Introduction to Silicon Controlled Rectifier (SCR) Power Controllers

Features and Benefits of SCRs

✴ **High reliability**
Because the SCR power controller is a solid-state device, it provides virtually limitless, trouble-free operation with a minimum of maintenance.

✴ **Infinite resolution**
Power, current or voltage can be controlled from zero to 100% with infinite resolution.

✴ **Extremely fast response**
The SCR controller can toggle-load power on and off rapidly, providing the means to respond quickly to command, load and power supply changes.

The SCR

The SCR has two states, On and Off, and allows current to flow in only one direction. An SCR unit is composed of two SCRs arranged to control AC power. SCRs can remain in the off state even though the applied potential may be several thousand volts; in the on state, they can pass several thousand amperes. When a small signal is applied the SCR will turn on in 10-100 microseconds. Once turned on it will remain on until the current through it is reduced below a very low value called the holding current.

Basically, an SCR power controller consists of the following:

➤ Semiconductor power devices (SCRs and diodes)
➤ A control circuit normally referred to as the firing circuit
➤ A means to dissipate the generated heat
➤ Protective circuits (fuses and transient suppressors)

Distributive Zero-Cross Control

The term zero-cross or synchronous operation of SCRs is derived from the fact that the SCRs are turned on only when the instantaneous value of the AC sinusoidal waveform is zero. Zero-cross controllers can provide two rather distinctively different types of control: time proportioning control, and distributive control.

The Distributive Control Technique combines power pulses of short duration to obtain the exact power level proportional to the command signal or setpoint.

Phase-Angle Control

In phase-angle control the SCR unit is turned on at a certain phase angle of the AC power supply that provides the correct percentage of power. Power is regulated by advancing or delaying the point at which the SCR is turned on within each half cycle. Shown is an example of this for 50% power output.

Phase-angle control provides a very fine resolution of power and is used to control fast responding loads such as tungsten-filament lamps or loads in which the resistance changes as a function of temperature. Phase-angle control is required if the load is transformer-coupled or inductive.

Phase-angle controllers are typically more expensive than zero-cross controllers because the phase-angle circuit requires more sophistication than a zero-cross circuit. Phase-angle control of three-phase power requires SCRs in all three legs and is appreciably more expensive than zero-cross control, which only requires SCRs in two of the three legs.

Optional (SCR) Features

**True Power Regulation / Current Limit**
It uses output voltage, current, conduction angle, phase shift, and power factor to monitor and regulate the output. It will provide output power that is constant, regulated and linear to the command signal. This option includes an RMS current limit (adjustable from 35 to 125% of the unit’s rating) and has a 0-5 VDC output that is proportional to the load power.

**Over-Current Trip**
Tempco’s over-current trip is peak current sensing. The circuit will shut down the SCR within a half-cycle of AC current. It includes an automatic or manual reset that allows the user to select the reset mode after an alarm. A relay output is available for alarming or shutdown. Adjustable from 100 to 300% of the unit’s rating.

**RMS Current Regulation / Over-Current Trip**
It will hold the output current constant regardless of the load resistance, based upon the command signal input. This option includes an RMS current trip adjustable from 35 to 125% of the unit’s rating.

**RMS Current Limit / Over-Current Trip**
The output current can be adjusted to automatically limit or clamp the maximum RMS current available from the SCR power control. It is settable from 35 to 125% of the unit’s rating. This option includes an RMS current trip adjustable from 35 to 125% of the unit’s rating.

**Over-Temperature Thermostat**
These are bi-metal snap action thermostats that open or close when the heat sink’s temperature exceeds its maximum operating temperature. Standard on all SCR power controls starting at 90 Amps. Specify NO or NC when ordering, or a NO thermostat will be included.

**Load Unbalance Alarm**
The unbalance alarm monitors and compares the current in each of the three phases. If the current deviates more than the setpoint allows, an alarm relay is actuated.

**SCR Module Failure Alarm**
This option monitors the voltage drop across each of the SCRs. Since most SCRs fail shorted (zero voltage drop) this is the most accurate method to detect a failed SCR module. A relay output is provided.

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The “A” Series SCR Power Controllers are a compact and economical power control solution for industrial applications that require high reliability and long life. The fast solid state switching provides superior performance over relays, contactors and other slower cycling controllers by reducing temperature variations associated with the longer on-off cycles of those devices. The result is a more precise control of the heating process and extended heater life.

- Fast Cycling Distributive Zero Cross or Phase Angle Firing Control Modes
- Line Voltage Compensation
- Compact Size; Diagnostic LED; Increased Heater Life

**Specifications**

**Command Signals:** 4-20mA; 0-5 VDC; 0-10 VDC; potentiometer

**Control Mode:** Distributive Zero Cross; Phase Angle Firing

**Load Current:** 15, 25, 40 or 70 Amps

**Line Voltage:** 120, 240, 480, or 575 VAC; +10% - 20% 50/60 Hz

**Zero and Span:** Factory pre-set. User adjustable over a range of 20% of span.

**Transient Voltage and dv/dt:** 200 volts/microsecond minimum. Uses a dv/dt snubber and a metal oxide varistor. (MOV)

**Control Range**
- Zero Cross: 0 to 100% of line voltage
- Phase Angle Firing: 0 to 97% of line voltage

**Linearity**
- Zero Cross: Linear with respect to the command signal
- Phase Angle Firing: RMS load voltage is linear within 2% of the command signal.

“A” Series SCR Power Controllers are offered with the options listed in the worksheet below. Fill in the boxes with the appropriate number and/or letter designation for your requirements and a part number will be assigned.

**Ordering Code:**

**Control Mode**
- BOX 1
  - Z: Distributive Zero Cross
  - P: Phase Angle Fire

**Line Voltage**
- BOX 3
  - 1: 120 VAC
  - 2: 240 VAC
  - 3: 480 VAC
  - 4: 575 VAC

**Load Current**
- BOX 2
  - xx: 15, 25, 40 or 70 Amps

**Common Configurations** — “A” SERIES
- 240 VAC; 1-phase; 4-20 mA input

<table>
<thead>
<tr>
<th>Load Current</th>
<th>Zero Cross</th>
<th>Phase Angle</th>
</tr>
</thead>
<tbody>
<tr>
<td>15 Amp</td>
<td>SRS01101</td>
<td>SRS02101</td>
</tr>
<tr>
<td>25 Amp</td>
<td>SRS01102</td>
<td>SRS02102</td>
</tr>
<tr>
<td>40 Amp</td>
<td>SRS01103</td>
<td>SRS02103</td>
</tr>
<tr>
<td>70 Amp</td>
<td>SRS01104</td>
<td>SRS02104</td>
</tr>
</tbody>
</table>

**Control Input**
- BOX 4
  - A: 4 to 20 mA
  - B: 0 to 5 VDC
  - C: 0 to 10 VDC
  - D: Potentiometer

**Options (up to two)**
- BOXES 5, 6
  - (for zero cross or phase angle fire models)
  - E: Over-Temperature Thermostat – N.O. Contacts
  - F: Over-Temperature Thermostat – N.C. Contacts
  - N: None

**Notes:** Fusing is not included. Class T fuses are recommended.

All control input configurations require 24 VAC power supply except zero cross with 4-20mA input.

**Potentiometer Kit (ordered separately):** 5KΩ potentiometer and knob
- Part number: SRS99001

**Multi-Tap Transformer**
- Input: 120/240V, 400V, 480V or 575V
- Output: 24VAC
- Part number: SRS99002

**Specifications**

- **Temperature**
  - Operating: 32 to 122°F (0 to 50°C)
  - Storage: 14 to 198°F (-10 to 70°C)
  - Cooling: Convection
  - Mounting: Panel mount with heat sink fins vertical

- **Dimensions**
  - 15-40 Amp units — Overall: 4.75”W × 6.0”H × 3.1”D
  - 70 Amp units — Overall: 8.5”W × 10”H × 5”D

- **Weight**
  - 15-40 Amp units: 1.2 lb.
  - 70 Amp units: 3 lb

**Notes:**
- STANDARD LEAD TIME IS 2 TO 3 WEEKS.
- WARNING: Cancer and Reproductive Harm - www.P65Warnings.ca.gov

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Rev 2 (8-18)
The “B” Series SCR Power Controllers are a compact and economical power control solution for industrial applications that require high reliability and long life. The fast solid state switching provides superior performance over relays, contactors and other slower cycling controllers by reducing temperature variations associated with the longer on-off cycles of those devices. The result is a more precise control of the heating process and extended heater life.

**Design Features**
- Conservative Thermal Design
- Compact Size
- Voltage Squared Linearity
- Line Voltage Protection
- Includes Semiconductor F/T Fuses
- Diagnostic Indicators
- Multi-Turn Zero & Span Adjustments
- UL, cUL Compliant

**Specifications**

**Command Signals:** 4-20mA; 0-5 VDC; 0-10 VDC; potentiometer

**Control Mode:** Distributive Zero Cross; Phase Angle Firing

**Load Current:** Zero Cross or Phase Angle Fire Output

**Amperage Ratings:** 60, 90, 120, 180, 225, 350, 500, 650, 800, 1000, 1200

**Line Voltage:** 120, 240, 480, or 575 VAC; 10% to 20% 50/60 Hz

**Zero and Span:** Factory pre-set. User adjustable over a range of 20% of span.

**Transient Voltage and dv/dt:** 200 volts/microsecond minimum. Uses a dv/dt snubber and a metal oxide varistor (MOV).

**Control Range**
- Zero Cross: 0 to 99.5% of line voltage
- Phase Angle Firing: 0 to 97% of line voltage

**Linearity**
- Zero Cross: Linear with respect to the command signal
- Phase Angle Firing: RMS load voltage is linear within 2% of the command signal.

“B” Series SCR Power Controllers are offered with the options listed in the worksheet below. Fill in the boxes with the appropriate number and/or letter designation for your requirements and a part number will be assigned.

**Ordering Code:** SRSB –

**Control Mode BOX 1**
- Z: Distributive Zero Cross
- P: Phase Angle Fire

**Load Current BOX 2**
- 60, 90, 120, 180, 225, 350, 500, 650, 800, 1000, 1200 Amps

**Line Voltage BOX 3**
- 120 VAC
- 240 VAC
- 480 VAC
- 575 VAC

**Control Input BOX 4**
- A: 4 to 20 mA
- B: 0 to 5 VDC
- C: 0 to 10 VDC
- D: Potentiometer

**Options (up to three) BOXES 5, 6, 7**
- E: Over Temperature Thermostat – Normally Open
- F: Over Temperature Thermostat – Normally Closed

**Common Configurations — “B” Series**
- 240 VAC; 1 phase; 4-20 mA control input; Includes Over Temperature Thermostat – N.O.

For controls 90 Amp and over:

**Part Number**
- Load Current: Zero Cross Phase Angle
- 60 Amp SRS03101 SRS04101
- 90 Amp SRS03102 SRS04102
- 120 Amp SRS03103 SRS04103
- 180 Amp SRS03104 SRS04104
- 225 Amp SRS03105 SRS04105
- 350 Amp SRS03106 SRS04106

**Potentiometer Kit (ordered separately): 5KΩ**
- potentiometer and knob – Part Number: SRS99001

**Temperature Controller**
- Operating: 32 to 122°F (0 to 50°C)
- Storage: 14 to 158°F (-10 to 70°C)

**Cooling:** 60 Amp convection; all others fan cooled

**Mounting:** Panel mount with heat sink fins vertical

**Dimensions**
- 60-225 Amp units—Overall: 9.5”W × 16.25”H × 9.25”D
- Mounting Centers: 7.0”W × 15.69”H
- 350 and 500 Amp units—Overall: 14.75”W × 20.125”H × 8.5”D
- Mounting Centers: 13.0”W × 18.375”H
- 650 Amp units—Overall: 16.75”W × 23.0”H × 11.5”D
- Mounting Centers: 15.75”W × 19.75”H
- 800-1200 Amp units—Overall: 16.75”W × 29.0”H × 12.0”D
- Mounting Centers: 13.0” Top/15.0” Bottom

**Weight**
- 60-225 Amp units: 22 lbs
- 350-500 Amp units: 24 lbs
- 600 Amp units: 47 lbs
- 800-1200 Amp units: 71 lbs

**Note:** Over-temperature thermostat is standard on 90 Amp controls and over — Specify N.O or N.C. when ordering

**Standard lead time is 3 to 4 weeks.**

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Design Features
* Electrically Isolated Heat Sink
* Conservative Thermal Design
* Voltage Squared Linearity
* Transient Voltage Protection
* Multi-Turn Zero & Span Adjustments
* UL, cUL, CE Compliant
* Ideal for: Electric Ovens, Furnaces and Kilns, Environmental Chambers and Extruders

The “C” Series SCR Power Controllers are two-leg zero cross SCR power controllers that linearly control, proportional to the command signal, the power applied to a 3-phase electrical load. The controller consists of a master and slave assembly. Each assembly consists of a heat sink and an SCR module. The master assembly contains the control circuit card which controls the on-off cycles for both assemblies.

Specifications
Command Signals: 4-20mA; 0-5 VDC; 0-10 VDC; potentiometer
Control Mode: Distributive Zero Cross
Load Current: 15, 25, 40 or 70 Amps
Line Voltage: 208, 240, 277, 480 or 575 VAC; 10% to 20% 50/60 Hz
Zero and Span: Factory pre-set. User adjustable over a range of 20% of span.
Control Range: 0 to 100% of line voltage
Linearity: Average load voltage is linear within 1% of the command signal.

Notes: Fusing is not included. Class T fuses are recommended. All control input configurations require 24 VAC power supply except zero cross with 4-20mA input.

“C” Series SCR Power Controllers are offered with the options listed in the worksheet below. Fill in the boxes with the appropriate number and/or letter designation for your requirements and a part number will be assigned.

Ordering Code: SRTC – 1 2 3 4 5

Potentiometer Kit (ordered separately): 5KΩ potentiometer and knob Part number: SRS99001
Multi-Tap Transformer Input: 120/240V, 400V, 480V or 575V Output: 24V Part number: SRS99002

Common configurations — “C” Series
240 VAC; 3-phase; 2-leg; Zero cross firing; 4-20 mA input

<table>
<thead>
<tr>
<th>Load Current</th>
<th>Part Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>15 Amp</td>
<td>SRT01101</td>
</tr>
<tr>
<td>25 Amp</td>
<td>SRT01102</td>
</tr>
<tr>
<td>40 Amp</td>
<td>SRT01103</td>
</tr>
<tr>
<td>70 Amp</td>
<td>SRT01104</td>
</tr>
</tbody>
</table>

Standard lead time is 2 to 3 weeks.

WARNING: Cancer and Reproductive Harm - www.P65Warnings.ca.gov.

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Three Phase SCR Power Controllers

**SCR Power Controller “D” Series — Three-Phase 60 through 1200 Amp (2-leg – Zero Cross)**

The “D” Series SCR Power Controllers are two-leg zero cross SCR power controls that linearly control, proportional to the command signal, the power applied to a 3-phase electrical load. The Series “D” controller features a compact design, a single plug-in circuit card for ease of operation and an electrically isolated heat sink. All three leads are fused.

### Design Features
- Hinged Cover for Easy Access to Components
- Back to Back SCRs
- Includes 3 Semiconductor F2T fuses
- Line Voltage Compensation
- Diagnostic Indicators (Control Power, Command Signal, Blown Fuse)
- Fan Cooled on 90 Amp and higher units
- Transient Voltage Protection
- Voltage Squared Linearity
- Electrically Isolated Heat Sink
- Multi-Turn Zero & Span Adjustments
- UL, cUL, CE Compliant

### Specifications

#### Command Signals:
- 4-20 mA
- 0-5 VDC
- 0-10 VDC
- Potentiometer

#### Control Mode:
- Distributive Zero Cross

#### Load Current per Leg:
- 60, 90, 120, 180, 225, 350, 500, 650, 800, 1000, 1200 Amps

#### Line Voltage:
- 208, 240, 480, or 575 VAC; 10% to 20% 50/60 Hz

#### Zero and Span:
- Factory pre-set. User adjustable over a range of 20% of span.

#### Transient Voltage and dv/dt:
- 200 volts/microsecond minimum.
  - Uses a dv/dt snubber and a metal oxide varistor (MOV).

#### Control Range:
- 0 to 99.5% of line voltage

#### Linearity:
- Average load voltage is linear within 2% of the command signal.

#### Temperature
- Operating: 32 to 122°F (0 to 50°C)
- Storage: 14 to 158°F (-10 to 70°C)

#### Cooling:
- 60A convection; all others fan cooled

#### Mounting:
- Panel mount with heat sink fins vertical

#### Dimensions

<table>
<thead>
<tr>
<th>Load Current (Amps)</th>
<th>Overall</th>
<th>Mounting Centers</th>
</tr>
</thead>
<tbody>
<tr>
<td>60-225</td>
<td>12.5”W × 16.25”H × 9.25”D</td>
<td>10.0”W × 15.69”H</td>
</tr>
<tr>
<td>350 and 500</td>
<td>19.0”W × 20.125”H × 8.5”D</td>
<td>17.25”W × 18.375”H</td>
</tr>
<tr>
<td>650</td>
<td>24.0”W × 23.0”H × 11.5”D</td>
<td>23.0”W × 22.0”H</td>
</tr>
<tr>
<td>800-1200</td>
<td>27.0”W × 29.0”H × 11.75”D</td>
<td>26.0”W × 13.75” Top/14.25” Bottom</td>
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</tbody>
</table>

#### Weight

<table>
<thead>
<tr>
<th>Load Current (Amps)</th>
<th>Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>60-225</td>
<td>31 lbs</td>
</tr>
<tr>
<td>650</td>
<td>87 lbs</td>
</tr>
<tr>
<td>350-500</td>
<td>41 lbs</td>
</tr>
<tr>
<td>800-1200</td>
<td>180 lbs</td>
</tr>
</tbody>
</table>

### Ordering Code:

**Control Input**

- **BOX 1**
  - A: 4-20 mA
  - B: 0-5 VDC
  - C: 0-10 VDC
  - D: Potentiometer

**Load Current**

- **BOX 2**
  - xxxx: 60, 90, 120, 180, 225, 350, 500, 650, 800, 1000, 1200 Amps

**Line Voltage**

- **BOX 3**
  - 8: 208 VAC
  - 9: 240 VAC
  - 10: 480 VAC
  - 11: 575 VAC

**Options (up to two)**

- **BOX 4, 5**
  - E: Over-Temperature Thermostat – N.O. Contacts
  - F: Over-Temperature Thermostat – N.C. Contacts
  - G: Load Unbalance Alarm
  - H: SCR Failure Alarm
  - N: None

### Notes:

- Over-temperature thermostat is standard on 90 Amp controls and over — Specify N.O or N.C. when ordering

**Potentiometer Kit (ordered separately):**

- 5KΩ potentiometer and knob
  - Part number: SRS99001

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**“D” Series SCR Power Controllers** are offered with the options listed in the worksheet at right. Fill in the boxes with the appropriate number and/or letter designation for your requirements and a part number will be assigned.

**COMMON CONFIGURATIONS — “D” SERIES**

- 240 VAC; 3-phase; 2-leg; zero cross firing
- 4-20 mA control input; Includes Over-Temperature Thermostat – N.O. for controls 90 Amp and over

<table>
<thead>
<tr>
<th>Load Current</th>
<th>Part Number</th>
</tr>
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<tbody>
<tr>
<td>60 Amp</td>
<td>SRT02101</td>
</tr>
<tr>
<td>90 Amp</td>
<td>SRT02102</td>
</tr>
<tr>
<td>120 Amp</td>
<td>SRT02103</td>
</tr>
<tr>
<td>180 Amp</td>
<td>SRT02104</td>
</tr>
<tr>
<td>225 Amp</td>
<td>SRT02105</td>
</tr>
<tr>
<td>350 Amp</td>
<td>SRT02106</td>
</tr>
</tbody>
</table>

**Standard lead time is 3 to 4 weeks.**
**SCR Power Controller “E” Series — Three-Phase 60 through 1200 Amp (3-leg – Phase Angle Fire)**

The “E” Series SCR Power Controllers are three-phase, six SCR, phase angle power controls. 5 LEDs monitor line, command signal, 3-line current. They are ideal for electric ovens, furnaces and kilns, silicone carbide, transformer coupled loads.

**Design Features**
- Hinged Cover for Easy Access to Components
- Back to Back SCRs
- Includes 3 Semiconductor Fuses
- Line Voltage Compensation
- Diagnostic Indicators (Control Power, Command Signal, Blown Fuse)
- Fan Cooled on 90 Amp and Higher Units
- Transient Voltage Protection
- Voltage Squared Linearity
- Electrically Isolated Heat Sink
- Multi-Turn Zero & Span Adjustments
- UL, cUL, CE Compliant

**Specifications**

**Command Signals:** 4-20 mA; 0-5 VDC; 0-10 VDC; potentiometer

**Control Mode:** 3-Leg – Phase Angle Fire

**Load Current:** 60, 90, 120, 180, 225, 350, 500, 650, 800, 1000, 1200 Amps

**Line Voltage:** 120, 208, 240, 380, 415, 480 or 575 VAC; 10 to 20% 50/60 Hz

**Zero and Span:** Factory pre-set. User adjustable over a range of 25% of span.

**Transient Voltage and dv/dt:** 200 volts/microsecond minimum. Uses a dv/dt snubber and a metal oxide varistor (MOV).

**Control Range:** 0 to 98% of line voltage

**Linearity:** Average load voltage is linear within 2% of the command signal.

**Options Available:** See Ordering Box

**Temperature**
- **Operating:** 32 to 122°F (0 to 50°C)
- **Storage:** 14 to 158°F (-9 to 70°C)

**Ordering Code:** **SRTE – ******

Series “E” SCR Power Controllers are offered with the options listed in the worksheet at right. Fill in the boxes with the appropriate number and/or letter designation for your requirements and a part number will be assigned.

**COMMON CONFIGURATIONS — “E” SERIES**

- **240 VAC; 3-phase; Phase Angle Firing; 4-20 mA control input; Includes**
- **Over-Temperature Thermostat – N.O. for controls 90 Amp and over.**

<table>
<thead>
<tr>
<th>Load Current</th>
<th>Part Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>60 Amp</td>
<td>SRT03101</td>
</tr>
<tr>
<td>90 Amp</td>
<td>SRT03102</td>
</tr>
<tr>
<td>120 Amp</td>
<td>SRT03103</td>
</tr>
<tr>
<td>180 Amp</td>
<td>SRT03104</td>
</tr>
<tr>
<td>225 Amp</td>
<td>SRT03105</td>
</tr>
<tr>
<td>350 Amp</td>
<td>SRT03106</td>
</tr>
</tbody>
</table>

**Control Input**
- **BOX 1**
  - **A:** 4-20 mA
  - **B:** 0-5 VDC
  - **C:** 0-10 VDC
  - **D:** Potentiometer

**Line Voltage**
- **BOX 3**
  1: 120 VAC
  2: 208 VAC
  3: 240 VAC
  4: 480 VAC
  5: 575 VAC
  6: 415 VAC

**Note:** Over-temperature thermostat is standard on 90 Amp controls and over — Specify N.O or N.C. when ordering

**Dimensions**

- **60-225 Amp units—Overall:** 17.5”W × 16.25”H × 9.25”D
  - **Mounting Centers:** 15.0”W × 15.69”H

- **350 and 500 Amp units—Overall:** 19.0”W × 31.0”H × 8.5”D
  - **Mounting Centers:** 17.25”W × 14.37” Top/14.37” Bottom

- **650 Amp units—Overall:** 24.0”W × 34.75”H × 11.25”D
  - **Mounting Centers:** 23.0”W × 16.25” Top/17.5” Bottom

- **800-1200 Amp units: Overall:** 27.0”W × 38.75”H × 11.75”D
  - **Mounting Centers:** 26.0”W × 17.25” Top/20.5” Bottom

**Weight**
- **60-225 Amp units:** 40 lbs
- **650 Amp units:** 126 lbs
- **350-500 Amp units:** 60 lbs
- **800-1200 Amp units:** 231 lbs

**Cooling:** 60A convection; All others fan cooled

**Mounting:** Panel mount with heat sink fins vertical, or any position if fan cooled

**Options (up to three) BOXES 4, 5, 6**
- **A:** True Power Regulation/Current Limit
- **B:** Over-Current Trip
- **C:** RMS Current Regulation/Over-Current Trip
- **D:** RMS Current Limit/Over-Current Trip
- **E:** Over-Temperature Thermostat – N.O. Contacts
- **F:** Over-Temperature Thermostat – N.C. Contacts
- **G:** Load Unbalance Alarm
- **H:** SCR Failure Alarm
- **N:** None

**Potentiometer Kit (ordered separately):** 5KΩ potentiometer and knob
- **Part number:** SRS99001

**Standard lead time is 3 to 4 weeks.**

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