



# CHEROKEE INTERNATIONAL

*"The Powerful Choice"*

## CRP1000 Series

1000W 48V Bulk Power Hot Swap  
Fault Tolerant Power Supplies

### Features

- ◆ Power Factor Corrected
- ◆ I<sup>2</sup>C Signal interface
- ◆ 0°C to 55°C operation
- ◆ 2-pole AC on/off switch
- ◆ IEC320 input connector
- ◆ Power OK Sensor
- ◆ Current Limiting Protection
- ◆ Automatic Thermal Shutdown
- ◆ Over-voltage Protection
- ◆ Droop Current Sharing
- ◆ Fully compliant with FCC & EN55022 class "B"
- ◆ UL, cUL and TUV
- ◆ 5 volt 50mA standby output



**1000 Watts**

### Product Specifications

**AC INPUT VOLTAGE RANGE:** 85 to 270 VAC continuous range operation. 47-63 Hz. Internally fused to 20A, 250 VAC. Steady state input current 13.4A

**POWER FACTOR:** Power factor is 0.99 typ. at full load nominal line.

**EFFICIENCY:** 84% typical at nominal line full load.

**INRUSH CURRENT:** 70A Max (cold start) @ 200VAC, 25°C

**INPUT TRANSIENT PROTECTION:** Gas Tube

**IMMUNITY (lightning surge protection):** EN61000-4-5: Level 3 DM (1KV), Level 4 CM (2KV). **(fast transient protection)** EN61000-4-4: Level 4 (4KV)

**HOLD-UP TIME:** At full load, 85VAC line, output will remain in regulation for a minimum of 20 ms after loss of AC input power.

**TOTAL PACKAGE OUTPUT POWER:** 900 Watts continuous duty from 0°C to +55°C operation. Total Power limited at 950 watts.

**STANDBY POWER:** +5V/50mA output always present when AC mains is available.

**REGULATION TOTAL:** (load and line) requires a minimum load 5% of maximum continuous rating. Load: ±6.3%, Line: ±0.2%, including droop

**TRANSIENT RESPONSE:** ±2.5V for a 33% Load Step (0.5A/μsec.)

**REVERSE VOLTAGE PROTECTION:** 20A max.

**OUTPUT VOLTAGE ADJUSTMENT:** 47.0-49.0V

**CURRENT SHARING:** Outputs share as a percent of the maximum output current rating via Drooping method, ±10%

**TEMPERATURE COEFFICIENT:** All outputs, ± 0.02%/°C

**DYNAMIC RESPONSE:** A step load change (1A/ms max. slew rate) of ±25% of max rated currents, tested at 75% of max rated current will cause a max deviation of 3%. Outputs will recover to within 1% of nominal in 200μs (typ).

**RIPPLE & NOISE:** Ripple and noise 1% peak-to-peak max. @ 20MHz bandwidth, measured across a 10mf tantalum capacitor in parallel with a 0.1mf ceramic capacitor at the load using a 24-in. load cable.

**REMOTE On/Off:** On when Enable pin is low.

**P-OK SIGNAL:** Opto-isolated signal active low when PS. Fails. 10mA sink  
**OVERSHOOT & UNDERSHOOT:** Following turn-on/off or (enable/inhibit the output voltage overshoot or undershoot shall be less than 1% of nominal output voltage.

**OVER-LOAD PROTECTION:** Output is Limited to 130% maximum of output current rating.

**SHORT CIRCUIT PROTECTION:** Current limiting (hiccup) protection Output Auto-recovers when short is removed.

**AUTOMATIC THERMAL SHUTDOWN:** Supply shuts down in case of an excessive ambient temperature condition. To reset, cycle input power.

**OVERVOLTAGE PROTECTION:** 54.5V to 59.5VDC Shutdown latches power supply off. To reset, cycle input power.

**HIPOT:** 2600VDC, 1mA for one (1) second measured from input to output with output connected to chassis.

**TEMPERATURE (Operating):** 0°C to +55°C

**(Non-operating):** 0°C to +85°C

**HUMIDITY (Operating):** 0 to 95%, Non-condensing

**COOLING:** Self-contained DC ball bearing fan.

**SIZE:** 13.13" L x 3.98" W x 6.25" H

**WEIGHT:** 7.0 lbs.

**CONNECTOR:** Positronics PLC18 type

**MTBF:** 250,000 hours per Bellcore TR-NWT-000332

**WARRANTY:** One Year from date of shipment.

**SAFETY:** UL, C-UL and TUV

# CRP1000 Series

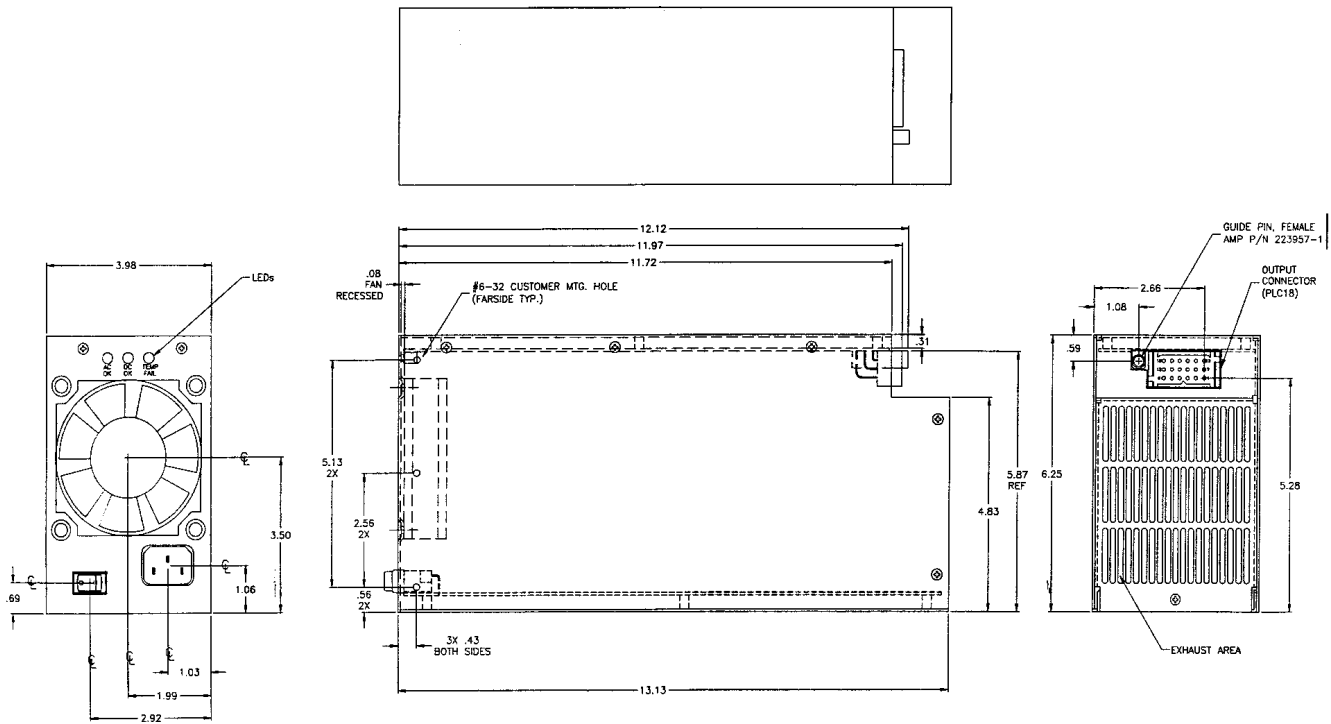
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Model Selector Guide							
Model	Output	Output Current		Output V.	Ripple	Line	Load
Number	Voltage	Min. (A)	Max. (A)	Tolerance	& Noise	Regulation	Regulation
CRP1000-K1	20-30	2A	42A	±0.05V	240mV P-P	±0.01V	±01.75V
CRP1000-L1	48-60	1.1A	21A	±0.05V	480mV P-P	±0.01V	±01.75V

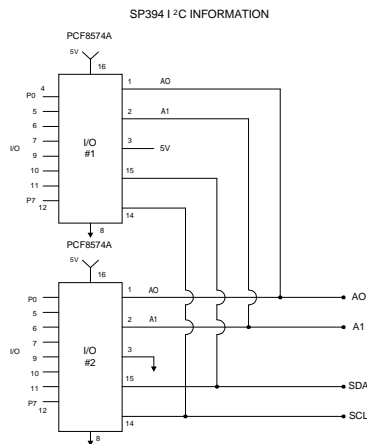
Note: Both models include a auxiliary 5 volt standby output rated at 50mA

For additional voltage and current combinations, please contact a factory representative.

## Mechanical Detail



Power Supply Signals		
Conn. No.	Pin No.	Function
J2	1	Enable - In
J2	2	(V2 RTN) Pwr. - GND
J2	3	-48V RTN
J2	4	-48V RTN
J2	5	-48V DC (V1)
J2	6	-48V DC (V1)
J2	7	ADDR - 1 (I2C)
J2	8	(5V RTN) PWR- GND
J2	9	-48V DC RTN
J2	10	-48V DC RTN
J2	11	-48V DC (V1)
J2	12	-48V DC (V1)
J2	13	ADDR - 0 (I2C)
J2	14	I2C - Clock
J2	15	I2C - Data
J2	16	5V - PWR (V2)
J2	17	N/U
J2	18	V - (-48V @ Cathode)



ADDRESS		DATA
A0 A1 1	I/O #1	P0=0
		P1=0
		P2=0
		P3=0
		P4=>20% LOAD = 1
		P5=>40% LOAD = 1
		P6=>60% LOAD = 1
A0 A1 1	I/O #2	P7=>80% LOAD = 1
		P0 = DC OK = 1
		P1 = AC OK = 1
		P2 = THERMAL WARNING = 1
		P3 = 0
		P4 = 0
		P5 = 0
P6 = 0		
		P7 = 0

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