

## SQ-300i™ Automatic Voltage Controller:



The SQ-300i™ Automatic Voltage Controller is the industry leader in efficient precipitator management.

It is the culmination of over 15 years of precipitator electronics experience, and offers the best available control technology.

Advances in microprocessors and computing have enabled us to develop the most sophisticated and powerful control in the world. The SQ-300i is also the easiest to operate. At the touch of a button, you can access one of six easy-to-read help menus and operating screens. All control functions can be viewed quickly by navigating through the backlit screens.

### The SQ-300i™. ..Nothing else is even close.

BHA's SQ-300i™ AVC is the culmination of over 15 years of precipitator electronics experience, and offers the best available control technology.

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Maximum precipitator performance is achieved using the following features:

- On-line waveform analysis to evaluate T/R set efficiency.
- Diagnosis screen that warns of problems, then suggests corrective actions.
- Automatic Ramp Rate.
- Adjustable Fast/Search ramp rates.
- Adjustable Background Power Setting.
- Downloadable Set-up Instructions.
- No adjustments or field calibration required.
- Backlit LCD Screen with scratch resistant coating.
- Over 20 Status and Alarm messages.
- Security Features.
- kV Min/Max measurement.
- Enhanced Back Corona Detection and Control.
- Automated I/E Ratio Selection.
- Tumbling hammer control. (OPTIONAL)

## **The One Control Designed to Meet All Your Needs**

### **More Power?**

BHA's SQ-300i™ AVC has the most advanced spark response algorithm in the industry. Patented Fast-Search ramps and Automated Ramp Rate bring your precipitator back to full power as quickly as possible after quenching a spark. This enables your ESP to collect more dust.

### **Want reduced power consumption?**

The on-board Energy Management system keeps opacity below a pre-set limit, using the least amount of power possible. BHA customers have achieved up to 40 to 60% decreases in precipitator power usage, with energy savings of over \$2000 a day.

### **Need advanced technology?**

The SQ-300i AVC enables you to take advantage of Best Available Control Technology to keep you ahead of regulatory requirements. Remote Diagnostics, Back Corona detection and control, automatic waveform analysis, seamless DCS and data archive interfaces, sophisticated data acquisition and trending, and a host of other features can be yours with the world's leading Automatic Voltage Control.

### **Intel® Processors, Quality Manufacturing**

Each SQ-300i™ is individually assembled and hand soldered to ensure high quality connections and reduced heat stress to circuit components. All PC board components are the best available, and are conformal-coated and housed in anodized aluminium enclosures to guard against ambient conditions and radio frequency interference.

The latest Intel® microprocessors are used throughout, and all units are shipped pre-programmed for ease of use. Program parameters can be supplied on disk, loaded on your computer, then downloaded into your SQ-300is to reduce initial set-up time. All program parameters can also be easily keyed in at the control panel.



### **BHA's Control Systems can make your operation more profitable**

One BHA utility customer operates two 684 MW coal-fired boilers at a location in the USA. Boiler flue gases (1,700,000 ACFM) are treated in two large weighted-wire precipitators, then pass through a wet scrubber system before reaching the chimney. Precipitator



performance problems were resulting in wear and damage to the scrubbers.

BHA was contracted to perform an internal rebuild and upgrade of the ESPs which included an Energy Management system, linking CPM 5000 monitors, SQ-300i voltage controls and a Data Acquisition system. The CPMs were installed in the ductwork prior to the scrubbers to provide early warning of excess particulate entering the ducts. The rebuilt system worked so well the customer was able to reduce average power to the ESPs by 40-60% at a cost savings of \$2,200 per day, with no increase in particle emissions. This customer has lowered their operating costs by making their precipitator more efficient.