

# SCR CONTROL (THYRISTOR)



- Available in Single Phase (110VAC-240VAC 50/60HZ)
- Available in Three Phase (208VAC-600VAC 50/60HZ) (higher voltages upon request)
- Applications available up to 375kW (>375kW in parallel)
- Primary and Secondary SCR designs
- 5% Ripple at full load (optional/custom filtering available)
- Constant Current and Constant Voltage (crossover regulation of 0.5%)
- Air or Water Cooled
- Self-Contained or Remote Controlled
- PLC Interface Available (0-5VDC, 0-10VDC, 4-20mA)
- All of our power supplies are designed for continuous duty at 40° C (high temp packages available)
- Aldonex power supplies utilize soft-start technology and thermal protection
- Three Phase models include Phase Monitoring/Protection
- All Control Boards are conformal coated (MIL-1-46058 or MIL-V-173)
- Custom and Modular Designs available
- Manufactured and Developed in the USA

Aldonex can offer a full line of SCR power supplies to suit your needs. We have been in the business for over 50 years and have been providing rectifiers to a variety of industries for various applications. Some of these applications are metal finishing, anodizing, electrowinning, chemicals on site and water treatment. We are one of the few manufacturers that will custom build our power supplies to suit your needs. This includes controls, components, cabinets, and modular units. We offer Powder Coated Steel, Stainless Steel, Aluminum, and Poly Pro enclosures.



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# **RECTIFIER ELEMENTS**

Aldonex power supplies utilize oversized SCR and diode assemblies. Assemblies are oversized approximately by 45% or more in order to withstand any excessive surge in current. By utilizing a multi-cell semiconductor design that is so closely balanced our semiconductors do not require any fuses or balancers. Thus cuts out costly replacements and downtime.

#### **POWER TRANSFORMER**

Our transformer core consists of grain oriented silicon steel laminations. The primary and core are separated by a solid performed silicon impregnated insulation coil form. This minimizes the risk of primary to core short circuits. The transformer secondary is a heavy duty copper winding resulting in the greatest rigidity.

Current in windings is limited to a density of 600 circular mills per ampere. The complete transformer assembly is dipped in the highest quality insulating varnish. This process results in a quite unit which will withstand the harshest shop environment while operating cool under full load.

#### **CONTROLS**

All control equipment including the Main Starter, Motor Starter, Control Step Down, SCR Gate Drive, CV/CC Control Board are located behind an easy to access panel. We strive to isolate these components into a dust free environment free of potentially corrosive moisture entry.

Operator Controls are funished in a separate enclosure for Remote Operation. Start/Stop push buttons, Constant Voltage. Constant Current controls, DC Volt Meter and DC Amp Meter are typically mounted on a hinged panel.



- \*As Shown
- 1000ADC 0-24VDC
- Water Cooled Poly Pro Cabinet
- mote Control ("EZ" Controller)



- \*As Shown
   500ADC 0-24VDC x4(Modular Unit)
- Air Cooled
  Poly Pro Cabinet - Self-Contained("EZ" Controller)



Self-Contained

- \*As Shown 2500ADC 0-35VDC (Custom Spec)
- Air Cooled Stainless Steel Cabinet
- Standard Analog Controls
- \*As Shown 25ADC 0-15VDC
- Air Cooled
- Poly Pro Cabinet
  Digital Meters (1% or better accuracy)
- Cut-Off Timer w/ Bypass

### **OPTIONS**

- Amp Hour/Minute Meter (pump control optional)
- Diaital Meters
- Setpoint Meter
- Automatic Ramp
- Step Ramping
- Cut-Off Timer
- Alarm

- PLC Interface (0-5VDC, 0-10VDC, 4-20mA)
- PLC Start/Stop
- Custom Dry Contacts
- "EZ" Controller (see additional literature)
- Periodic Reversing (Manual or Automatic)
- Filter Choke (reduce AC ripple)
- We welcome custom controls!

# STANDARD TECHNICAL DATA

**AC Input Voltage** 1x 110VAC-240VAC 50/60HZ

3X 208VAC-600VAC 50/60HZ (other voltages available upon request)

**Output Current** Up to 15000ADC (>15000ADC In Parallel)

**Output Voltage** Up to 400VDC

Control Constant Current/Constant Voltage Control (0.5% crossover regulation)

Ripple 5% Ripple at Full Load (optional filtering resulting in 5% or less throughout the operating range)

**Duty Factor** 100% (can run 24/7 365 days a year)

**Operating Temp** 40° C (optional high temp/altitude packages available)

