



500W Single Output with PFC Function

SP-500 series



■ Features :

- Universal AC input / Full range
- Built-in active PFC function, PF>0.95
- Protections: Short circuit / Overload/ Over voltage / Over temperature
- Forced air cooling by built-in DC fan
- Built-in cooling Fan ON-OFF control
- Built-in remote ON-OFF control
- Built-in remote sense function
- Fixed switching frequency at 110KHz
- 3 years warranty



SPECIFICATION

MODEL	SP-500-12	SP-500-13.5	SP-500-15	SP-500-24	SP-500-27	SP-500-48	
OUTPUT	DC VOLTAGE	12V	13.5V	15V	24V	27V	48V
	RATED CURRENT	40A	36A	32A	20A	18A	10A
	CURRENT RANGE	0 ~ 40A	0 ~ 36A	0 ~ 32A	0 ~ 20A	0 ~ 18A	0 ~ 10A
	RATED POWER	480W	486W	480W	480W	486W	480W
	RIPPLE & NOISE (max.) Note.2	240mVp-p	240mVp-p	240mVp-p	240mVp-p	200mVp-p	300mVp-p
	VOLTAGE ADJ. RANGE	10 ~ 13.2V	12 ~ 15V	13.5 ~ 18V	20 ~ 26.4V	24 ~ 30V	41 ~ 56V
	VOLTAGE TOLERANCE Note.3	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%
	LINE REGULATION	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%
	LOAD REGULATION	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%
	SETUP, RISE TIME	1500ms, 50ms at full load					
HOLD UP TIME (Typ.)	24ms at full load						
INPUT	VOLTAGE RANGE Note.5	88 ~ 264VAC	124 ~ 370VDC				
	FREQUENCY RANGE	47 ~ 63Hz					
	POWER FACTOR (Typ.)	PF>0.95/230VAC	PF>0.95/115VAC	at full load			
	EFFICIENCY(Typ.)	84%	84%	83%	85.5%	86.5%	87%
	AC CURRENT (Typ.)	7A/115VAC	3.5A/230VAC				
	INRUSH CURRENT (Typ.)	18A/115VAC	36A/230VAC				
	LEAKAGE CURRENT	<3.5mA/240VAC					
PROTECTION	OVERLOAD	105 ~ 135% rated output power Protection type : Fold back current limiting, recovers automatically after fault condition is removed					
	OVER VOLTAGE	13.8 ~ 16.2V	15.5 ~ 18.2V	18 ~ 21V	27.6 ~ 32.4V	31 ~ 36.5V	57.6 ~ 67.2V
		Protection type : Hiccup mode, recovers automatically after fault condition is removed					
	FAN CONTROL, O.T.P.	RTH1 or RTH2 $\geq 50^{\circ}\text{C}$ FAN ON, $\leq 45^{\circ}\text{C}$ FAN OFF, $\geq 70^{\circ}\text{C}$ output shutdown					
FUNCTION	REMOTE CONTROL	RC+/RC-: Short = power on ; Open = power off					
ENVIRONMENT	WORKING TEMP.	-10 ~ +50 $^{\circ}\text{C}$ (Refer to output load derating curve)					
	WORKING HUMIDITY	20 ~ 90% RH non-condensing					
	STORAGE TEMP., HUMIDITY	-20 ~ +85 $^{\circ}\text{C}$, 10 ~ 95% RH					
	TEMP. COEFFICIENT	0.03%/ $^{\circ}\text{C}$ (0 ~ 50 $^{\circ}\text{C}$)					
	VIBRATION	10 ~ 500Hz, 2G 10min./1cycle, period for 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, light industry level, criteria A					
OTHERS	MTBF	133.4K hrs min. MIL-HDBK-217F (25 $^{\circ}\text{C}$)					
	DIMENSION	170*120*93mm (L*W*H)					
	PACKING	1.9Kg; 8pcs/15.5Kg/1.06CUFT					
NOTE	<ol style="list-style-type: none"> 1. All parameters NOT specially mentioned are measured at 230VAC input, rated load and 25$^{\circ}\text{C}$ 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. 						

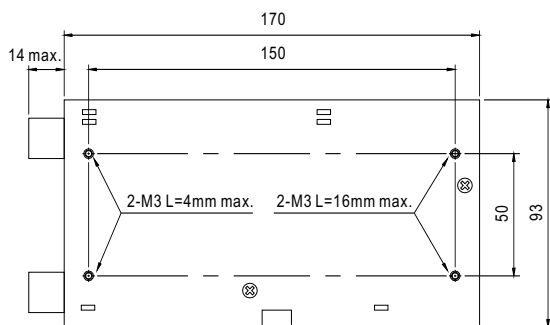
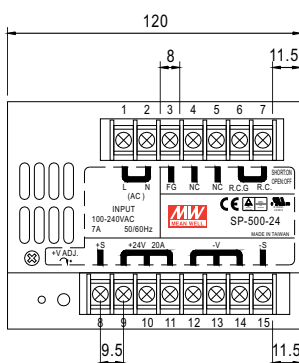
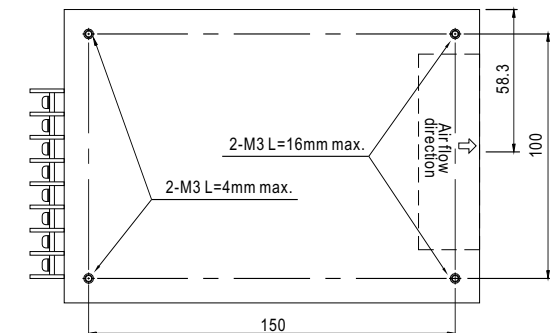


500W Single Output with PFC Function

SP-500 series

Mechanical Specification

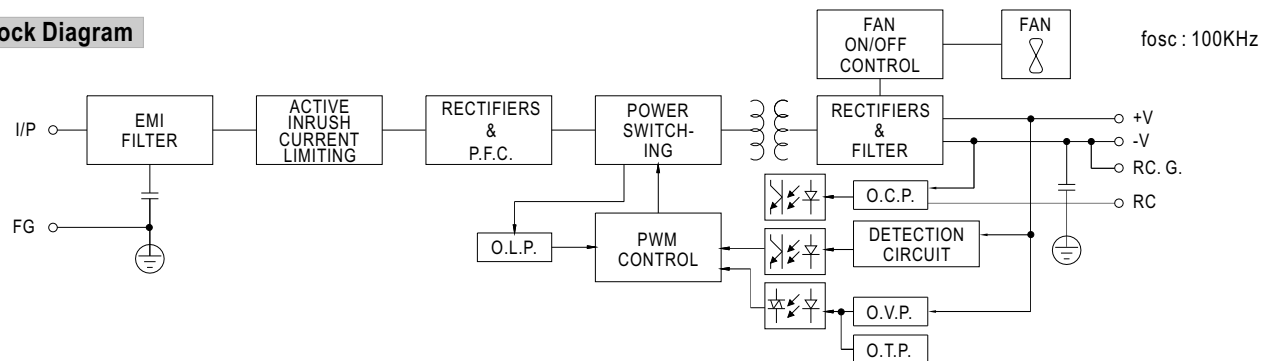
Case No. 910 Unit:mm



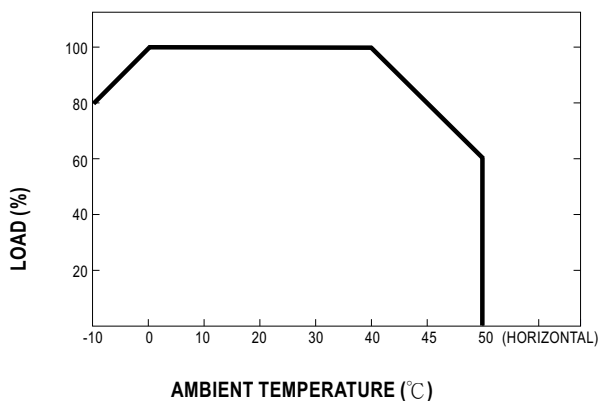
Terminal Pin No. Assignment

Pin No.	Assignment	Pin No.	Assignment
1	AC/L	7	R.C.
2	AC/N	8	+S
3	FG	9~11	DC OUTPUT +V
4,5	NC	12~14	DC OUTPUT -V
6	R.C.G	15	-S

Block Diagram



Derating Curve



Output Derating VS Input Voltage

