



## Multichannel Voltage Detection

### NOVX MODEL 3352/3362 WITH MINIPULSE OPTION

Simco-Ion's Novx brand of Passive (Model 3352) and Active (Model 3362) Multi-fan Closed-loop Ionizer Controllers provide the capability to simultaneously detect, measure, record, and monitor electrostatic voltages in multiple locations. The versatile antenna options used with these systems allow their use in a variety of applications including monitoring sensitive workstations, in-tool voltages, or ionizer performance with the option of closed-loop control to designated ionizer products. Up to 6 sensors (3 for Ionizer Monitor/Control, 3 for ESD Event Detection) can be connected to an individual instrument. This multi-channel capability provides a cost-effective monitoring solution for multiple areas or ionizers. Data input is actively monitored and logged with time stamps using Calibrator\_Reader. The instruments have user-settable thresholds and alarm levels that provide a proactive safeguard for critical areas when interfaced to an alarm output. Out of range conditions can trigger a remote alarm light or audible alarms, shut down a critical process, or make adjustments to designated ionizer.

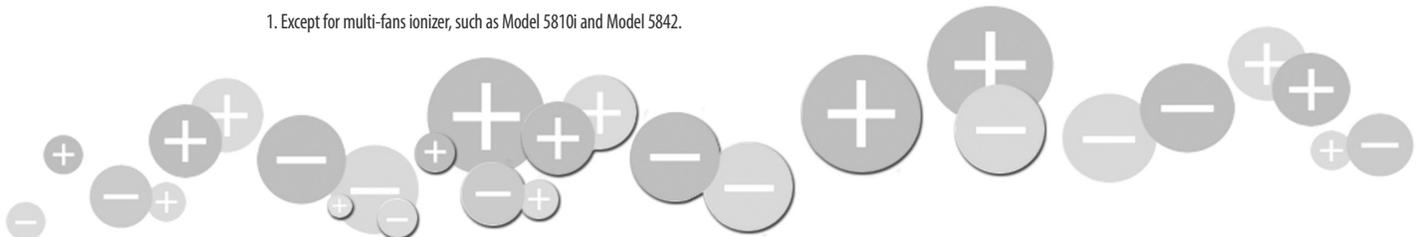
#### Features

- Microprocessor-based controllers, multichannel, digital I/O, auxiliary I/O, local addressability, RS-485/Modbus, or Ethernet data output
- Passive and Active antenna configurations
- Precision resolution
- Programmable closed-loop control for up to 3 designated ionizer<sup>1</sup>
- Programmable alarm set-points with tool shutdown option
- Voltage/polarity displays, local LEDs each channel
- MiniPulse ESD event detection option

#### Benefits

- Provides easy integration, cost/performance advantages over other monitoring solutions, direct communication to other Novx instruments, or a tool controller.
- Monitor voltage at distances and ionizer balance; perform In Situ decay testing without the added expense of a CPM
- Measurement 1V resolution or less (depending on reading), Data Logging with 0.1V resolution
- Enable closed-loop feedback control to designated ionizers based on balance or decay test results
- Reduce process variations, decrease scrap/rework, and improve process yields
- Visual indicators at the instrument
- Correlation of Electrostatic Charge (ESC) with Electrostatic Discharge (ESD)

1. Except for multi-fans ionizer, such as Model 5810i and Model 5842.



Specification	Model 3352	Model 3362
Input Voltage	24VDC	24VDC
Antenna	Passive (SMA connector)	Active (Triaxial connector)
Range	0 to $\pm 500V$	0 to $\pm 150V$
Accuracy	0.5V for $<20V$ , $\pm 5\%$ for $>20V$	1V for $<20V$ , $\pm 5\%$ for $>20V$
Decay Testing	N/A	up to 3 channels
Capacity <sup>1</sup>	1, 2, or 3 ionizers	1, 2, or 3 ionizers
LCD Display	4-digit	4-digit
LCD Warning	ERR, ALRM	ERR, ALRM
Setpoint	Alarm: Programmable Audible Alarm: $\pm 0.5V$ (min) Zero: Programmable	Alarm: Programmable Audible Alarm: $\pm 1V$ (min) Zero: Programmable
Communication	RS-485/Modbus, Ethernet	RS-485/Modbus, Ethernet
Aux Out	Open collector	Open collector
Enclosure	Stainless Steel	Stainless Steel
Dimension	2.05"W x 6.93"D x 6.50"H (5.21 x 17.6 x 16.5 cm)	2.05"W x 6.93"D x 6.50"H (5.21 x 17.6 x 16.5 cm)
Weight	2.1 lb (0.95 kg)	2.2 lb (1 kg)
Warranty	Two-year limited warranty	Two-year limited warranty
Certification		

#### Power Adapter 14-21328

Input Voltage	100-240 VAC 50/60 Hz
Output Voltage	24VDC, 30W
Dimension	3.9"L x 1.4"H x 2.1"W (9.90 x 3.56 x 5.33 cm)
Weight	0.44 lb (0.2 kg)
Certification	

1. Except for multi-fans ionizer, such as Model 5810i and Model 5842.

## Ordering Information

91-3352-01	Novx 3352 Passive Closed-loop Ionizer Controller
91-3362-01	Novx 3362 Active Closed-loop Ionizer Controller
91-3352MP-01	Novx 3352 Passive Closed-loop Ionizer Controller with MiniPulse Option
91-3362MP-01	Novx 3362 Active Closed-loop Ionizer Controller with MiniPulse Option
32-0220	Mounting Bracket, "L" (2 pcs per controller)
33-0521-5	Passive Antenna, 1.75" x 1" Tall with SMA-to-SMA Cable (5 ft)
33-0504	Passive Antenna, 1.75" x 4" Tall with SMA-to-SMA Cable (5 ft)
33-0510-xx	Passive Antenna, 1" Tall with SMA-to-SMA xx ft Cable (xx = 5 or 15)
33-0509-15	Active Antenna Assembly, 5" x 0.5" Tall with 15 ft Triaxial Cable
33-0523-xx	Active Antenna Assembly, 1.75" x 1" Tall with X ft Triaxial Cable (xx = 5 or 20)
33-0507-5	Active Antenna Assembly, 1.75" x 4" Tall with 5 ft Triaxial Cable
33-0530-8	Micro ESD Directional Antenna Assembly MPA-02 with Remote Triaxial Cable (8 ft)
14-21328	Power Adapter

## Applications

The **Novx 3352 Passive Multi-fan Closed-loop Controller** connects with passive antennas to detect low-level voltage change and ion balance ( $\leq 400V$ ) with sensitivity less than 1V. Antenna connection configurations:

- Monitor voltages on moving targets
- Monitor balance and provide closed-loop control to ionizer
- Distinguish the proximity of voltages from ionizer signals
- MiniPulse option for ESD Event Detection

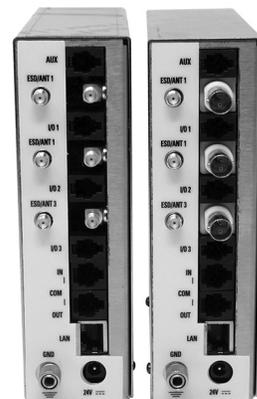
The **Novx 3362 Active Multi-fan Closed-loop Controller** connects to active antennas, providing similar voltage and ion balance detection capability as the 3352 with the addition of decay tests. The antenna acts as a charged plate monitor (CPM) to periodically measure ionizer discharge times at programmable frequencies. A "Decay Test" button is provided on the front panel of the 3362 for manually initiating an ionizer decay test.

Antenna connection configurations:

- Monitor voltages on moving targets
- Monitor ionizer balance and provide closed-loop control to ionizer
- Distinguish the proximity of voltages from ionizer signals
- Perform decay testing automatically or on command
- MiniPulse option for ESD Event Detection

## Special Features

Both the Novx 3352 and 3362 feature a front panel which has an LCD screen that displays the voltage and alarm status of each of the three channels in real-time. Each interface with the Novx Calibrator\_Reader for a full setup, visual monitoring, and logging capability. Files can be exported for Excel graphing and analysis. These instruments can operate as stand-alone systems and interface to the process controller to initiate response testing and data reporting.



## Calibration

Instruments are shipped calibrated and certified. Calibration must be validated annually to meet ISO certification compliance requirements.



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