

INSTALLATION, OPERATION, AND MAINTENANCE MANUAL

FM-2400



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GENERAL DESCRIPTION

The self-balancing ionizer can treat up to 6 tons of air conditioning or 2,400 CFM. It can be mounted at the fan inlet of a typical air handling unit such as a RTU, PTAC, Fan Coil Unit, Mini Split, or a VRF indoor unit using the integrated mounting magnets. The unit can be powered with 12V-36V DC or 24V AC on the 2401 model without requiring an external power supply and 120V or 240V AC on the 2403 model. The unit has as option to communicate with the Building Management System via a dry contact on the 2471 and 2473 models.

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 integrated magnets. The ionizer can also be mechanically fastened to the fan housing using #6 or #8 self-tapping sheet metal screws through the mounting tabs. Ensure that the screws don't interfere with the fan blade rotation. Don't use screws longer than necessary. (See Figure 1). The ionizer may also be mounted downstream of the fan if the fan inlet area is not accessible.
2. Insure that air flows over the two brush emitters simultaneously. (See Figure 2).
3. The unit should be mounted downstream of the filter and avoid locations immediately downstream of a humidifier or other wet locations.

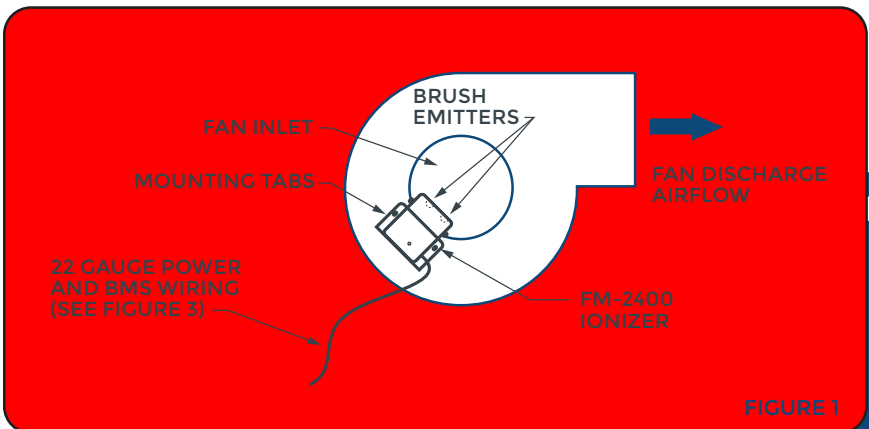


FIGURE 1

ELECTRICAL INSTALLATION

WARNING: Do not apply power to the unit before mechanical installation is complete. Always remove power to the ionizer before handling the unit.

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. For model 2401 DC power, connect black wire (positive) and white wire (negative) to 12V-36V. For model 2401 AC power, connect black wire (hot) and white wire (neutral) to 24V.
4. For model 2403 AC power, connect black wire (hot) and white wire (neutral) to 120V or 240V.
5. For models 2471 and 2473, connect the red and green wires to communicate with the Building Management System (BMS).
6. For best results interlock ionizer power with fan control circuit.
7. Avoid installation locations where flammable or explosive gases exist.
8. Apply power to the unit. Confirm that the blue ionization LED illuminates indicating that the ionizer is functioning properly.

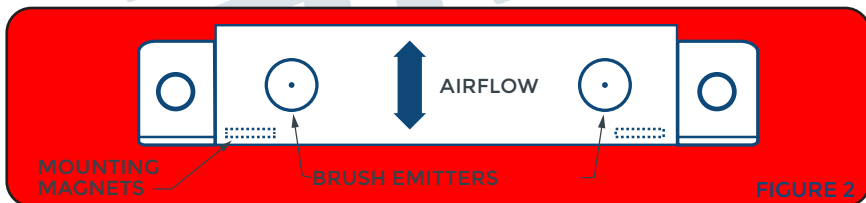


FIGURE 2

Wiring for all FM-2400 models

Service	Wiring Configuration	
	Models 2401 and 2403	Models 2471 and 2473
AC Hot or DC Positive	Black	Black
AC Neutral or DC Negative	White	White
BMS Communication	Not used	Red
BMS Communication	Not used	Green

FIGURE 3

OPERATION

1. When proper power is supplied to the ionizer, the ionizer will be activated and the blue ionization indicator LED will illuminate.
2. The ionization unit is self-balancing and does not require adjustment.

TROUBLESHOOTING

If the unit is not operating, check the following:

1. Verify that proper power has been applied to the ionizer and connections are 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 ionization LED illuminates in blue. If the ionization LED does not illuminate, contact Air+ for technical support.

MAINTENANCE

The FM-2400 is a low maintenance ionizer. The ionization brushes should be inspected for dust and dirt at least every six (6) months. If the carbon fiber brushes are dirty, follow the instructions below to clean the brushes:

1. Disconnect power.
2. Remove any accumulated dirt or dust on the brushes using compressed air or a small brush. Avoid brushes with metal bristles as this could damage the carbon fibers.
3. Reconnect power.