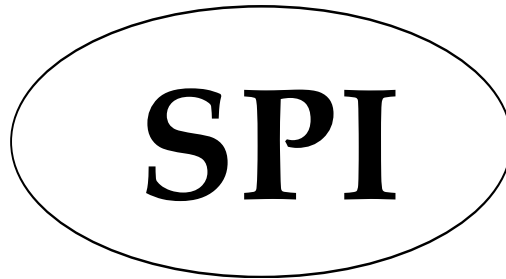


SPARKLE POWER INT'L LTD.



SPECIFICATION

SPI-300G

POWER SUPPLY

San Jose Office

1000 ROCK AVE.
SAN JOSE, CA 95131
TEL: (408) 519-8888
FAX: (408) 519-9999
ATTN: SALES DEPT.

Colorado Office

TEL: (303) 776-3281
FAX: (303) 776-7645

L.A. Office

TEL: (626) 839-1124
FAX: (626) 839-3395

05/24/2005

SPI SPARKLE POWER INT'S LTD.

TABLE OF CONTENTS		PAGE
1.0	GENERAL REQUIREMENTS	2
2.0	INPUT REQUIREMENTS	2
3.0	OUTPUT REQUIREMENTS	2
3.1	OUTPUT VOLTAGE AND CURRENT	2
3.2	OUTPUT VOLTAGE HOLD-UP TIME	3
3.3	OPERATION AT NO LOAD	3
3.4	PROTECTION	3
3.5	OUTPUT RISE TIME	3
3.6	OUTPUT OVERSHOOT	4
3.7	EFFICIENCY	4
3.8	POWER GOOD SIGNAL	4
3.9	POWER FAIL SIGNAL	4
4.0	PHYSICAL ENVIRONMENT	5
4.1	OPERATING CONDITIONS	5
4.2	STORAGE AND SHIPPING CONDITIONS	5
4.3	SHOCK AND VIBRATION	5
5.0	REGULATORY COMPLIANCE	5
5.1	SAFETY REQUIREMENTS	5
5.2	EMISSION REQUIREMENTS	5
5.3	INPUT LINE CURRENT HARMONIC CONTENT	6
6.0	OTHER REQUIREMENTS	6
6.1	COOLING	6
6.2	ACOUSTIC NOISE LEVEL	6
6.3	INPUT CONNECTIONS AND CONTROLS	6
6.4	RELIABILITY	6
7.0	MECHANICAL SPECIFICATIONS	6

(SPI) SPARKLE POWER INT'S LTD.

1.0 GENERAL REQUIREMENTS

This specification describes a 300-watt power supply.

2.0 INPUT REQUIREMENTS

The power supply shall operate from 90 to 132 Vrms or 180 to 264 Vrms.

The power supply shall operate from an AC mains frequency of 47 through 63 Hz.

The AC mains single-cycle peak inrush current shall be limited to 55 amps cold, 90 amps warm measured at 132 Vrms, 60 Hz and coinciding with the AC mains voltage peak.

The AC mains steady-state RMS input current shall be:

6.0 amps maximum / 115 Vrms,60Hz.

3.0 amps maximum / 230 Vrms,50Hz.

3.0 OUTPUT REQUIREMENTS

3.1 OUTPUT VOLTAGE AND CURRENT

	MINIMUM LOAD	MAXIMUM LOAD	LOAD REG.	CROSS REG.	LINE REG.	RIPPLE & NOISE
+5V	3.0A	30.0A	±5%	±5%	±1%	50mV P-P
+12V	1.0A	12.0A	±5%	±5%	±1%	120mV P-P
-5V	0.0A	0.5A	±10%	±10%	±2%	150mV P-P
-12V	0.0A	0.5A	±10%	±10%	±2%	150mV P-P

NOISE LPF = 5M Hz (CHROMA 6000)

CROSS REG.= HLLLL,LHHHH,LHLLL,HLHHH

All outputs shall be safety-isolated from the AC mains and share a common return. This common return must be connected to supply chassis.

Voltages and ripple are measured at the load side of mating connectors with a 0.1 uF monolithic ceramic capacitor paralleled by a 10 uF electrolytic capacitor across the measuring terminals.

(SPI) SPARKLE POWER INT'S LTD.

3.2 OUTPUT VOLTAGE HOLD-UP TIME

16.6 mS minimum : at 115V / 60Hz.
 16.6 mS minimum : at 230V / 50HZ.
 (Refer to the figure 1.)

3.3 OPERATION AT NO LOAD

The power supply shall be capable of being operated with no load on any or all outputs without damage. for no load on +5V, the output shall not exceed +6.5 Vdc and the power supply may shutdown and require power-on restart.

3.4 PROTECTION

3.4.1 Over-load protection

There shall be protection form an output over-current event. The supply may shutdown form such an event and require power-on restart. Testing consists of application of the listed over-current value with maximum load on all other outputs.

Over-current test values:(maximum)

+5V : 65A
 +12V : 25A

3.4.2 Short-current protection

A short circuit at any output shall cause no damage to the power supply nor blow the primary fuse. The supply may shut down in the event of a short circuit and require power-on restart. A short circuit consists of application of a test resistance of less than 0.05 ohms at each output with maximum load on all other outputs.

3.4.3 Over-voltage protection

In the event of an over-voltage condition on +5V the power supply shall shut down and require recycling of the AC mains input to reset the system.

+5V : 5.5V to 6.5V

3.5 OUTPUT RISETIME

The cold-start power-on voltage risetime of all outputs shall be measured with maximum load on all outputs.

risetime :	+5V	100mS	(maximum)
(10-90%)	+12V	100mS	(maximum)
	-5V	100mS	(maximum)
	-12V	100mS	(maximum)

(SPI) SPARKLE POWER INT'S LTD.

3.6 OUTPUT OVERSHOOT

No output voltage shall overshoot or generate spikes at turn-on or turn-off, during momentary power loss, output short, or realistic input voltage or output load changes. Overshoot is defined as any output that exceeds the voltage tolerance plus or minus an additional 5%.

3.7 EFFICIENCY

Overall efficiency must be 65% minimum measured at normal AC mains voltage and frequency with maximum loads on all outputs.

3.8 POWER GOOD SIGNAL

115V/230V (FULL LOAD) : 100-500ms

3.9 POWER FAIL SIGNAL

115V/230V (FULL LOAD) : 1mS minimum.

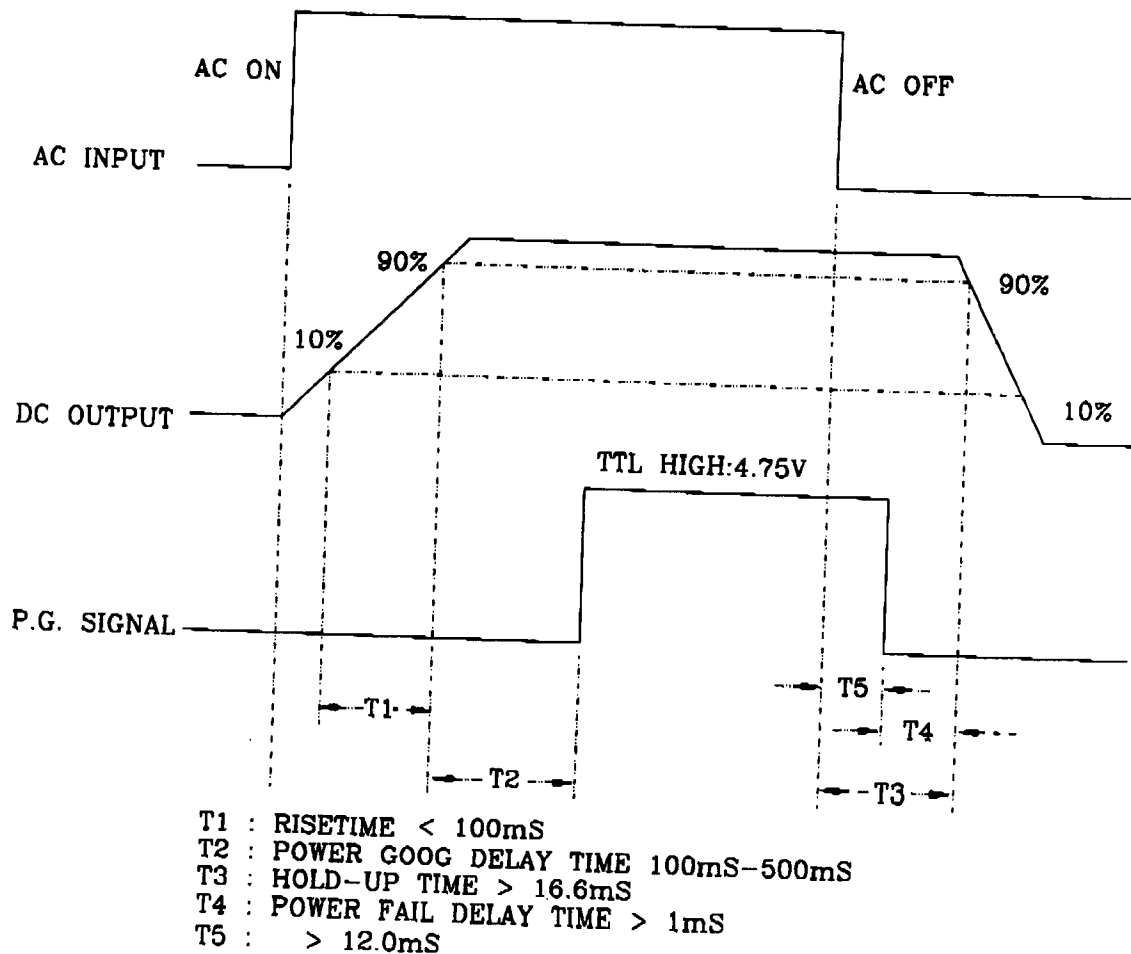


FIGURE 1

(SPI) SPARKLE POWER INT'S LTD.

4.0 PHYSICAL ENVIRONMENT

4.1 OPERATING CONDITIONS

The power supply shall be capable of continuous operation and meet all electrical specification without need for adjustment when subjected to the following environmental conditions:

4.1.1 AMBIENT TEMPERATURE: 0 TO 40°C

4.1.2 RELATIVE HUMIDITY: 90%

4.2 STORAGE AND SHIPPING CONDITIONS

No degradation of the power supply shall occur during shipping or storage at the specified conditions.

4.2.1 AMBIENT TEMPERATURE: -20 TO +65°C

4.2.2 RELATIVE HUMIDITY: 95%

4.3 SHOCK AND VIBRATION

The power supply will withstand the following imposed conditions without experiencing non-recoverable failure or deviation from specified output characteristics.

Storage -40G, 11mSec. half-sine wave pulse in both directions on three mutually perpendicular axes.

Operating -10G, 11mSec. half-sine wave pulse in both directions on three mutually perpendicular axes.

Vibration Operation-Sine wave excited, 0.25G maximum acceleration, 10-250 Hz, swept at one octave/min. Fifteen minute dwell at all resonant points, where resonance is defined as those exciting frequencies at which the device under test experiences excursions two times large than non-resonant excursions.

5.0 REGULATORY COMPLIANCE

5.1 SAFETY REQUIREMENTS

- CSA C22.2
- UL 1950
- TUV IEC950

5.2 EMISSION REQUIREMENTS

When testing the power supply must operate within the listed requirements.

(SPI) SPARKLE POWER INT'S LTD.

5.2.1 LINE CONDUCTED EMI

The subject power supply is meet FCC and VFG 243 class B requirements under maximum load conditions. (This limits are 6dBuV below the regulatory agencies requirements.)

5.2.2 REDIATED EMI

The subject power supply is meet FCC and VFG 243 class B requirements under maximum load conditions. (This limits are 6dBuV below the regulatory agencies requirements.)

5.3 INPUT LINE CURRENT HARMONIC CONTENT

The power supply meet the requirements of EN61000-3-2 CLASS D for harmonic line current content at full rated power.

6.0 OTHER REQUIREMENTS

6.1 COOLING

With the fan voltage set to around 12 volts, the fan is with speed controler(option), the fan will deliver greater than 25 CFM with the power supply in open air.

6.2 ACOUSTIC NOISE LEVEL

The operating acoustic noise level of the power supply shall not exceed the A-Weighted Sound Pressure level (Lpa) of 30 dBA and the A-Weighted Sound Power level (Lwa) of 32 dBA at 25°C at 45% RH measured at 25 cm in all planes per ECMA-74 and ECMA-109 (latest revisions) over the fan's minimum to maximum static load rating.

6.3 INPUT CONNECTIONS AND CONTROLS

Refer to Mechanical Specifications for placement. The AC mains input are through a three-circuit IEC type connector mounted on the rear of the power supply chassis. power ON/OFF are accomplished via an internally-mounted push-push actuated switch on the front of the power supply.

6.4 RELIABILITY

The power supply reliability, when calculated by MIL-HDBK-217; latest revision, are exceed 50,000 hours with all output at maximum load and an ambient temperature of 40°C.

7.0 MECHANICAL SPECIFICATIONS

Refer to the attached mechanical specifications drawing.