

# TOTAL POWER INT'L

320W Single Output with PFC Function

## SP-320 series



### ■ Features :

- Universal AC input / Full range
- Built-in active PFC function, PF>0.95
- Protections: Short circuit/Over load/Over voltage/Over temperature
- Forced air cooling by built-in DC Fan
- Built-in fan speed control
- Fixed switching frequency at 100KHz
- 3 years warranty

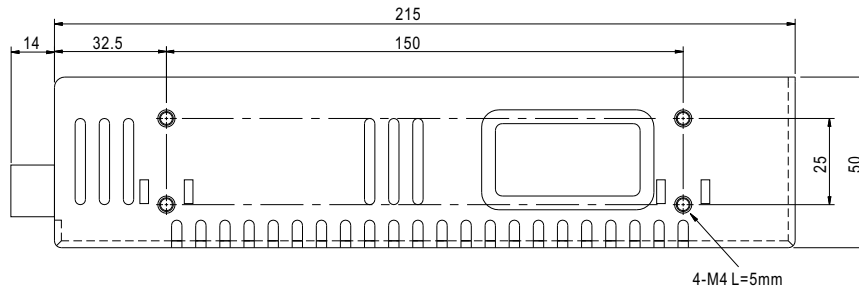
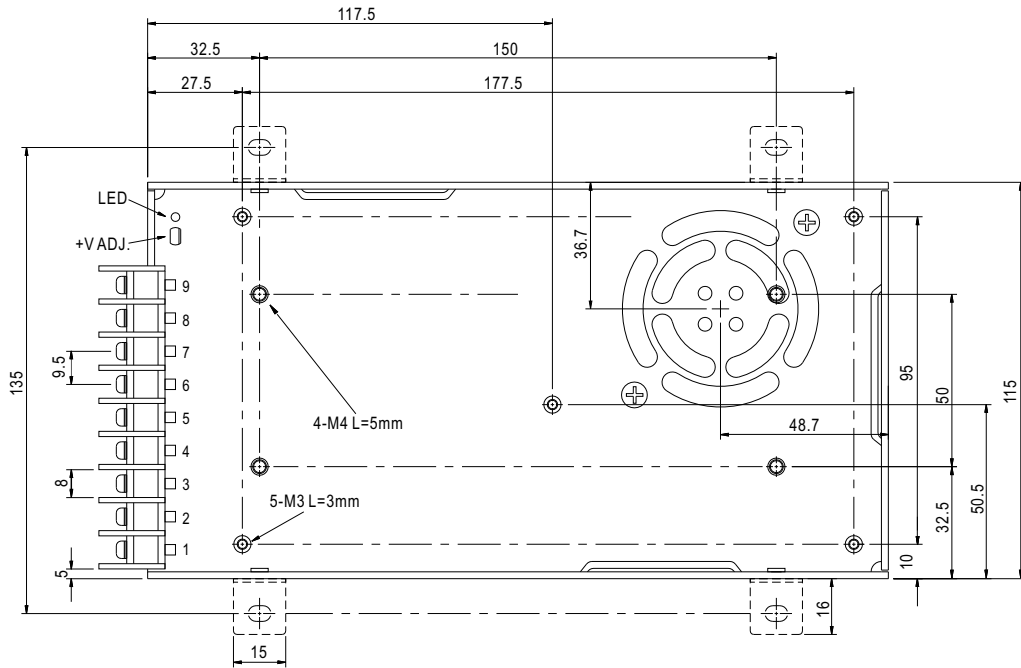


### SPECIFICATION

MODEL	SP-320-5	SP-320-7.5	SP-320-12	SP-320-13.5	SP-320-15	SP-320-24	SP-320-27	SP-320-48	
OUTPUT	DC VOLTAGE	5V	7.5V	12V	13.5V	15V	24V	27V	48V
	RATED CURRENT	55A	40A	25A	22A	20A	13A	11.7A	6.7A
	CURRENT RANGE	0 ~ 60A	0 ~ 40A	0 ~ 25A	0 ~ 22A	0 ~ 20A	0 ~ 13A	0 ~ 11.7A	0 ~ 6.7A
	RATED POWER	275W	300W	300W	297W	300W	312W	315.9W	321.6W
	RIPPLE & NOISE (max.) Note.2	150mVp-p	150mVp-p	150mVp-p	150mVp-p	150mVp-p	150mVp-p	200mVp-p	240mVp-p
	VOLTAGE ADJ. RANGE	4.5 ~ 5.5V	6 ~ 9V	10 ~ 13.2V	12 ~ 15V	13.5 ~ 18V	20 ~ 26.4V	26 ~ 32V	41 ~ 56V
	VOLTAGE TOLERANCE Note.3	±2.0%	±2.0%	±1.0%	±1.0%	±1.0%	±1.0%	±1.0%	±1.0%
	LINE REGULATION	±0.5%	±0.5%	±0.3%	±0.3%	±0.3%	±0.2%	±0.2%	±0.2%
	LOAD REGULATION	±1.0%	±1.0%	±0.5%	±0.5%	±0.5%	±0.5%	±0.5%	±0.5%
SETUP, RISE, HOLD TIME	800ms, 50ms, 16ms/230VAC      2500ms, 50ms, 16ms/115VAC at full load								
INPUT	VOLTAGE RANGE	88 ~ 264VAC      120 ~ 370VDC							
	FREQUENCY RANGE	47~63Hz							
	POWER FACTOR	PF>0.95/230VAC      PF>0.98/115VAC at full load							
	EFFICIENCY (Typ.)	79%	83%	86%	86%	86%	87%	88%	89%
	AC CURRENT	5A/115VAC      2.5A/230VAC							
	INRUSH CURRENT (max.)	22A/115VAC      40A/230VAC							
	LEAKAGE CURRENT	<1mA/ 240VAC							
PROTECTION	OVER LOAD	105 ~ 135% rated output power Protection type : Hiccup mode, recovers automatically after fault condition is removed							
	OVER VOLTAGE	5.75 ~ 6.75V	9.4 ~ 10.9V	13.8 ~ 16.2V	15.5 ~ 18.2V	18 ~ 21V	27.6 ~ 32.4V	33.7 ~ 39.2V	57.6 ~ 67.2V
	OVER TEMPERATURE	80°C ±5°C (70°C ±5°C 5V only) (TSW1 : Detect on heatsink of power transistor) Protection type : Shut down o/p voltage, recovers automatically after temperature goes down							
ENVIRONMENT	WORKING TEMP.	-20 ~ +65°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 ~ 50°C)							
	VIBRATION	10 ~ 500Hz, 2G 10min./1cycle, 60min. each along X, Y, Z axes							
SAFETY & EMC (Note 4)	SAFETY STANDARDS	UL60950, TUV EN60950 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	207K hrs min.      MIL-HDBK-217F (25°C)							
	DIMENSION	215*115*50mm (L*W*H)							
	PACKING	1.2Kg; 12pcs / 14.4Kg / 0.98CUFT							
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> </ol>								

**Mechanical Specification**

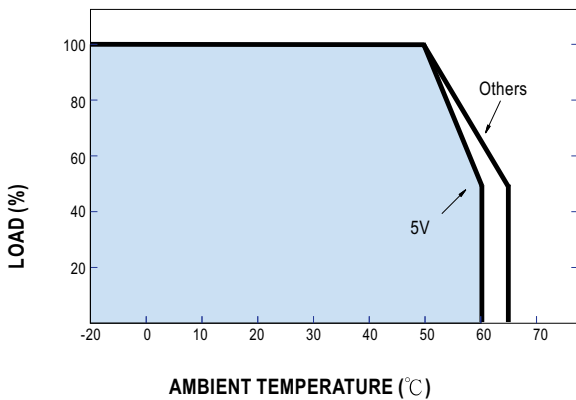
Case No. 912 Unit:mm



Terminal pin number assignment :

Pin No.	Assignment	Pin No.	Assignment
1	AC/L	4-6	DC OUTPUT -V
2	AC/N	7-9	DC OUTPUT +V
3	FG $\perp$		

**Derating Curve**



**Static Characteristics (5V)**

