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THREE PHASE DIGITAL SCR POWER CONTROLLER / BURST Controller

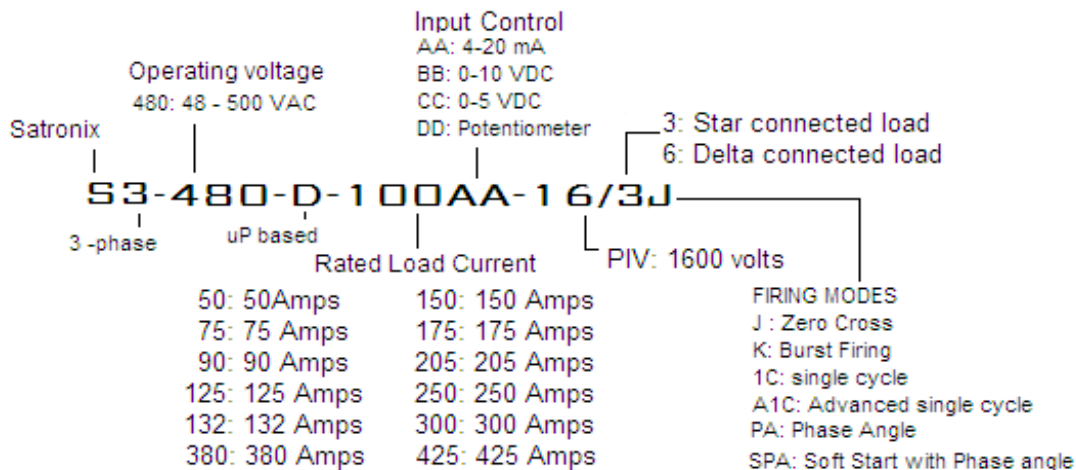
Features

- Allows to set the voltage applied to different sort of loads like Resistive, Inductive.
- Small Housing. Easy and ready to use.
- 6 SCR Phase angle control for star and delta 3 SCR 3 Diode.
- Shorted SCR detection.
- Optically coupled gate drives.
- Fully opto-isolated full cycle three phase angle controller.
- Plug in and interchangeable controller card
- Linear control of RMS voltage with respect to command signal 0-10 VDC or 0-5VDC or 4-20mA
- Input Output transfer characteristic linearization function (Resistive load).
- Over temperature protection.
- Diagnostic features like status given on LED
- Built –in Power Supply (90 – 270 VAC) , 50/60Hz
- Power Switch and controller in a single casing
- Rated operational Load current 50 – 90 A at 25 °C
- Integrated heatsink and fan for force cooling for higher ratings.

NOTE: 2-Phase & 1-Phase models available. Higher ratings will be available on request



Type selection guide



Note: Casing A shown above is upto 90A

TYPE**S3-480-D-... -16-6/3**

Mains voltage**Mains frequency****Current****Control input**

Up to 480 VAC

50 / 60 Hz

25A /50A /75 / 90A

0-5 VDC/ 0-10VDC / 4-20mA

www.satronixindia.com**Description**

This model is 3 ϕ phase angle power controller with 6 SCR for Star and 3 SCR, 3 diode for Delta phase angle control. It linearly controls RMS load voltage with respect to control signal. This model is available with current rating from 50 to 90 amps. It is useful for transformer coupled loads, fast responding loads and non linear loads.

Applications

- Vacuum furnaces
- Transformer coupled loads
- Fast responding loads
- T-3 lamps
- High frequency induction heating
- Variable resistance loads
 - Silicon carbide
 - Molybdenum di silicide
 - Graphite

Load current50- 90 Amps/ Phase @ 25°C
(25/50/75/90 Amps)

Min. Operational Current

Less than equal to 50mA

Load Voltage range

0 to 100% VAC/ 25 – 480 VAC

Off state leakage current

Less than 10mA

Voltage Frequency

dv/ dt critical1000 V/ μ S

I²T

Refer Output specifications table

SCR voltage (Peak forward and reverse rating)1600 Volts minimum

Input specifications

Control signalAA: 4 to 20mA
CC: 0 to 5 VDC
BB: 0 to 10 VDC
DD: Potentiometer controlled

Allowable Input Current

Less than or equal to 50mA

Impedance (Rc) Dynamic100M Ω

Control Range0 to 100% of line voltage



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Output specifications

Current	Voltage Range V	PIV 480 V	PIV 600 V	Max. Peak (1 cycle current)	Leakage Current mA	I ² T For fusing t = 10m secs
50 A	25 – 600 V	1200 V	1600 V	1000 A	15 mA	4750 A ² S
75 A	25 – 600 V	1200 V	1600 V	1350 A	15 mA	14450 A ² S
90 A	25 – 600 V	1200 V	1600 V	2000 A	15 mA	19100 A ² S

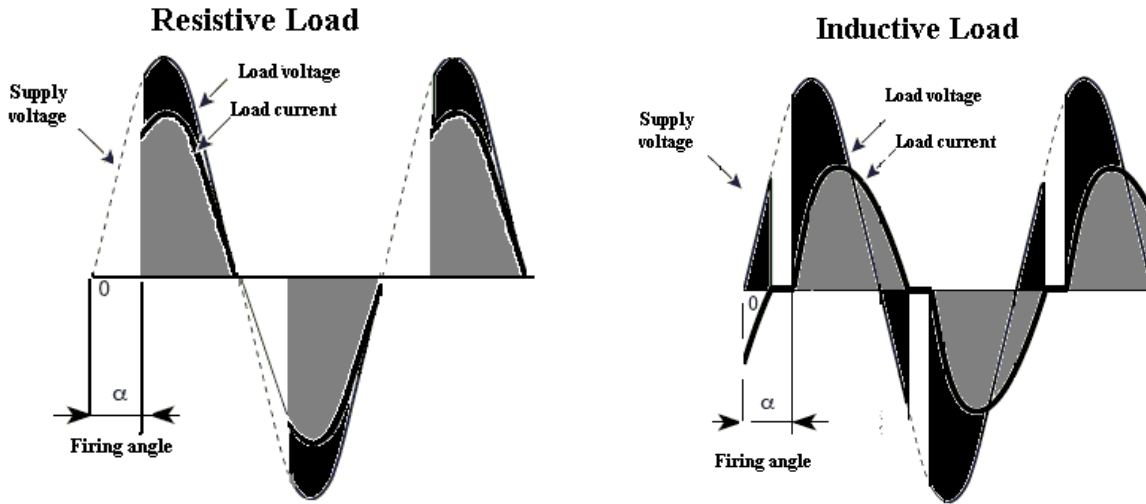
General specifications

Frequency	50/60 Hz
Rated Insulation Voltage I/P to O/P	≤ 4000 VAC rms
Rated Insulation Voltage O/P to Case	≥ 2500 VAC rms
Insulation resistance O/P to case	≥ 10 ¹⁰ Ω
Insulation Capacitance O/P to case	≥ 50 pF
Isolation Capacitance I/P to O/P	≤ 8 pF
Cooling	Convection cooling on 50 A model and forced cooling on other models
Over temp protection	O/P is interrupted when not cooled adequately
Heat dissipation	1.5 W/A of controlled current per phase
Fuses	Semiconductor fuses are recommended. Fast acting electronic fuses protect control transformer.
Operating temperature	0 to 55°C
Storage temperature	-40 to 80°C
Junction Temperature	100 °C
Protection against fast voltage transients	Built-in RC network



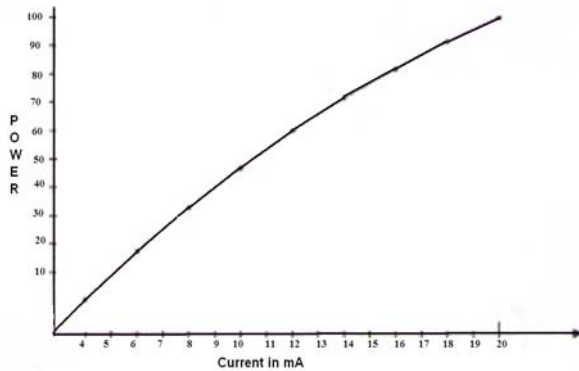
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Waveforms for resistive and inductive loads

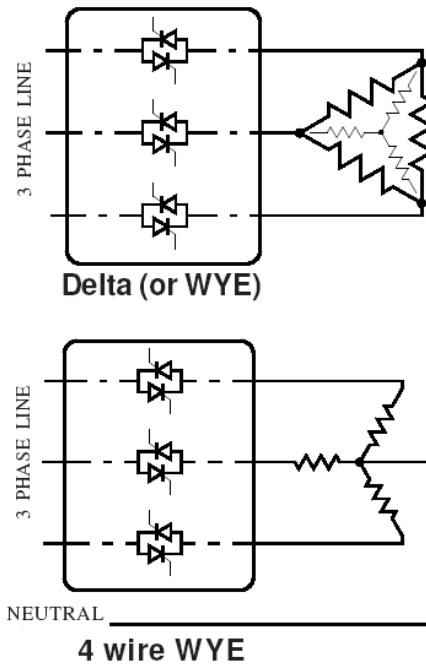


Power curve

Power Vs. Current in mA curve



Wiring Diagram



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