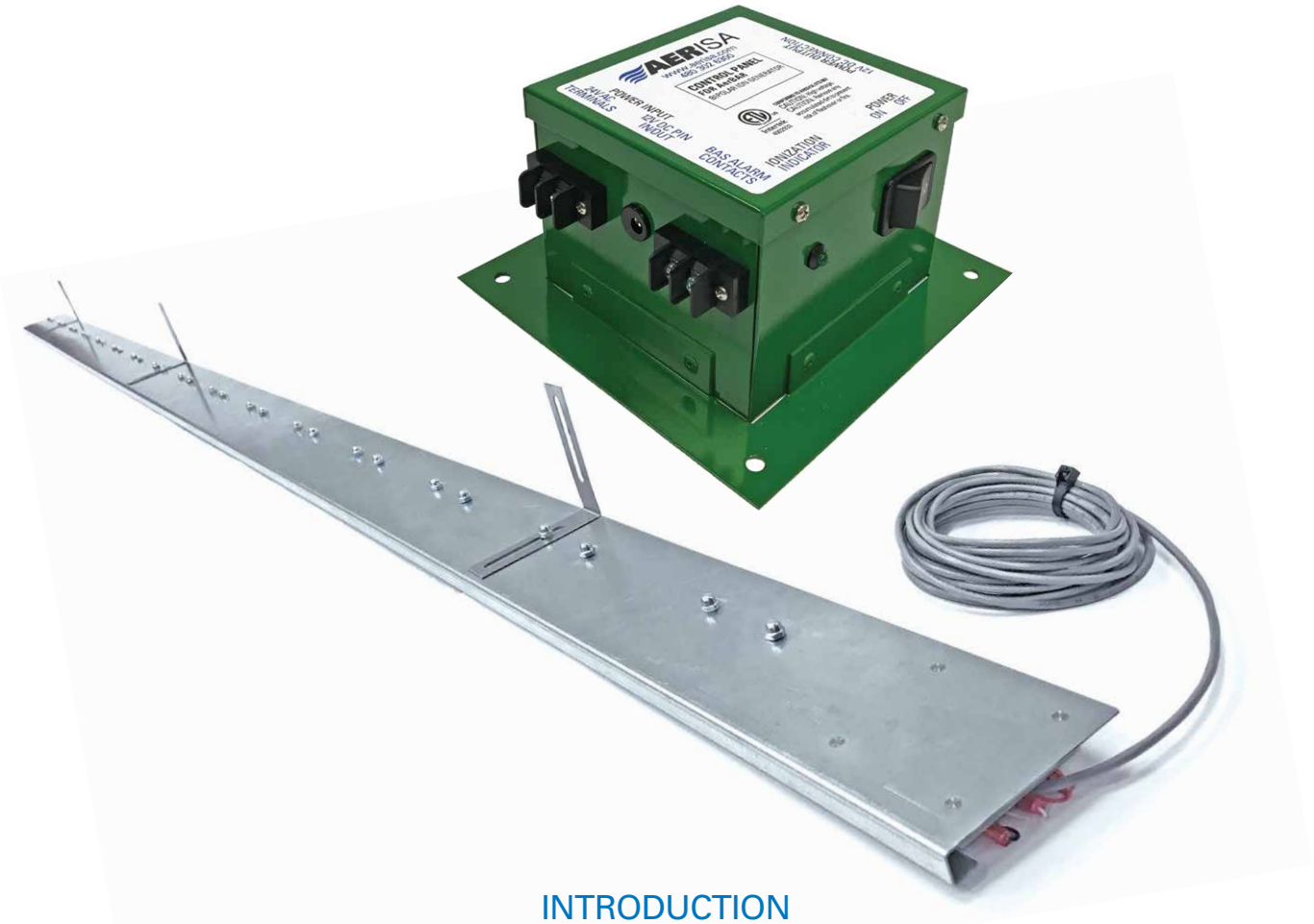
INSTALLATION, OPERATION & MAINTENANCE MANUAL

AERISA
AerBar

07/2018



INTRODUCTION

The Aerisa AerBar utilizes needlepoint bipolar ionizers appropriately spaced on a narrow galvanized steel bar. The AerBar is specifically designed to be mounted inside an air handling unit, roof top unit, or other HVAC equipment using factory supplied hardware. The preferred mounting location is after the filter and before the cooling coil. The AerBar is designed for long term, smooth operation without the need for maintenance. CFM ranges between 3,000 and 20,000 with a "quick guide" for easy selection of proper equipment. For airflow ranges above 20,000 CFM, or for air handling equipment with dimensions that may not be able to handle a single AerBar, multiple bars may be applied with the same high quality result. A low voltage power cable is provided in order to bring the needed 12V DC from the control panel to the AerBar. The Control panel can accept either 24V AC or 12V DC. For applications requiring 120V or 230V, a 12V DC power supply can be provided. One AerBar-CP can power up to two (2) AerBars.

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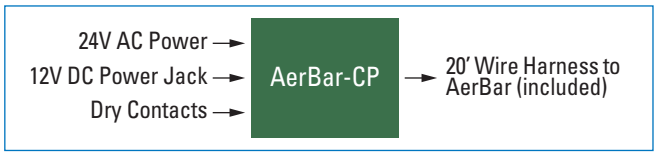
ELECTRICAL INSTALLATION INSTRUCTIONS

Warning: Always disconnect power to the unit prior to handling any of the units components. Do not connect to power before the installation is complete.

1. Read this entire IOM Manual prior to installing the AerBar and its components.
2. A dedicated 24V AC transformer is recommended to power the AerBar. When sizing a transformer make sure that it is adequate for the VA rating of all attached loads. When powering the AerBar with 12V DC, make sure that the power supply is adequate for the attached load.
3. The AerBar-CP draws less than 32 watts. The power source should be protected by a circuit breaker not to exceed 20 amps.
4. Power may be connected to the ionization unit using the following methods.



MECHANICAL INSTALLATION INSTRUCTIONS

Caution: The AerBar should not be installed downstream of any sources of moisture such as a humidifier.

Caution: Mount on metallic construction only. Do not fasten the AerBar directly onto the fins or tubes of a coil. Install the AerBar so that the structural integrity or function of any heat transfer coil is not compromised.

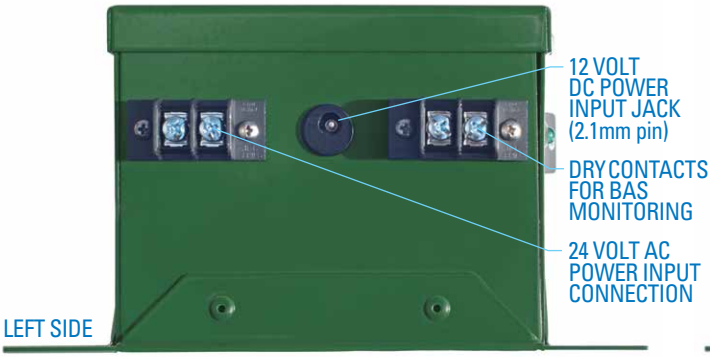
1. Install the control panel in an area that is readily accessible for ease of maintenance.
2. The entering face of the cooling coil (within an air handler) is the preferred mounting location. The AerBar comes complete with mounting brackets in order to secure it to the structural frame of the coil without damaging the fins or tubes.
3. Once the AerBar is securely fastened inside the AHU, mount the control panel (AerBar-CP) at a nearby location to allow easy connection of the AerBar provided wiring harness to the AerBar-CP.
4. Connect the power to the AerBar-CP in the correct location and turn the switch to the "ON" position. (See Electrical Installation section above).
5. Install AerBar such that ionization needles are pointed down toward the floor of the AHU.
6. Do not mount the AerBar upstream of the system media filter.

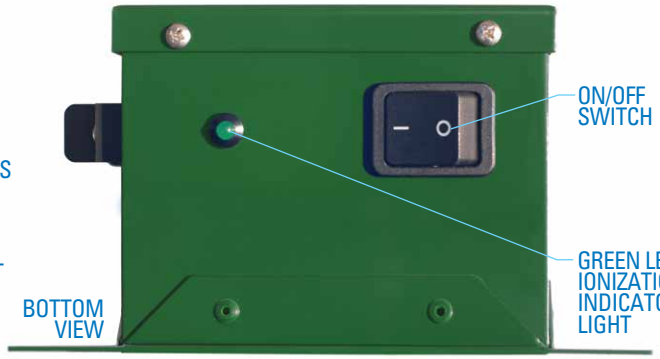
OPERATION

1. The AerBar ionization assembly will be activated once power is supplied to the AerBar Control Panel (AerBar-CP) and the switch is in the "on" position.
2. Balancing or adjustments are not necessary.
3. Interlock the AerBar-CP to be activated when the supply fan is powered.

MONITORING CIRCUIT

The AerBar Control Panel (AerBar-CP) includes a monitoring circuit to verify operation status. The circuit consists of a relay with isolated normally open contacts. The contacts remain open whenever the ionization system is not powered or if there is a fault in the equipment. Whenever the ionizer is energized and producing ions, the normally open contacts close and the green ion indicator light will illuminate. Connect the monitoring control wires to the Building Automation System (BAS) dry contacts on the AerBar-CP.





TROUBLESHOOTING

If the AerBar ionization unit is not working, check that:

1. The AerBar-CP power switch is in the “on” position, the supply fan is running and the green ion indicator light is illuminated.
2. The power input connections to the AerBar-CP are properly connected. Verify all connections are correct and securely tightened. Reconnect any loose wires.
3. If the AerBar-CP internal fuse is blown, wait 2 minutes to allow the unit to automatically reset the fuse. Turn on the power to the AerBar-CP. If the fuse blows again, return the AerBar-CP to the factory for service.

SEQUENCE OF OPERATION

1. For units that are interlocked with the supply fan control, the BAS controls the start/stop of the air conditioning unit supply fan.
2. After a one minute time delay on a call for supply fan operation, the BAS monitors the ionization system via the AerBar-CP.
3. Open contacts indicate a fault; closed contacts indicate normal operation.