



# 150W Single Output with PFC Function

# HSP-150 series



### ■ Features :

- Universal AC input / Full range
- Withstand 300VAC surge input for 5 seconds
- Built in active PFC compliance to EN61000-3-2 class C
- High efficiency up to 90%(typ.)
- Protections: Short circuit / Overload / Over voltage / Over temperature
- Cooling by free air convection
- Low profile:32mm
- ZVS technology to reduce power dissipation
- Built in remote sense
- LED indicator for power on
- 3 years warranty

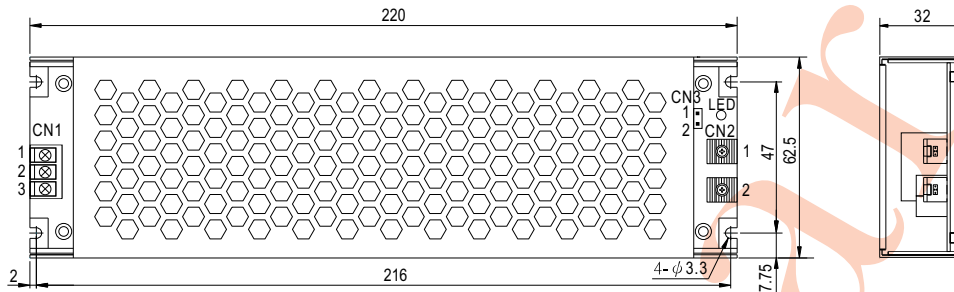


### SPECIFICATION

MODEL	HSP-150-2.5	HSP-150-3.8	HSP-150-5	
OUTPUT	DC VOLTAGE	2.5V	3.8V	5V
	RATED CURRENT	30A	30A	30A
	CURRENT RANGE(convection)	0 ~ 30A	0 ~ 30A	0 ~ 30A
	RATED POWER(convection)	100W	152W	150W
	RIPPLE & NOISE (max.) Note.2	80mVp-p	100mVp-p	100mVp-p
	VOLTAGE ADJ. RANGE	2.25~2.75V	3.4~4.2V	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	2000ms, 100ms/230VAC    3000ms, 100ms/115VAC at full load		
HOLD UP TIME (Typ.)	16ms/230VAC    16ms/115VAC at full load			
INPUT	VOLTAGE RANGE Note.4	90 ~ 264VAC    127 ~ 370VDC		
	FREQUENCY RANGE	47 ~ 63Hz		
	POWER FACTOR (Typ.)	PF ≒ 0.95/230VAC	PF ≒ 0.98/115VAC at full load	PF ≒ 0.9/230VAC at 50%~100% load
	EFFICIENCY (Typ.)	80%	86%	90%
	AC CURRENT (Typ.)	2A/115VAC    1A/230VAC		
	INRUSH CURRENT (Typ.)	Cold start 70A/230VAC		
	LEAKAGE CURRENT	<0.5mA / 240VAC		
PROTECTION	OVERLOAD	105~150% rated output power Protection type : Hiccup mode, recovers automatically after fault condition is removed		
	SHORT CIRCUIT	Protection type : Hiccup mode, recovers automatically after fault condition is removed		
	OVER VOLTAGE	2.9 ~ 3.4V	4.3 ~ 5.3V	5.7 ~ 7.0V
	OVER TEMPERATURE	100°C ±10°C (RTH2) Protection type : Shut down o/p voltage, recovers automatically after fault condition is removed		
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		
	TEMP. COEFFICIENT	±0.03%/°C (0 ~ 60°C)		
	VIBRATION	10 ~ 500Hz, 2G 10min./1cycle, 60min. each along X, Y, Z axes		
SAFETY & EMC (Note 4)	SAFETY STANDARDS	Design refer to IEC60950-1, UL60950-1, EN60950-1		
	WITHSTAND VOLTAGE	I/P-O/P:3.0KVAC    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°C / 70%RH		
	EMI CONDUCTION & RADIATION	Compliance to EN55022 (CISPR22) Class B, EN55015		
	HARMONIC CURRENT	Compliance to EN61000-3-2, CLASS C (≒ 60% load), EN61000-3-3		
OTHERS	EMC IMMUNITY	Compliance to EN61000-4-2, 3, 4, 5, 6, 8, 11; ENV50204, EN61547, EN55024, light industry level (surge 4KV), criteria A		
	MTBF	K hrs min.    MIL-HDBK-217F (25°C)		
	DIMENSION	220*62.5*32mm (L*W*H)		
NOTE	PACKING			
		<p>1. All parameters NOT specially mentioned are measured at 230VAC input, rated load and 25°C of ambient temperature.</p> <p>2. Ripple &amp; noise are measured at 20MHz of bandwidth by using a 12" twisted pair-wire terminated with a 0.1uf &amp; 47uf parallel capacitor.</p> <p>3. Tolerance : includes set up tolerance, line regulation and load regulation.</p> <p>4. Derating may be needed under low input voltages. Please check the static characteristics for more details.</p> <p>5. 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.</p>		

### Mechanical Specification

Unit:mm



AC Input Terminal(CN1) pin NO. Assignment

Pin No.	Assignment	Terminal
1	AC/L	T21-BM10-03
2	AC/N	
3	FG $\perp$	

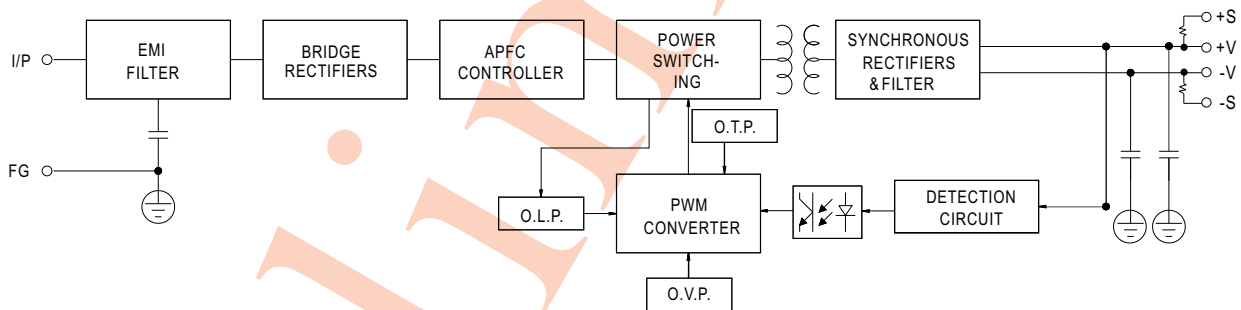
Remote sense pin(CN3):JS-2001-02 or equivalent

Pin No.	Assignment	Mating Housing	Terminal
1	-S	JS-1001-02 or equivalent	JS-2001-02 or equivalent
2	+S		JS-2001-02 or equivalent

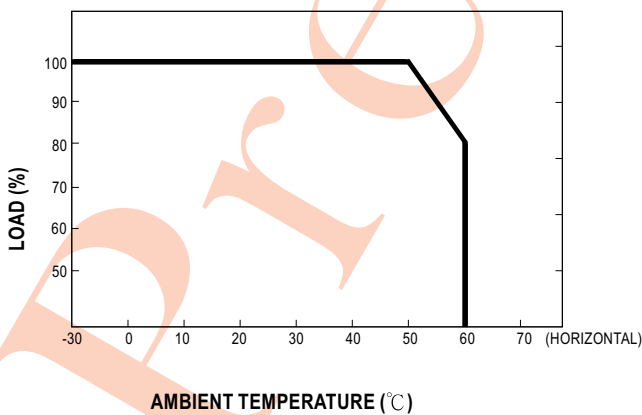
DC Output Terminal(CN2) pin NO. Assignment

Pin No.	Assignment	Terminal
1	-V	CPB-7M5
2	+V	

### Block Diagram



### Derating Curve



### Static Characteristics

