



Modulated Pulse AeroBar[®]

MODEL 5630

The Model 5630 AeroBar MP ionizing bar is a cost-efficient, high-performance ionizer specifically designed for FPD and semiconductor back-end applications where fast discharge times, low swing voltages and precision balance are desired. The Model 5630 utilizes patented MP technology, which combines a high-frequency sine wave and modulated pulses (MP) for optimal performance. MP technology produces lower swing voltages than other technologies, allowing AeroBar mounting in close proximity to the target. Using this breakthrough technology, the Model 5630 ionizing bar maintains peak performance for longer periods between cleanings, resulting in extended cleaning cycles compared with conventional pulsed AC products. The 450 mm and 600 mm lengths of the 5630 come with 50 mm emitter point spacing, while 850 mm to 2350 mm lengths feature 75 mm emitter point spacing. The Model 5630 comes standard with QTC27 TurboJet nozzles using titanium emitter points to provide lengthened cleaning cycles and high performance.

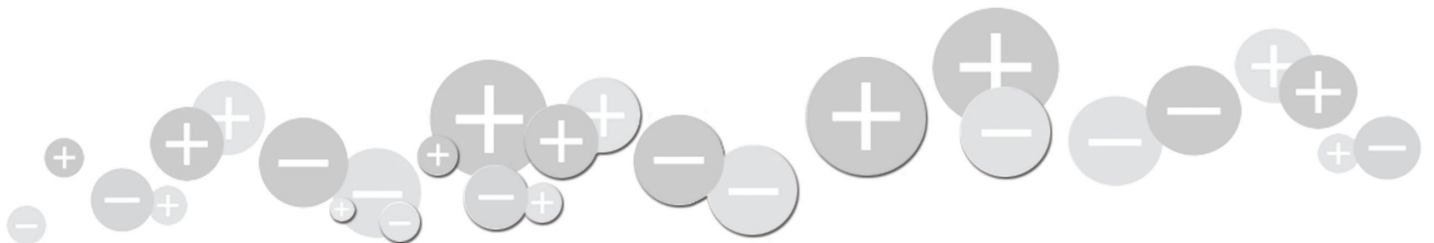
The Model 5630 is easy to adjust and features the ability to fine-tune voltage, frequency and balance for different environmental needs and product sensitivity requirements. Mounted in either horizontal or vertical orientations, the Model 5630 can be easily installed and optimized for a wide variety of applications, including in-tool mail-slot, conveyor and load/unload applications.







Features

- Modulated pulse technology
- Low swing voltages
- Fast discharge times
- Long-term performance stability
- Optional software in easy-to-use interface with wide adjustability
- Alarm output signal

Benefits

- Precision performance with long-term stability
- Safe to use within 150 mm of product and work surfaces
- Effective static charge neutralization at fast conveyer and automation speeds
- Extended cleaning cycles reduce maintenance costs
- Fast setup and easy optimization in any environment
- Communicate to tool or facility monitoring system



Input Voltage	24 VDC ±10%
Output Voltage	13.5 kV p-p (max), adjustable
Distance	150-1000 mm distance to surface; application & customer specification dependent
Frequency	Default setting at 5 Hz; adjustable from 1-33 Hz
Balance	Auto balancing system <±20V over time and across the bar length (measured in a controlled environment at 24" distance)
Ionization Performance	TurboJet nozzle: ±1000-100V in 3.5 sec or less @ 600 mm away (typ) when operating under a HEPA with 60 fpm of airflow and CDA flow of 3 lpm/nozzle; tested in accordance with STM3.1-2006 OpenJet nozzle: 15 sec (typ) with no air-assist, Vp-p Swing of 80 Vp-p; measured at 24" below an emitter center group of points
Ion Emission	Modulated pulse (MP) technology
Emitters	Titanium emitter points
Emitter Pitch	50 mm or 75 mm spacing between nozzles; 50 mm spacing only on the 450 mm and 600 mm lengths
Cleanliness	Meets ISO 14644 Class 3 standard (Fed. Std. 209e Class 1 equivalent)
Air Supply	Clean dry air (CDA) or nitrogen
Airflow	45 psi max gas pressure; 1-3.5 lpm/nozzle thru 8 mm OD one-touch fitting (optional)
Ozone	<0.05 ppm
EMI	Below background level
Operating Env.	Temperature 15-35°C (59-95°F); humidity 30-60% RH, non-condensing
Bar Settings	DIP switches for general power settings; trim pots for fine tuning balance, frequency & power output or use serial output to 5635 MP Bar Control software for fine adjustments
Enclosure	ABS chassis, stainless steel rails on the outside of the bar
Dimensions	3.1"H x 1.3"W x 18/24/34/39/45/51/57/63/69/75/81/87/93"L (78 x 34 x 450/600/850/1000/1150/1300/1450/1600/1750/1900/2050/2200/235 mm)
Certifications	   
Model 5601 Power Distribution Box	
Input Voltage	24 VDC for each bank of 4 bars; 5.6A total (0.7A max/port)
Communication	Ethernet (RJ-45) to/from PC; individual bar standby inputs
Alarm Output	Relay closure to ground
Output	8 RJ-45 ports (1 for each 5635 bar)
Indicators	Green PWR, Yellow COM, Red ALM, Blue USB LEDs
Weight	15 oz (420g)
Dimensions	1.2"H x 6.3"L x 3.6"W (3.1 x 16.0 x 9.2 cm)
Certifications	 

Simple Installation

The Model 5630 ionizing bar can be quickly installed by simply plugging into a 24 VDC source and connecting an air line. Set the DIP switches for the distance from the bar to the product as defined in the user's manual to activate factory settings for a base discharge performance. Users can then fine-tune the control parameters from the bar or through the optional easy-to-use software package to optimize balance, swing voltage and discharge times for an application. An alarm connection in the Signal and Power Junction Box enables a status signal output to the tool controller or a central factory monitoring computer for FMS monitoring.

Optional Power Distribution Box

The Model 5601 Power Distribution Box can be used to centralize power and software control for up to 8 MP AeroBars.



Ordering Information

91-5630-xxxx-yy-zzzz-01	xxxx (bar lengths): 450*/600*/850/1000/1150/1300/1450/1600/1750/1900/2050/2200/2350 mm; yy (nozzle spacing): -50 for 50 mm, -75 for 75 mm; zzzz (nozzle type): OpenJet (QOC30) or TurboJet with a titanium emitter point (QTC27)
33-5601-03	Model 5601 Power Distribution Box, 24 VDC; powers up to 8 MP AeroBars
14-21241	24 VDC Power Supply for Model 5601 Power Distribution Box (power cord ordered separately)
92-5635-001	AeroBar MP Remote Serial Adapter Kit (includes RJ-45 splitter, serial to USB adapter, RJ-45 to DB9 adapter)
25-0540-xx	CAT-5 with RJ-45 Ethernet Cable in 6, 10, 15 ft lengths, white
28-6370	Flat mounting clips. Recommended usage: 450-1150 mm, 2 clips; 1300-2050 mm, 3 clips; 2200 mm and above, 4 clips
32-22210	Horizontal rotatable mounting bracket. Recommended usage: 450-1150 mm, 2 clips; 1300-2050 mm, 3 clips; 2200 mm and above, 4 clips
32-22220	Vertical rotatable mounting bracket, requires 2 brackets for each ionizer bar to hold one at the top and one at the bottom
33-21491	Signal and Power Junction Box (for 1 AeroBar)
33-25625	24 VDC Power Converter with Power/Signal Junction Box Kit (for powering 1 AeroBar)
33-5353	Flat Mounting Clip with Active/Screw Fasteners (2) for AeroBar. Recommended usage: 450-1150 mm, 2 clips; 1300-2050 mm, 3 clips; 2200 mm and above, 4 clips

*The 450 mm and 600 mm are only available with 50 mm nozzle spacing.



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