

# ***POWER SUPPLIES FOR INDUSTRIAL APPLICATIONS***

**Engineered and Built for Reliability and Performance**



**POWER YOU CAN DEPEND ON**



**GRAND POWER**  
— SYSTEMS —

## POWER SUPPLIES FOR INDUSTRIAL APPLICATIONS

The FurnaStar platform from Grand Power Systems combines over 50 years and over 3GVA of global power systems experience with the latest power control technologies and advanced magnetics materials. The robust design includes precision RMS voltage and current measurements, stable control, reliable SCR drives, an intuitive HMI for diagnostics, easy field deployment, calibration and loop tuning functions, and a wide range of remote interface protocols.

The FurnaStar platform is fully programmable with up to 100 unique sequences programmable through the touch screen or via remote interface.

### Features

- ▶ Single and multiple zone with independent controls
- ▶ Fully programmable with up to 100 process steps
- ▶ Integrated cooling ▶ Analog and digital interface options
- ▶ High precision RMS measurements
- ▶ Robust control algorithm for heating applications
- ▶ Comprehensive diagnostics and feedback

### Precise Control

- ▶ Set-point accuracy of current, voltage or power greater than  $\pm 1\%$  at full scale
- ▶ Repeatability (returning to a given set-point)  $< 0.5\%$  of setting

### Multiple Output Options

- ▶ Up to 3 Independently controlled zones
- ▶ Standard 15V, 30V and 60V maximum outputs (voltage must be selected at time of ordering), others available
- ▶ Please contact factory for non-standard outputs and power requirements
- ▶ For all linear and non-linear resistive loads

### Environmental and Cooling Data

- ▶ Max. ambient temperature: 104°F (40°C)
- ▶ Max. enclosure temperature at full load: 120°F (49°C)
- ▶ Storage temperature: 35°F - 140°F (2°C - 60°C)
- ▶ Relative humidity:  $< 90\%$  non-condensing

### Safety and Reliability Data

- ▶ Short-circuit, over-current, monitoring/correction, ground fault, and water over-temperature protection
- ▶ Integral 100mS hardware soft-start, with additional programmable soft-start and ramp feature

- ▶ Circuit breaker, fuse protection and E-stop
- ▶ 1,500V galvanic isolation from input to output
- ▶ 50,000 hour MTBF ▶ Two year warranty

### Physical Data

- ▶ Water and air cooled power electronics and magnetics for long life and reliability
- ▶ Control module will manage two independent control zones

### Communications, Display and Data Outputs

- ▶ Reporting options include current, voltage and true delivered power
- ▶ Powerful digital control, systems management and health-monitoring functions
- ▶ Internal closed-loop control, with external feedback from the process
- ▶ Remote diagnostics
- ▶ Full suite of communication options available: RS-485, Ethernet (TCP-IP), Profibus/Profinet and Modbus
- ▶ Analog (0-10VDC, 4-20mA) communication included
- ▶ HMI touch screen menu
  - Power, Voltage and Current display
  - Graphical display of Power vs. Time
  - High resolution power regulation display
  - Diagnostics: all alarms and error codes
  - Event and data logging - One step calibration model
  - Adjustable outer PID loop parameters
  - Multiple levels of password protection



### Other Options

- ▶ Power Factor Correction ▶ Element resistance monitoring
- ▶ Ground fault detection ▶ Full protection options
- ▶ Flow meters ▶ Thermal monitoring

[GrandPowerSystems.com](http://GrandPowerSystems.com)

Ph: (844) 383-8644



Grand Haven, Michigan



Warner, NH