

# INSTALLATION, OPERATION, AND MAINTENANCE MANUAL

## FM-6000



**air+**

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## GENERAL DESCRIPTION

The Air+ FM-6000 is an auto-cleaning, zero-ozone, needlepoint ionizer producing billions of positive and negative ions that deactivate bacteria and viruses, agglomerate particulate, and neutralize odors. No maintenance is required as the needles are cleaned of dirt and dust automatically and programmed from the factory at once per 24 hours of operation and upon start-up. The ionizer should be mounted at the fan-inlet of a typical air handling unit such as an RTU, PTAC, Fan Coil Unit, Mini Split, or a VRF indoor unit. The unit can be powered with 12V-24V AC or DC without requiring an external power supply. The unit has communication capabilities including a dry contact and data export to the BMS. The FM-6000 is also UL 2998 validated for zero ozone emissions.

## MECHANICAL INSTALLATION

**WARNING:** Do not apply power to the unit before mechanical installation is complete. Care should be taken to avoid contact with the emitters as they carry a high voltage potential when powered.

1. Mount the ionizer at the inlet of the fan using the supplied magnets. The ionizer can also be mechanically fastened to the fan housing using #4 self-tapping sheet metal screws through the mounting tabs. (See Figure 1) Be sure to avoid the fan blades when screwing into the fan housing.
2. Insure that air flows over the two needlepoint emitters simultaneously. (See Figure 2)
3. The unit should be mounted downstream of the filter and avoid locations directly downstream of a humidifier or other wet locations.

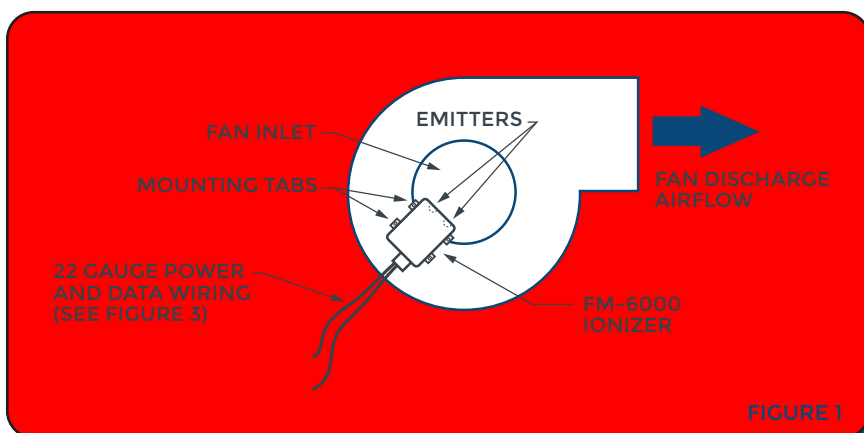


FIGURE 1



1. All field wiring to be in accordance with the National Electric Code (NEC) and the authority having jurisdiction (AHJ).
2. It is recommended that surge protection be provided for this ionizer at the equipment level or the circuit feeding the ionizer. Any transformer used to power the ionizer must be grounded.
3. Connect 12V or 24V AC or DC power wires to power inlet block by pressing the orange tab firmly, inserting the appropriate wire, then releasing the orange tab. Repeat as necessary for the other wires. (See Figure 3).
4. For best results interlock ionizer power with fan control circuit.
5. Avoid installation locations where flammable or explosive gases exist.
6. Apply power to the unit. The LED indicator will be green when power is applied to the ionizer, but then turns orange when operating properly.

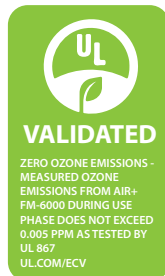
## OPERATION

1. When power is applied to the ionizer, the LED will illuminate in green for several seconds.
2. The green LED then turns orange indicating the unit is in operation mode and ions are being produced.
3. Two minutes after initial startup, the LED changes back to green and a cleaning cycle is automatically initiated. After the cleaning cycle completes, the LED returns to orange indicating normal operation.
4. The cleaning cycle will repeat every 24 hours if the ionizer operates continuously. If the ionizer doesn't run continuously, steps 1-3 will repeat once the ionizer is energized.

## TROUBLESHOOTING

**If the unit is not operating, check the following:**

1. Verify that all power connections are correct and tight. Reconnect any loose wires as necessary.
2. If the ionizer is powered from the fan control circuit, verify that the supply fan is running to initiate operation and that the LED illuminates in orange. If the LED is green and the cleaning cycle is not active after waiting a few minutes, contact Air+ for technical support.



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