Overhead Ionization

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- Can use remote Control to adjust offset voltage balance, change fan speeds and alarm settings
- Or use Overhead Zero Volt Ionizer control buttons
- Per S20.20-2007, overhead ionizer offset voltage balance < ± 50 volts
- Discharge times per S20.20 are user defined
- EMIT Overhead Zero Volt Ionizer has Auto-Balancing Sense Feedback typically; ±5 volts
- Discharge times tested at 3.1 seconds (18" under fans)
- Data acquisition allows recording levels of performance to a computer at all times

Ion Offset Voltage (Balance) Feedback Sensors

- Designed to provide balanced amount of positive and negative ions
- Ion sensors usually incorporated into a grill of the ionizer's outlet
- Designed to sense and correct air ion imbalances
- In critical applications, monitoring, feedback control, and alarms may be required
- All emitters pins require periodic cleaning; "clean me alarms" can extend maintenance / calibration cycle

Imagine holding a remote control in your hand and being able to adjust the ionizer offset voltage balance within seconds, as well as change fan speeds and alarm settings. Just use EMIT's 50669 Remote Control to control the Overhead Zero Volt Ionizer or use control buttons on the ionizer.

Per ANSI/ESD S20.20-2007, ionizer offset voltage balance is to be less than ± 50 volts (other than Room Systems) tested per ANSI/ESD STM 3.1 or ESD TR53. Discharge times are also important but the requirement per S20.20 is user defined.

The performance of the Overhead Zero Volt Ionizer is outstanding in every regard including a patented Auto-Balancing Sense Feedback to control the offset voltage balance as low as ±3 volts, typically; ±5 volts. Expect superior discharge times; we have tested at 3.1 seconds 18" under fans. Data acquisition allows recording levels of performance to a computer at all times.

50665 Zero Volt Ionizer

Ion Offset Voltage (Balance) Feedback Sensors

"Ionizers utilized as air ion sources are designed to provide balanced amount of positive and negative ions. Many of them feature an internal feedback system (with ion sensors usually incorporated into a grill of the ionizer's outlet) to sense and correct air ion imbalances." (ESD Association working group 3 Proceedings of 27th EOS/ESD Symposium)

"In critical applications, monitoring, feedback control, and alarms may be required to assure that ionizers are providing the level of charge control required to protect the product." "Providing a sensor for each ionizing device can improve feedback control. In addition, an effective monitoring and control method can reduce the amount of maintenance." (ESD Handbook TR20.20 section 5.3.6.5.4.4)

All EMIT Overhead Ionizers are designed to provide static control mounted above a work surface and include auto feedback or "clean me" alarms. Emitter pins need to be cleaned periodically and the Critical Environment Overhead Ionizer has easily removable cassettes that allow better and quicker cleaning.

If the products that are being produced are of such value that ongoing monitoring of offset voltage is warranted, ionizers with sensors and auto-balance feedback mechanisms, with or without alarms, should be considered or even required.

Maintenance and Cleaning of Ionizers

"All ionization devices will require periodic maintenance for proper operation. Maintenance intervals for ionizers vary widely depending on the type of ionization equipment and use environment. Critical clean room uses will generally require more frequent attention. It is important to set-up a routine schedule for ionizer service." (ESD Handbook TR 20.20 section 5.3.6.7 Maintenance / Cleaning)

Per ESD TR53 Compliance Verification of ESD Protective Equipment and Materials ANNEX A, Test Frequency "The objective of the periodic test procedures listed in this document is to identify if significant changes in ESD equipment and materials performance have occurred over time. Test frequency limits are not listed in this document, as each user will need to develop their own set of test frequencies based on the critical nature of those ESD sensitive items handled and the risk of failure for the ESD protective equipment and materials."

Tracking test records over a period of time will allow the users to define a maintenance schedule that will optimize performance while minimizing material and labor costs.