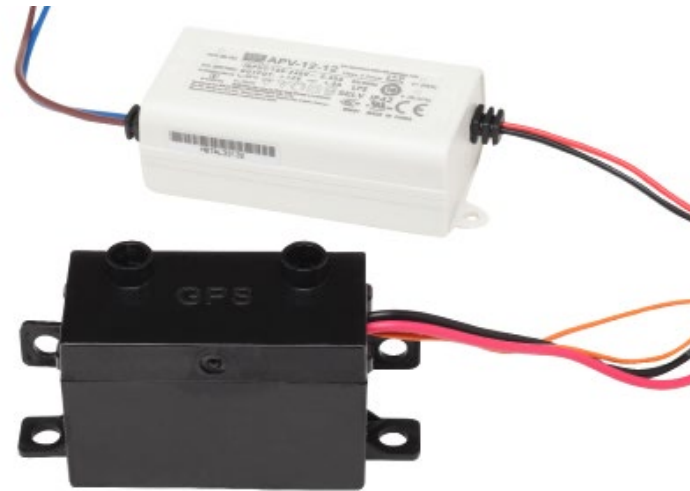


Installation, Operation & Maintenance Manual

GPS-FC3T-BAS™



Thank your choosing the GPS-FC-3T-BAS™ from Global Plasma Solutions. The GPS FC-3T-BAS is designed to be mounted inside of fan coils, heat pumps, ductless mini splits, and air handlers up to 3,200 CFM or 8 tons. There are BAS terminals provided.

Harware Provide by GPS

- GPS-FC-3T-BAS unit
- APV-12-24 Power Supply
- Fuse

Harward Required by Installer

- Mounting screws
- Electrical connectors
- Double sided tape

INSTALLATION LOCATION

GPS recommends the GPS-FC-3T-BAS be installed downstream from the filter to prevent unnecessary build up of particulates on the carbon fiber needle tips. Below is a list of locations to mount the GPS- FC-3T-BAS in the preferred order.

1. Downstream from the filter, and prior to the blower and cooling coil. This helps prevent particulate build up and provides maximum bacteria control.
2. Downstream from the filter and the blower, prior to the cooling coil
3. Downstream from the filter, blower and coil,
4. Prior to the filter. Particulate build up will be greater, so cleaning will need to be done more frequently.



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

MECHANICAL INSTALLATION

1. Select a location for installation. **The GPS-FC-3T-BAS needs to be perpendicular to the air flow** (air should flow past needles like a ball through the goal posts). The GPS-FC-3T-BAS should be mounted so that the needles are exposed to airstream.
 - The ideal location on typical split systems is on the blower housing, the side opposite the blower motor. The housing of the GPS-FC-3T-BAS should be so that the needles extend slightly above the side of the blower housing.
 - The ideal location for ceiling cassette units is on the fan side of the protective screen/ grill.
 - The ideal location for mini split systems is after the filter and behind the coil, mounted to the wall plate.
 - The ideal location for ducted module is on the intake side after the filter between the blower housings.
2. Secure the GPS-FC-3T-BAS, if attaching to sheet metal use self-taping screws if possible. **NOTE: Inspect the other side of sheet metal to make sure screws will not damage refrigerant lines, wires, or other components.** When attaching the GPS-FC-3T-BAS to a grill or screen nylon ties may be used.
3. The GPS-FC-3T-BAS needles should not be touching any metal surface or wires. Move and secure any wires that may contact the needles.



Figure 1



NOTE: THE NEEDLES MUST BE 2 INCHES AWAY FROM METAL SURFACES TO PREVENT ARCING



Electrical Installation



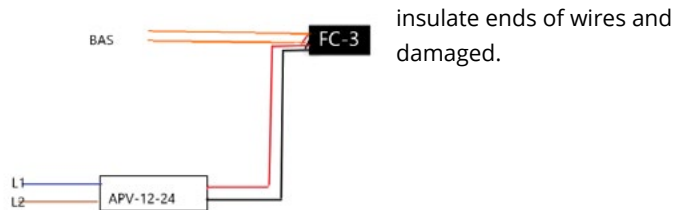
CAUTION: MAKE SURE POWER IS DISCONNECTED TO THE HVAC EQUIPMENT BEFORE INSTALLATION

Verify voltage of circuit the GPS-FC-3T-BAS is being connected.

- If 240VAC, see below “1. 240VAC Installation.”
- If 120VAC, see below “2. 120 VAC Installation.”

1. 240VAC Installation:

- Find a suitable location for the AVP-12-24. Secure it with self-tapping screws or double-sided tape.
- Route the wires so that they will not short, abrade, or damage other components.
- If not already done, connect the GPS-FC-3T-BAS to the low voltage side of AVP-12-24 (red and black wires) red to red and black to black.
- Connect the high voltage side of AVP-12-24 (blue and brown wires) to the terminal block where the 240VAC wires enter HVAC unit.
- Connect the orange wires to the Building Automation System wires or terminals (if present).
If no BAS system is present, then secure wires where they will not be



2. 120VAC Installation:

- Find a suitable location for the AVP-12-24. Secure it with self-tapping screws or double-sided tape.
- Route the wires so that they will not short, abrade, or damage other components.
- If not already done, connect the GPS-FC-3T-BAS to the low voltage side of AVP-12-24 (red and black wires) red to red and black to black.
- Connect the neutral leg of power to the blue wire. Connect the line or power leg to the brown wire.
- Connect the orange wires to the Building Automation System wires or terminals (if present).
If no BAS system is present, then insulate ends of wires and secure wires where they will not be damaged.

Verification of Operation

Verify the GPS-FC-3T-BAS and wiring are secure and wired for the correct voltage. Restore power to the HVAC equipment. The green indicator light on the FC-3 will illuminate. The BAS terminals will close. To verify output, take a non-contact voltage reader and place it near the needles it should indicate voltage.

Maintenance



CAUTION: MAKE SURE POWER IS DISCONNECTED BEFORE SERVICING

The GPS-FC-3T-BAS requires very little maintenance. Over time particles will accumulate on the needles and they will need to be cleaned periodically. In most applications annual cleaning will suffice.

1. Turn power to the GPS-FC-3T-BAS off.
2. Gently brush the needles with a nylon brush (toothbrush will work).
3. Restore power to the GPS-FC-3T-BAS.



3101 Yorkmont Road • Suite 400
Charlotte, NC 28208
980-279-5622

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