SM600 series

600W single Output Switching Power Supply

Features:

- AC input 180~264VAC
- Withstand 300VAC surge input for 5 second
- Protections: Short circuit / Overload / Over voltage/ Over temperature
- Built-in cooling Fan ON-OFF control
- 1U low profile 40.5mm
- Forced air cooling by built-in DC fan
- 100% full load burn-in test
- LED indicator for power on
- High reliability
- 3 years warranty

Specification

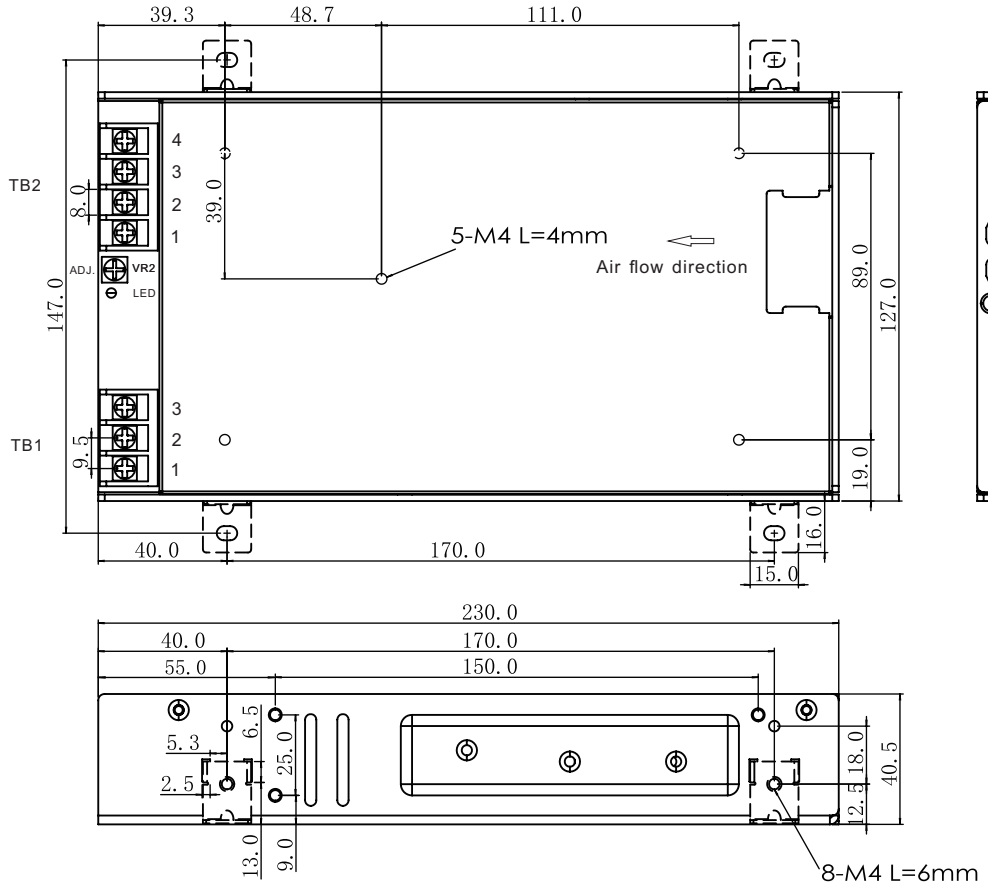
MODEL		SM-600-12	SM-600-24	SM-600-27	SM-600-36	SM-600-48
INPUT	VOLTAGE RANGE	180~264VAC 240~370Vdc(refer to 'static characteristic')				
	FREQUENCY RANGE	47~63Hz				
	EFFICIENCY(Typ.)	85%	87%	88%	88%	89%
	AC CURRENT(Typ.)	6.5A/230VAC				
	INRUSH CURRENT(Typ.)	40A/230VAC (cold start)				
	LEAKAGE CURRENT	<2mA/240VAC				
OUTPUT	DC VOLTAGE	12V	24V	27V	36V	48V
	RATED CURRENT	42A	25A	22.22A	16.66A	12.5A
	CURRENT RANGE	0~42A	0~25A	0~22.22A	0~16.66A	0~12.5A
	RATED POWER	504W	600W	600W	600W	600W
	RIPPLE&NOISE (max.)	100mVp-p	200mVp-p	200mVp-p	200mVp-p	200mVp-p
	VOLTAGE ADJ.RANGE	10.8~13.2V	22.8~26.4V	24~30V	34.2~39.6V	45.6~52.8V
	VOLTAGE TOLERANCE	±1%	±1%	±1%	±1%	±1%
	LINE REGULATION	±0.5%	±0.5%	±0.5%	±0.5%	±0.5%
	LOAD REGULATION	±1%	±1%	±1%	±1%	±0.5%
	SETUP, RISE TIME	3000ms,50ms/230VAC				
	HOLD UP TIME(Typ.)	10ms/230VAC				
PROTECTION	OVER LOAD	105%~140% rated output power				
		Protection type: constant current, recovers automatically after fault condition is removed				
	OVER VOLTAGE	13.8~17.4V	27.6~35V	30.6~38V	45~53V	56.6~66.2V
		Protection type: Hiccup mode, recovers automatically after fault condition is removed				
	OVER TEMPERATURE	Protection type: Shutdown, recovers automatically after temperature goes down				
FUNCTION	FAN ON/OFF	RTH2≥50℃ FAN ON, ≤40℃ FAN OFF				
ENVIRONIMENT	WORKING TEMP.,HUMIDITY	-20~+70℃ (Refer to "Derating curve"), 20~90%RH non-condensing				
	STORAGE TEMP.,HUMIDITY	-40~+85℃, 10~95%RH				
	TEMP. COEFFICIENT	±0.03%/℃ (0~50℃)				
	VIBRATION	10~500Hz, 2G 10min./1 cycle, each along X、Y、Z axes				

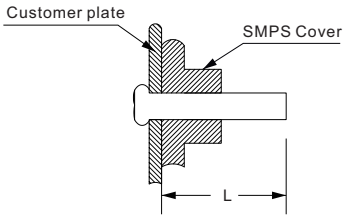
Safety and electromagnetic compatibility	Safety standards	Refer to UL62368-1,TUV EN62368-1,CCC GB4943.1		
	Withstand voltage and isolation resistance	I/P-O/P: 3KVac; 100MΩ / 500Vdc / 25℃ / 70%RH		
		I/P-FG: 2KVac; 100MΩ / 500Vdc / 25℃ / 70%RH		
		O/P-FG: 0.5KVac; 100MΩ / 500Vdc / 25℃ / 70%RH		
	Electromagnetic	**Parameter**	**Standard**	**Test Level / Note**
		Conducted emission	BS EN/EN55032(CISPR32),FCC PART 15 / CISPR22 ,GB9254.1	Class A
		Radiated emission	BS EN/EN55032(CISPR32),FCC PART 15 / CISPR22 ,GB9254.1	Class A
		Harmonic current	BS EN/EN61000-3-2,GB17625.1	Dos not meet
		Voltage flicker	BS EN/EN61000-3-3	----
	Electromagnetic compatibility immunity	BS EN/EN55035		
		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℃)		
	DIMENSION	230*127*40.5mm(L*W*H)		
	PACKING	1.3Kg; 9pcs/ 12.7Kg/ 0.66CUFT		

NOTE

1. All parameters NOT specially mentioned are measured at 230VAC input, rated load and 25℃ of ambient temperature.
2. Ripple & noise are measured at 20MHz of bandwidth by using a 12" twisted pair-wire terminated with a 0.1uF & 47uF parallel capacitor.
3. Tolerance: includes set up tolerance, line regulation and load regulation.
4. Line regulation is measured from low line to high line at rated load.
5. Load regulation is measured from 0% to 100% rated load
6. 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.
7. The ambient temperature derating of 5℃/1000m is needed for operating altitude great than 2000m(6500ft).
8. 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.

Mechanical specification

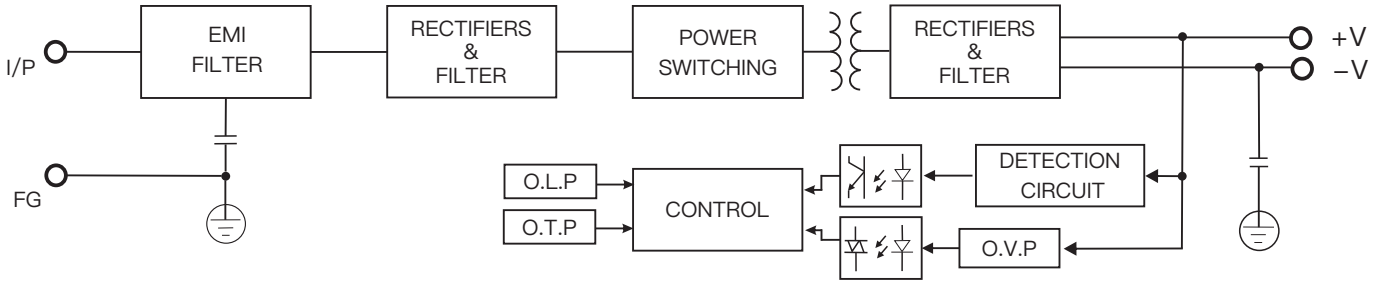




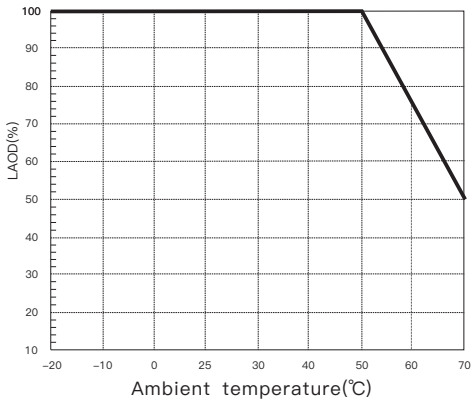
NOTE:
Unit: mm
ADJ:Output adjustable resistor
Torque:M3.5, 0.8N • m Max
TOL: ±1.00

	Pin No.	Assignment
TB1	1	AC/L
	2	AC/N
	3	FG
TB2	1~2	DC output –V
	3~4	DC output +V
VR2	Output voltage adjust	

Block diagram



Derating curve



Static characteristics