



CE EN 62368-1

## Features:

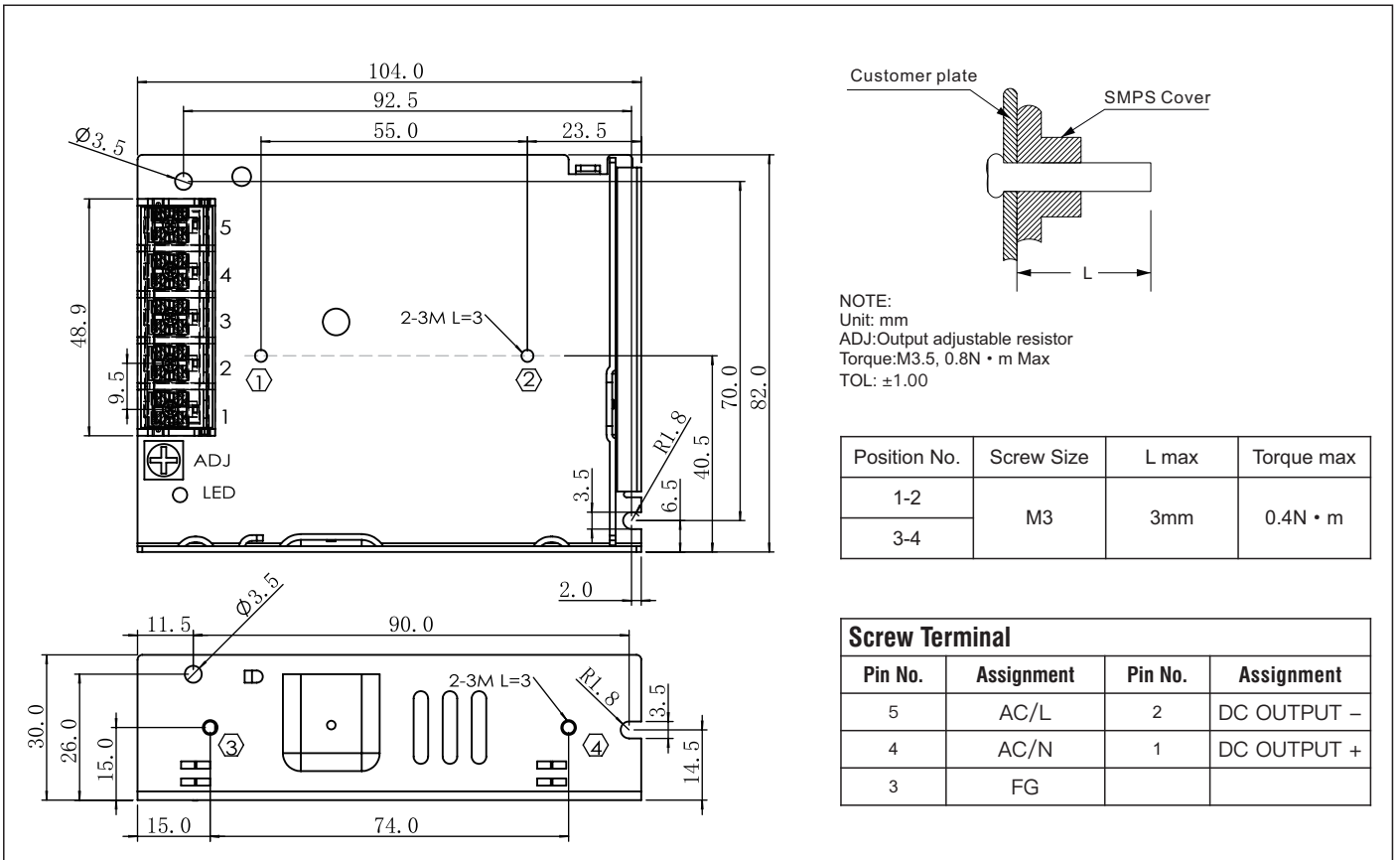
- Universal AC input / Full range
- Withstand 300VAC surge input for 5 second
- No load power consumption<0.2W
- Miniature size and 1U Low profile
- High operating temperature up to 70°C
- Protections: Short circuit /Over load /Over voltage
- Cooling by free air convection
- Refer to IEC/EN 60335-1(PD3) 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 categoryIII
- 100% full load burn-in test
- 3 years warranty

## Specification

MODEL		SM50-5	SM50-12	SM50-15	SM50-24	SM50-36	SM50-48
INPUT	VOLTAGE RANGE	85~264Vac(refer to 'static characteristic')					
	FREQUENCY RANGE	47~63Hz					
	EFFICIENCY(Typ.)	83%	86%	87%	88%	89%	90%
	AC CURRENT(Typ.)	0.95A/115Vac 0.65A/230Vac					
	INRUSH CURRENT(Typ.)	45A/230Vac (cold start)					
	LEAKAGE CURRENT	<0.75mA/240Vac					
OUTPUT	DC VOLTAGE	5V	12V	15V	24V	36V	48V
	RATED CURRENT	10A	4.2A	3.4A	2.2A	1.45A	1.1A
	CURRENT RANGE	0~10A	0~4.2A	0~3.4A	0~2.2A	0~1.45A	0~1.1A
	RATED POWER	50W	50.4W	51W	52.8W	52.2W	52.8W
	RIPPLE&NOISE(max.)	80mVp-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	1000ms,30ms/230Vac 2000ms,30ms/115Vac at full load					
	HOLD UP TIME(Typ.)	30ms/230Vac 12ms/115Vac at full load					
PROTECTION	OVER LOAD	110%~160% rated output power					
		Protection type: Hiccup mode, recovers automatically after fault condition is removed.					
	OVER VOLTAGE	5.75~6.75V	13.8~17.5V	18.8~21.8V	28.8~33.6V	41.4~48.6V	55.2~64.8V
ENVIRONMENT	Protection type:Shutdown o/p voltage , re-power on to recover						
	WORKING TEMP	-30~+70°C(Refer to '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	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	≥645Khrs MIL-HDBK-217F(25°C)		
	DIMENSION	104*82*30mm(L*W*H)		
	PACKING	0.23Kg; 60pcs/ 14.8Kg/ 1.03CUFT		
NOTE	1. All parameters NOT specially mentioned are measured at 230VAC input, rated load and 25°C 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°C/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



## Block diagram

