

3. PHYSICAL REQUIREMENTS

3.1 MECHANICAL SPECIFICATIONS

The mechanical drawing of the subject power supply, which indicate the form factor, location of the mounting holes, location, the length of the connectors, and other physical specifications of the subject power supply. Please refer to the attachment drawing.

3.2 CONNECTOR SPECIFICATIONS

The power supply connectors are:

- AC Inlet : Standard inlet socket 10A/250V, UL/CSA/VDE approved.
- P1 : The equivalent of MOLEX 39-01-2200, 20 pin connector
- PA,PB,PC, : The equivalent of AMP 1-480424-0, 4 pin connector
- PD :The equivalent of AMP 171822-4, 4 pin connector
- P2 :The equivalent of Molex 39-01-2040, 4pin connector

3.3 CONNECTOR PIN DESIGNATIONS

The pin designations and color codes are defined as follows:

	P1 SYSTEM BOARD		PD DISK DRIVER		PA,PB,PC DISK DRIVER		P2 DISK DRIVER	
PIN1	+3.3V	ORANGE	+12V2	YELLOW	+12V2	YELLOW	COM	BLACK
PIN2	+3.3V	ORANGE	COM	BLACK	COM	BLACK	COM	BLACK
PIN3	COM	BLACK	COM	BLACK	COM	BLACK	+12V1	YELLOW/BLACK
PIN4	+5V	RED	+5V	RED	+5V	RED	+12V1	YELLOW/BLACK
PIN5	COM	BLACK						
PIN6	+5V	RED						
PIN7	COM	BLACK						
PIN8	PW-OK	GRAY						
PIN9	+5Vsb	PURPLE						
PIN10	+12V	YELLOW						
PIN11	+3.3V	ORANGE						
	+3.3VS	BROWN						
PIN12	-12V	BLUE						
PIN13	COM	BLACK						
PIN14	PS-ON	GREEN						
PIN15	COM	BLACK						
PIN16	COM	BLACK						
PIN17	COM	BLACK						
PIN18	NC	NC						
PIN19	+5V	RED						
PIN20	+5V	RED						

4. ELECTRICAL REQUIREMENTS

4.1 OUTPUT ELECTRICAL REQUIREMENTS

The subject power supply will meet all electrical specifications below, over the full operation temperature range and dynamic load regulation.

4.1.1. OUTPUT RATING

Output	Nominal	Regulation	Ripple/Noise	Min	Max	peak
1	+3.3V	±5%	50mV	0.5A	14.0 A	
2	+5V	±5%	50mV	0.5A	16.0 A	
3	+12V1	±5%	120mV	1.0A	16.0 A	
4	+12V2	±5%	120mV	1.0A	10.0A	
5	-12V	±10%	120mV	0 A	0.8 A	
6	+5VSB	±5%	50mV	0 A	2.5A	

$$(1) 220W(50^{\circ}C) : +3.3V + 5V + 12V1 + 12V2 = 207W$$

$$250W(25^{\circ}C) : +3.3V + 5V + 12V1 + 12V2 = 237W$$

The +12V1 and +12V2 total output shall not exceed 17A.

(2) The +3.3V and +5V total output shall not exceed 110watts.

(3) total output for this subject power supply is 250 watts.

(4) Ripple and noise measurements shall be made under all specified load conditions through a single pole low pass filter with 20MHz cutoff frequency. Outputs shall bypassed at the connector with a 0.1uF ceramic disk capacitor and a 10uF electrolytic capacitor to simulate system loading.

(5) Dimension : 150 x 81.5 x 40.5 (mm)

4.1.2. LOAD CAPACITY SPECIFICATIONS

The cross regulation defined as follows, the voltage regulation limits DC include DC Output ripple & noise.

220W Load condition

No.	+3.3V	+5V	+12V1	+12V2	-12V	+5Vsb
FL1	14.0	12.76	5.0	3.75	0.4A	2.5
FL2	0.5	16.0	3.5	3.5	0.1A	2.5
FL3	14.0	0.5	1.0	1.0	0.1A	2.5
FL4	0.5	2.0	16.0	1.0	0.1A	0
FL5	0.5	1.5	1.0	10.0	0.1A	0
ML	0.5	0.5	0.5	0.2	0A	0
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250W Load condition

No.	+3.3V	+5V	+12V1	+12V2	-12V	+5Vsb
FL1	14.0	12.76	5.0	5.2	0.4	2.5
FL2	9.0	16.0	5.0	5.2	0.5	2.5
FL3	1.0	2.0	14.0	4.2	0.5	2.5
FL4	1.0	2.0	8.2	10.0	0.5	2.5
CR1	0.5	16.0	3.5	3.5	0.1	2.5
CR2	1.0	2.0	5.5	10.0	0.5	0
CR3	14.0	0.5	1.0	1.0	0.1	0
CR4	0.5	2.0	16.0	1.0	0.1	0
ML	0.5	1.5	1.0	10.0	0.1	0
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4.1.3. HOLD-UP TIME (@FULL LOAD)

220W:

115V / 60Hz : 17 mSec. Minimum.

230V / 50Hz : 17 mSec. Minimum.

The output voltage will remain within specification, in the event that the input power is removed or interrupted, for the duration of one cycle of the input frequency. The interruption may occur at any point in the AC voltage cycle. The power good signal shall remain high during this test.

4.1.4. OUTPUT RISE TIME

(10% TO 90% OF FINAL OUTPUT VALUE, @FULL LOAD)

115V-rms or 230V-rms + 5Vdc : 20ms Maximum

4.1.5. OVER VOLTAGE PROTECTION

Voltage Source	Protection Point
+ 3.3 V _{dc}	3.5V-4.8V
+5V _{dc}	5.5V-6.82V
+12V1 _{dc} + +12V2 _{dc}	13.4V-15.6V