250W Single Output with PFC Function

HSP-250 series



■ Features :

- Universal AC input / Full range
- Built-in active PFC function, PF>0.95
- High efficiency up to 87%
- Protections: Short circuit / Overload / Over voltage / Over temperature
- Forced air cooling by built-in DC fan
- 1U low profile 41mm
- Conformal coated
- Built-in cooling fan ON-OFF control
- Built-in remote sense function
- 3 years warranty

SPECIFICATION

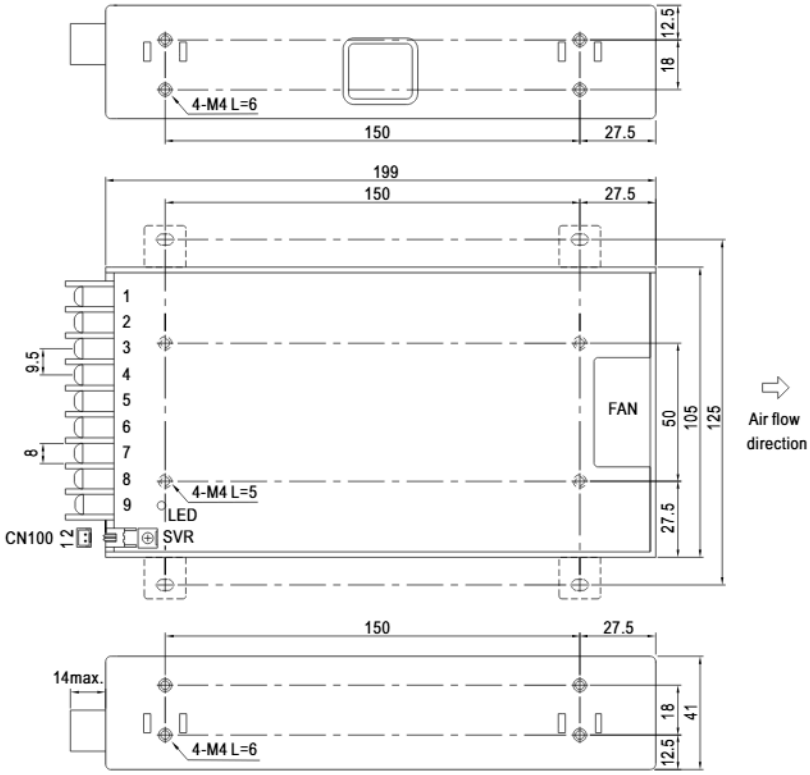
MODEL		HSP-250-2.5	HSP-250-3.6	HSP-250-5
OUTPUT	DC VOLTAGE	2.5V	3.6V	5V
	RATED CURRENT	50A	50A	50A
	CURRENT RANGE	0 ~ 50A	0 ~ 50A	0 ~ 50A
	RATED POWER	125W	180W	250W
	RIPPLE & NOISE (max.) Note.2	100mVp-p	100mVp-p	100mVp-p
	VOLTAGE ADJ. RANGE	2.3 ~ 2.8V	3.24 ~ 3.96V	4.5 ~ 5.5V
	VOLTAGE TOLERANCE Note.3	±2.0%	±2.0%	±2.0%
	LINE REGULATION	±0.5%	±0.5%	±0.5%
	LOAD REGULATION	±1.0%	±1.0%	±1.0%
	SETUP, RISE TIME	3000ms, 50ms/230VAC 3000ms, 50ms/115VAC at full load		
	HOLD UP TIME (Typ.)	16ms/230VAC 16ms/115VAC at full load		
INPUT	VOLTAGE RANGE Note.5	85 ~ 264VAC 120 ~ 370VDC		
	FREQUENCY RANGE	47 ~ 63Hz		
	POWER FACTOR (Typ.)	PF>0.95/230VAC PF>0.98/115VAC at full load		
	EFFICIENCY (Typ.)	79%	83%	87%
	AC CURRENT (Typ.)	1.5A/115VAC 0.75A/230VAC	2A/115VAC 1A/230VAC	2.8A/115VAC 1.4A/230VAC
	INRUSH CURRENT (Typ.)	35A/115VAC 70A/230VAC		
	LEAKAGE CURRENT	<1.2mA / 240VAC		
PROTECTION	OVERLOAD	105 ~ 135% rated output power		
		Protection type : Hiccup mode, recovers automatically after fault condition is removed		
	OVER VOLTAGE	2.88 ~ 3.38V	4.14 ~ 4.86V	5.75 ~ 6.75V
		Protection type : Shut down o/p voltage, re-power on to recover		
	OVER TEMPERATURE	80℃ ±5℃ (TSW2) detect on heatsink of power transistor ; 80℃ ±5℃ (TSW1) detect on heatsink of output transistor		
		Protection type : Shut down o/p voltage, recovers automatically after temperature goes down		
FUNCTION	FAN CONTROL	RTH3≧60±10℃ Fan on ; RTH3≦40±10℃ Fan off		
ENVIRONMENT	WORKING TEMP.	-40 ~ +70℃ (Refer to output load derating curve)		
	WORKING HUMIDITY	20 ~ 90% RH non-condensing		
	STORAGE TEMP., HUMIDITY	-40 ~ +85℃, 10 ~ 95% RH		
	TEMP. COEFFICIENT	±0.03%/℃ (0 ~ 50℃)		
	VIBRATION	10 ~ 500Hz, 2G 10min./1cycle, 60min. each along X, Y, Z axes		
SAFETY & EMC (Note 4)	SAFETY STANDARDS	UL60950-1, TUV EN60950-1 approved		
	WITHSTAND VOLTAGE	I/P-O/P:3KVAC I/P-FG:1.5KVAC O/P-FG:0.5KVAC		
	ISOLATION RESISTANCE	I/P-O/P, I/P-FG, O/P-FG:100M Ohms / 500VDC / 25℃ / 70% RH		
	EMI CONDUCTION & RADIATION	Compliance to EN55022 (CISPR22) Class B		
	HARMONIC CURRENT	Compliance to EN61000-3-2,-3		
	EMS IMMUNITY	Compliance to EN61000-4-2,3,4,5,6,8,11, ENV50204, EN55024, EN61000-6-2, heavy industry level, criteria A		
OTHERS	MTBF	179.7K hrs min. MIL-HDBK-217F (25℃)		
	DIMENSION	199*105*41mm (L*W*H)		
	PACKING	0.97Kg;16pcs/16.5Kg/0.87CUFT		

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. The power supply is considered a component which will be installed into a final equipment. The final equipment must be re-confirmed that it still meets EMC directives.
5. Derating may be needed under low input voltages. Please check the derating curve for more details.

■ Mechanical Specification

Case No.980B Unit:mm



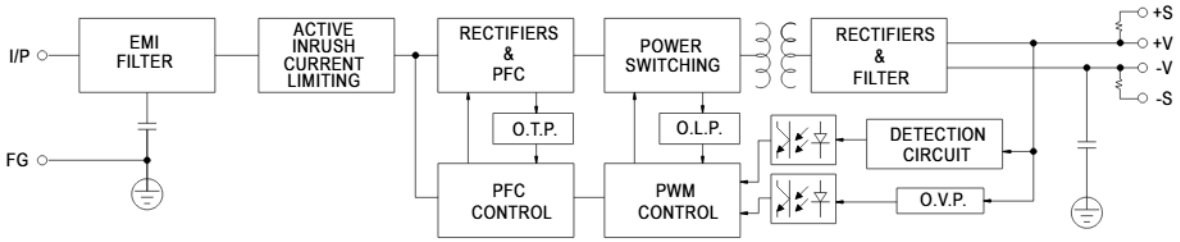
Terminal Pin No. Assignment

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

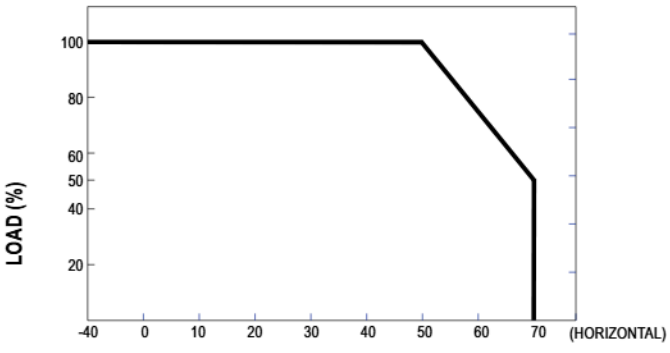
Remote Sense (CN100) : JST B-XH or equivalent

Pin No.	Assignment	Mating Housing	Terminal
1	+S	JST XHP or equivalent	JST SXH-001T or equivalent
2	-S		

■ Block Diagram

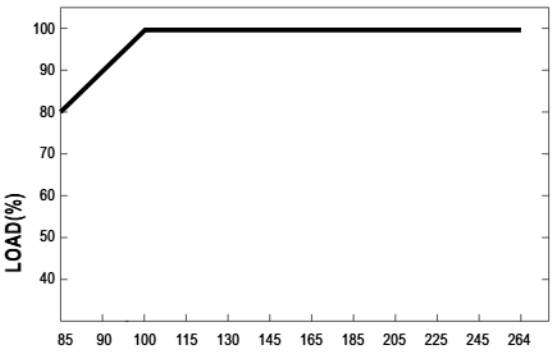


■ Derating Curve



AMBIENT TEMPERATURE (℃)

■ Output Derating VS Input Voltage



INPUT VOLTAGE (V) 60Hz