

**Regulated
High Efficiency
Low EMI/RFI**

Features:

- Encapsulated Aluminum case
- Voltage & Resistance Programmable
- 0 to 100% Programmable Output
- Stability: <50PPM/ ° C
- Temperature Range: -55 ° C to 90 ° C (Case)
- 5V, 12V, 15V & 28V Input Voltages available

Electrical Characteristics:

- Input Voltage: 24 VDC ±20%
- Input Current :300 mA NO LOAD)
- Input Current :22 A (FL 100W)
- Load Regulation: 1% NL - FL (typ)
- Line Regulation: 0.33% (Vin +/- 10%)

VCR Series Description and Application Notes:

The VCR series precision switching supplies are used in laser, medical, RF, capacitor charging and various other applications where compact high voltage at large power levels are needed. The output polarity is floating and provides an isolation from the input by over 3 kV. Output return and input return are separated by over 1 t at 25 deg C. Each unit is fully encapsulated in a thermal conducting epoxy resin which provides mechanical stability as well as guarding against humidity and high voltage surface tracking. The VCR supply is packaged in an anodized aluminum case which provides electrostatic shielding - the case is electrically connected to the heat sink plate.

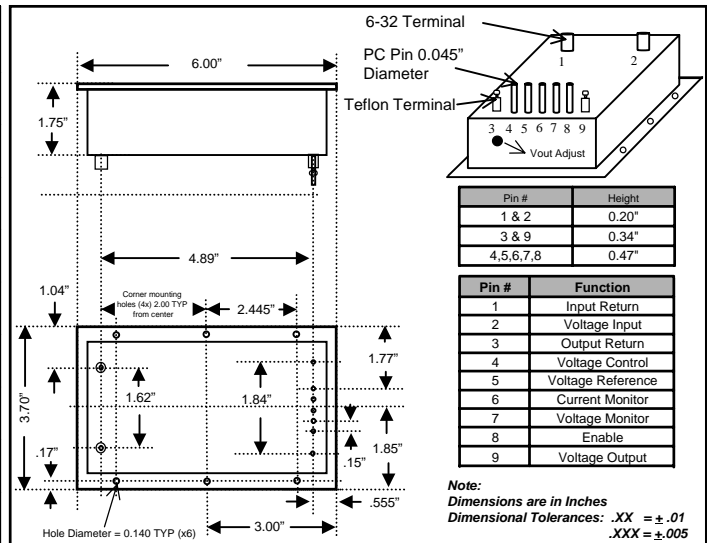
The VCR Series are regulated by virtue of a patented Resonant Pulse Width Modulation topology. The normal input voltage (24 VDC typical) is stepped up by resonant action to a high voltage output which is referenced to the input ground. The output voltage of the VCR unit is FLOATING. The output high voltage return and the input power return are NOT INTERNALLY CONNECTED together.

A twenty turn potentiometer adjustment located on the top of the unit sets the maximum output voltage. The output voltage may be controlled in two different ways. In the voltage programming mode, a control voltage between 0 - 5 VDC will adjust the output between 0 and full output. In the resistance programming mode, a resistor placed between the control pin and reference pin will set the output to a voltage which depends on the value of the resistance used. Typically a 10-k resistor will set the output voltage to 50%. Zero resistance yields zero output. The maximum output current ability is set for each unit to be 120% above the nominal value determined by the maximum current. The current limit circuitry internal to the V CR Series has a reaction time constant of less than 0.1 second which triggers a 2 second based "try again" circuit.

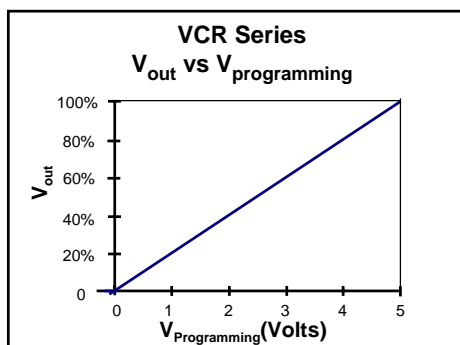
Product Selection Table

Model	Output Voltage	Output Current	Ripple
VCR-3	0 to 300V	0 to 333mA	0.10%
VCR-5	0 to 500V	0 to 200mA	0.10%
VCR-10	0 to 1000V	0 to 100mA	0.10%
VCR-20	0 to 2000V	0 to 50mA	0.10%
VCR-25	0 to 2500V	0 to 40mA	0.10%
VCR-50	0 to 5000V	0 to 20mA	0.10%
VCR-100	0 to 10,000V	0 to 10mA	0.10%
VCR-150	0 to 15,000V	0 to 6.66mA	0.10%
VCR-200	0 to 20,000V	0 to 5mA	0.10%

VCR Series Outline Drawing



Output Voltage vs. Programming Voltage



Schematic Equivalent

