

High Voltage Power Solutions

Military High Voltage Power Supply

CCM-20-26

Military High Voltage Power Supply

- ◆ 20kV@750 μ A, multiple outputs
- ◆ Adjustable focus and grid-2 voltages
- ◆ Internal dynamic focus amplifier
- ◆ Focus and grid-2 monitoring systems
- ◆ Grid-2 fast shunting to ground upon remote shutdown
- ◆ Remote on / off
- ◆ Overheat output indicator



Model CCM-20-26 military high-voltage power supply is designed to power high-resolution, high-brightness cathode ray tubes used in military avionics displays.

The CCM-20-26 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-20-26, focus and grid-2 potentials are tightly controlled, allowing complete item interchangeability without readjustment of the system.

Grid-1 potential is a low-ripple, fixed DC voltage suitable for cutoff biasing of a CRT. The CCM-20-26 also incorporates an internal DC-coupled dynamic-focus amplifier capable of providing up to 300 volts peak-to-peak modulation.

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

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



Rantec Power Systems Inc.

CCM-20-26

Military High Voltage Power Supply

ELECTRICAL

INPUT

Voltage	30Vdc ±5%
Current - Full-load	1.5A max
Remote On / Off	<0.8V / 2 to 8V or open
Dynamic focus	0 to 10VDC

OUTPUT

ANODE 20kV ±0.1%; 750µA, max

Line regulation	0.05% of anode, max
Static Load Regulation	0.1% of anode, max
Dynamic Load Regulation	12V / 100µA, max
Ripple	20V p-p, max (@200uA)
Temperature Coefficient	50 ppm / ° C, max
Monitor (2000 to 1)	10Vdc ±3%

FOCUS 5kV, nominal; -10uA to 550µA, max

Adjustment Range	±1kV
Line Regulation	0.1% of focus, max
Static Load Regulation	0.05% of focus, max
Dynamic Load Regulation	4V / 100µA, max
Ripple	10V p-p, max
Temperature Coefficient	100ppm / ° C, max
Monitor (1000 to 1)	4 to 6 Vdc, ±5%

GRID 2 500Vdc, nominal; -10uA to 50µA, max

Adjustment Range	±100Vdc
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 / ° C, max
Monitor (100 to 1)	4 to 6Vdc, ±3%

GRID 1 -100Vdc, nominal

Current Range	2 to 25 mA
Load Regulation	12% of Grid1, max
Ripple	0.1V p-p, max

DYNAMIC FOCUS AMPLIFIER 300V p-p, min

Gain	30, ±5%
Bandwidth	dc to 150kHz
Slew Rate	10V / µs

LV CONNECTOR PINOUT

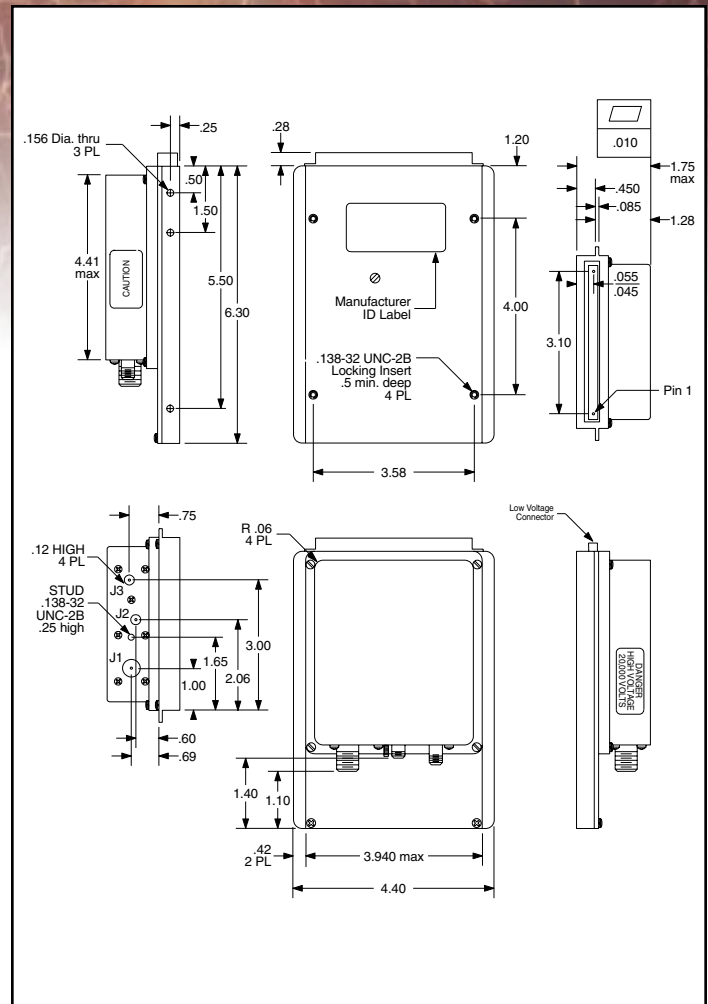
PIN OUT	FUNCTION	PIN OUT	FUNCTION
a 1, 2	Focus & Grid 2 Adj Ref	a 14	Focus Monitor Out
a 3, 5	Adj. Return	a 15	Dynamic Focus – Input
a 4	Thermostat	a 16	Dynamic Focus – Return
a 6	Grid 2 Adj.	a 17	Focus Adj.
a 7	Remote	a 18, 20	Chassis Ground
a 8	Signature	a 19	Grid 1 Out
a 9	Grid 2 Monitor Out	a 21	Anode Monitor
a 10, 11	Return	a 22 – a 32	Test Points
a 12, 13	+V Input		

MECHANICAL

Anode Connector – J1	LGH 1 I (equivalent)
Focus Connector – J3	LGH ½ I (equivalent)
G2 Connector – J2	LGH ½ LI (equivalent)
Low Voltage Connector	96 pin; mates with MIL-C-55302/132-01
Weight	< 2 lbs.

ENVIRONMENTAL

Operating Temperature (case)	-55° C to +85° C
Storage Temperature (ambient)	-62° C to +95° C
Altitude	0 to 70,000 feet
Humidity (non-operating)	240 hrs. of relative humidity to 100% as specified in Method 507 of MIL-STD-810



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 DSHV CCM2026 REV-B 010906

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