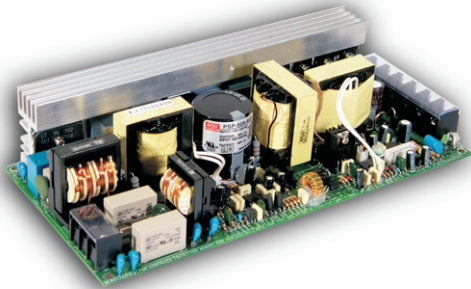




## 500W with PFC and Parallel Function

# PSP-500-P 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
- Current sharing up to 2000W(3+1)
- With power good and fail signal output
- Built-in remote ON-OFF control
- Built-in remote sense function
- 3 years warranty



### SPECIFICATION

| MODEL                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | PSP-500-5P                                                                                                                                                                | PSP-500-12P  | PSP-500-13.5P | PSP-500-15P | PSP-500-24P  | PSP-500-27P | PSP-500-48P  |
|--------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------|---------------|-------------|--------------|-------------|--------------|
| OUTPUT                   | DC VOLTAGE                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | 5V                                                                                                                                                                        | 12V          | 13.5V         | 15V         | 24V          | 27V         | 48V          |
|                          | RATED CURRENT                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | 80A                                                                                                                                                                       | 41.5A        | 37A           | 33A         | 20.8A        | 18.5A       | 10.5A        |
|                          | CURRENT RANGE                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | 0 ~ 80A                                                                                                                                                                   | 0 ~ 41.5A    | 0 ~ 37A       | 0 ~ 33A     | 0 ~ 20.8A    | 0 ~ 18.5A   | 0 ~ 10.5A    |
|                          | RATED POWER                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | 400W                                                                                                                                                                      | 498W         | 499.5W        | 495W        | 499.2W       | 499.5W      | 504W         |
|                          | RIPPLE & NOISE (max.) Note.2                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | 100mVp-p                                                                                                                                                                  | 150mVp-p     | 150mVp-p      | 150mVp-p    | 150mVp-p     | 150mVp-p    | 200mVp-p     |
|                          | VOLTAGE ADJ. RANGE                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 4.75 ~ 5.5V                                                                                                                                                               | 10 ~ 13.2V   | 12 ~ 15V      | 13.5 ~ 18V  | 20 ~ 26.4V   | 24 ~ 30V    | 41 ~ 56V     |
|                          | VOLTAGE TOLERANCE Note.3                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | ±2.0%                                                                                                                                                                     | ±1.0%        | ±1.0%         | ±1.0%       | ±1.0%        | ±1.0%       | ±1.0%        |
|                          | LINE REGULATION                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | ±0.5%                                                                                                                                                                     | ±0.3%        | ±0.3%         | ±0.3%       | ±0.2%        | ±0.2%       | ±0.2%        |
|                          | LOAD REGULATION                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | ±2.0%                                                                                                                                                                     | ±0.5%        | ±0.5%         | ±0.5%       | ±0.5%        | ±0.5%       | ±0.5%        |
|                          | SETUP, RISE, HOLD TIME                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 1500ms, 50ms, 15ms at full load                                                                                                                                           |              |               |             |              |             |              |
| INPUT                    | VOLTAGE RANGE                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | 90 ~ 264VAC                                                                                                                                                               | 127 ~ 370VDC |               |             |              |             |              |
|                          | FREQUENCY RANGE                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 47 ~ 63Hz                                                                                                                                                                 |              |               |             |              |             |              |
|                          | POWER FACTOR                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | 0.95/230VAC    0.98/100VAC at full load                                                                                                                                   |              |               |             |              |             |              |
|                          | EFFICIENCY (Typ.)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | 76%                                                                                                                                                                       | 82%          | 82%           | 82%         | 84%          | 84%         | 86%          |
|                          | AC CURRENT                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | 7A/115AVC                                                                                                                                                                 | 3.5A/230VAC  |               |             |              |             |              |
|                          | INRUSH CURRENT (max.)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | 20A/115VAC                                                                                                                                                                | 40A/230VAC   |               |             |              |             |              |
|                          | LEAKAGE CURRENT                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | <1mA / 240VAC                                                                                                                                                             |              |               |             |              |             |              |
| PROTECTION               | OVER LOAD                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | 110 ~ 125% rated output power<br>Protection type : Constant current limiting, recovers automatically after fault condition is removed                                     |              |               |             |              |             |              |
|                          | OVER VOLTAGE                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | 5.75 ~ 6.75V                                                                                                                                                              | 13.8 ~ 16.2V | 15.5 ~ 18.2V  | 18 ~ 21V    | 27.6 ~ 32.4V | 31 ~ 36.5V  | 57.6 ~ 67.2V |
|                          | OVER TEMPERATURE                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | Protection type : Shut down o/p voltage, re-power on to recover                                                                                                           |              |               |             |              |             |              |
|                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | RTH2 ≥ 95℃ Detect on heatsink of Q1, Q7 power transistor & L3 output choke<br>Protection type : Shut down o/p voltage, recovers automatically after temperature goes down |              |               |             |              |             |              |
| FUNCTION                 | REMOTE CONTROL                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | RC+ / RC-: 0 ~ 0.8V=power on ; 4 ~ 10V=power off      sink current <4 ~ 10mA                                                                                              |              |               |             |              |             |              |
| ENVIRONMENT              | WORKING TEMP.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | -10 ~ +60℃ (Refer to output load derating curve)                                                                                                                          |              |               |             |              |             |              |
|                          | WORKING HUMIDITY                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | 20 ~ 90% RH with 30CFM forced air non-condensing                                                                                                                          |              |               |             |              |             |              |
|                          | STORAGE TEMP., HUMIDITY                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | -20 ~ +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<br>(Note 4) | SAFETY STANDARDS                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | UL1950, 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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 130.1K hrs min.    MIL-HDBK-217F (25℃)                                                                                                                                    |              |               |             |              |             |              |
|                          | DIMENSION                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | 250*123*50mm (L*W*H)                                                                                                                                                      |              |               |             |              |             |              |
|                          | PACKING                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | 1.3Kg; 6pcs/7.8Kg/1.45CUFT                                                                                                                                                |              |               |             |              |             |              |
| NOTE                     | 1. All parameters NOT specially mentioned are measured at 230VAC input, rated load and 25℃ of ambient temperature.<br>2. Ripple & noise are measured at 20MHz of bandwidth by using a 12" twisted pair-wire terminated with a 0.1uf & 47uf parallel capacitor.<br>3. Tolerance : includes set up tolerance, line regulation and load regulation.<br>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. |                                                                                                                                                                           |              |               |             |              |             |              |

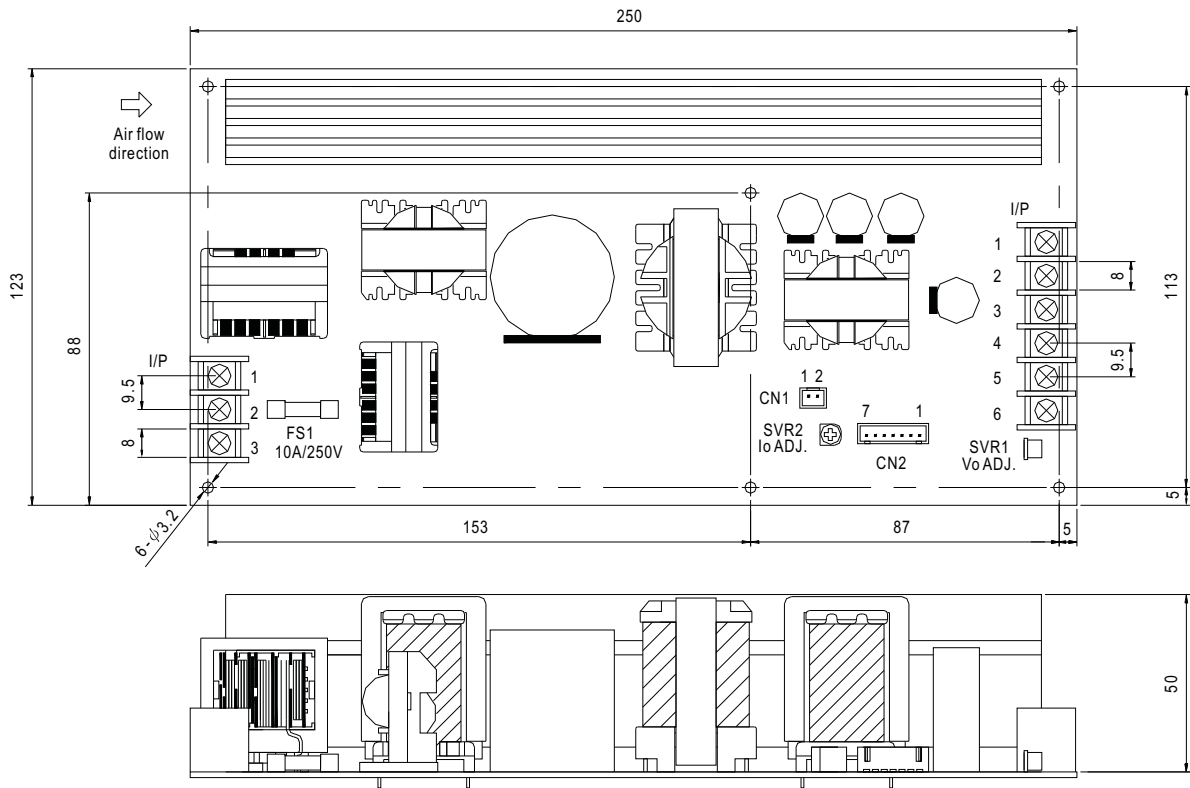


500W with PFC and Parallel Function

**PSP-500-P series**

### Mechanical Specification

Unit:mm



AC Input Terminal Pin. No. Assignment

| Pin No. | Assignment |
|---------|------------|
| 1       | AC/L       |
| 2       | AC/N       |
| 3       | FG $\perp$ |

DC Output Terminal Pin. No Assignment

| Pin No. | Assignment   |
|---------|--------------|
| 1~3     | DC OUTPUT +V |
| 4~6     | DC OUTPUT -V |

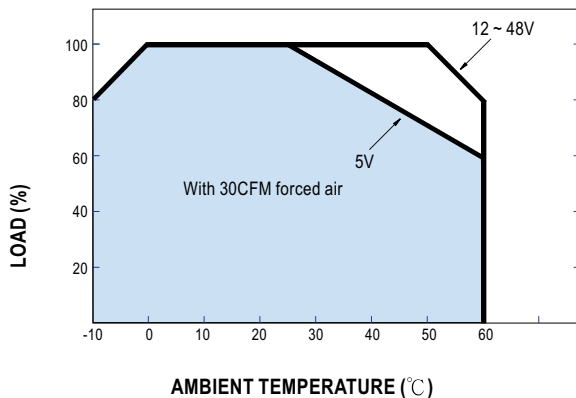
Connector Pin. No. Assignment(CN1) : JST B2B-XH or equivalent

| Pin No. | Assignment | Mating Housing        | Terminal                        |
|---------|------------|-----------------------|---------------------------------|
| 1       | GND        | JST XHP or equivalent | JST SXH-001T-P0.6 or equivalent |
| 2       | +12V       |                       |                                 |

Connector Pin. No. Assignment (CN2) : JST B7B-XH or equivalent

| Pin No. | Assignment       | Pin No. | Assignment        | Mating Housing        | Terminal                        |
|---------|------------------|---------|-------------------|-----------------------|---------------------------------|
| 1       | P(Current share) | 5       | Power fail signal | JST XHP or equivalent | JST SXH-001T-P0.6 or equivalent |
| 2       | +S               | 6       | RC+               |                       |                                 |
| 3       | -S               | 7       | RC-               |                       |                                 |
| 4       | GND              |         |                   |                       |                                 |

### Derating Curve



### Output Derating VS Input Voltage

