



Installation and Maintenance Instructions **For the Air Handler Mounted (AHU) Fresh-Aire UV Systems**

The Air Handler Mounted Series of Fresh-Aire UV Systems are designed such that the UV lamps can be remotely mounted from the power supply to be internally mounted into air handling systems as a preventive maintenance device. The power supply has been designed to be weather resistant to withstand the wet environment found inside of air handlers or the outdoor conditions of outdoor packaged air conditioning systems.

Safety Precautions:

- It is recommended that a trained technician install and maintain this unit.
- To prevent electrical shock – **ALWAYS DISCONNECT POWER BEFORE SERVICING.**
- **THIS PRODUCT EMITS ULTRAVIOLET RADIATION WHICH CAN CAUSE SERIOUS EYE INJURY. NEVER LOOK AT THE UV LIGHT, TURN OFF THE POWER TO THE UV UNIT BEFORE SERVICING.**
- Choose a mounting location that limits ultraviolet light exposure to plastic materials and wiring that has unknown resistance to ultraviolet light.

Fresh-Aire UV Kit Checklist:

The Fresh-Aire UV Kit includes the following items:

- Remote Mountable Germicidal UV Lamp(s).
- Remote Mountable Weather Resistant Power Supply.
- UV Lamp “Z” Mounting Bracket(s).
- Installation Hardware kit including self-tapping screws, wing nuts, lamp indicator caution sticker and lens.

Installation Instructions:

Mounting the UV Lamp(s)

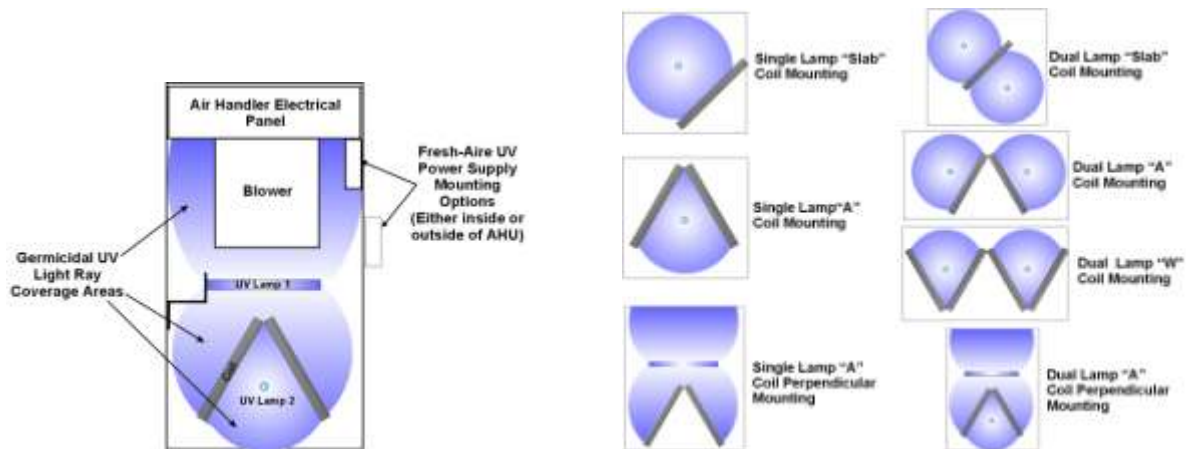
- 1) Choose a suitable location inside the air handler to mount the UV Lamp(s). For single lamp applications, the ideal location is to position the UV lamp in the air handler such that the UV light can expose the most surfaces of the coil, drain pan and/or interior surfaces of the air handler, i.e. at the center of the “A” plate of an “A” coil will expose both surfaces of the return side of the “A” coil and the drain pan to prevent fouling of the coil and slimming of the drain pan. For dual lamp applications, the ideal location is to mount one lamp on the return side of the coil and one perpendicular across the supply side, such as illustrated below. Refer to the diagram below for mounting suggestions:

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- 2) For "A" plate mounting, drill a 25mm (1") hole at the desired mounting location such as on the "A" plate of the coil.
- 3) For mounting the UV lamp(s) above the coil or air handler surfaces use the supplied "Z" mounting brackets to mount the lamps in the desired location. Use the supplied self-tapping sheet metal screws to mount the remote brackets at the desired mounting location.
- 4) Carefully remove the UV Lamp from the shipping container. **Note:** The Glass of the UV Lamp is very fragile, be careful not to bang it against anything during installation as it may break.
- 5) *For coil mounting:* Carefully slide the UV Lamp into the 25mm (1" hole) and use the supplied self-taping sheet metal screws to mount it in place. **Note:** Do not over tighten as the ceramic bases of the lamp can break. *For bracket mounting:* Pass the lamp cord through the hole of the mounting bracket and slide the base of the lamp onto the studs of the bracket, and use the supplied wing-nuts to secure into place. **Note:** for lamp placements that may be in line-of-sight of unknown UV resistant materials such as air filters, flex duct or wiring, it is recommended to use optional Part # TUV-SHIELD to block the UV light from direct exposure to these surfaces or wrap suspect materials with foil tape to protect.
- 6) Use a clean cloth and wipe any fingerprints or dirt from the UV lamps from the installation process.

Mounting the Power Supply

- 1) Next, find a suitable location to mount the power supply. The power supply is weather resistant and is designed to withstand the wet conditions found within an air handler or the weather conditions found on outdoor package units. The power supply should be mounted in a location (either inside or outside of the air handler) that is convenient for access to the main power supply and for connection to the UV lamps. Use the supplied self-taping sheet metal screws to mount the power supply in place through the mounting holes on the sides of the base of the power supply. When mounting the power supply on outdoor package units, it is recommended to use weather tight strain reliefs (optional Part# TUV-STRNRLF) or other sealing methods in order to pass the power cord and lamp cables into the interior of the air handler for connections.
- 2) **ENSURE THE MAIN POWER TO THE AIR HANDLER IS TURNED OFF BEFORE PROCEEDING.** Refer to the electrical diagram for proper connection of the power supply to the main power. **CONNECT IN ACCORDANCE WITH ALL STATE AND LOCAL ELECTRICAL AND BUILDING CODES.** The Power Supplies have automatic voltage selection between 120 – 277 VAC Single Phase built into the power supplies and will automatically adjust to the proper voltage when power is applied.

Final Connections and Installation Wrap-Up

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- 1) Connect the waterproof remote cable(s) male plugs on the power supply to the waterproof lamp(s) female receptacles. Dress any excess remote cable into the air handle and secure.
- 2) Mount the supplied visual indicator lenses in a convenient location on the front access panel of the air handler such that light coming from the UV lamp can be viewed by the indicator lenses. Place the included Lamp Indicator Caution Sticker over the lens.
- 3) Turn the ON/OFF switch of the Fresh-Aire UV system to ON.
- 4) Replace all access panels to the air handler. **Caution: The Fresh-Aire UV emits Ultraviolet light that can cause Serious Eye Burns and Temporary Blindness, Ensure all access panels have been replaced before proceeding to the next step!!!!**
- 5) Re-apply power to the air handler.
- 6) Check that the lamp(s) have lighted, Typically within 5 seconds of applying power.
- 7) Check that the blue glow of the UV lights can be seen by the indicator lens.

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Maintenance:

Periodic Maintenance

Periodically wipe the UV lamps with a clean cloth or alcohol swab to remove any accumulated dust or dirt. This should be performed at least once per year or during routine maintenance intervals.

UV Lamp Replacement Intervals

The UV Lamps of the Fresh-AireUV system have varying germicidal UV Output life spans depending on the model chosen. The expected life spans are as follows:

Model Series TUV-100 – One Year Effective Lamp Life, Replace with Lamp Part #TUVL-100

Model Series TUV-200 – Two-Year Effective Lamp Life, Replace with Lamp Part #TUVL-200

Please contact your local dealer for replacement lamps.

Replace the lamps after the lamp has reached the end of its' expected service life regardless of whether the lamp is still lit or not. This is because the UV lamps lose their germicidal effectiveness in time as the gas required to create the UV light is expended over time. **This procedure should only be attempted by a trained service technician. Ensure all power is disconnected and the UV lamp is OFF before opening any of the service panels to the air handling system.**

Trouble Shooting Guide

Problem	Solution
UV Lamp(s) Not Lighting	<ol style="list-style-type: none"> 1. Check that power is applied. 2. Check that the unit is turned ON. 3. Ensure the remote lamp cables are properly connected. 4. Check the fuse. Replace only with same size and type. 5. Install New UV Lamp(s). 6. Consult Factory.
UV Lamp(s) Flickering	<ol style="list-style-type: none"> 1. UV Lamp(s) have reached end of effective service life. Install new lamp(s) of same type. 2. If unit is new, check remote cables to ensure they are properly connected. 3. If new lamps still flicker, consult factory.
UV Lamps Have burned Out Prematurely	<ol style="list-style-type: none"> 1. Defective power supply, Consult Factory.
Power Supply Will Not Light UV Lamps even after new lamps are installed	<ol style="list-style-type: none"> 1. Defective power supply, Consult Factory.

Note: There are no user serviceable parts inside of power supply. Only serviceable parts are the UV Lamp(s) and fuses of the unit. Service should only be performed by qualified service technicians.

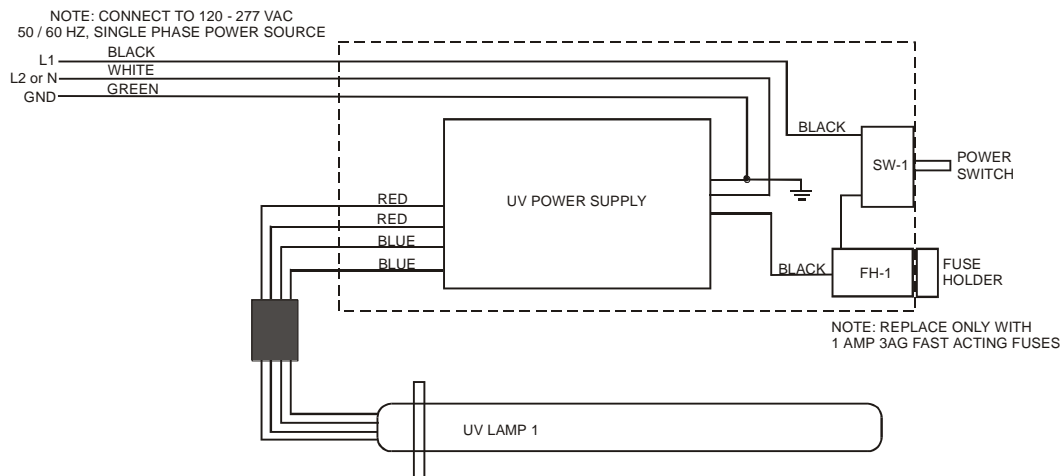
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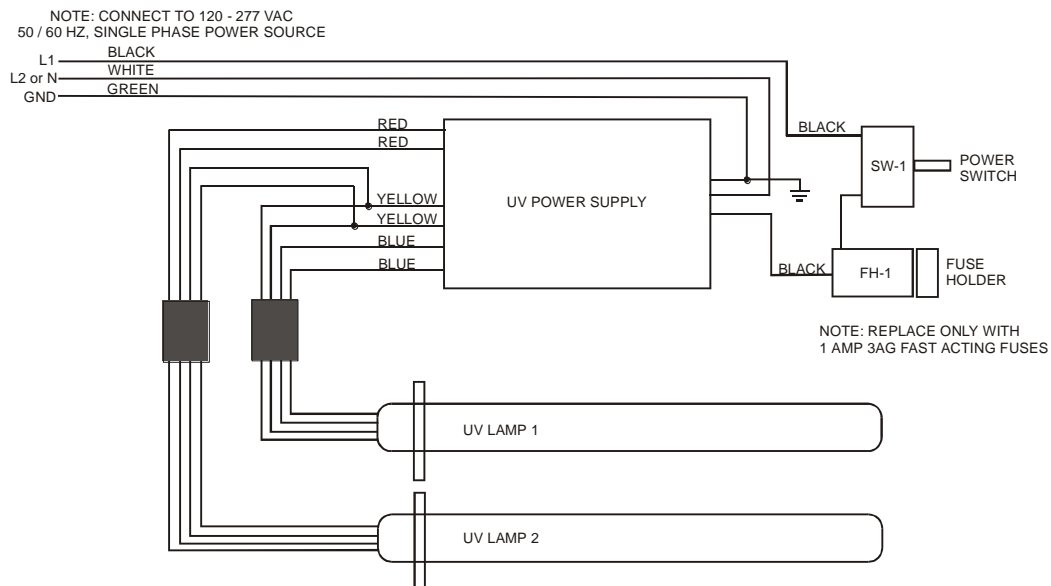
FRESH-AIRE UV INTERNAL MOUNT POWER SUPPLY WIRING DIAGRAM

Revised 6/03

SINGLE LAMP POWER SUPPLY MODEL TUV-1S-I



DUAL LAMP POWER SUPPLY MODEL TUV-1D-I



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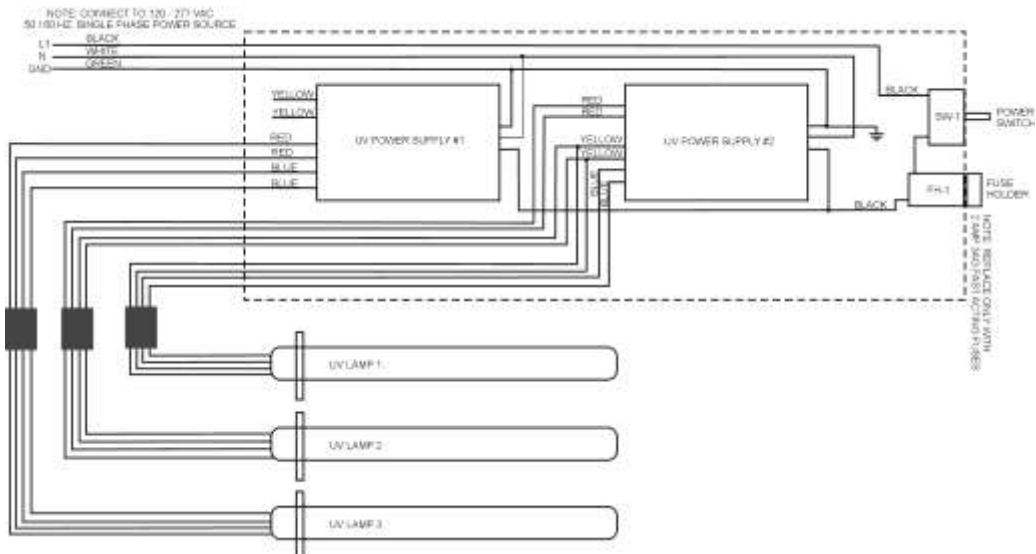


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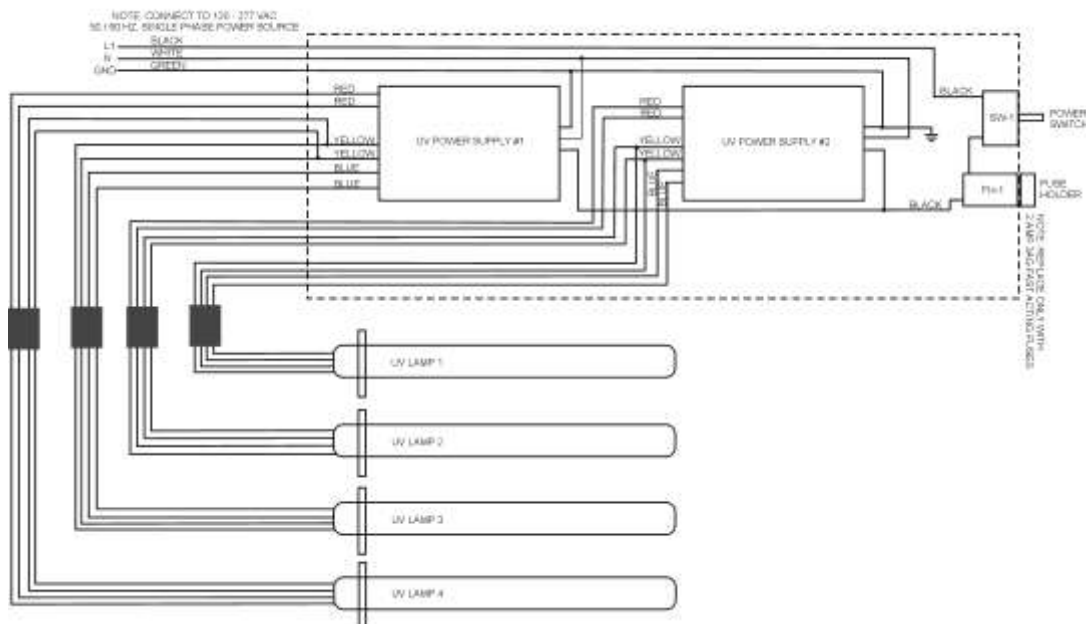
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QUAD LAMP POWER SUPPLY MODEL TUVP-1TJ



QUAD LAMP POWER SUPPLY MODEL TUVP-1QJ



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Please Follow the Instructions Below for Proper Lamp Connection

A



Ensure the Pins are Straight and Aligned Before Inserting the Connectors.

B

Align the Alignment Keys While Inserting the Connectors



C

Ensure the Connectors are Fully Seated for Proper Electrical Connection



Note: Improper lamp connection may cause the lamps to flicker or run for only a few seconds. If this is the case, disconnect the connectors, check pin alignment and reseal the connectors before consulting factory.

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UNLIMITED LIFETIME POWER SUPPLY WARRANTY

This warranty supersedes and replaces any warranty statements orally made by the Sales Person, Distributor or Dealer or contained in the written instructions or other Brochures or informational documents in relation to this product. This warranty gives you specific legal rights, and you may also have other rights which vary from State to State.

Manufacturer warrants the **Fresh-Aire UV** to be free from defects in material and workmanship under the normal use and service when operated and maintained in strict accordance with manufacturer's instructions for the lifetime of the original installation from the date of purchase of equipment, with exception of the Ultraviolet Lamp(s), which are warranted for UV germicidal output only and for the following periods, dependent on lamp type as follows: TUVL-100 – one (1) year and TUVL-200 – two (2) years. **The UV lamp warranty does not cover cracked or broken lamps.**

Manufacturer's obligation under this warranty is being limited to repairing or replacing any part found to its satisfaction to be so defective. This warranty does not cover parts damaged resulting from misuse, abuse, or any other than its intended use, accident, neglect, or from improper operation, maintenance, installation, modification or adjustments. **Triatomic Environmental, Inc. shall have no responsibility for charges incurred by the customer for installation or removal of warranted items.**

This warranty does not cover parts or equipment used with the **Fresh-Aire UV** that are not made by Manufacturer, since these items are covered by warranties of the respective manufacturer. This warranty shall be void if UV lamps from manufacturer's other than Triatomic Environmental, Inc. are used with this equipment.

Manufacturer assumes no liability for any harm, which may occur as a result of the use of the equipment herein and shall not be liable for consequential or any other damages whether or not caused by manufacturer's negligence or resulting from any express or implied warranty or breach thereof. Consequential damages for the purpose of this warranty shall include, but not be limited to, loss of use, income or profit, or loss of or damages to property or injury or death to persons or animals occasioned by or arising out of operation, use, the operation, installation, repair or replacement of the equipment or otherwise.

THERE ARE NO WARRANTIES WHICH EXTEND BEYOND THE DESCRIPTION ON THE FACE HEREOF

To obtain warranty service you should contact your local dealer or the part should be shipped at your cost to:

Triatomic Environmental, Inc.
1410 Park Lane South, Suite 3
Jupiter, FL. 33458

along with an explanation of the problem or defect.

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