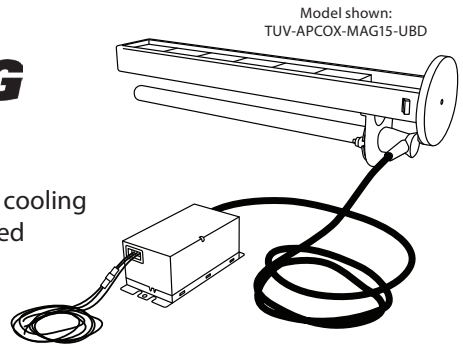
FRESH-AIRE UV
The Indoor Air Quality Expert

# APCO®-X MAG

## AIR TREATMENT SYSTEM


Model shown:
TUV-APCOX-MAG15-UBD

APCO®-X MAG is designed to be used inside the cooling cabinet in airhandlers and package units. Prefered location is between the cooling coil and blower housing.

For dual systems select a remote UV light location that shines on the greatest surface area or the area with the most microbial growth. Refer to the Optional Remote UV Light section for installation instructions.

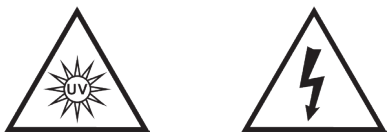
**IMPORTANT!**
- **Only qualified technicians should install this product***
- **Install in accordance with relevant building codes**
- **Read instructions carefully including safety warnings**

*Installation of this product by anyone other than licensed HVAC or electrical contractors voids warranty.

© Fresh-Aire UV LIT-FAUV-APCO-X-MAG-MAN 050626

US patent #7,704,463

EPA Est. Reg. No. 075179-FL-002




**WARNING!**
**PROTECT EYES FROM UV LIGHT**
**TURN OFF UNIT OR DISCONNECT**
**BEFORE SERVICING**

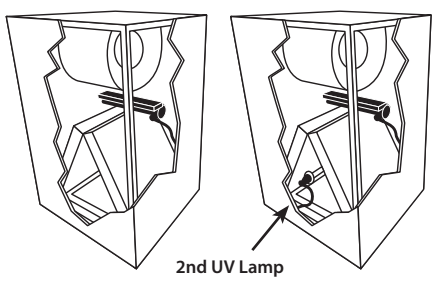
## ❶ Installation Notes

The APCO-X MAG is usually installed in air handlers and package units. The APCO-X MAG system should be oriented so that air flows past the UV Light first, then into the Matrix Element. A reversed installation is permitted if mounting on the return-side of the coil.

A second remote UV lamp is included with APCO-X MAG DUAL. Select a location inside the air system that will allow it to shine on the greatest surface area or the area with the most evident microbial growth. To install the secondary UV light use the Optional 2nd Remote UV Light Installation Instructions provided with APCO-X MAG DUAL.

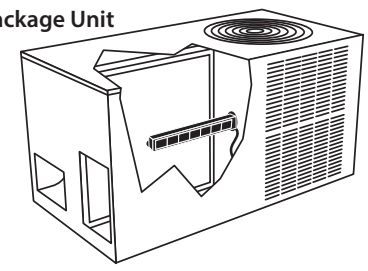
Typical installations include:

**Air Handler**



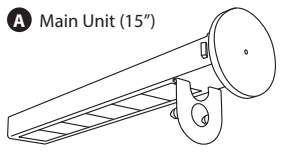

Single in air handler  Dual in air handler

**Package Unit**

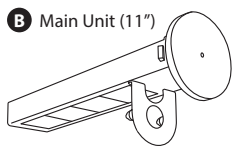


## APCO-X MAG Parts List

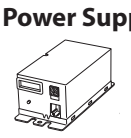
Ⓐ Main Unit (15")



Ⓑ Main Unit (11")



### Power Supply



Ⓒ TUVP-20S24-277 (Single)

Ⓓ TUVP-40SD24-277 (Dual)

**NOTE:**
One power supply included
(single or dual depending on model)

### 11" UVC Lamp

Ⓔ

PART: **TUVL-311** LIFE: **3 Year**

### 15" UVC Lamp

Ⓕ

PART: **TUVL-315** LIFE: **3 Year**

### Small Parts

Ⓖ
Self-tapping Screws

Ⓗ
Quick Nut (plastic)

Ⓘ
Spade Connector

Ⓙ
Splice Connector

Ⓚ

Panel Sticker

Ⓛ
Sight Glass

### 2nd Remote UV Light (APCO-X MAG Dual only)

Ⓜ

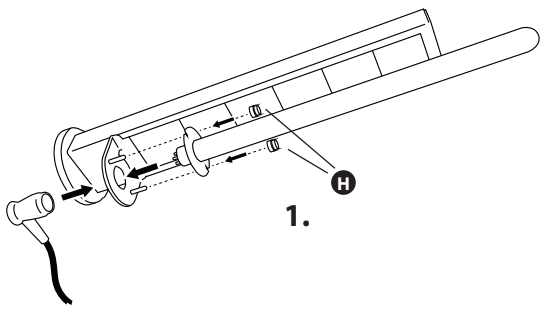
PART: **TUVL-311** LIFE: **3 Year**

**NOTE:**
One lamp included
(11" or 15" depending on model)

Ⓝ

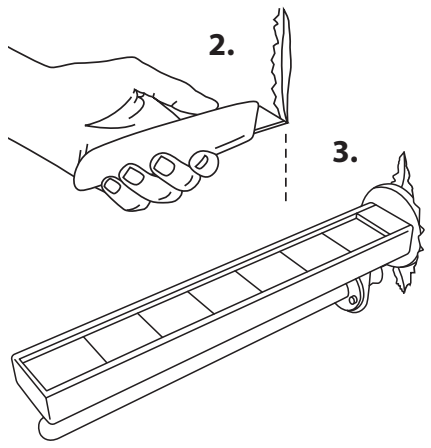
PART: **TUVL-315** LIFE: **3 Year**

Ⓩ Z-Magnet mount




## ❷ Mount Lamp

Mount the UV Lamp to the APCO-X MAG unit as shown using 2 quick nuts Ⓗ.




**Important!** Do not install the mounting magnet within 12" of digital signal devices as this may cause interference.

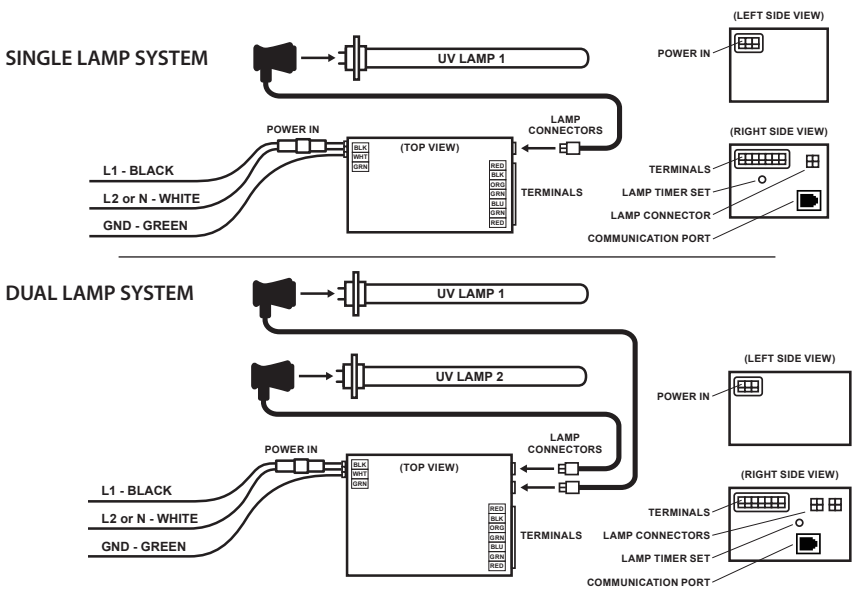
## ❸ Air Handler Interior Surface Installation

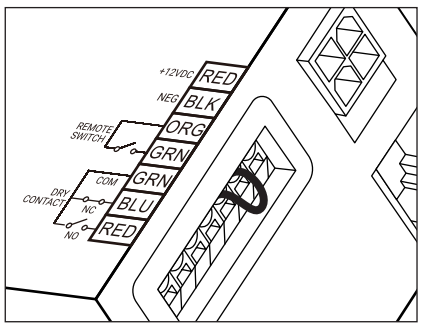
1. Determine the optimal position for placement of APCO-X MAG inside the air system.
2. Use a utility knife to cut a slit in the insulation on the interior surface.
3. Place the magnetic mounting bracket directly on the metal surface or remove the magnet and hard-mount the bracket using the self-tapping screws provided. Use foil tape to close the cut in the insulation.

## ❹ Connecting to Power

**IMPORTANT! Must be wired to constant power - do not connect to blower relay.**

Before connecting to power, confirm which APCO-X MAG model is being installed. Turn off main power source before installation. Always use proper conduit fittings and terminations.



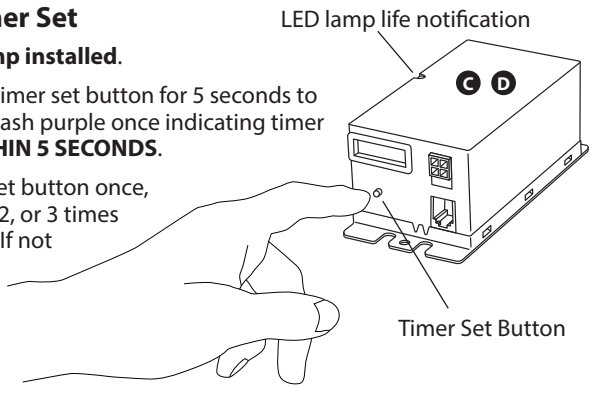




## ❹ Connecting to Power (Continued)

Terminal block detail

## ❺ Replacement Lamp Timer Set

1. Connect power **without the lamp installed**.
2. For lamp replacement hold the timer set button for 5 seconds to enter timer mode. The LED will flash purple once indicating timer mode, **DO THE NEXT STEP WITHIN 5 SECONDS**.
3. **WITHIN 5 SECONDS** press the set button once, twice or thrice. LEDs will flash 1, 2, or 3 times indicating numbers of years set. If not completed within 5 seconds setup will fail and will need to be repeated.




**IMPORTANT!**

**Systems with high 24 VAC loads may require the installation of a separate 24 VAC transformer to power the UV light.**

**Always use a separate 24 VAC transformer with "communicating" air systems.**

**Draws 16 VA, may need to do load calculation: Volts under load X Amps under load.**

## ❻ Lamp Replacement

The UV lamp in APCO-X MAG (model TUVL- 315 or TUVL- 311) should be replaced every 3 years. Note: UV lamps will continue to emit visible light but lose germicidal effectiveness over time.

Ⓔ 

**TUVL-311**

Ⓕ 

**TUVL-315**

Hg

### CAUTION!

UV Lamps contain small amounts of mercury - dispose of lamps in accordance with local environmental regulations. For more information visit www.lamprecycle.org

**Note:** Use of replacement UV lamps other than Fresh-Aire UV® voids warranty**.**

**MANUFACTURER'S WARRANTY**

FRESH-AIRE UV
**LIFETIME WARRANTY**
ALL PARTS
3-YEAR LAMP

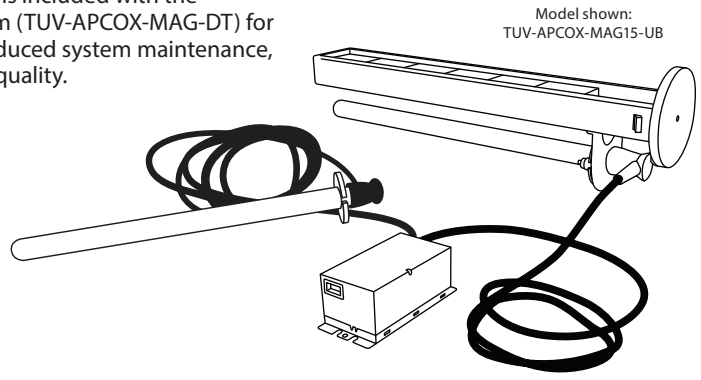
For more information scan the QR

Or visit www.freshaireuv.com/warranty/

# Optional 2nd Remote UV Light Installation Instructions

A second remote UV light is included with the APCO-X MAG DUAL system (TUV-APCOX-MAG-DT) for enhanced disinfection, reduced system maintenance, and improved indoor air quality.

Model shown:
TUV-APCOX-MAG15-UB



**IMPORTANT!**

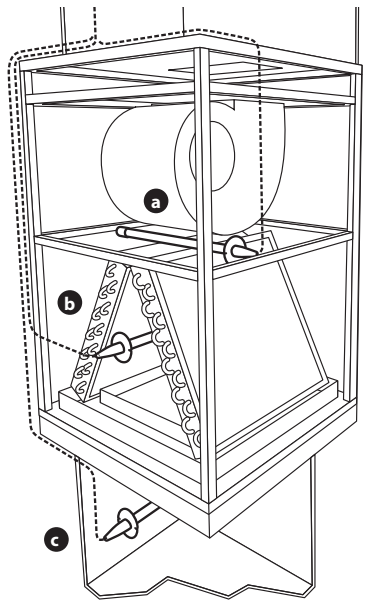
- APCO-X MAG DUAL lamps are wired in series - connect both for lamps to light
- Only qualified technicians should install this product
- Install in accordance with relevant building codes
- Read instructions carefully including safety warnings

## Installation Notes

Before installing the Remote UV Light it is necessary to determine the optimal mounting location inside the air system. First, look for the area with the heaviest mold growth. Also consider a location that will allow the germicidal UV Light to shine on the greatest surface area.

Some typical mounting locations:

- (a) Across top of coils
- (b) Coil "A" plate
- (c) Return-side duct



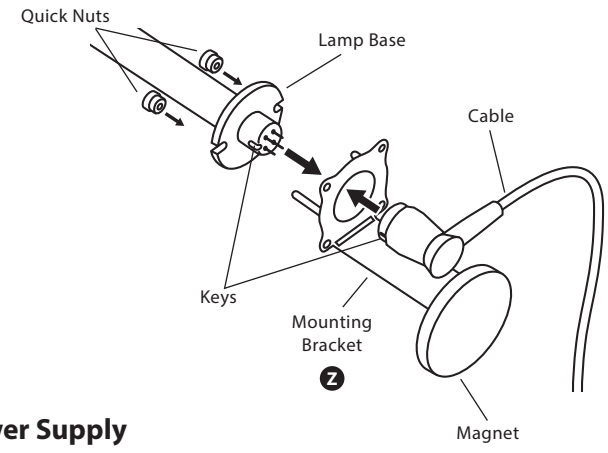

Mounting Options

**WARNING**
**PROTECT EYES FROM UV LIGHT**
**TURN OFF UNIT OR DISCONNECT BEFORE SERVICING**

**Important:** Some materials inside the air system (including filter media, flex duct, wiring etc.) may not be UV light resistant. Use the optional UV shield (part #TUV-SHIELD-LPC) or cover the materials with reflective tape.

## ❶ Air Handler Interior Surface Installation

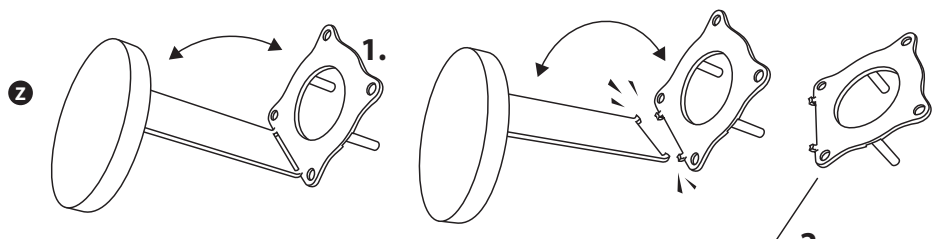
1. Pass lamp base through hole in magnetic mounting bracket.
2. Align keys on lamp and cable, press firmly together.
3. Fasten the lamp base to the magnetic mounting bracket using quick nuts.



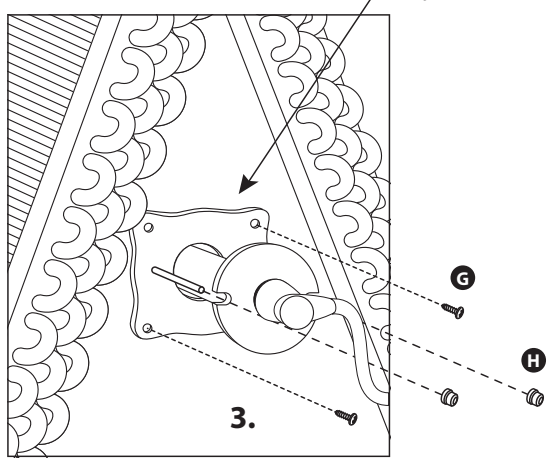

### STEP 2: Cable Routing & Power Supply

1. Determine the best location for the power supply inside the air system, close to the electrical components.
2. Route the lamp cable through the air system to the power supply.
3. Connect the lamp cable to the power supply by aligning the square connectors, then press firmly together until latch catches.

## ❷ Coil "A" plate or Duct Installation



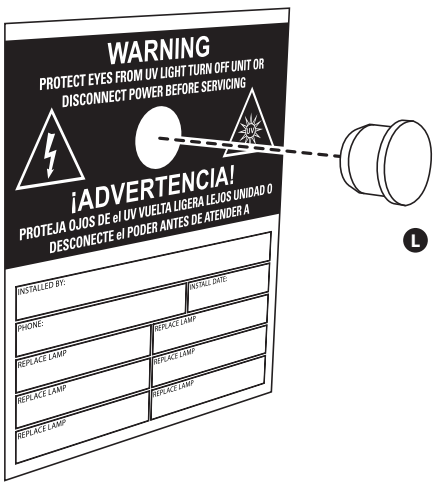

1. For A-plate and duct mounting start by snapping the magnetic mounting bracket apart by bending.
2. Drill a 1" hole in the A-plate or duct then attach the smaller piece of the bracket using the self-tapping screws.
3. Insert the UV lamp into the hole then use the plastic quick-nuts to attach the UV lamp to the magnetic mounting bracket as shown.




## ❸ Sight Glass Installation

1. Find a suitable location on the outside of the duct-work near the UV Lamp installation and apply the Fresh-Aire UV® warning/lamp replacement sticker (K).
2. Drill a ½" hole through the circle on the sticker. Press the sight glass (L) into the hole.
3. Turn on the power and use the sight glass to confirm that the UV Lamp is operating.

1.




## ❹ Lamp Replacement

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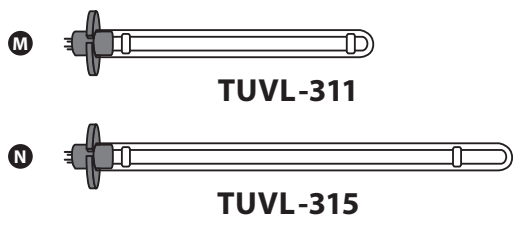


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