

Power Supply Overview :

**1.1 Table 1 Input Electrical Characteristics Overview (输入特性)**

Input voltage range	180Vac tp 264Vac
Normal voltage range	<b>200Vac to 240Vac</b>
Input frequency range	47HZ-63HZ
Max input ac current	2.0Amax.at full load condition
Inrush current (cold start)	100Atyp peak, 220Vac/50Atyp peak,180Vac
standby power	≤1W ( 265VAC )
Efficiency (full load)	85% min .at 220Vac
Harmonic current	Meet EN61000-3-2 class D/GB17625.1-1998
Leakage Current	Less Than 3.5mA 220Vac

Note:

**1.2 Output Electrical Characteristics Overview (输出特性)**

**1.2.1 Output power: (输出功率)**

1) output power : 220Wmax.& 220Vac

**1.2.2 Table 2 Output Voltage ,Current &Regulation.(输出调整率)**

Output Voltage	Regulation	Min current	Max. current	Peak current
+V1(+5V)	+V1±5%	0A	3.0A	
+V2(+STB5V)	+V2±5%	0A	1.0A	
+V3(+12V)	+V3±10%	0A	2.5A	
+V4(+24V)	+V24±5%	0A	6.0A	

Note:

**1.2.3 Table 3 DC Output Ripple &Noise. (输出涟波和噪声)**

Output Voltage	Ripple & Noise (Max.)
+V1(+5V)	50mVp-p@25°C ;
+V2(+STB5V)	50mVp-p@25°C ;
+V3(+12V)	120mVp-p@25°C ;
+V4(+24V)	240mVp-p@25°C ;

Note: 1) Ripple and noise are defined as periodic or random signal over frequency band of 10Hz to 20MHz .Measurements shall be made with an oscilloscope with 20MHz bandwidth

2) Outputs shall be bypassed at the connector with a 0.1uF ceramic disk capacitor and a 10uF electrolytic capacitor to simulate system loading.

**1.2.4 Output Transient Response. (输出动态相应)**

Table 4 .Test condition

Voltage Tolerance Limit	Slew Rate	Load Change
24/+5/+5STB±5% 12±10%	0.2A/uS	Min to 50% load and 50% to Max load
All output±10%	0.2A/uS	Min load to max load

Note: Transient response measurements shall be made with a load changing repetition rate of 50Hz to 10KHz

**1.2.5 Table 5 DC Output Hold-Up Time (输出保持时间)**

Output Voltage	180Vac	240Vac
+V1(+5V)	≥10mS	≥10mS

+V2(+STB5V)	≥10mS	≥10mS
+V3(+12V)	≥10mS	≥10mS
+V4(+24V)	≥10mS	≥10mS

Note: All of DC output at full load.

**1.2.6 Table 6 DC output Overshoot At Turn On & Turn Off. (输出超调)**

Output Channel	Output(V)	Over shoot voltage(V)	
		Turn on	Turn off
+V1(+5V)	+5v	10%	5%
+V2(+STB5V)	+5v	10%	5%
+V3(+12V)	+12v	10%	5%
+V4(+24V)	+24v	10%	5%

Note: All of dc output current from Min. to Max

**1.2.7 Table 7 DC Output Voltage rise time (输出上升时间)**

Output Voltage	180Vac&Full Load	220Vac&Full Load
+V1(+5V)	≤50mS	≤50mS
+V2(+STB5V)	≤50mS	≤50mS
+V3(+12V)	≤50mS	≤50mS
+V4(+24V)	≤50mS	≤50mS

Note: The output voltages shall rise from 10% to 90% of their output voltage

### 1.3 Protection: (保护功能)

**1.3.1 Table 8 DC output Over Voltage Protection. (输出过压保护)**

Output Voltage	Max .Over Voltage	Comments
+V1(+5V)	7V	Power supply latch into non-output state
+V2(+STB5V)	7V	Power supply latch into non-output state
+V4(+24V)	29V	Power supply latch into shutdown state

Note: The power supply shall be test at max AC voltage (264Vac) and min .load or no load.

**1.3.2 Table 9 DC Output Over current Protection. (输出过流保护)**

Output Voltage	Over Current	Comments
+V1(+5V)	6A typ	Power supply restart
+V2(+STB5V)	3A typ	Power supply restart
+V3(+12V)	4A typ	Power supply restart
+V4(+24V)	10A typ	Power supply latch into shutdown state

Note: the over current protection should be test at other fo dc output at rated load .

**1.3.3 Table 10 DC output Short Circuit Protection.(输出短路保护)**

Output Voltage	Comments
+V1(+5V)	Power supply restart
+V2(+STB5V)	Power supply restart
+V3(+12V)	Power supply restart
+V4(+24V)	Power supply latch into shutdown state

Note: the over current protection should be test at other fo dc output at rated load .

### 1.3.4. Reset After Shutdown.(保护功能复位)

If the power supply latches into shutdown state due to fault condition on its outputs protection, the power supply shall return to normal operation only after the fault

has been removed and the Ps-on or Ac input has been cycled off /on with a minimum off time of 2 second.

#### 1.4 Remote on/off control(遥控功能)

The power supply DC outputs (without +5STB) shall be enable with an active-high TTL( $\geq 2.5v/2.0mA$ )-compatible signal(po-on). The +5STB is on whenever the AC power is present.

除+5STB 外，其余输出受控于一个 TTL 电平兼容信号 ( PS-ON $\geq 2.5v/2.0mA$  ) ，+5STB 上电就存在。

When ps-on is pull to TTL high ,the DC outputs are to be enable. PS-ON 高电平，打开输出。

When ps-on is pull to TTL low or open circuit ,the DC outputs are to be enable. PS-ON 低电平或开路，关闭输出。

## 2. Isolation (绝缘性能)

### 2.1 Table 11 (绝缘阻抗)

Input To Output	DC500V 50M $\Omega$ min (at room temperature)
Input To FG	DC500V 50M $\Omega$ min (at room temperature)
FG To Output	NON ISOLATED

Note:

### 2.2 Table 12 (绝缘耐压)

Input To Output	3000Vac 50Hz 1 minute $\leq 10mA$
Input To FG	1500Vac 50Hz 1 minute $\leq 10mA$
FG To Output	NON ISOLATED

Note:

## 3. Safety (安全规格)

The power supply shall compliance with the following Criterion:

- 1) EN60950
- 2) GB4943-1995
- 3)

## 4. EMC (电磁兼容性)

### 4.1 EMI (电磁干扰)

The power supply shall compliance with the following Criterion:

- 1) Conduction Emission : (传导干扰度)  
\* GB9254 , CLASS B
- 2) Radiated Emission : (辐射干扰度)  
\* GB9254 , CLASS B

### 4.2 EMS (电磁抗扰)

The power supply shall compliance with the following Criterion :

- 1) ESD (静电抗扰度)  
\*GB17626.2-1998
- 2) EFT (脉冲群抗扰度)  
\* GB17626.4-1998
- 3) SURGE (雷击浪涌)  
\*GB17626.5-1998

## 5. Environmental Requirement (工作环境)

### 5.1 Temperature (环境温度)

\* Ovrating Ambient: -10 $^{\circ}C$  To +40 $^{\circ}C$

\* Non-operating Ambient: -20 $^{\circ}C$  To +80 $^{\circ}C$

### 5.2 Humidity (环境湿度)

\* Operating: From 10% to 90% relative humidity (non-condensing)

\* Non-Operating: From 5 to 95% relative humidity (non-condensing)

### 5.3 Altitude (海拔高度)

\* Operating: to 10,000ft

\* Non-Operating: to 20,000ft

5.4 Cooling Method ( 冷却方式 )

\* Convection or Forced air.

5.5 Vibration ( 振动耐受 )

\* 10-55HZ , 49.0m/s<sup>2</sup> (5G),3minutes period ,60minutes each along X,Y and Z axis

5.6 Impact ( 冲击耐受 )

\* 196.1 m/s<sup>2</sup>(20G),11ms,once each X,Y and Z axis.

6. Dimension ( 物理尺寸 )

\*190mm X130 mm X 25mm (W\*H\*D)

7. Weight ( 重量 )

\*450g

8. Pin Connection ( 连接器脚位定义 )

**Table 13 PIN-CN2 Connection And Function**

NO.	Pin Connection	Function
1.2.3.4	GND	output RETURN
5.6.7.8	+24V	+24VDC output

Note: TYPE PITCH 2.54mm。

**Table 14 AC input wire Connection And Function**

NO.	Pin Connection	Function
1.2	+12VDC	+12VDC output
3.4.5.12.13	GND	+12/+5/+5STB RETURN
6.7.10.11	+5VDC	+5VDC output
8	+5STB	STANDBY ( +5.0V ) OUTPUT
9	PS-ON	On/off control (on =high)

Note: TYPE PITCH 2.54mm。

**Table 15 AC input wire Connection And Function**

NO.	Pin Connection	Function
1	L	AC INPUT LINE
2	NC	NO CONNECTED
3	N	AC INPUT NUTRUEL