



CE EN 62368-1

Features:

- Universal AC input / Full range
- Withstand 300VAC surge input for 5 second
- No load power consumption < 0.3W
- Miniature size and 1U Low profile
- High operating temperature up to 70 °C
- Protections: Short circuit /Over load /Over voltage
- Cooling by free air convection
- Refer to IEC/EN 60335-1(PD3) and IEC/EN61558-1, 2,-16 For household appliances
- Operating altitude up to 5000 meters
- Withstand 5G vibration test
- High efficiency, long life and high reliability
- LED indicator for power on
- Over voltage category III
- 100% full load burn-in test
- 3 years warranty

Specification

MODEL		SM100-5	SM100-12	SM00-15	SM100-24	SM100-36	SM100-48
INPUT	VOLTAGE RANGE	85~264Vac 120~370Vdc(refer to 'static characteristic')					
	FREQUENCY RANGE	47~63Hz					
	EFFICIENCY(Typ.)	85%	87.5%	88.5%	90%	90.5%	91%
	AC CURRENT(Typ.)	1.9A/115Vac 1.2A/230Vac					
	INRUSH CURRENT(Typ.)	50A/230Vac (cold start)					
	LEAKAGE CURRENT	<0.75mA/240Vac					
OUTPUT	DC VOLTAGE	5V	12V	15V	24V	36V	48V
	RATED CURRENT	18A	8.5A	7A	4.5A	2.8A	2.3A
	CURRENT RANGE	0~18A	0~8.5A	0~7A	0~4.5A	0~2.8A	0~2.3A
	RATED POWER	90W	102W	105W	108W	100.8W	110.4W
	RIPPLE&NOISE(max.)	100mVp-p	120mVp-p	120mVp-p	150mVp-p	200mVp-p	200mVp-p
	VOLTAGE ADJ.RANGE	4. 5~5.5V	10.2~13.8V	13.5~18V	21.6~28.8V	32.4~39.6V	43.2~52.8V
	VOLTAGE TOLERANCE	±2%	±1%	±1%	±1%	±1%	±1%
	LINE REGULATION	±0.5%	±0.5%	±0.5%	±0.5%	±0.5%	±0.5%
	LOAD REGULATION	±1%	±0.5%	±0.5%	±0.5%	±0.5%	±0.5%
	SETUP, RISE TIME	500ms,30ms/230Vac 500ms,30ms/115Vac at full load					
HOLD UP TIME(Typ.)	55ms/230Vac 10ms/115Vac at full load						
PROTECTION	OVER LOAD	110%~150% rated output power Protection type: Hiccup mode, recovers automatically after fault condition is removed.					
	OVER VOLTAGE	5.75~6.75V	13.8~16.2V	18.8~21.8V	28.8~33.6V	41.4~48.6V	55.2~64.8V
ENVIRONMENT	WORKING TEMP	-30~+70°C (Refer to output load derating curve)					
	WORKING HUMIDITY	20~90% RH non-condensing					
	STORAGE TEMP, HUMIDITY	-40~+85°C, 10~95% RH non-condensing					
	TEMP. COEFFICIENT	±0.03%/°C (0~50°C)					
	VIBRATION	10~500Hz, 5G 10min./1 cycle, period for 60 min. each along X、Y、Z axes					
	OVER VOLTAGE CATEGORY	III; Refer to UL61558; EN50178; EN60664-1,EN62477-1; altitude up to 2000 meters					

Safety and electromagnetic compatibility	Safety standards	Refer to UL62368-1,TUV EN62368-1,CCC GB4943.1,IEC/EN 60335-1(PD3) and IEC/EN61558-1,-2,-16			
	Withstand voltage and isolation resistance	I/P-O/P: 4KVac; 100MΩ / 500Vdc / 25°C / 70%RH			
		I/P-FG: 2KVac; 100MΩ / 500Vdc / 25°C / 70%RH			
		O/P-FG: 1.25KVac; 100MΩ / 500Vdc / 25°C / 70%RH			
	Electromagnetic compatibility emission	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	----	
	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	≥700Khrs MIL-HDBK-217F(25°C)			
	DIMENSION	134*97*30mm(L*W*H)			
	PACKING	0.25Kg; 36pcs/ 10Kg/ 0.97CUFT			
NOTE	<p>1. All parameters NOT specially mentioned are measured at 230VAC input, rated load and 25°C of ambient temperature.</p> <p>2. Ripple & noise are measured at 20MHz of bandwidth by using a 12" twisted pair-wire terminated with a 0.1uF & 47uF parallel capacitor.</p> <p>3. Tolerance: includes set up tolerance, line regulation and load regulation.</p> <p>4. Line regulation is measured from low line to high line at rated load.</p> <p>5. Load regulation is measured from 0% to 100% rated load</p> <p>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.</p> <p>7. The ambient temperature derating of 5°C/1000m is needed for operating altitude great than 2000m(6500ft).</p> <p>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.</p>				

Mechanical specification

Customer plate
SMPS Cover

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

Position No.	Screw Size	L max	Torque max
1-2	M3	3mm	0.4N · m
3-5		5mm	

Screw Terminal			
Pin No.	Assignment	Pin No.	Assignment
1	AC/L	4,5	DC OUTPUT -
2	AC/N	6,7	DC OUTPUT +
3	FG		

Block diagram

