



## Clean Ionizing Bar

### scorplON3<sup>TM</sup>

Simco-Ion's scorplON3 Ionizing Bar is designed to meet today's requirements for cleanliness and performance for the semiconductor front-end, semiconductor back-end, and general electronics markets. Its unique combination of available air assist, "Peak-reduction" technology, multiple emitter point materials and lengths make it suitable for a wide range of applications. It can be used to reduce charge on surfaces to minimize ESD events, as well as to reduce airborne particle contamination landing on product surfaces during manufacturing.

The scorplON3 is available with two different emitter point materials, single-crystal silicon (the standard for the semiconductor industry for its cleanliness) and tungsten (for general purposes where ISO Class 1 cleanliness is not required).

An Air-assist version is available for use in applications where laminar air flow is not present. By providing a stream of Compressed Dry Air (CDA) around each emitter point, ions can be delivered to product surfaces further away, as well as provide a "sheath" of clean air around the emitter points themselves to lengthen the cleaning cycle.

#### Features



- Air assist versions
- "Peak-reduction" technology
- Daisy-chain feature with "master/slave" capability

#### Benefits

- Provides longer working distances for applications where HEPA airflow is not present, as well as lengthening cleaning cycles
- Reduces swing voltages for pulsed-DC ionization applications that need good performance with minimal voltage offsets
- Allows one easily-accessed bar to direct and monitor the settings on other bars inside a tool



## Specifications

scorplON3 Ionizing Bar	
<b>Input Voltage</b>	24 VDC, 200 mA per bar
<b>Discharge</b>	<10 sec (typ), 24" with 90 fpm unidirectional airflow <sup>1</sup>
<b>Balance</b>	<30V (typ), 24" with 90 fpm unidirectional airflow
<b>Output Current</b>	<15 µA, each polarity
<b>Timing</b>	0-10 sec @ 0.1 sec increments, adjustable
<b>Connectors</b>	6-pin RJ-11 modular jack receptacles provide power and RS-485 communications
<b>Communications</b>	RS-485
<b>Address Control</b>	Each bar can be set to one of 10 unique addresses
<b>Output Control</b>	Performance stability is maintained using real time feedback, comparison to a value stored in the bar and adjusting via a micro controller located in the bar
<b>Operating Modes</b>	Steady state DC, Pulsed DC, Peak Reduction; peak reduction overlap adjustable 0-90%
<b>Mode Control</b>	Each bar in a series can be set to operate independently or under control of a Master (Slave mode). Independent bars can be set to any operating mode
<b>Fault Interface</b>	1/8" (3.5 mm) phone jack, opto-isolated transistor can be set to normally off or normally on
<b>LED Indicators</b>	Flash on with POS/NEG power supplies; green NORMAL & PULSE DURATION; red FAULT; communicated through RS-485 interface; rapid simultaneous flashing identifies bar address
<b>Emitter Points</b>	Replaceable Ultra-clean Silicon or Tungsten
<b>Cleanliness</b>	ISO 14644-1 Class 1 (Ultra-clean Silicon), ISO 14644-1 Class 4 (Fed. Std. 209e Class 10) (Tungsten)
<b>Operating Env.</b>	Temperature 15-35°C (59-95°F) recommended; relative humidity 20-65%
<b>Ozone</b>	<0.020 ppm
<b>EMI</b>	Below background level
<b>AC Adapter</b>	Universal 100-240 VAC 50/60 Hz input, (IEC320); powers up to 3 bars max, any length
<b>Option</b>	Air assist model available; computer interface RS-485 or Ethernet capable
<b>Mounting</b>	Stainless steel brackets, adjustable mounting centers
<b>Enclosure</b>	ABS chassis
<b>Dimensions</b>	18, 24, 36, 44, 64, 74, 84L x 2.95H x 1.89W in. (45.7, 61, 91.4, 111.8, 162.6, 188, 213.4 x 75H x 48W cm)
<b>Weight</b>	0.8 kg (1.8 lb), 1 kg (2.1 lb), 1.3 kg (2.8 lb), 1.5 kg (3.2 lb), 2.0 kg (4.3 lb), 2.2 kg (4.9 lb), 2.5 kg (5.5 lb)
<b>Warranty</b>	Two year limited warranty
<b>Certifications</b>	  RoHS 2 Compliant
scorplON3 MMI Module Remote	
<b>Power</b>	9 VDC Alkaline Battery, Type 1604
<b>Communication</b>	IR (infrared) and wired RS-485
<b>Connections</b>	RJ-11 modular jack receptacles provide power and RS-485 communications
<b>Display</b>	4-line LCD; menu driven interface
<b>Controls</b>	Up/Down Arrow, Left/Right Arrow, Enter
<b>Power</b>	ON/OFF Slide Switch
<b>LED Indicators</b>	Green TRANSMIT, red RECEIVE
<b>Dimensions</b>	4.40H x 7.70W x 1.25D in. (110 x 196 x 32 mm)
<b>Weight</b>	0.75 lb (0.34 kg) with battery

1. Tested in accordance with ANSI/ESD STM3.1-2006.

## Ordering Information

4011546-4011552	scorplON3 Ionizing Bar, Tungsten (W) emitters in 18" (7), 24" (7), 36" (11), 44" (15), 64" (19), 74" (19), 84" (19) bar lengths
4015454-4015460	scorplON3 Ionizing Bar, Ultra-clean Silicon (SCSi) emitters in 18" (7), 24" (7), 36" (11), 44" (15), 64" (19), 74" (19), 84" (19) bar lengths
4011560-4011566	scorplON3 Ionizing Bar w/Air Assist, Tungsten (W) emitters in 18" (7), 24" (7), 36" (11), 44" (15), 64" (19), 74" (19), 84" (19) bar lengths
4015461-4015467	scorplON3 Ionizing Bar w/Air Assist, Ultra-clean Silicon (SCSi) emitters in 18" (7), 24" (7), 36" (11), 44" (15), 64" (19), 74" (19), 84" (19) bar lengths
5051328-5051330	scorplON3/3/3S Power Supply Kit (120V 60 Hz; 230V 50 Hz, EU or 230V 50 Hz, UK)
4011574	scorplON3 MMI Module Remote
4371327	scorplON3 Replacement Ultra-clean Silicon (SCSi) emitter point
5051248-5051251	scorplON Replacement (W) emitter kit (7, 11, 15, 19 emitters)



Reducing In-tool Particles

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