



**CE** EN 62368-1

**Features:**

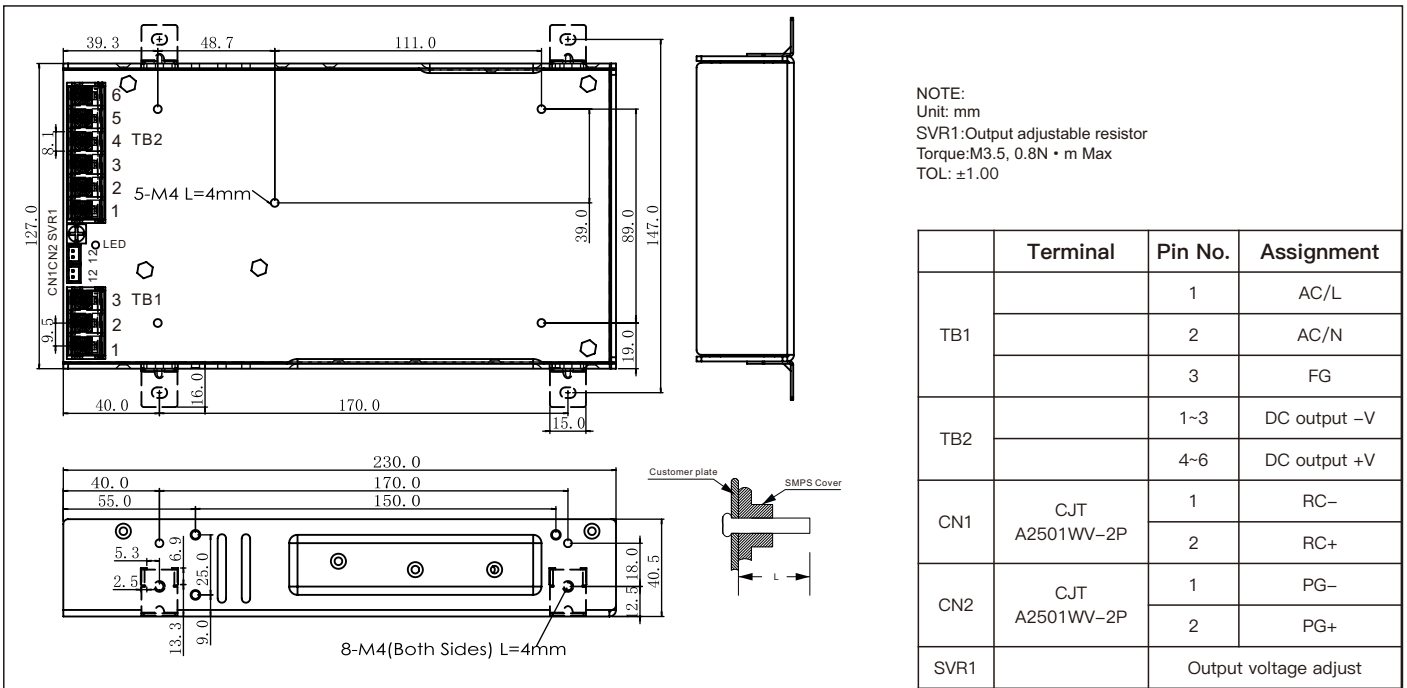
- Universal AC input 90~264VAC
- Built-in active PFC function
- Protections: Short circuit / Overload / Over voltage / Over temperature
- Fan less design
- 1U low profile 40.5mm
- Remote control/power good(fail)
- Redundant (for LP-500R)
- 100% full load burn-in test
- LED indicator for power on
- High efficiency/High reliability
- 3 years warranty
- Compliance to IEC/EN/UL 62368-1

**Specification**

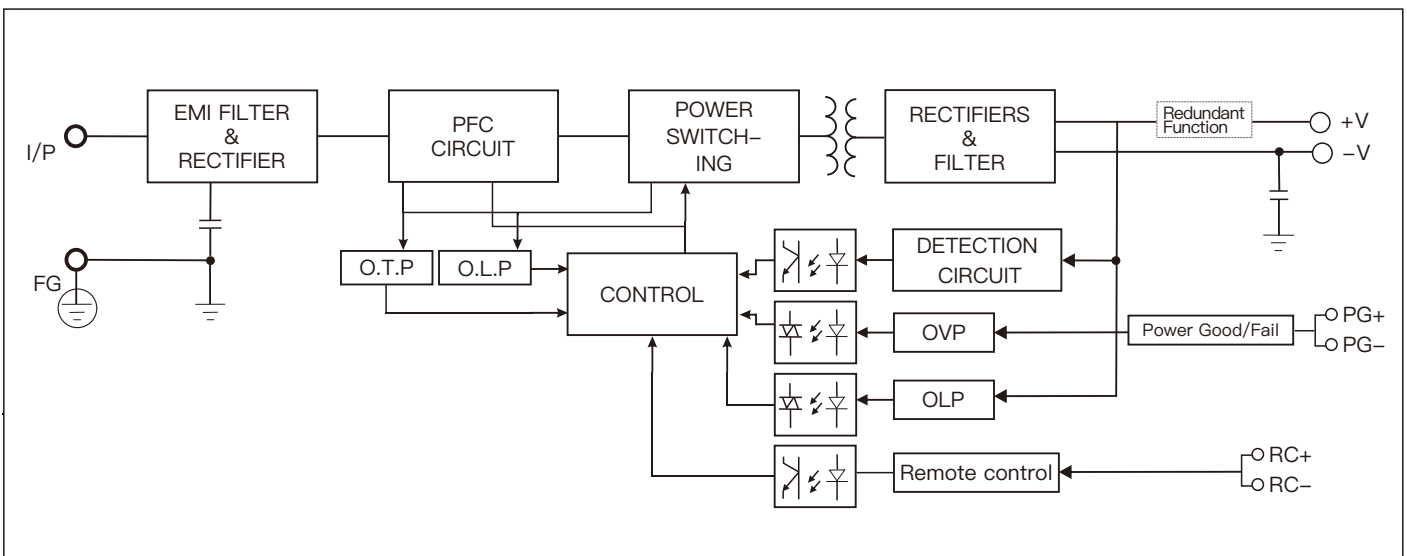
MODEL		SMF500-5	SMF500-7.5	SMF500-12	SMF500-15	SMF500-24	SMF500-36	SMF500-48
INPUT	VOLTAGE RANGE	90~264VAC 127~370VDC(refer to 'static characteristic')						
	FREQUENCY RANGE	47~63Hz						
	POWER FACTOR(Typ.)	PF>0.95/230VAC PF>0.98/115VAC at full load						
	EFFICIENCY(Typ.)	89%	90%	92%	93%	94%	94%	94%
	AC CURRENT(Typ.)	5.4A/115VAC 2.7A/230VAC						
	INRUSH CURRENT(Typ.)	20A/115VAC 40A/230VAC (cold start)						
	LEAKAGE CURRENT	<2mA/240VAC						
OUTPUT	DC VOLTAGE	5V	7.5V	12V	15V	24V	36V	48V
	RATED CURRENT	60A	50A	40A	33A	22A	14.6A	11A
	CURRENT RANGE	0~60A	0~50A	0~40A	0~33A	0~22A	0~14.6A	0~11A
	RATED POWER	300W	375W	480W	495W	528W	525.6W	528W
	RIPPLE&NOISE (max.)	150mVp-p	150mVp-p	150mVp-p	200mVp-p	200mVp-p	200mVp-p	200mVp-p
	VOLTAGE ADJ.RANGE	4.5~5.5V	6.75~8.25V	11.4~13.2V	14.3~15.8V	22.8~26.4V	34.2~37.8V	45.6~52.8V
	VOLTAGE TOLERANCE	±2%	±2%	±1%	±1%	±1%	±1%	±1%
	LINE REGULATION	±0.5%	±0.5%	±0.5%	±0.5%	±0.5%	±0.5%	±0.5%
	LOAD REGULATION	±1%	±1%	±0.5%	±0.5%	±0.5%	±0.5%	±0.5%
	SETUP, RISE TIME	1500ms,50ms/230VAC 3000ms,50ms/115VAC						
	HOLD UP TIME(Typ.)	12ms/230VAC 12ms/115VAC						
PROTECTION	OVER LOAD	110%~140% rated output power Protection type: >0.2s, Shutdown, recovers automatically after repower on						
	OVER VOLTAGE	5.75~6.75V	8.6~10.4V	13.8~16.8V	16.5~19.5V	27.6~32.4V	39.6~46.8V	56.6~66.2V
	OVER TEMPERATURE	Protection type: Shutdown, recovers automatically after temperature goes down						
FUNCTION	REMOTE CONTROL(CN1)	Power on: voltage between RC+ and RC- is 0-0.8V; Power off: voltage between RC+ and RC- is 4-10V						
	POWER GOOD/FAIL(CN2)	Voltage between PG+ and PG- goes high after power set up; The voltage goes low when Vo below 90% of adj. voltage value. Internal pull-up voltage is 3.6V, internal pull-up resistor is 1KΩ						
	REDUNDANT(LP-500R)	For parallel connection protection: For parallel applications, when one PSU cannot work, the another one will be automatically enabled. This can prevent the system crash, and provide the reliability of system						
ENVIRONMENT	WORKING TEMP., HUMIDITY	-30~+70°C (Refer to "Derating curve") , 20~90%RH non-condensing						
	STORAGE TEMP., HUMIDITY	-40~+85°C, 10~95%RH						
	TEMP. COEFFICIENT	±0.03%/°C (0~50°C)						
	VIBRATION	10~500Hz, 2G 10min./1 cycle, each along X、Y、Z axes						

Safety and electromagnetic compatibility	Safety standards	Refer to UL62368-1,TUV EN62368-1,CCC GB4943.1		
	Withstand voltage and isolation resistance	I/P-O/P: 3KVac; 100MΩ / 500Vdc / 25°C / 70%RH		
		I/P-FG: 2KVac; 100MΩ / 500Vdc / 25°C / 70%RH		
		O/P-FG: 0.5KVac; 100MΩ / 500Vdc / 25°C / 70%RH		
	Electromagnetic	Parameter	Standard	Test Level / Note
		Conducted emission	BS EN/EN55032(CISPR32),FCC PART 15 / CISPR22 ,GB9254.1	Class B
		Radiated emission	BS EN/EN55032(CISPR32),FCC PART 15 / CISPR22 ,GB9254.1	Class B
		Harmonic current	BS EN/EN61000-3-2,GB17625.1	Class A
		Voltage flicker	BS EN/EN61000-3-3	----
		BS EN/EN55035		
Electromagnetic compatibility immunity	Parameter	Standard	Test Level /Note	
	ESD	BS EN/EN61000-4-2	Level 4, 8KV air, Level 2, 4KV contact, criteria A	
	RF field susceptibility	BS EN/EN61000-4-3	Level 3, criteria A	
	EFT bursts	BS EN/EN61000-4-4	Level 3, criteria A	
	Surge susceptibility	BS EN/EN61000-4-5	Level 3, 1KV/L-N, 2KV/L/N-FG criteria A	
	Conducted susceptibility	BS EN/EN61000-4-6	Level 3, criteria A	
	Magnetic field immunity	BS EN/EN61000-4-8	Level 4, criteria A	
	Voltage dips and interruptions	BS EN/EN61000-4-11	>95% dip 0.5 periods, 30% dip 25 periods , >95% interruptions 250 periods	
OTHERS	MTBF	≥200Khrs MIL-HDBK-217F(25°C)		
	DIMENSION	230*127*40.5mm(L*W*H)		
	PACKING	1.3Kg; 9pcs/12.7Kg/0.66CUFT		
NOTE	<ol style="list-style-type: none"> <li>All parameters NOT specially mentioned are measured at 230VAC input, rated load and 25°C of ambient temperature.</li> <li>Ripple &amp; noise are measured at 20MHz of bandwidth by using a 12" twisted pair-wire terminated with a 0.1uF &amp; 47uF parallel capacitor.</li> <li>Tolerance: includes set up tolerance, line regulation and load regulation.</li> <li>Line regulation is measured from low line to high line at rated load.</li> <li>Load regulation is measured from 0% to 100% rated load</li> <li>Length of set up time is measured at cold first start, Turning ON/OFF the power supply very quickly may lead to increase of the set up time.</li> <li>The ambient temperature derating of 5°C/1000m is needed for operating altitude great than 2000m(6500ft).</li> <li>The power supply is considered a component which will be installed into a final equipment. All the EMC tests are been executed by mounting the unit on a 360mm*360mm metal plate with 1mm of thickness. The final equipment must be re-confirmed that it still meets EMC directives.</li> </ol>			

**Mechanical specification**



**Block diagram**



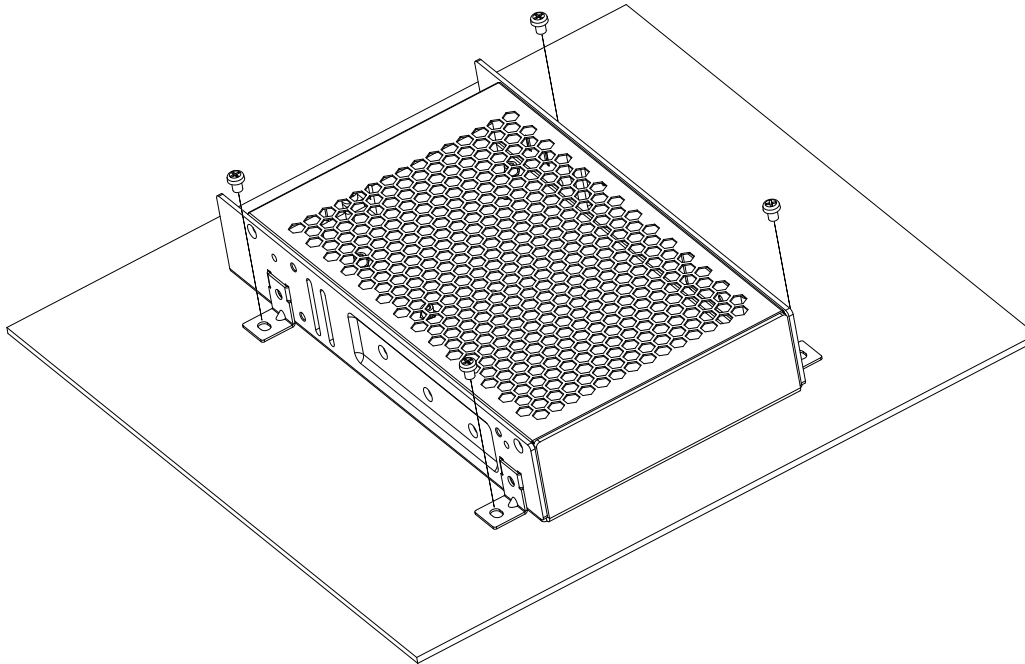


**Installation**

**1. Operate with additional aluminum plate**

In order to meet the 'derating curve' and 'static characteristics', LP-500(R) series must be installed onto an aluminum plate (L\*W\*T:300mm\*300mm\*3mm or the cabinet of the same size) on the bottom. The size of the suggested aluminum plate is shown as below. And for optimizing thermal performance, the aluminum plate must have an even and smooth surface (or coated with thermal grease), and LP-500(R) series must be firmly mounted at the center of the aluminum plate. There are two ways to fix it.

Method 1



Method 2

