

# High Voltage Power Solutions

## Military High Voltage Power Supply

### CCM-22-02

#### Military High Voltage Power Supply

- ◆ 22kV@1mA, multiple outputs
- ◆ Adjustable focus and grid-2 voltages
- ◆ Internal dynamic focus amplifier
- ◆ Anode, Focus, and G2 monitors
- ◆ G2 fast shunting to ground upon remote shutdown
- ◆ Remote on / off
- ◆ Ideal for:
  - Avionics
  - CRT Displays
  - Full Military Applications



Model CCM-22-02 military high-voltage power supplies are ideal for use in military avionics displays and applications.

The CCM-22-02 provides regulated anode, focus and grid potentials from a low-voltage DC source. The anode voltage is a regulated, low-ripple, fixed DC voltage. Focus and grid-2 potentials are regulated, low-ripple DC voltages that can be adjusted by external potentiometers. When potentiometers are used with reference voltages supplied by the CCM-22-02, focus and grid potentials are tightly controlled, allowing complete item interchangeability without readjustment of the system. The CCM-22-02 also incorporates an internal DC-coupled dynamic-focus amplifier. The CCM-22-02 is circuit protected with an output current limiting, short circuit protection and transient voltage suppression.

For over 30 years, Rantec has been a leading designer and manufacturer of power conversion products such as high voltage power supplies, low voltage power supplies, DC/DC converters, and power systems products. Rantec's products serve the medical, analytical, industrial, aviation, defense, and communications industries.

**Rantec Power Teaming  
Engineers Offer Technical  
Assistance to:**

Evaluate Power System Requirements  
Develop Power System Architecture  
Reduce Time to Market



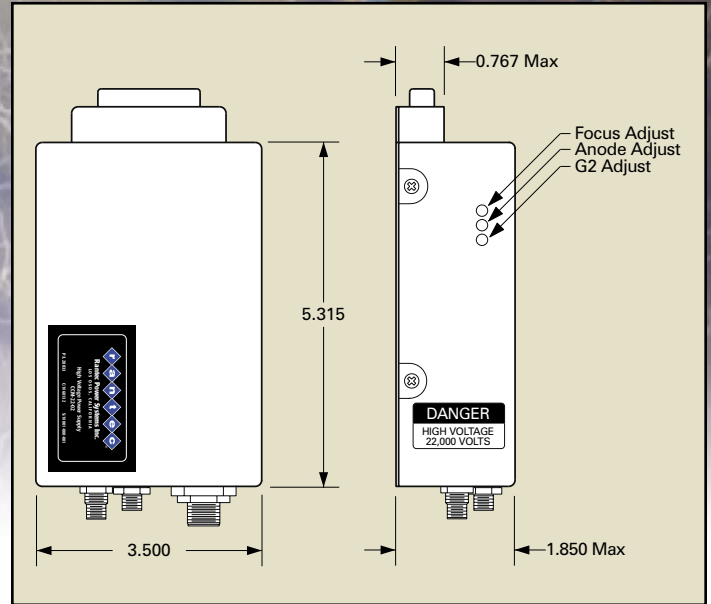
**Rantec Power Systems Inc.**

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## Military High Voltage Power Supply

ELECTRICAL	
<b>INPUT</b>	
Voltage	30Vdc $\pm$ 5%
Current - Full-load	1.5A max
Remote On / Off	Low = On; High or Open = Off
Dynamic focus	0 to +8VDC
<b>OUTPUT</b>	
<b>ANODE</b>	<b>22kV <math>\pm</math>0.2%; 1mA, max</b>
Line regulation	0.05% of anode, max
Static Load Regulation	0.1% of anode, max
Dynamic Load Regulation	85V pk
Ripple	13V p-p, max (@1mA)
Temperature Coefficient	75 ppm / $^{\circ}$ C, max
Monitor (2200 to 1)	10VDC $\pm$ 3%
<b>FOCUS</b>	<b>5kV, nominal; -10uA to 300uA, max</b>
Adjustment Range	4 to 6 kV $\pm$ 300V
Line Regulation	0.1% of focus, max
Static Load Regulation	0.05% of focus, max
Dynamic Load Regulation	5V / 100uA, max
Ripple	10V p-p, max
Temperature Coefficient	100ppm / $^{\circ}$ C, max
Monitor (1000 to 1)	4 to 6 Vdc, $\pm$ 5%
<b>GRID 2</b>	<b>500Vdc, nominal; -10uA to 50uA, max</b>
Adjustment Range	600-900Vdc
Line Regulation	0.1% of Grid 2, max
Static Load Regulation	0.1% of Grid 2, max
Ripple	0.5V p-p, max
Temperature Coefficient	100ppm / $^{\circ}$ C, max
Monitor (100 to 1)	6 to 9 VDC, $\pm$ 5%
<b>DYNAMIC FOCUS AMPLIFIER</b>	<b>300V p-p, min</b>
Gain	37.5, $\pm$ 5%
Bandwidth	dc to 200kHz
Slew Rate	100V / $\mu$ s min.

MECHANICAL	
Size	5.32" x 3.50" x 1.85"
Weight	< 2.8 lbs.
ENVIRONMENTAL	
Operating Temperature (case)	-40 $^{\circ}$ C to +85 $^{\circ}$ C
Storage Temperature (ambient)	-55 $^{\circ}$ C to +90 $^{\circ}$ C
Altitude	0 to 70,000 feet
Humidity (non-operating)	as specified in MIL-STD-810C, Proc. II or III



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DSHV CCM2202 REV021121

1173 LOS OLIVOS AVE  
LOS OSOS CA 93402  
FAX 805 596 6006  
powersys@rantec.com  
www.rantec.com  
805 596 6000



Rantec Power Systems Inc.