



## 150W Single Output with PFC Function

## SP-150 series



## ■ Features :

- Universal AC input / Full range
- Built-in active PFC function, PF>0.93
- Protections: Short circuit / Overload / Over voltage / Over temperature
- Built-in constant current limiting circuit
- Remote ON-OFF control(Optional)
- LED indicator for power on
- 100% full load burn-in test
- Fixed switching frequency at PFC:67KHz PWM:134KHz
- 3 years warranty



## SPECIFICATION

MODEL		SP-150-3.3	SP-150-5	SP-150-7.5	SP-150-12	SP-150-13.5	SP-150-15	SP-150-24	SP-150-27	SP-150-48	
OUTPUT	DC VOLTAGE	3.3V	5V	7.5V	12V	13.5V	15V	24V	27V	48V	
	RATED CURRENT	30A	30A	20A	12.5A	11.2A	10A	6.3A	5.6A	3.2A	
	CURRENT RANGE	0 ~ 30A	0 ~ 30A	0 ~ 20A	0 ~ 12.5A	0 ~ 11.2A	0 ~ 10A	0 ~ 6.3A	0 ~ 5.6A	0 ~ 3.2A	
	RATED POWER	99W	150W	150W	150W	151.2W	150W	150W	151.2W	153.6W	
	RIPPLE & NOISE (max.) Note.2	100mVp-p	100mVp-p	100mVp-p	100mVp-p	100mVp-p	100mVp-p	150mVp-p	150mVp-p	250mVp-p	
	VOLTAGE ADJ. RANGE	3.14 ~ 3.63V	4.75 ~ 5.5V	7.13 ~ 8.25V	11.4 ~ 13.2V	12.8 ~ 14.9V	14.3 ~ 16.5V	22.8 ~ 26.4V	25.7 ~ 29.7V	45.6 ~ 52.8V	
	VOLTAGE TOLERANCE Note.3	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	1.0%	1.0%	1.0%	
	LINE REGULATION	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	
	LOAD REGULATION	1.0%	1.0%	1.0%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	
	SETUP, RISE TIME	600ms, 30ms at full load									
HOLD UP TIME (Typ.)	20ms at full load										
INPUT	VOLTAGE RANGE Note.5	85 ~ 264VAC		120 ~ 370VDC							
	FREQUENCY RANGE	47 ~ 63Hz									
	POWER FACTOR (Typ.)	PF>0.93/230VAC					PF>0.98/115VAC at full load				
	EFFICIENCY (Typ.)	67%	75%	79%	80%	80%	81%	83%	84%	84%	
	AC CURRENT (Typ.)	2.5A/115VAC		1.2A/230VAC							
	INRUSH CURRENT (Typ.)	COLD START 40A/230VAC									
	LEAKAGE CURRENT	<2mA / 240VAC									
PROTECTION	OVERLOAD	105 ~ 150% rated output power Protection type : Constant current limiting, recovers automatically after fault condition is removed									
	OVER VOLTAGE	3.63 ~ 4.46V	5.5 ~ 6.75V	8.25 ~ 10.13V	13.2 ~ 16.2V	14.85 ~ 18.2V	16.5 ~ 20.25V	26.4 ~ 32.4V	29.7 ~ 36.45V	52.8 ~ 64.8V	
	OVER TEMPERATURE	95°C (TSW1 : detect on heatsink of power transistor) Protection type : Shut down o/p voltage, recovers automatically after temperature goes down									
FUNCTION	REMOTE CONTROL(OPTION)	CN1:4 ~ 10VDC POWER ON, <0 ~ 0.8VDC POWER OFF									
ENVIRONMENT	WORKING TEMP.	-10 ~ +60°C (Refer to output load derating curve)									
	WORKING HUMIDITY	20 ~ 90% RH non-condensing									
	STORAGE TEMP., HUMIDITY	-20 ~ +85°C, 10 ~ 95% RH									
	TEMP. COEFFICIENT	0.05%/°C (0 ~ 50°C)									
	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									
	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, light industry level, criteria A									
OTHERS	MTBF	191.2K hrs min. MIL-HDBK-217F (25°C)									
	DIMENSION	199*99*50mm (L*W*H)									
	PACKING	0.76Kg; 20pcs/16.4Kg/1.28CUFT									
NOTE	<ol style="list-style-type: none"> <li>1. All parameters NOT specially mentioned are measured at 230VAC input, rated load and 25°C of ambient temperature.</li> <li>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.</li> <li>3. Tolerance : includes set up tolerance, line regulation and load regulation.</li> <li>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.</li> <li>5. Derating may be needed under low input voltages. Please check the derating curve for more details.</li> </ol>										

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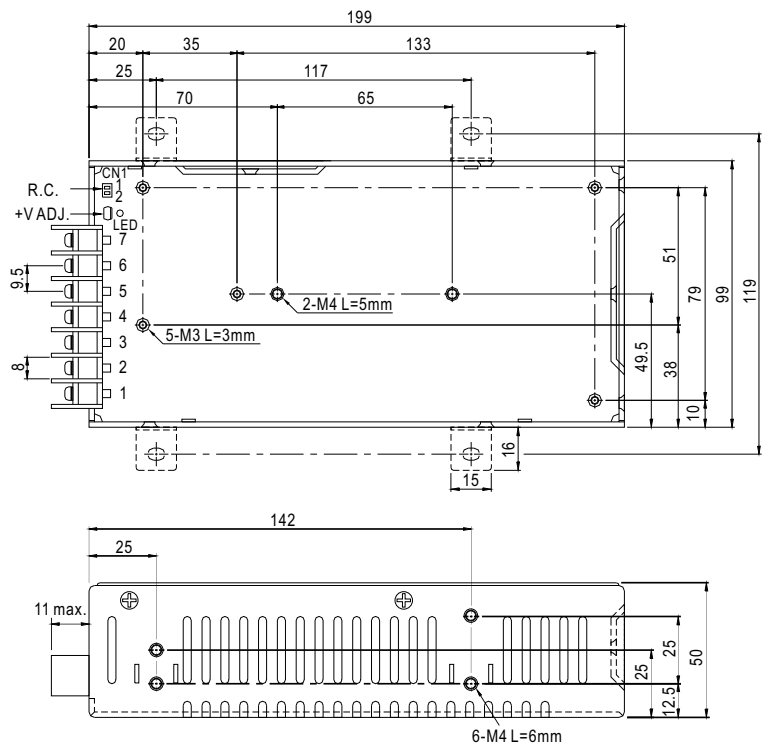


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■ Mechanical Specification

Case No. 916A Unit:mm



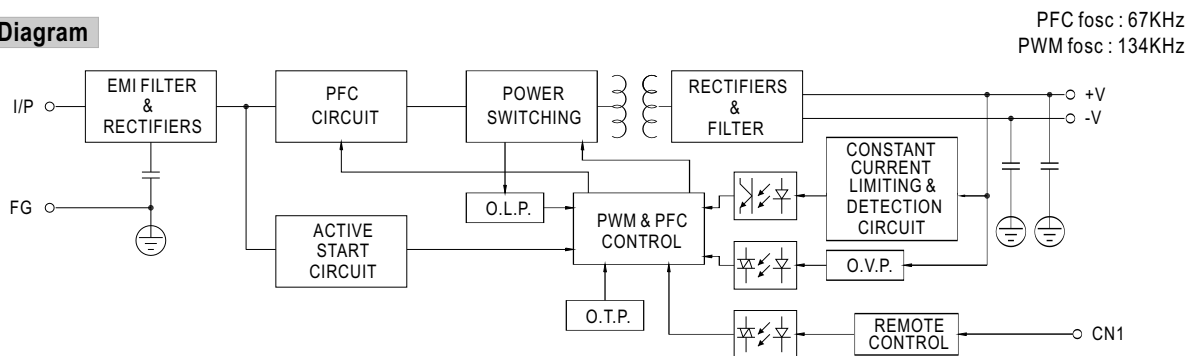
Terminal Pin No. Assignment

Pin No.	Assignment	Pin No.	Assignment
1	AC/L	4,5	DC OUTPUT -V
2	AC/N	6,7	DC OUTPUT +V
3	FG $\perp$		

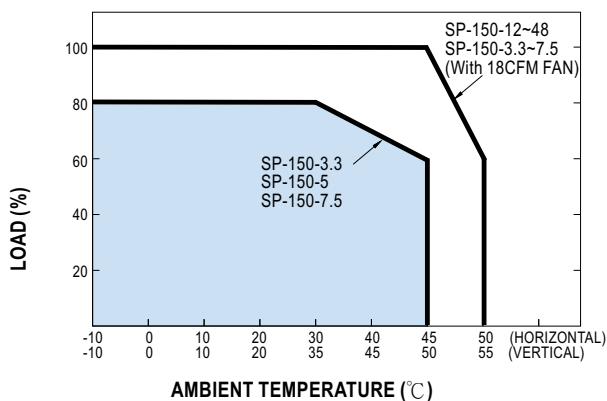
Remote ON/OFF(CN1):JST S2B-XH or equivalent(optional)

Pin No.	Assignment	Mating Housing	Terminal
1	RC+	JST XHP or equivalent	JST SXH-001T-P0.6 or equivalent
2	RC-		

■ Block Diagram



■ Derating Curve



■ Output Derating VS Input Voltage

