



Digital Ceiling Emitter

MODEL 5511

Designed to provide uniform ionization throughout the open areas of a cleanroom, the Model 5511, powered by the Model 5580 or 5520 controllers with digital technology, features the first fully digital platform. The system enables either centralized control of individual emitters through bi-directional communication between the Model 5511 and 5580/5520 controllers, or direct field programmability of the ceiling emitters with the Model 5570 handheld infrared (IR) remote control.









Digital technology allows the flexibility to control and address the operational settings of the Model 5511 system including alarm sensitivity, ion output (down to percentage levels), ion pulse timing, and polling frequency. The Model 5511 offers flexible settings to fit any environment — any specification.

Features and Benefits

- Fully digital technology
- Interactive digital communication platform for precise management of operating parameters
- Bi-directional infrared remote control with alphanumeric LCD display for emitter adjustment
- Effortless calibration of individual emitter operating ion balance, timing, and ion output at point of use, in real-time
- Available with single crystal silicon emitter points
- Industry standard, cleanest available emitter point material
- 24 VAC
- Safe, reliable operation



Specifications

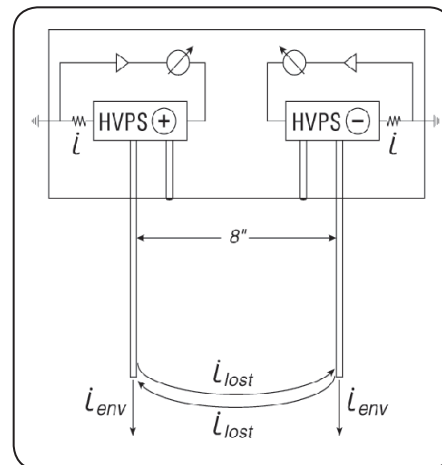
| Digital Ceiling Emitter Model 5511 | |
|------------------------------------|--|
| Input voltage | 24 VAC, 50/60 Hz, 1W typical |
| Output voltage | 0-20 KVDC, $\pm 10\%$ for each polarity; positive and negative output levels adjusted globally or individually at the controller or locally at each emitter with the 5570 remote control |
| Output current | 20 microamps, current and voltage limited to eliminate shock hazard |
| Control signal | Output levels and timing are adjusted with the 5570 remote control or with the 5580/5520 controller RS-485 connection |
| Connectors | Telephone type RJ-11 modular jack receptacle on each end of emitter |
| Regulation | Output and balance stability is achieved by independently regulating the ion emission current of each polarity at each ionizer |
| Timing | Precise timing (0-10 seconds at 0.1 seconds revolution) is generated by a local microcontroller; LEDs on each emitter indicate the polarity of the ion emission |
| Operating mode | Pulsed DC, steady-state DC, or standby |
| Emitter points | Single crystal silicon, machined titanium, or tungsten alloy. All emitter points are replaceable |
| Emitter rods | 2.5, 5, 10, 15, 24, 36, or 60 inches (6.4, 12.7, 25.4, 38.1, 61.0, 91.4, or 152.4 cm) |
| Preventative maintenance | Annual, semi-annual, or quarterly emitter point cleaning depending on process sensitivity and presences of AMCs in environment |
| Ozone | <0.005 ppm (24-hour accumulation) |
| EMI | Below background level |
| Alarm | Alarm operates when ionizer is no longer able to maintain preset ion output level. <i>Visual alarm:</i> A red LED in the middle of the ionizer chassis flashes at a high rate to distinguish it from the output indicators <i>Optional audible alarm:</i> Sounds at the 5520/5580 controller when an alarm event occurs at any emitter; selectable with the 5571 handheld terminal |
| Operating temperature | 59–95°F (15–35°C), nominal |
| Humidity | 20–60% RH, non-condensing |
| Dimensions | 1.2"H x 1.4"W x 17.5"L (3.1 x 3.6 x 44.5 cm) |
| Weight | 16.4 oz (465 grams) |
| Warranty | Two year limited warranty |
| Certifications | SEMI F47         |

Advanced Feedback Technology

Ion's Model 5511 enhanced ion emitters provide an unprecedented level of control and protection, using a sensing method covered by U.S. Patent No. 4,809,127: Self-Regulating Air Ionizing Apparatus. This patented feedback system assures the tightest feedback control available, unique in offering sensing, feedback and alarm capabilities at every emitter point in the system.

Ion uses a proprietary feedback circuit in the Model 5511 emitter. Each emitter has sensing circuits that accurately monitor the ion emission current from both the positive and negative emitter points. These circuits produce a signal proportional to the total ion production at each emitter point.

By monitoring and controlling every point of emission, the ionization system is able to consistently deliver highly accurate ion levels throughout an entire area. Each emitter can be fine-tuned to its local ionization requirements.



Ion's patented (U.S. Patent No. 4,809,127) design for maintaining stable ion current flow despite fluctuating environmental conditions, point erosion and point "agglomeration" (+HVPS Alarm - level set at factory).

Ordering Information

| | |
|-----------------|---|
| 91-5511- | Ceiling Emitter - Choose 2.5, 5, 10, 15, 24, 36, or 60" rod lengths - Choose titanium, tungsten wire, or silicon points |
| 91-5520 | Digital Controller, supports up to 20 ionizers |
| 91-5580 | Digital Controller, supports up to 80 ionizers |
| 91-5570 | Infrared Remote Control |
| 91-5571 | Handheld Terminal for 5520/5580 Controller |



MKS, Ion Systems

1750 North Loop Road, Alameda, CA 94502
Tel: 510.217.0600 or 800.367.2452 (Toll-free)
Fax: 510.217.0484
info@ion.com, www.ion.com

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