unit (see figure 8) and tie using black wire ties.
4. In addition, aluminum tape (not provided) can be used if needed to further shield any other surface of concern.

NOTE:- The cable should not extend past the UVC assembly to be in direct line of sight of UVC lamp.

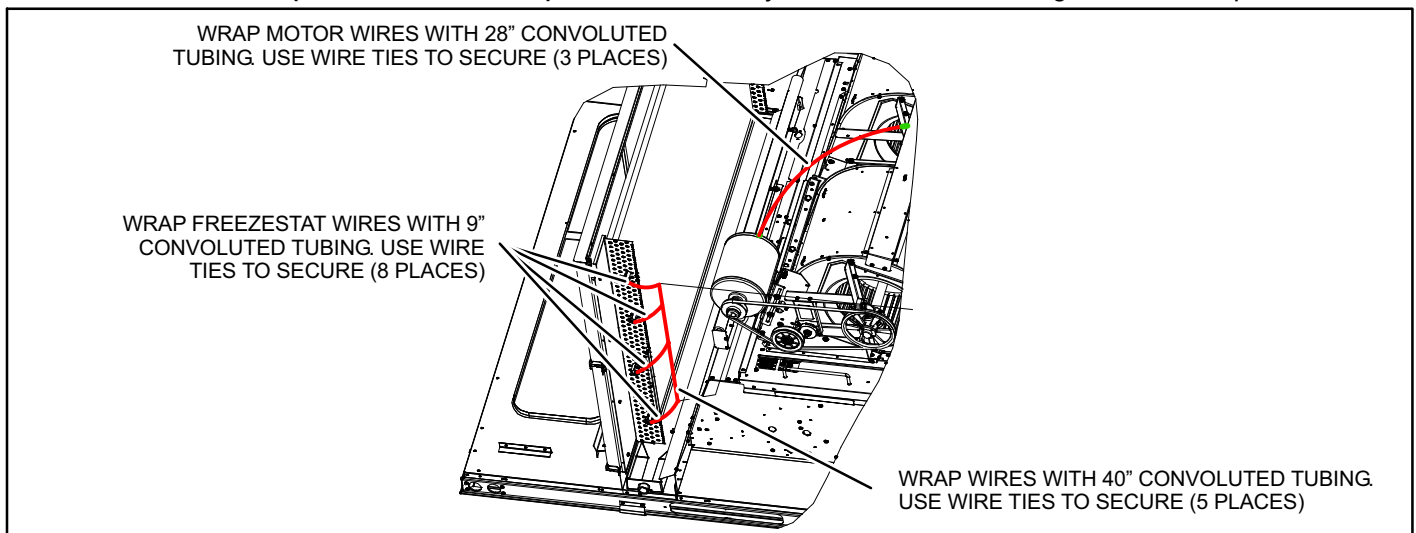


Figure 8. Installing Convuluted Tubing

Installation of sheet-metal shield panel

To prevent looking directly at the UVC lamp, install the sheet-metal panel provided (see figure 9). Use #10 screws (included) to attach the panel to the coil bracket.

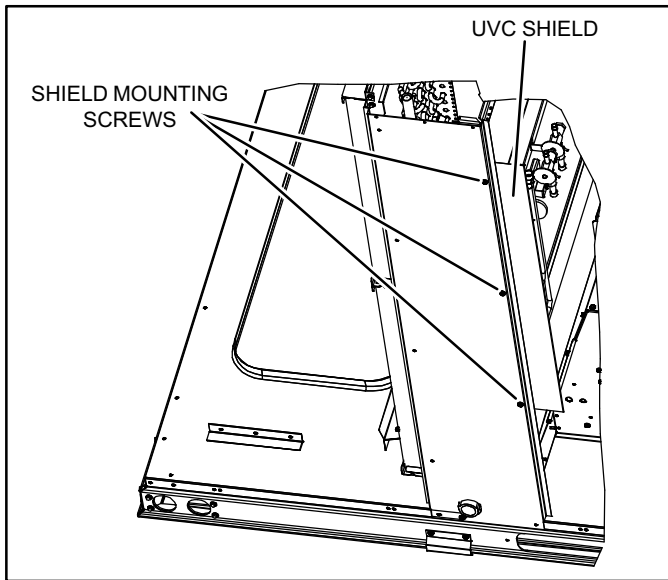


Figure 9. Installing shield panel

Finish Installation

Close all access doors before powering UVC lamp. Apply UVC Danger label to blower access door so that it is clearly visible (see figure 10).

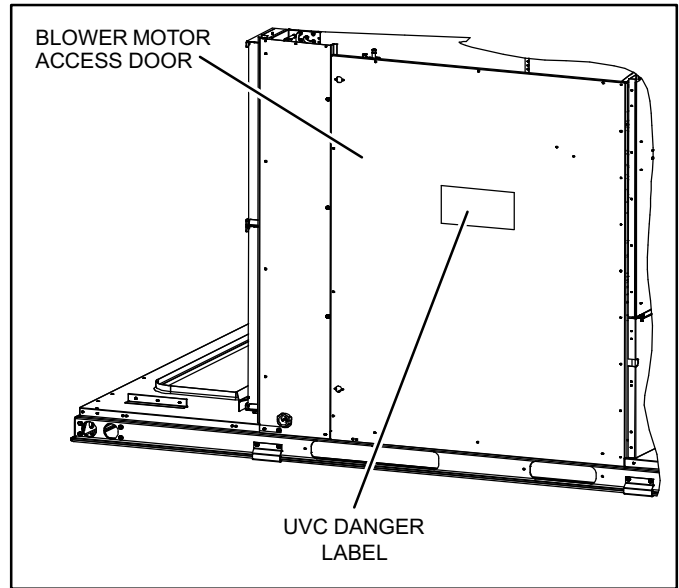


Figure 10. Adding UVC DANGER labels

Operation

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

Maintenance

For all maintenance, contact a qualified HVAC technician.

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 your Healthy Climate® germicidal light model.
2. Disconnect power to the rooftop unit before servicing the UVC kit.
3. Open the blower access door.
4. Disconnect the UVC cable quick connects (black/white).

5. Remove the (3) mounting screws of the UVC assembly. Carefully remove the complete UVC assembly out through the blower access door.
6. Allow 10 minutes before touching the lamps. Then, carefully remove the lamp splash guards and lamp from each of the lamp holders.
7. Wear cotton gloves or use a cotton cloth when handling the new lamp. Gently but firmly push in the splash guards on each end of the lamp. Align and insert the lamp with splash guard into the lamp holders of the UVC assembly until each end clicks into place (see figure 2 on Page 5).
8. Carefully place the UVC assembly on the blower deck. Line up the mounting holes on the UVC assembly with the mounting holes on the blower deck (see figure 3 on Page 5). Use the #10 screws provided to attach the UVC assembly in place.
9. Close the blower access door.
10. Reconnect power to the rooftop unit.
11. Open the filter access door and look through the view port in the triangular sheet-metal panel to verify that the UVC light is on.

Lamp Disposal

Hg-Lamp Contains Mercury—Manage in accordance with local, state and federal disposal laws. Refer to www.lamprecycle.org or call 1-800-9-LENNOX.

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.

