

SCR Series Mini-Sized Modules

HIGH VOLTAGE POWER SUPPLY



The SCR Series are regulated versions of the SC Series, supplying up to 5,000 VDC output depending on model. These converters are ideal for applications requiring minimal size and weight where a source of regulated DC voltage is needed. The SCR Series is ideal for battery powered applications, using only 50 mA input current at no load. They are a high frequency switching design that is efficient and programmable – the voltage is adjustable from 0 to 100% full output by an external control voltage or resistance value. Their power output is limited to 5 Watts at full output voltage. Positive or negative polarity is available. All SCR' modules are reverse input voltage and short circuit protected.

TYPICAL APPLICATIONS

General Lab Use Electrostatics Bias Voltage Grid Supply Ion Source

SPECIFICATIONS

Input Voltage:

12 VDC Input Standard 24 VDC Input (dash 24Vin Models) 48 VDC Input (dash 48in Models)

Output Voltage:

From 50 VDC to 5,000 VDC See "model selection table"

Output Polarity:

Output return is internally connected to the input return. The output is not floating.

Output Current:

depends upon power level See "model selection table"

SCR Series Regulated HV Modules

- Power level: 5 Watts
- Encapsulated
- 50 VDC to 5,000 VDC available
- Line/Load Regulation to 0.1%

SPECIFICATIONS Continued

Voltage Regulation

Load: 0.1% NL – FL (typical) Resistive load Line: 0.1% for +/- 10% variation of input voltage

Ripple:

1% maximum at full load

Temperature Coefficient:

100 ppm/ °C

Stability:

< 0.1% drift / hour after warm-up to operating temperature

Operating Temperature:

-55 °C to +100 °C case temperature

Humidity:

10% to 90% RH non-condensing

Input Terminals:

Gold pins (0.04 inch diameter x 0.25 inch length)

Output Terminals:

Gold Pins (0.04 inch diameter x 0.25 inch length)

Input Current:

5 W Module 12 Vin: 655 mA (Full load) 5 W Module 12 Vin: 50 mA (No load)

Power Efficiency:

70% typical

Encapsulation:

Epoxy potting

Short Circuit Ability:

Fold-back circuitry

Switching Frequency:

Typical 30kHz



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SPECIFICATIONS Continued

Cooling:

Convection: 5W module = 15 ° C case temperature rise at full load operation.

Dimensions:

2.5 L x 1.5 W x 0.75 H (63.5mm x 38.1mm x 19.1mm)

Weight:

4.3 oz (120 grams)

Encapsulation:

Epoxy potting

Finish:

Smooth Diallyl-Phthalate Thermoset Case

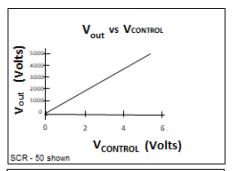
Terminations:

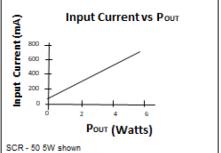
Electro-Gold Plated Brass pins (4)

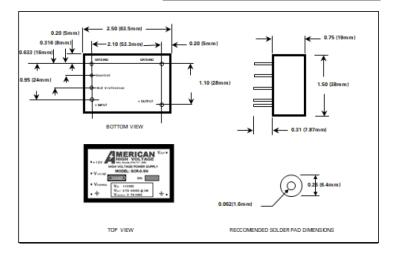
MODEL SELECTION TABLE

| Model | Voltage | Power Available |
|----------|----------------|-----------------|
| | | |
| SCR-0.5P | 50v positive | 5w |
| SCR-0.5N | 50v negative | 5w |
| SCR-1P | 100v positive | 5w |
| SCR-1N | 100v negative | • 5w |
| SCR-2P | 200v positive | 5w |
| SCR-2N | 200v negative | • 5w |
| SCR-3P | 300v positive | 5w |
| SCR-3N | 300v negative | 9 5w |
| SCR-5P | 500v positive | 5w |
| SCR-5N | 500v negative | 9 5w |
| SCR-10P | 1,000v positiv | re 5w |
| SCR-10N | 1,000v negati | ve 5w |
| SCR-20P | 2,000v positiv | re 5w |
| SCR-2N | 2,000v negati | ve 5w |
| SCR-3P | 3,000v positiv | re 5w |
| SCR-3N | 3,000v negati | ve 5w |
| SCR-4P | 4,000v positiv | re 5w |
| SCR-4N | 4,000v negati | ve 5w |
| SCR-5P | 5,000v positiv | re 5w |
| SCR-5N | 5,000v negati | |
| | | |

PERFORMANCE CHARTS







Ordering Information:

SCR - XXP or N / Z

XX = Output voltage

Z = Input voltage (blank if 12VDC)

Example:

SCR - 30P: Maximum output = 3,000 V positive polarity 5 Watts 12 VDC input SCR - 30N / 24V: Maximum output = 3,000 V negative polarity 24VDC input

HIGH VOLTAGE for the

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