
Product Name: **Switching Power**

Model: **24W 12V2A waterproof**

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1. Power Supply Overview :

1.1 Table 1 Input Electrical Characteristics Overview

Input voltage range	90-264VAC
Normal voltage range	100-240VAC
Frequency range	47-63Hz
Max input ac current	<1A (IN AC90V)
Inrush current (cold start)	30A
Efficiency(full load)	85% \geq (IN AC230V) 81% \geq (IN AC120V)
Leakage Current	<0.5mA
Standby Power Loss	\leq 1W

1.2 Output Electrical Characteristics Overview

1.2.1 Table 2 Output Voltage ,Current & Regulation.

Note:* pulse width within 100ms

Output Voltage	Regulation	Min. current	Rated current
12.00	$\pm 5\%$	0	2A

1.2.2 Table 3 DC Output Ripple & Noise.

Note: 1) Measurements shall be made with an oscilloscope with 20MHz bandwidth.

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

Output Voltage	Ripple & Noise (Max.)
12.00	120mV

1.2.3 Table 5 DC Output Hold-Up Time.

Note: All of dc output at full load.

Output Voltage	110V AC Input	220V AC Input
12.00	10ms	20ms

1.2.4 Table 7 DC output voltage rise time

Note: The output voltages shall rise from10% to 90% of their output voltage.

Output Voltage	110V AC input &Full Load	220V AC Input &Full Load
12.00	25ms	20ms

1.3 Protection:

1.3.1 Table 9 DC output Over Voltage Protection.

Note: The power supply shall be test at max AC voltage (264Vac) and max load .

Output Voltage	Max. Over Voltage	Comments
12.00	18V	Shutdown

1.3.2 Table 10 DC Output Over current Protection.

Output Voltage	Over Current	Comments
12.00	2.2-3.5A	Shutdown

1.3.3 Table 11 DC Output Short Circuit Protection.

Output Voltage	Comments
12.00	Shutdown

Note: While outputting regular anode short circuit

1.3.4 Table 12 DC Output Temperature coefficient.

Output Voltage	Comments
12.00	110±5°C

1.3.5 Reset After Shutdown.

The power supply will restart after the fault removed.

2. Isolation

2.1 Table 12 (Insulation resistance)

Note: Entry-level to second-class:50 MΩ is minimum(provide 500 VDCs)

2.2 Table 13 (Insulation withstand voltage)

Note: Entry-level to second-class:1500VAC 5mA 60S
Open FG and Output return.

3. Safety

The power supply shall compliance with the following Criterion:

- 1) EN60950
- 2) GB4943-2001

4. EMC (Electromagnetic compatibility)

4.1 EMI (Electromagnetic interference)

The power supply shall compliance with the following Criterion:

1) Conduction Emission :

*EN55022, CLASS B

2) Radiated Emission :

*EN55022, CLASS B

4.2 EMS (Electromagnetic immunity)

The power supply shall compliance with the following Criterion:

1) ESD (Static immunity)

*GB17626. 2-1998/IEC61000-4-2

4.3 Waterproof level: IP67

5. Environmental Requirement

5.1 Temperature

* Operating: -5°C to +35°C.

* Store: -10°C to +50°C.

5.2 Humidity

* Operating: From 10%to90% relative humidity (non-condensing).

* Store: From 5 to 95% relative humidity (non-condensing).

5.3 Altitude

* Operating: to10,000 ft.

* Store: to 20,000ft.

5.4 Cooling Method

* Ventilation cooling . 自然冷却

5.5 Vibration

* 10-55Hz, 49.0m/s² (5G), 3minutes period, 60minutes each along X, Y and Z axis.

5.6 Impact

* 196.1m/s² (20G),11ms, once each X, Y and Z axis.