Zhejiang Ximeng Electronic Technology Co.,ltd.

RSP-1000

Single Output With PFC



Size:268*130*40mm

Features

- Universal AC Input
- Protections:Short circuit / Overload / Over voltage/ Over temperature
- PS-ON output voltage switch control function
- Forced air cooling by built-in DC fan
- Built-in active PFC function
- C.C. and C.V.(Output voltage and current can be adjusted)
- 3 years warranty

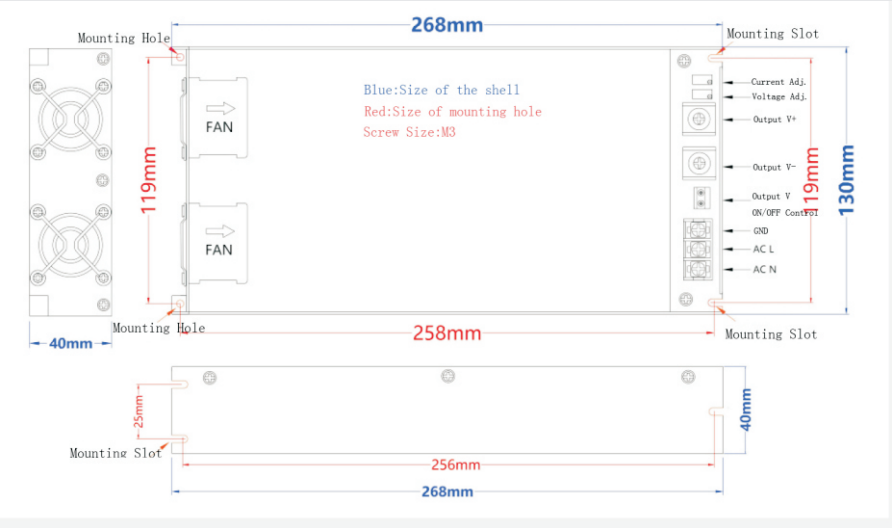
SPECIFICATION

MODEL		RSP-1000-24	RSP-1000-36	RSP-1000-42	RSP-1000-48	RSP-1000-60	RSP-1000-72	RSP-1000-110	RSP-1000-150
OUTPUT	DC VOLTAGE	24V	36V	42V	48V	60V	72V	110V	150V
	RATED CURRENT	42A	28A	24A	21A	16.7A	14A	9.1A	6.7A
	RATED POWER	1008W	1008W	1008W	1008W	1002W	1008W	1001W	1005W
	RIPPLE & NOISE (max.) Note.2	150mVp-p	150mVp-p	200mVp-p	200mVp-p	220mVp-p	220mVp-p	250mVp-p	300mVp-p
	VOLTAGE TOLERANCE Note.3	±3.0%	±3.0%	±3.0%	±3.0%	±3.0%	±3.0%	±3.0%	±3.0%
	LINE REGULATION	±1.0%	±1.0%	±1.0%	±1.0%	±1.0%	±1.0%	±1.0%	±1.0%
	LOAD REGULATION	±1.5%	±1.5%	±1.5%	±1.5%	±1.5%	±1.5%	±1.5%	±1.5%
	SETUP, RISE TIME	3s,60ms/230VAC(FULL LOAD) 8s,60ms/110VAC(FULL LOAD)							
	HOLD UP TIME (Typ.)	8ms/230VAC							
INPUT	VOLTAGE RANGE Note.4	110V-240VAC							
	FREQUENCY RANGE	47 ~ 63Hz							
	EFFICIENCY(Typ.)	88.3%	88.7%	89.5%	89.5%	90%	90%	90%	91%
	AC CURRENT(Typ.)	10A/115V 5A/230V							
	POWER FACTOR (Typ.)	When 220VAC input is used and the power supply operates at 100% full load, the power factor PF value is ≥ 0.98							
		When 110VAC input is used and the power supply operates at 100% full load, the power factor PF value is ≥ 0.99							
	INRUSH CURRENT (Typ.)	Cold Start 40A/115VAC 22A/230V							
	LEAKAGE CURRENT	< 3.5mA/220VAC							
FUNCTION	PS-ON	PS-ON Terminal short circuit: power off output voltage							
		S-ON Open circuit of terminal: open the output voltage (the default state of this terminal is open circuit)							
	OUTPUT VOLTAGE ADJ.	The output voltage can be adjusted, and the ADJV potentiometer can be manually adjusted, Range as per parameters listed in the above table.							
	OUTPUT CURRENT ADJ.	The output current is adjustable, and the ADJV potentiometer is manually adjusted. When the load reaches the current setting value, the power supply will output constant current							
	COOLING WAY	Built in fan for heat dissipation (temperature controlled automatic speed regulating fan, 2 fans (ball type)), internal blowing mode							
PROTECTION	OVER VOLTAGE	Cut off the output at 130% of the maximum output voltage, and it will not recover automatically. It will recover only after power off and restart							
	SHORT CIRCUIT	Short-term momentary short circuit: Power supply shuts down and automatically recovers after 3 seconds. Long-duration continuous short circuit: Power supply shuts down and attempts to restart every 3 seconds (hiccup mode).							
	OVERLOAD	1.Protection Mode: Constant Current Limiting, where the output current value is locked and remains unchanged, while the output voltage decreases as the load increases. 2.When a load of approximately 2.5 times the rated power is applied, it exceeds the power supply's overload constant current limiting range, effectively resembling a short circuit. In this case, the power supply will shut down and attempt to restart every 3 seconds (operating in hiccup mode).							
	UNDER-VOLTAGE	When the input voltage is below AC 96V, the power supply will not turn on.							
	FAN FAILURE	If either one of the two cooling fans fails to rotate or if no fan is detected, the power supply will not output any voltage and the device will not power on.							
	OVER TEMPERATURE	PWM transistor's heat sink reaches 85°C ±5%, shut off output voltage;It will automatically recover when the temperature drops down to 75°C ±5%.							
SAFETY	SAFETY STANDARDS	EN55032(CISPR32) ClassA EN61000-3-2.ClassA ; EN61000-3-3. EN61000-4-2.3.4.5.6.11.							
	WITHSTAND VOLTAGE	I/P-O/P:2.5KVAC I/P-FG:1.5KVAC O/P-FG:0.5KVAC							
	ISOLATION RESISTANCE	I/P-O/P, I/P-FG, O/P-FG:100M Ohms / 500VDC / 25°C/70%RH							
ENVIRONMENT	WORKING TEMP.	-25 ~ +50°C (please refer to "Derating Curve")							
	WORKING HUMIDITY	20 ~ 90% RH,non-condensing							
	STORAGE TEMP., HUMIDITY	-40 ~ +85°C, 10 ~ 95% RH,non-condensing							
	TEMP. COEFFICENT	±0.03%/°C (0 ~ 50°C)							
	VIBRATION	10 ~ 500Hz, 5G 10 mins/period, X、Y、Z 60 minutes for each axis							
OTHERS	MTBF	≥720.6K hrs MIL-HDBK-217F(25°C)							
	SIZE	268*130*40mm (L*W*H)							
	PACKING	1.4Kg; 12pcs/16.8Kg/0.9CUFT							

NOTE

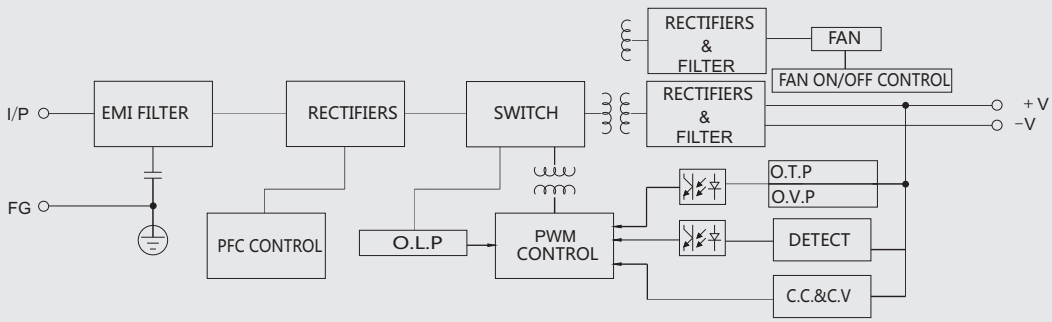
1.All Parameters NOT specially mentioned are measured at 230VAC input,rated load and 25°C of ambition temperature.
2.Ripple & noise are measured at 20MHZ of bandwidth by using a 12" twised pair-wire terminated with a 0.1uf & 47uf parallel capacitor.
3.Tolerance:includes set up tolerance ,line regulation and load regulation
4.Derating output is required under low input voltage. Please refer to the Derating Curve for details.
5. The power supply shall be confirmed with the terminal equipment for electromagnetic compatibility.
6.The ambient temperature decreases at a rate of 5 degrees Celsius per 1000 meters elevation when the altitude exceeds 2000 meters.

Mechanical Specification

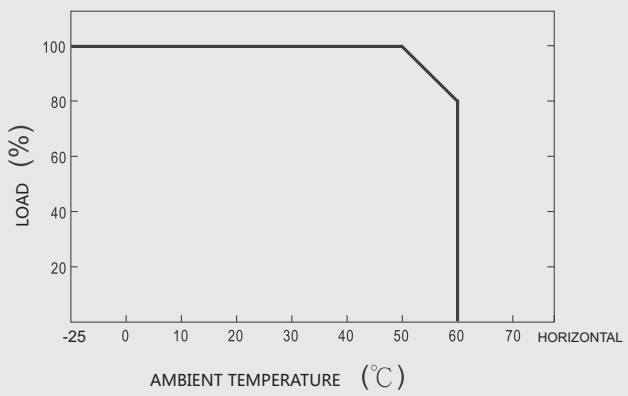


Block Diagram

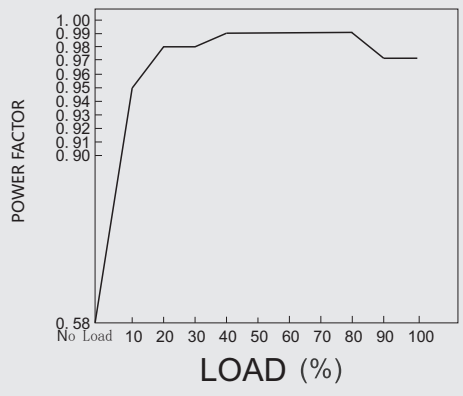
Frequency : 68KHz



Derating Curve

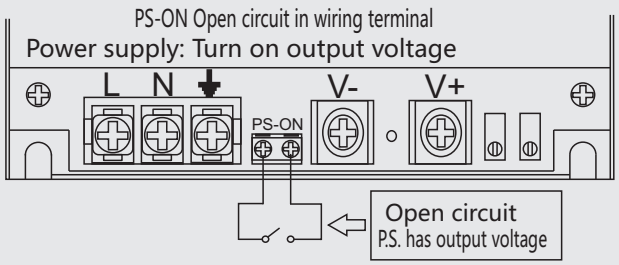


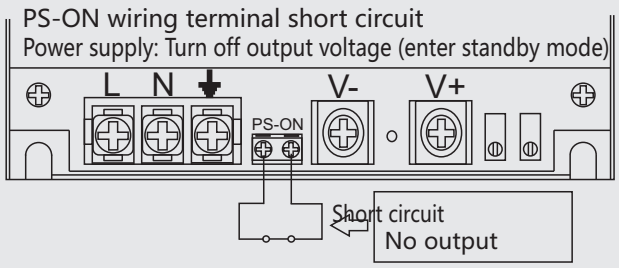
Power Factor VS Load



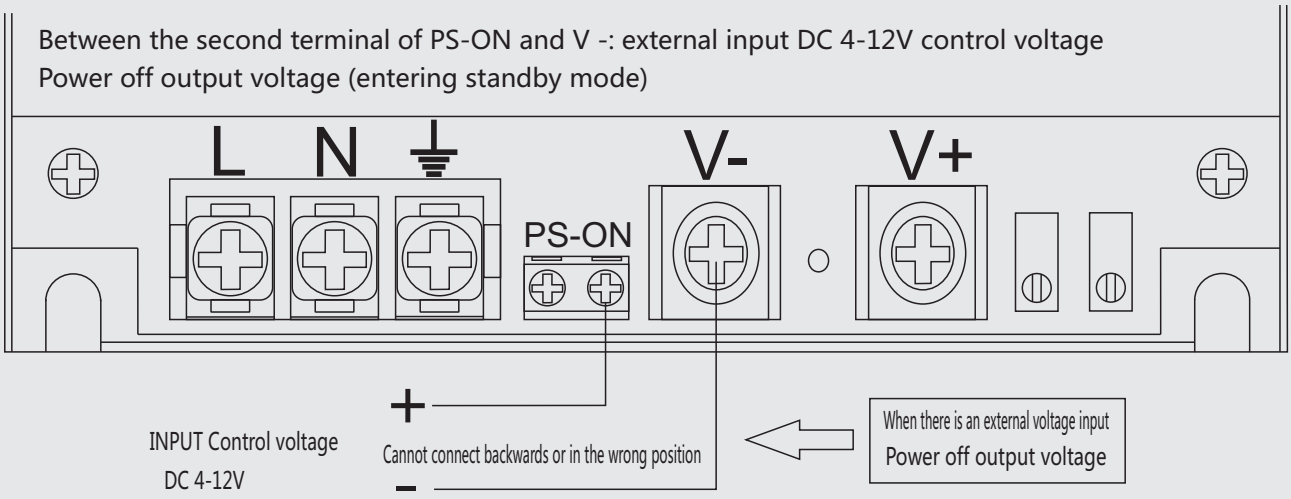
PS-ON USAGE

1.SHORT CIRCUIT





2. External voltage control



Note: The default control voltage for external input is 4-12V, which can be customized and modified as needed