

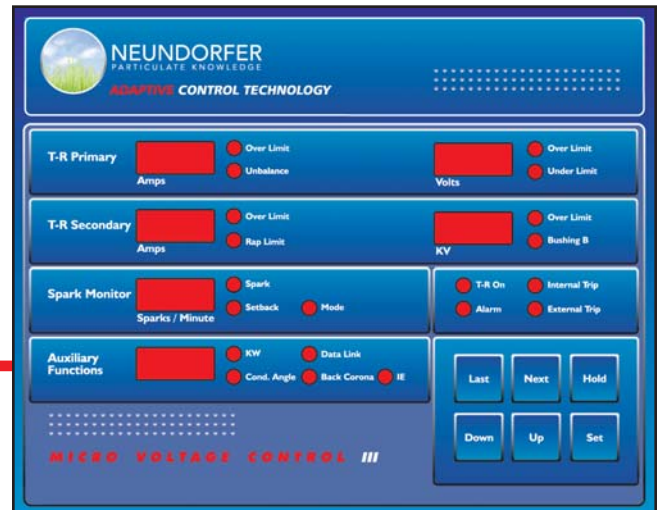
# MVC-3 Adaptive Voltage Control

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## 10 Years of Proven Performance!

The MVC-3 adaptive voltage control technology from Neundorfer is a highly flexible system for complete control of your electrostatic precipitator T/R sets and proven results:

- *Reduced opacity and outlet emissions*
- *Reduced maintenance costs and component failures*
- *Easy-to-implement, cost-effective shared communication across precipitator systems*



Neundorfer's microprocessor-based MVC-3 automatic voltage control is designed to efficiently maintain maximum



precipitator power input for varying dust concentrations and applications. In addition, it provides complete

automatic voltage off-time following a spark, and quick voltage recovery following the off-time.

In conjunction with the Neundorfer Precipitator Optimization System (POS), the MVC-3 becomes an integral part of your real-time precipitator management scheme, ensuring efficient precipitator operation as well as remote control and reporting.

## The Advantage of an Adaptive Control

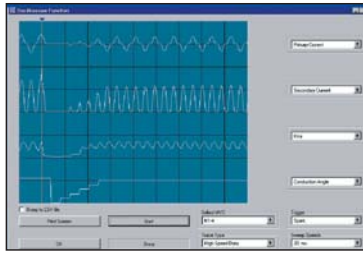
Neundorfer's use of adaptive technology gives the MVC-3 an advantage over competitive automatic voltage controls, using proprietary algorithms to optimize performance. These algorithms analyze precipitator conditions and automatically adjust parameters such as ramp rates, quench times and spark rates to achieve the best collection efficiency. In addition, by using this adaptive approach, setup is easier, since the user only has to input T/R set ratings and alarm conditions—without having to program “control” parameters.



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## MVC-3 Features

- Microprocessor-based modular design
- Compact design for easy installation
- User-friendly display/control panel
- Simultaneous multiple data readouts
- Spark sensing based on secondary current and primary voltage
- Dual secondary voltage metering capability
- Manual control based on SCR conduction angle
- Variable spark detection and response modes
- Power-off or reduced-power rapping capabilities
- Non-volatile memory – no battery backup required
- Continuous diagnostic self-test



POS provides remote control and reporting capabilities, such as this Digital Storage Oscilloscope Trace.

- SCR unbalance detection – indicates SCR failure
- Serial interface options for remote control, data logging and precipitator optimization systems
- Automatic quench time and ramp rate adjustment
- Auto restart after power failure
- Spark simulation for diagnostics

## Simplicity – A Neundorfer Design Philosophy

Neundorfer designs and programs microprocessors to automate functions, simplify set-up and operation, and improve reliability so that you can economically maximize precipitator performance with minimal operator intervention.

## Our Team is Your Backup

Neundorfer engineers and technicians are ready to support your needs when and where needed. You can also save time and money by using our remote monitoring services, to quickly solve a problem, or determine that a site visit is required.

We also offer a wide range of training topics, as well as users' group meetings for exchanging information and sharing individual experiences.

## Operating Modes

### Automatic

Automatic control based on adjustable spark rate, primary and secondary current limit, and secondary voltage limit (if kV input is available).

### Manual

Manual control based on SCR conduction angle, adjustable in one-degree increments, which can also be used to run air-load V-I curves. Spark sensing is maintained during manual operation.

### Intermittent Energization

For power savings and/or increased collection efficiency in certain applications. Choices of ratios are provided.

### Back Corona Control

For power savings, increased collection efficiency and elimination of back corona. Selectable sensitivity adjustment allows the control to be "fine tuned" to the operation of the precipitator.

## Specifications

- Operating Temperature Range: -40°C to 85°C
- Display/Control Panel Dimensions: 8.2" x 10.2"
- Supplied with a NEMA 12" cabinet or can be retrofitted to an existing cabinet
- On/Off/Reset Switch
- Indicators:
  - Primary Current
  - Primary Voltage
  - Secondary Current
  - Secondary Voltage (Dual bushing)
  - Spark Rate
  - SCR Firing Angle
  - Kilowatt
  - Set Back
  - Back Corona
  - Intermittent Energization ratio
  - Mode
  - Data link
  - Internal Alarm Trip
  - External Alarm Trip
- Communications:
  - RS-485 multi-drop network



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