

# Temperature Controllers



## 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

- \* Back to Back SCRs
- \* Includes 3 Semiconductor P<sup>2</sup>T 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

Partial case shown for 60 to 225 Amp units. 350 Amp and up use a caseless, open panel mount design.



#### 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

(60 to 225 Amp units use a partial case design. 350 Amp and up use a caseless, open panel mount design.)

**60-225 Amp units—Overall:** 12.5"W × 16.25"H × 9.25"D  
**Mounting Centers:** 10.0"W × 15.69"H

**350 and 500 Amp units—Overall:** 19.0"W × 20.125"H × 8.5"D  
**Mounting Centers:** 17.25"W × 18.375"H

**650 Amp units—Overall:** 24.0"W × 23.0"H × 11.5"D  
**Mounting Centers:** 23.0"W × 22.0"H

**800-1200 Amp units: Overall:** 27.0"W × 29.0"H × 11.75"D  
**Mounting Centers:** 26.0"W × 13.75" Top/14.25" Bottom

#### Weight

**60-225 Amp units:** 31 lbs

**350-500 Amp units:** 41 lbs

**650 Amp units:** 87 lbs

**800-1200 Amp units:** 180 lbs

**Ordering Code:** SRTD - 1 2 3 4 5

"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.

#### Control Input BOX 1

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

#### Line Voltage BOX 3

- 8:** 208 VAC
- 2:** 240 VAC
- 3:** 480 VAC
- 4:** 575 VAC

#### 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

Load Current:	Part Number
60 Amp	SRT02101
90 Amp	SRT02102
120 Amp	SRT02103
180 Amp	SRT02104
225 Amp	SRT02105
350 Amp	SRT02106

Standard lead time is 3 to 4 weeks.

#### Load Current BOX 2

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

#### 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



**Note:** 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**

**WARNING:** Cancer and Reproductive Harm - [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov).