



## PRODUCTS SPECIFICATION

**TITLE:** SWITCHING POWER SUPPLY

**MODEL:** EPR-100-24

**DESIGN NO:** \_\_\_\_\_

DATE	2010-9-14
REV	A00
DESIGNED	
CHECKED	
APPPROVED	

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## 1. BASIC PARAMETER

MODEL	OUTPUT VOLTAGE	VOLTAGE ADJUST RANGE	NOISE& RIPPLE	MIN.LOAD	MAX.LOAD
EPR-100-24	24V	+/-10%	100mV	0A	4.5A

REMARK:1) Maximum 108W continuous output, with air convection.

2) VOLTAGE ADJUST RANGE: +/-10% RATED OUTPUT VOLTAGE.

3) Noise & Ripple Test Conditions: peak to peak, Rated input voltage, full load,20 MHz band width.

## 2. TECHNICAL CHARACTERISTICS

### 2-1 INPUT CHARACTERISTICS

ITEM	UNIT	MIN	Rated	MAX	REMARK
Input Voltage	Vac	88	230	264	
Input Frequency	Hz	47	60	63	
Input Current	A	/	/	1.0	230Vac /Full Load.
				2.0	115Vac /Full Load.
Inrush Current	A	/	/	35	230Vac/50Hz, Full load cold start.
Input Fuse	5A/250Vac				

### 2-2 OUTPUT CHARACTERISTICS

ITEM	UNIT	MIN	Rated	MAX	REMARK
Output Voltage	V	23.76	24	24.24	
Output current	A	0	/	4.5	
Load Regulation	/	/	1%	/	
DC OUTPUT RIPPLE&NOISE	mV	/	/	100	
EFFICIENCY	/	/	84%	/	Input: 230Vac/50Hz, Max load.

DC OUTPUT RIPPLE&NOISE TEST CONDITIONS:

1) Oscilloscope should be limited at 20MHZ bandwidth.

2)At output terminals with parallel 0.1uF ceramic and 22uF electrolytic capacitors.

And test at output terminals.



ITEM	UNIT	Time	Test Conditions
Setup Time	mS	500	230Vac Input, 24VOutput, Full Load.
DC Output Voltage Rise Time	mS	80	230Vac Input, 24VOutput, Full Load.
DC Output Hold-up Time	mS	20	230Vac Input, 24VOutput, Full Load.

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

### 2-3 PROTECTION FUNCTION

ITEM	Output Voltage	Comments
Short Circuit Protection	24V	Recovers automatically after fault condition is removed

ITEM	Output Voltage	Range	Comments
Over Voltage Protection	24V	115~145%	Reset must be need when over voltage to get right.
Over load Protection	24V	120~150%	Recovers automatically after fault condition is removed

1) Over Voltage Protection: The protection time hold-up for 10 seconds or upper.

2) Over load Protection: The Protection point is the calculated result of the output voltage to 90% of the rated voltage.

### 2-4 ISOLATION FUNCTION

ITEM	Test Method	Test Conditions
Dielectric	Input To Output	1500Vac 50Hz 1 /minute. $\leq 5\text{mA}$



strength:(Hi-pot)	Input To FG	1500Vac 50Hz 1 /minute. ≤5mA
	Output To FG	500Vac 50Hz 1 /minute. ≤5mA
Isolation Impedance	Input To Output	DC500V 100MΩ /min(at room temperature)
	Input To FG	DC500V 100MΩ /min(at room temperature)
	Output To FG	DC500V 100MΩ /min(at room temperature)

### 2-5 SAFETY REQUIREMENT

#### \* Safety& EMC:

Designed to meet the following:

EN60950

EN55022 Class B

### 2-6 RELIABILITY&MTBF

#### \* Burn-in test

230Vac (50Hz) input voltage applied to the power supply, Full load is applied on the product in a 40+/-5 degrees C environment in a burn-in room for 4 hours.

#### \*MTBF

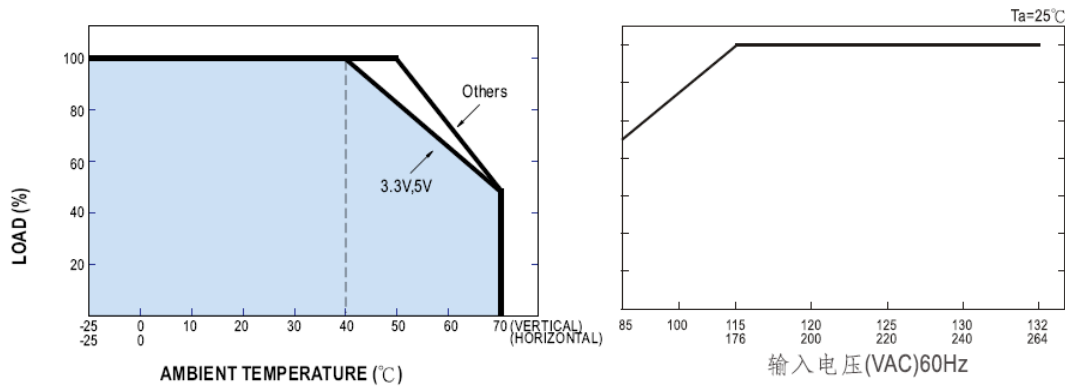
350,000 Hours at 25°C

### 3. ENVIRONMENT REQUIREMENT

ITEM	UNIT	MIN	Rated	MAX	REMARK
Temperature	°C	-20	25	70	Operation Temperature (attached drawing)
		-40	25	85	Storage Temperature
Humidity	°C	20%	RH	90%	Operation Humidity
		10%	RH	95%	Storage Humidity

Cooling Mode	Air Cooling
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### Operation Temperature Output Derating Curve



#### 4. MECHANISM DIMENSION

power supply dimension. (L X W X H)

159mm X 98mm X 38mm (L X W X H)

power supply weight.

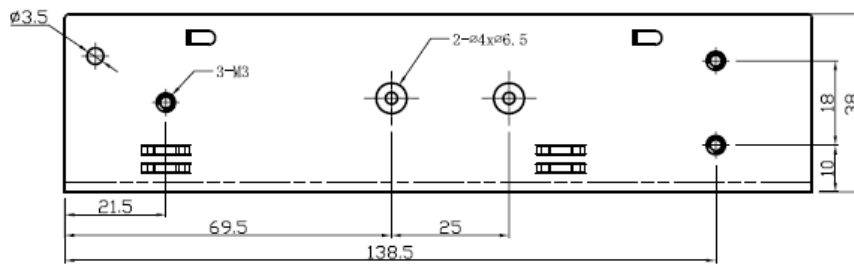
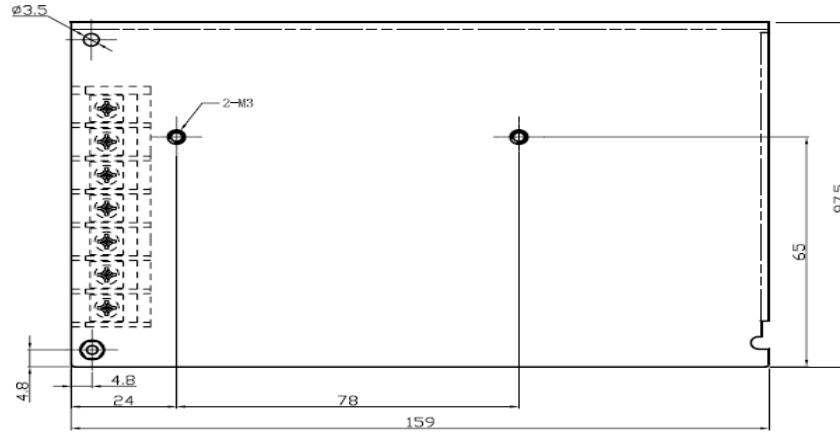
Maximum Weight is 0.6Kg.

#### 5. AC INPUT & DC OUTPUT CONNECTION

AC CN1: Pitch=9.50mm, 3pin.

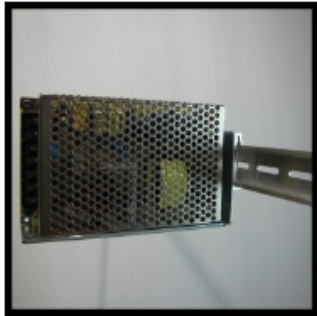
DC CON1:24V GND 2PIN 9.5mm

#### 6. POWER SUPPLY INSTALLATION DRAWING

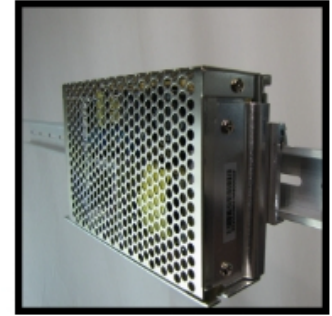
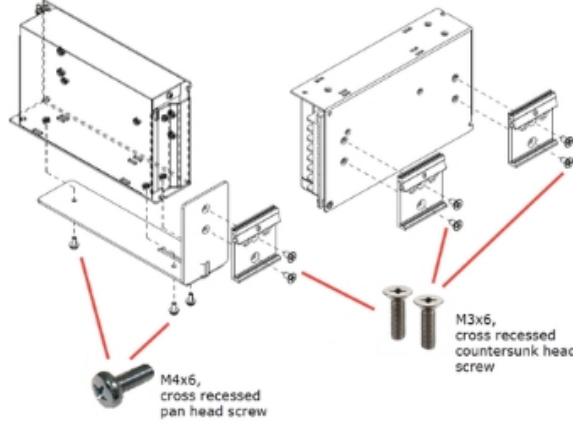


## Din Rail

### Mounting Options



L Bracket



Direct

Note:

Mounting screws depth should not exceed 4 mm. into the power supply. Included screws are for mounting options above.