Critical Process Electrostatic Monitoring

NOVX SERIES 7000

The Novx Series 7000 Process Monitor is a multi-purpose microprocessor-based instrument for monitoring critical electrostatic-related parameters in workstations and process environments. The six dedicated use channels provide the flexibility to customize the instrument for the monitoring capability and communication required at each location. Module options include field voltage detection/Ionizer balance, ESD event, body voltage detection or ground monitoring, and particle counting.
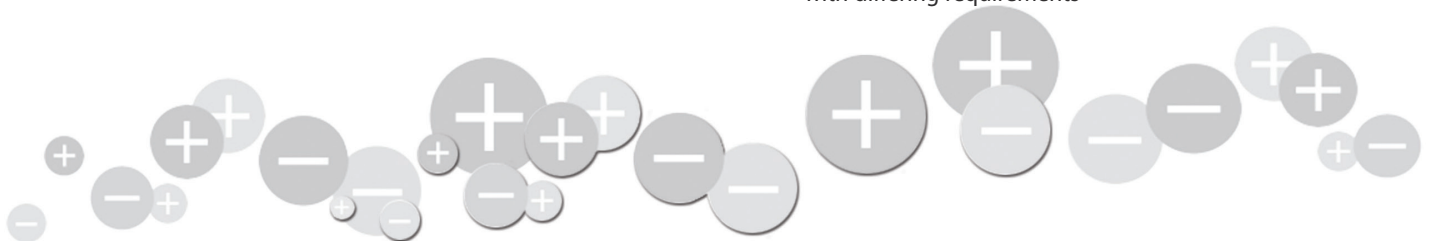
The instrument is programmable through Calibrator_Reader Software, allowing the user to set thresholds and alarms, define data logging parameters and automate alarm notifications. The time-stamped graphical interface provides the ability to cross-correlate events to sensor measurements.

Features

- Smart Signal Processing
- Multiple sensor and antenna styles

- Daisy-chainable; RS-485 or Ethernet output

- ESD event detection tracking
- Three options for field voltage monitoring
- User-programmable alarm set-points with automated messaging
- Closed-loop control to tool computer

- Plug-in modules allow factory upgrades

Benefits

- Discriminates ESD events from other events/background noise
- Adapts to a variety of process applications, environmental conditions and configurations
- Ability to connect multiple units with a single output or IP address
- Logs events
- Select appropriate detection method for the application
- Customize each sensor location; ensures prompt alarm notifications
- Provides ability to shut down tool when thresholds are exceeded
- Provides flexibility to reconfigure monitors for processes with differing requirements

Field Sensing	Passive
Input Voltage Range*	±15 - ±5000V
Voltage Out, Full-scale*	0 - ±5.0
Input Impedance	>100 GΩ
Bandwidth with Filter	5 Hz
Accuracy	±1V for ≤20V; ±5% for >20V
Peak Hold*	OFF, ON
Antennas	±1V - ±5000V max*
ESD Event Detection	CDM / HBM
Particle Counter Sensing Interface	Data acquisition/power available for most popular sensor models
Body Voltage Detection	
Applied Voltage (dual-wire)*[1]	<0.5V
Adjustable Alarm (1 and 2)*	1 - 10V
Accuracy*	±0.5V
Wrist-strap Voltage Threshold*	0.1 - 10V
Wrist-strap Alarm Delay*	1 - 25 sec
Ground Monitoring	
Range	1 - 20Ω
Accuracy	0.5Ω
Applied Voltage (open circuit)	<0.5V
Applied Current (short circuit)	<1 mA
GND 1 Threshold	1 - 20Ω
GND 2 Threshold	1 - 20Ω
General	
Novx Com	RS-485 or Ethernet
LED Display Scale	1 - 5000V
Digital Display	4-Digit
Audible Alarms	Off, High, Low
Power Supply	100-240 VAC, 50/60 Hz
Dimensions	2.7W x 7H x 5.5D in. (6.9 x 17.8 x 14 cm)
Weight	2.5 lb (1.4 kg)
Enclosure	Stainless Steel
Warranty	Two year limited warranty

* = Programmable. 1 = Open circuit voltage measured with Fluke 45 meter.

Module Options

LED Proximity Display: A visual field voltage level indicator with Red/Yellow/Green display.

Field Voltage Detection, Ionizer Balance: Provides local field voltage and ionizer balance monitoring along with closed-loop feedback control for the passive antenna system.

MiniPulse ESD Event Detection: Combines detection with specialized antennas to count and record event quantity.

Body Voltage Detection and Ground Monitoring:

1. Provides 2 each dual wire operator body voltage detection (typical alarm level set-point is ±3V to 10V).

2. Provides Ground Monitoring of 1 each hard ground and 1 each soft ground at a workstation

Particle Counter Interface: Powers and collects output data from most particle counters and provides system status with data logging.

Communication: Choose from RS-485 or Ethernet.

Calibrator Reader Software

For Novx instruments almost all the configuration and calibration parameters are set through the Novx Com Line communication port. This procedure is accomplished using the Novx Calibrator_Reader Program running on a desktop or notebook computer.

Calibration

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

Ordering Information

9960-7000-0000	Series 7000 (motherboard/enclosure, 128 kb microcontroller)
9960-7000-0005	Standard LED Display (red/yellow/green)
9960-7000-0010	Passive Detection w/LED Display (antenna ordered separately)
33-0504	Passive Antenna 1.75" x 4" tall, SMA cable
33-0520-5	Passive Antenna 1.75" x 1" tall, SMA cable
9960-7000-0035	MiniPulse ESD Event Detection (antenna required)
33-0530-08	Micro Directional ESD Antenna with 8 ft Remote Coax cable MPA-02
9960-7000-0040	Dual-channel/Dual-wire Body Voltage & GND with Molded Remote Box
9960-7000-0081	Particle Counter Interface Board, 8-pin
9960-7000-0070	RS-485 Board
9960-7000-0071	Ethernet Board
14-1211-01	Power Supply ±12V, +5V 42W, 4' cord Mini-DIN

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