INSTALLATION, OPERATION,
AND MAINTENANCE MANUAL

FM-2400 SERIES

air+
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 Rev3 6/25

GENERAL DESCRIPTION

The Air+ FM-2400 series of compact, brush style ionizers can treat up to 6 tons of air conditioning or 2,400 CFM. It can be mounted in a typical air handling unit such as an RTU, PTAC, Fan Coil Unit, Mini Split, or a VRF indoor unit using the integrated mounting magnets or screws. Low voltage (12V-24V AC or DC) and line voltage (120V-240V AC) models are available with an option to communicate with the BMS via dry contacts.

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.

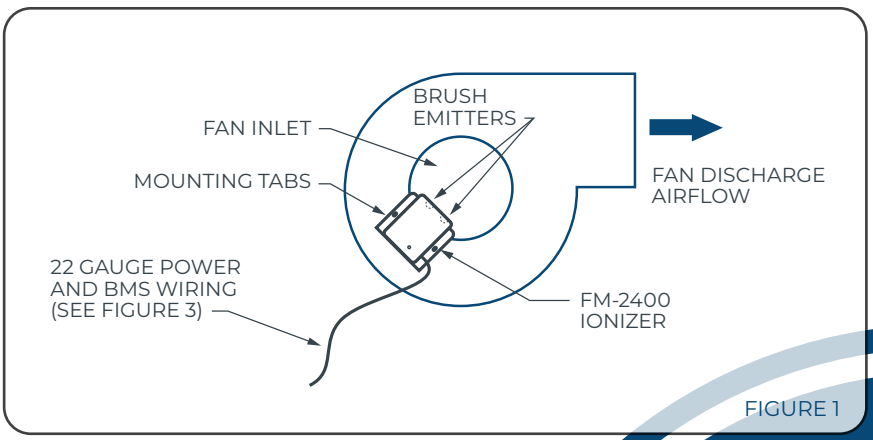

FIGURE 1

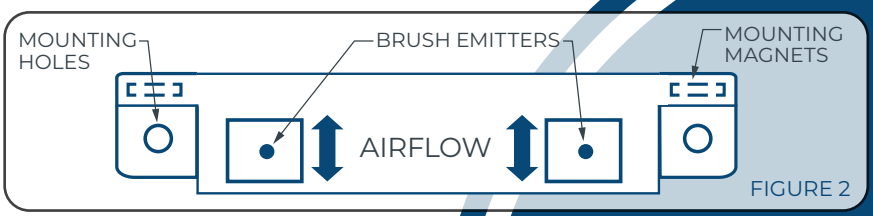

FIGURE 2

ELECTRICAL INSTALLATION

WARNING: Do not apply power to the unit before electrical 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. This ionizer is to be powered with a Class 2 power supply.
3. It is recommended that surge protection be provided at the equipment level or the circuit feeding the ionizer. Any transformer used to power the ionizer must be grounded.
4. For model 2401/2471 DC power, connect black wire (positive) and white wire (negative) to 12V-24V DC. For AC power, connect black wire (hot) and white wire (neutral) to 12V-24V AC.
5. For model 2403/2473 AC power, connect black wire (hot) and white wire (neutral) to 120V or 240V AC.
6. For models 2471 and 2473, connect the red and green wires to communicate with the Building Management System (BMS).
7. Interlock ionizer power with fan control circuit.
8. Avoid installation locations where flammable or explosive gases exist.
9. Apply power to the unit. Confirm that the blue Ionization LED illuminates indicating that the ionizer is functioning properly.

Wiring Chart for FM-2400 Models

Model	Input Voltage	AC Voltage	DC Voltage	Communication
2401	12-24V, AC or DC	Black/White	Black/White	N/A
2471	12-24V, AC or DC	Black/White	Black/White	Red/Green
2403	120V - 240V AC	Black/White	N/A	N/A
2473	120V - 240V AC	Black/White	N/A	Red/Green

FIGURE 3

OPERATION

1. When proper power is applied 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 at info@air-plus.com. .

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.

RECOGNIZED COMPONENT
ETL LISTED C US
Intertek 5033490

Conforms to UL STD 867
Certified to CSA STD C22.2#187

INTERTEK SUSTAINABILITY ACCREDITED
CERTIFIED ZERO OZONE
MEETS UL 2998 - EMITS LESS THAN 0.005 PPM

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