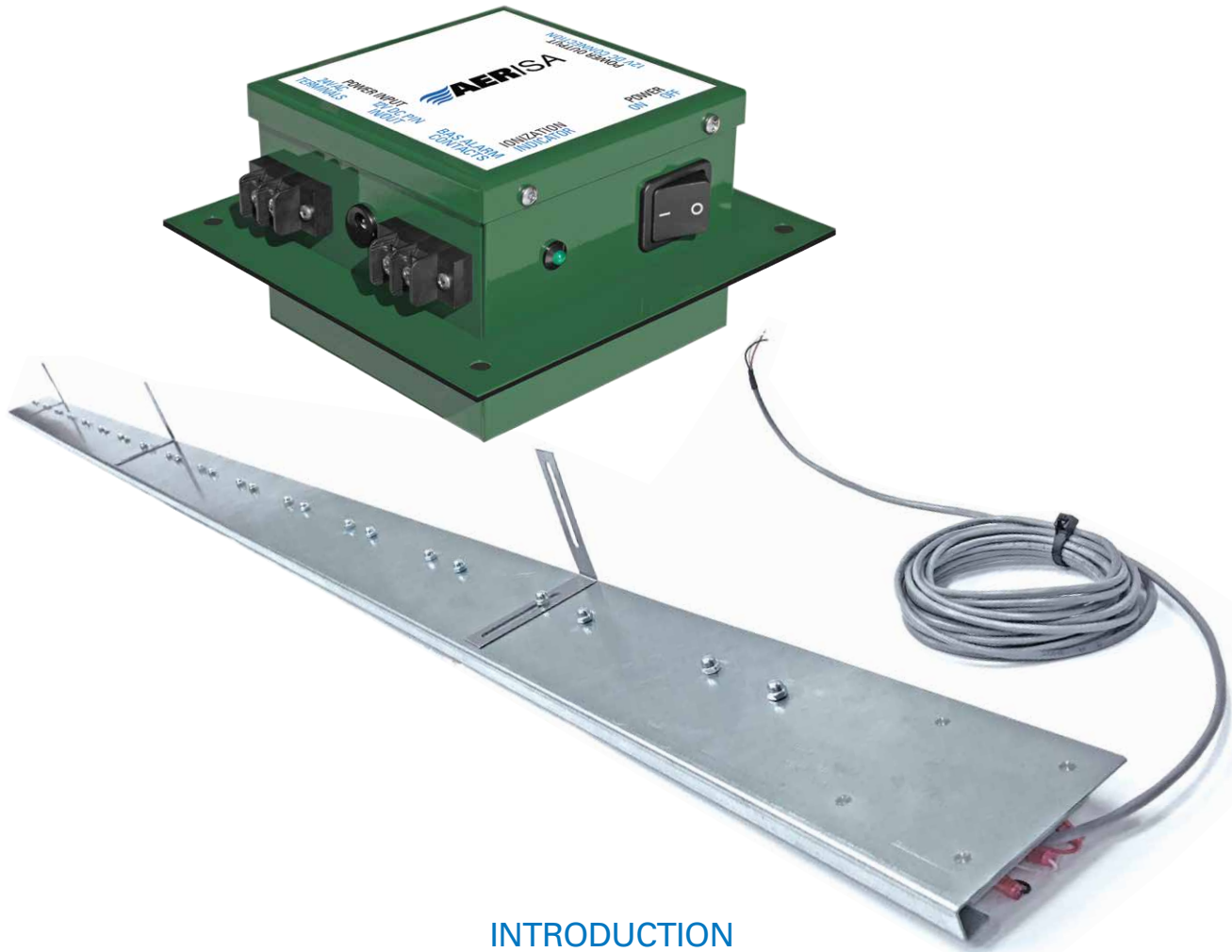


INSTALLATION, OPERATION & MAINTENANCE MANUAL

AERISA AerBar & Control Panel

03/17



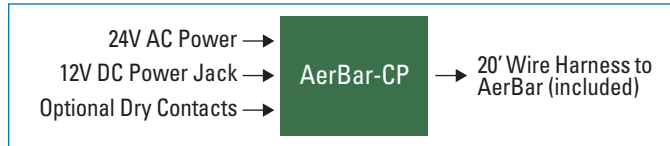
INTRODUCTION

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, upstream of the cooling coil. Locally mounted using supplied hardware, 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 control panel, with a low voltage power cable, is offered in order to provide the needed 12V DC power to the **AerBar**. The Control panel can accept either 24V AC or 12V DC. Applications with 120V or 230V power, a 12V DC power supply can be provided. One AerBar-CP can power up to two (2) AerBars.

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 method.



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.

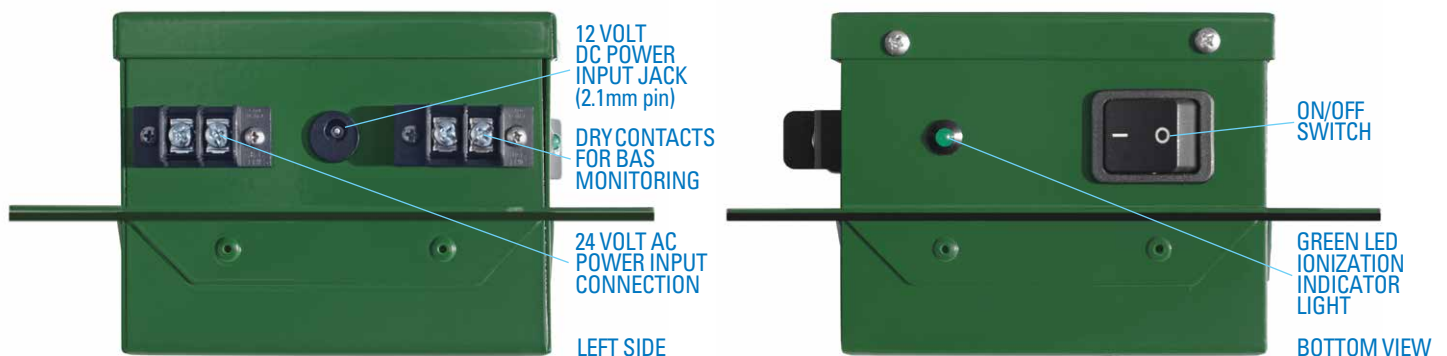
1. The control panel must be installed in an area that is readily accessible for ease of maintenance.
2. The entering face of the cooling coil (within an air handler) is the preferred mounting location. The **AerBar** comes complete with mounting brackets in order to secure it to the structural frame 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 particulate 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 only 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.