



# 1000W Single Output with PFC Function

# PSP-1000 series



## ■ Features :

- Universal AC input / Full range
- AC input active surge current limiting
- Built-in active PFC function
- Protections: Short circuit / Overload / Over voltage / Over temperature
- Built-in constant current limiting circuit
- Current sharing up to 2 units or 2000W
- Built-in remote ON-OFF control
- Built-in remote sense function
- Built-in active current sharing and parallel function
- 3 years warranty

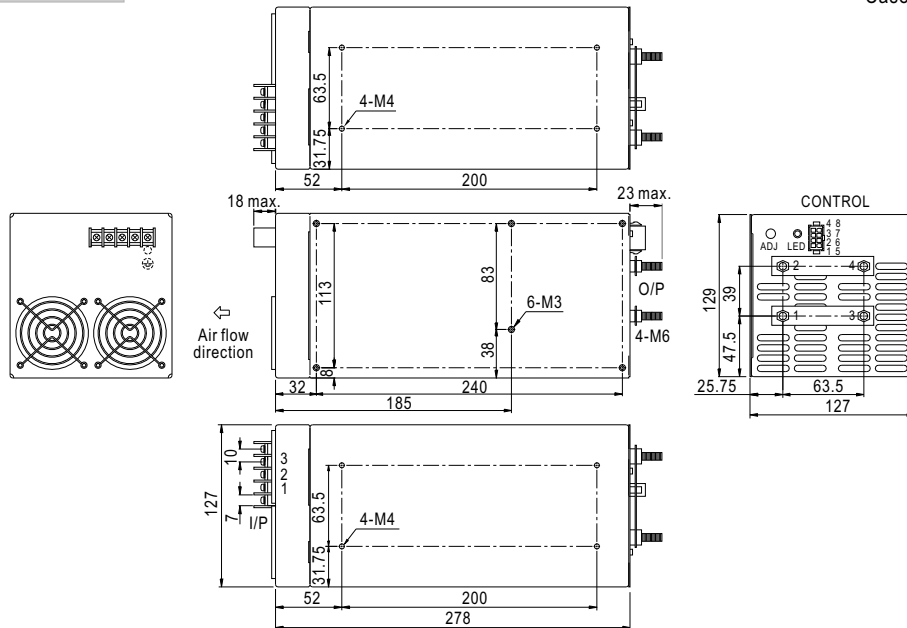


## SPECIFICATION

| MODEL                    |   | PSP-1000-5  | PSP-1000-12  | PSP-1000-13.5 | PSP-1000-15 | PSP-1000-24  | PSP-1000-27 | PSP-1000-48  |
|--------------------------|---|---|--------------|---------------|-------------|--------------|-------------|--------------|
| OUTPUT                   | DC VOLTAGE  | 5V  | 12V          | 13.5V         | 15V         | 24V          | 27V         | 48V          |
|                          | RATED CURRENT   | 145A  | 75A          | 67A           | 60A         | 37.6A        | 33.6A       | 19A          |
|                          | CURRENT RANGE   | 0 ~ 145A  | 0 ~ 75A      | 0 ~ 67A       | 0 ~ 60A     | 0 ~ 37.6A    | 0 ~ 33.6A   | 0 ~ 19A      |
|                          | RATED POWER   | 725W  | 900W         | 904.5W        | 900W        | 902.4W       | 907.2W      | 912W         |
|                          | PEAK LOAD <span>Note.4</span>   | 800W  | 1000W        | 1000W         | 1000W       | 1000W        | 1000W       | 1000W        |
|                          | RIPPLE & NOISE (max.) <span>Note.2</span>   | 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 <span>Note.3</span>   | ±6.0%   | ±3.0%        | ±2.0%         | ±2.0%       | ±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 TIME  | 1500ms, 50ms/230VAC      1500ms, 50ms/115VAC at full load   |              |               |             |              |             |              |
| HOLD UP TIME (Typ.)      | 24ms/230VAC      24ms/115VAC at full load   |   |              |               |             |              |             |              |
| INPUT                    | VOLTAGE RANGE <span>Note.6</span>   | 90 ~ 264VAC      127 ~ 370VDC   |              |               |             |              |             |              |
|                          | FREQUENCY RANGE   | 47 ~ 63Hz   |              |               |             |              |             |              |
|                          | POWER FACTOR (Typ.)   | 0.96/230VAC      0.96/115VAC at full load   |              |               |             |              |             |              |
|                          | EFFICIENCY (Typ.)   | 77%   | 84%          | 84%           | 84%         | 85%          | 86%         | 86%          |
|                          | AC CURRENT (Typ.)   | 11.2A/115AVC      5.6A/230VAC   |              |               |             |              |             |              |
|                          | INRUSH CURRENT (Typ.)   | 32A/115VAC      63A/230VAC  |              |               |             |              |             |              |
|                          | LEAKAGE CURRENT   | <2mA / 240VAC   |              |               |             |              |             |              |
| PROTECTION               | OVERLOAD  | 115 ~ 140% 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  | 95℃ (TSW1) detect on the heatsink of PFC MOSFET      90℃ (TSW2) detect the winding of 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 <20mA  |              |               |             |              |             |              |
| ENVIRONMENT              | WORKING TEMP.   | -10 ~ +60℃ (Refer to output load derating curve)  |              |               |             |              |             |              |
|                          | WORKING HUMIDITY  | 20 ~ 90% RH 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 5) | 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  | 59.6K hrs min.      MIL-HDBK-217F (25℃)   |              |               |             |              |             |              |
|                          | DIMENSION   | 278*129*127mm (L*W*H)   |              |               |             |              |             |              |
|                          | PACKING   | 5.2Kg; 3pcs/16.3Kg/1.42CUFT   |              |               |             |              |             |              |
| 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. 10% Duty cycle maximum within every 30 seconds(max.). Average output power should not exceed the rated power.<br>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.<br>6. Derating may be needed under low input voltages. Please check the derating curve for more details. |   |              |               |             |              |             |              |

Case No. 924A Unit:mm

## Mechanical Specification



AC Input Terminal Pin No. Assignment

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

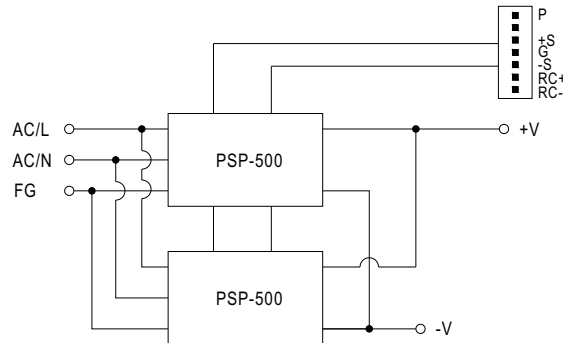
DC Output Terminal Pin No. Assignment

| Pin No. | Assignment   |
|---------|--------------|
| 1,3     | DC OUTPUT +V |
| 2,4     | DC OUTPUT -V |

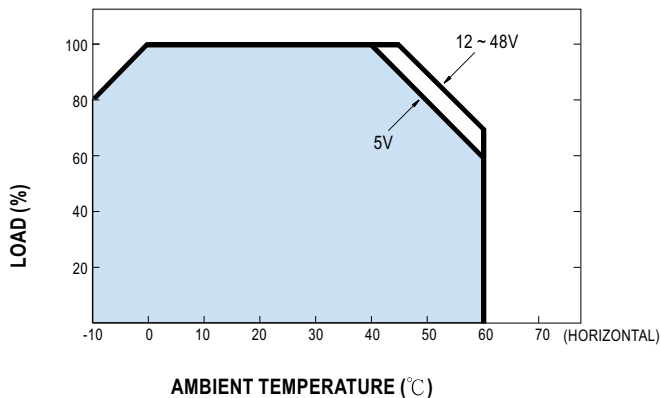
Control Pin No. Assignment : MOLEX 5559-NP uses 5558 male crimp terminal

| Pin No. | Assignment       | Pin No. | Assignment | Mating connector | Terminal                                    |
|---------|------------------|---------|------------|------------------|---|
| 1       | P(Current share) | 5       | NC         | MOLEX 5557-NR    | MOLEX 5556 Female crimp Terminal receptacle |
| 2       | -S               | 6       | NC         |                  |   |
| 3       | G                | 7       | +S         |                  |   |
| 4       | RC-              | 8       | RC+        |                  |   |

## Block Diagram



## Derating Curve



## Output Derating VS Input Voltage

