



## Digital AeroBar®

### MODEL 5585

MKS, Ion Systems AeroBar Ionizer Model 5585 is designed to control static charge in process tools, mini-environments, laminar flow-hoods, low ceiling rooms and workstations. The Model 5585 incorporates MKS, Ion Systems digital technology, providing OEMs and end users with precision performance and FMS monitoring capabilities.





With an aerodynamic design and adjustable ion emission control, the Model 5585 provides optimized ionization in enclosed environments without disrupting laminar airflow. For a comprehensive, integrated solution, the Model 5585 can be used in conjunction with MKS, Ion Systems Digital Model 5511 Ceiling Emitters and Model 5520/5580 Controllers for a fab-wide electrostatics management solution.

### Features & Benefits

- Fully digital technology
- Pulsed DC or SSDC ion emission modes, Standby mode
- Fully adjustable operating parameters individualized at each AeroBar: mode, power, timing, on times, patented off time feature
- Bi-directional infrared remote control with alphanumeric LCD display for AeroBar adjustments
- 24 VAC input power
- Global synchronization of all ionizers on a controller
- Available with single crystal silicon, titanium or tungsten emitter points
- Interactive digital communication platform for precise adjustments
- Choice of ion emission modes to meet the performance needs of all environmental applications. Operation modes can be mixed within an installation. Standby mode for maintenance without having to power down
- Precision control over discharge times and swing voltage for optimized performance; off-times allow faster discharge times at greater distances
- Easy, remote adjustments with no potentiometers or switches
- Safe, reliable operation of the AeroBar and distribution of power
- Optimized discharge times and swing voltages by timing the outputs for each polarity
- Compatible material choices for any process; silicon, the industry standard for semiconductor manufacturing; titanium for disk drive and other clean technologies, and tungsten for less critical applications



# Specifications

<b>Input Voltage</b>	24 VAC, 50/60 Hz, 1 $\Omega$ typical, received from the 5520 or 5580 Controller
<b>Output Voltage</b>	0-20 kVDC, $\pm$ 10% for each polarity; positive and negative output levels adjusted globally or individually at the controller or locally at each bar with the 5570 Remote Control
<b>Control Signal</b>	Output levels and timing are adjusted with the 5570 Remote Control, with the 5520/5580 Controller RS-485 connection
<b>Output Current</b>	<15 microamps, current and voltage limited
<b>Connectors</b>	Telephone type RJ-11 modular jack receptacle on each end of bar
<b>Output Control</b>	Positive and negative output can be adjusted with the 5570 Remote Control at each bar or remotely with the 5520/5580 Controller or 5571 Handheld Terminal
<b>Regulation</b>	Output and balance stability is achieved by independently regulating the ion emission current of each polarity at each ionizer
<b>Timing</b>	Precise timing (0-10 seconds at 0.1 seconds resolution) is generated by a local microcontroller; LEDs on each bar indicate the polarity of the ion emission
<b>Operating Modes</b>	Pulsed DC, steady-state DC, or standby
<b>Emitter Points</b>	Single crystal silicon, machined titanium, or tungsten alloy; all emitter points are replaceable
<b>Alarm</b>	Alarm operates when the bar is no longer able to maintain preset ion output level. Visual alarm: A red LED in the middle of the ionizer chassis flashes at a high rate to distinguish it from the output indicators. Optional audible alarm: Sounds at the 5520/5580 Controller when an alarm event occurs at any emitter; selectable with the 5571 Handheld Terminal
<b>Chassis</b>	ABS plastics, fire retardant
<b>Ozone</b>	<0.005 ppm. (24-hour accumulation)
<b>EMI</b>	Below background level
<b>Operating Temperature</b>	65-80°F (18-27°C), nominal
<b>Humidity</b>	40-60% RH, non-condensing
<b>Dimensions</b>	2.1H x 1.2W x 22, 28, 44, 64, 84L inches (5.3H x 3.05W x 55.9, 71, 111.8, 162.6, 213.4L cm)
<b>Weight</b>	1.5 lb (1.02 kg) for a 22" (55.9 cm) bar; approx. 6 oz per add'l foot (0.17 kg per add'l 30 cm)
<b>Warranty</b>	Two year warranty
<b>Certifications</b>	SEMI F47     RoHS Compliant

## Intelligent Tool, Intelligent Options

The digital communication technology allows the Model 5585 to be remotely adjusted through the controller, creating less cleanroom and tool disruption. Digital communication technology enables the user to adjust all operating parameters of the ionization system, including addresses of the AeroBar, alarm sensitivity, ion output (down to 0.1%), ion pulse timing, sync, and polling. Users may also adjust the ion operating modes, from steady-state DC to pulsed DC, for total flexibility in your application.

The Model 5585 is available with single crystal silicon emitter points<sup>1</sup>; the industry standard for ultraclean ionization. The Model 5585 exceeds requirements for operation in Class 1 environments.

## Patented Control

Through patented feedback and ionization regulation technologies<sup>2</sup>, the Model 5585 provides an unparalleled level of control and protection. This ensures the tightest feedback and ionization regulation available for long-term stability and balanced ion output.

## Model 5520/5580 Controllers

Powered by a connection to the Model 5520/5580 Controllers, you can control up to 20 or up to 80 AeroBars from a single point for consolidated management and reporting.

For specifications on the Model 5520/5580 Controllers, see the Model 5520/5580 datasheet.

1. U.S. Patent Nos. 5,447,763 and 5,650,203.

2. U.S. Patent Nos. 4,809,127; 4,951,172; 4,901,194; 4,542,434; 4,827,371; 5,055,963.

## Ordering Information

<b>91-5585T-xxR</b>	AeroBar with tungsten wire emitter points in -22, -28, -44, -64, or -84 inch bar lengths
<b>91-5585C-xxR</b>	AeroBar with Class 1 titanium emitter points in -22, -28, -44, -64, or -84 inch bar lengths
<b>91-5585U-xxR</b>	AeroBar with silicon emitter points in -22, -28, -44, -64, or -84 inch bar lengths
<b>91-5520R</b>	Digital Controller, supports up to 20 ionizers
<b>91-5580</b>	Digital Controller, supports up to 80 ionizers
<b>91-5570</b>	Infrared Remote Control
<b>91-5571</b>	Handheld Terminal for 5520/5580 Controller
<b>28-6225</b>	End clip
<b>28-6230</b>	Mid clip
<b>28-6255</b>	Flat clip
<b>28-6257</b>	Grid mounting clip



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