

*Installation, Operation & Maintenance Manual*

# GPS-FC48™ -AC



NOTICE: This product is to be used only as directed. Read entire manual before use. Do not use unless properly installed.



Thank you for purchasing a GPS-FC-48-AC air ionization system from Global Plasma Solutions.

### *Hardware Provided by GPS*

Before you start, confirm the contents of your shipment. Each GPS-FC48-AC will consist of the following

1. GPS-FC48-AC with in line power switch.
2. Rare earth magnets (2).
3. Machine screws and nuts (2 each) for mounting magnets.

### *Hardware by Others*

1. Electrical wiring, junction box, or receptacle to provide power to the GPS-FC48-AC.
2. Self-tapping screws (optional) if not using magnet mount.

### *Installation Location*



**CAUTION: MAKE SURE POWER IS DISCONNECTED TO THE HVAC EQUIPMENT BEFORE INSTALLATION**

GPS recommends mounting the GPS-FC48-AC on the blower housing on the side opposite the motor. Alternate mounting locations are on the supply air duct or the return air duct after the system filter. The emitter brushes should be no closer than two inches from any wiring or metal objects.

**NOTE: Use Temperature - Maximum Ambient temperature in which unit shall be used: 140 degree F/ 60°C**

### *Mechanical Installation*

1. Ensure power to the HVAC equipment and the circuit the GPS-FC48-AC will be connected to has been turned off.
2. Find an appropriate location. Verify the carbon fiber emitters have a 2" clearance from wires or other metal objects.
3. Mount the magnets to the GPS-FC48-AC using included hardware. See FIGURE 1.
4. Install the GPS-FC48-AC so that airflow is passing by both emitters at the same time (like a football through goalposts).
5. Check that the wiper arm has room to rotate freely.



Figure 1

## Wiring

1. Confirm the power is off prior to wiring. Follow all local and national electrical and building codes.
2. GPS recommends the GPS-FC48 be powered constantly and NOT switched with the system or blower.
3. The GPS-FC48-AC will self-adjust to voltages from 24VAC to 240VAC. Output and performance will not be effected by choice of input voltage. Connect the power wires as follows:

Black 24 - 240VAC  
White Neutral or L2  
Green Ground  
Brown Dry Contacts/BAS terminals

4. Wire in BAS terminals (optional). The GPS-FC48-AC is equipped with dry contacts that are normally open and close when the GPS-FC48-AC is on and has no faults. The contacts are rated up to 250VAC and 1A.

## Operation



### **CAUTION! NEVER TOUCH BRUSHES WHILE OPERATING, SHOCK MAY OCCUR**

Once powered and the inline switch is in the on position, the unit initiates an internal check of all systems. If the autocleaning wiper blade is not in the "home" position, it will move to the home position in series with the airflow.

## Cleaning Cycle

The GPS-FC48-AC comes with a preset cleaning cycle designed to clean the brushes every three days. The cleaning process may be activated by pushing the test button located on the top of the unit. To change the cycle frequency, press the cleaning cycle button once. While cleaning is in progress press and hold the cleaning cycle button for 5 seconds. The LED will start flashing. Pressing the cleaning cycle button again will change the days between cleaning. The number of flashes indicates the cleaning interval in days (3 flashes=3 days, 5 flashes=5 days).

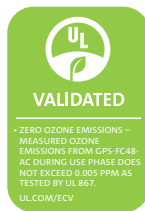
## Troubleshooting

1. Unit will not power up, LED not illuminated:
  - a. Confirm proper voltage is applied to the correct terminal(s).
  - a. Try an alternate power source. If using 24v try using 120v or vice versa.
2. Wiper sticks or stops on emitters:
  - a. Adjust height of emitters: loosen screw at base of emitter gently push or pull emitter to a height where wiper just contacts emitter. Hold the emitter in place and tighten screw. Verify correct height after tightening screw.
3. Wiper does not clean/ contact emitters:
  - a. Adjust height of emitters: loosen screw at base of emitter gently push or pull emitter to a height where wiper just contacts emitter. Hold the emitter in place and tighten screw. Verify correct height after tightening screw.
  - a. If the emitter is worn to the point where there is no adjustment, replacement emitters can be ordered from GPS. Remove the screw and the emitter base, unplug the emitter from the connector. Plug the new emitter in, reinstall base, adjust emitter height and tighten screw.
4. If unit does not operate properly after verifying the above instructions please contact GPS for additional assistance.



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