



Features:

- AC input 180~264VAC
- Protections: Short circuit / Overload / Over voltage / Over temperature
- Built-in cooling Fan ON-OFF control
- Withstand 300VAC surge input for 5 second
- Forced air cooling by built-in DC fan
- 100% full load burn-in test
- LED indicator for power on
- High reliability
- 3 years warranty
- Compliance to IEC/EN/UL 62368-1

Specification

MODEL		LS-450-5	LS-450-6.5	LS-450-12	LS-450-15	LS-450-24	LS-450-36	LS-450-48
INPUT	VOLTAGE RANGE	180~264Vac 240~370Vdc(refer to 'static characteristic')						
	FREQUENCY RANGE	47~63Hz						
	EFFICIENCY(Typ.)	84%	85%	85%	86%	87%	87.5%	88%
	AC CURRENT(Typ.)	5A/230Vac						
	INRUSH CURRENT(Typ.)	65A/230Vac (cold start)						
	LEAKAGE CURRENT	<2mA/240Vac						
OUTPUT	DC VOLTAGE	5V	6.5V	12V	15V	24V	36V	48V
	RATED CURRENT	70A	60A	37.5A	30A	18.8A	12.5A	9.4A
	CURRENT RANGE	0~70A	0~60A	0~37.5A	0~30A	0~18.8A	0~12.5A	0~9.4A
	RATED POWER	350W	390W	450W	450W	451.2W	450W	451.2W
	RIPPLE&NOISE (max.)	150mVp-p	150mVp-p	150mVp-p	150mVp-p	150mVp-p	150mVp-p	150mVp-p
	VOLTAGE ADJ.RANGE	4.5~5.5V	6~7.5V	10.2~13.8V	13.5~17.5V	21.6~28.5V	32.4~39.6V	43.2~52.8V
	VOLTAGE TOLERANCE	±3%	±2%	±1.5%	±1%	±1%	±1%	±1%
	LINE REGULATION	±0.5%	±0.5%	±0.5%	±0.5%	±0.5%	±0.5%	±0.5%
	LOAD REGULATION	±2%	±2%	±1%	±1%	±0.5%	±0.5%	±0.5%
	SETUP, RISE TIME	3000ms,50ms/230Vac						
	HOLD UP TIME(Typ.)	15ms/230Vac						
PROTECTION	OVER LOAD	105%~135% rated output power Protection type: 12V/15V/24V/36V/48V Constant current limiting, recovers automatically after fault condition is removed.. 5V/6.5V Hiccup mode (recovers after re-power on) or shutdown						
	OVER VOLTAGE	5.75~6.75V	9.4~11.3V	13.8~17V	18.2~22.5V	28.8~33.6V	41.4~46.8V	55.2~64.8V
	OVER TEMPERATURE	Protection type: Hiccup mode, recovers automatically after fault condition is removed						
FUNCTION	FAN ON/OFF CONTROL(Typ.)	RTH2≥50°C FAN ON, ≤40°C FAN OFF						
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, 5G 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 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	≥300Khrs MIL-HDBK-217F(25°C)		
	DIMENSION	215*115*30mm(L*W*H)		
	PACKING	0.75Kg; 15pcs/ 12.25Kg/ 0.77CUFT		
NOTE	<ol style="list-style-type: none"> All parameters NOT specially mentioned are measured at 230VAC input, rated load and 25°C of ambient temperature. Ripple & noise are measured at 20MHz of bandwidth by using a 12" twisted pair-wire terminated with a 0.1uF & 47uF parallel capacitor. Tolerance: includes set up tolerance, line regulation and load regulation. Line regulation is measured from low line to high line at rated load. Load regulation is measured from 0% to 100% rated load 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. The ambient temperature derating of 5°C/1000m is needed for operating altitude great than 2000m(6500ft). 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

Top View Dimensions:
 Total width: 215.0 mm
 Internal width: 150.0 mm
 Right side offset: 32.5 mm
 Left side offset: 36.5 mm
 Total height: 115.0 mm
 Bottom offset: 50.0 mm
 Right side offset: 47.0 mm
 Left side offset: 32.5 mm
 Left side offset: 86.9 mm
 Left side offset: 9.5 mm
 Left side offset: 8.1 mm
 Left side offset: 6.9 mm
 Left side offset: 12.8 mm

Side View Dimensions:
 Total length: 150.0 mm
 Right side offset: 32.5 mm
 Right side offset: 2.0 mm
 Right side offset: 6.5 mm
 Right side offset: 6.5 mm
 Right side offset: 12.5 mm
 Total height: 30.0 mm

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

Customer plate and SMPS Cover:
 A cross-sectional view showing the customer plate and SMPS cover with a screw of length L.

Table 1: Screw Specifications

Position No.	Screw Size	L max	Torque max
⑤ - ⑧	M4	3mm	0.9N · m
① - ④	M4	5mm	0.9N · m

Table 2: Screw Terminal Assignments

Pin No.	Assignment	Pin No.	Assignment
1	AC/L	4,5,6	DC OUTPUT -
2	AC/N	7,8,9	DC OUTPUT +
3	FG		

Air flow direction: Indicated by a downward arrow.

Block diagram

