

### ■ Features :

- Universal AC input / Full range
- Built-in active PFC function
- High efficiency up to 90% (typ)
- Protections: Short circuit/Over load/Over voltage/Over temperature
- PWM control and regulated
- High power density 9.78W/inch<sup>3</sup>
- 5"x3" compact size
- Built-in remote sense function
- ZVS technology to reduce power dissipation
- Free air convection for 150W and 200W with 20.5 CFM forced air

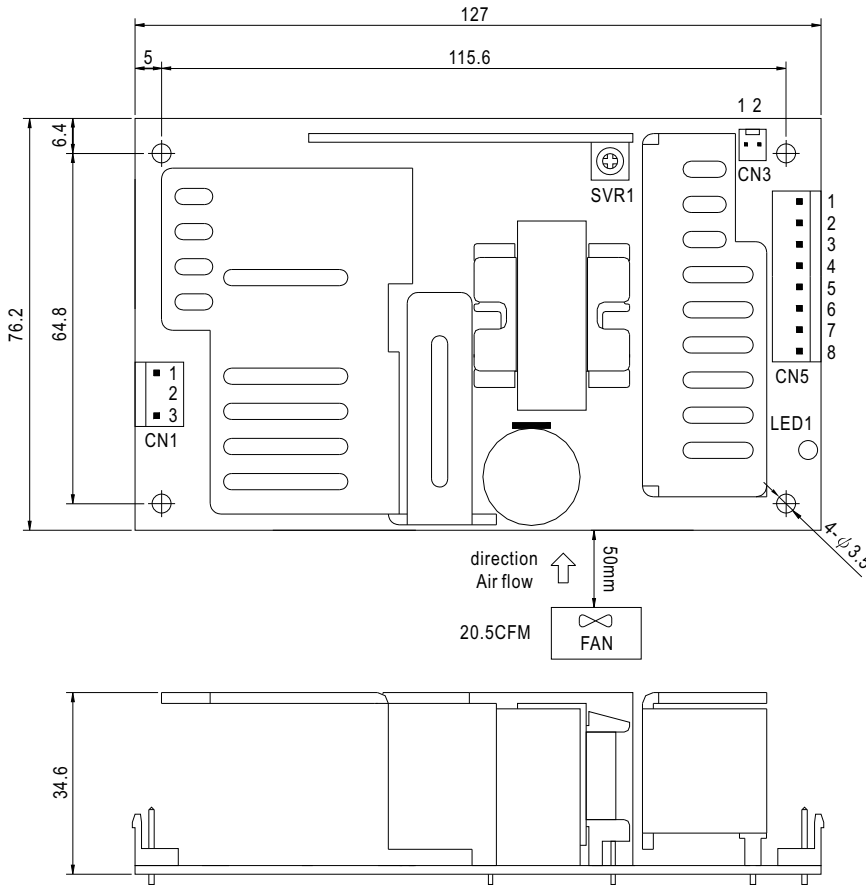


## SPECIFICATION

| MODEL                 | PPS-200-5  | PPS-200-12   | PPS-200-15   | PPS-200-24     | PPS-200-27   | PPS-200-48     |              |
|-----------------------|--|--|--------------|----------------|--------------|----------------|--------------|
| OUTPUT                | DC VOLTAGE   | 5V   | 12V          | 15V            | 24V          | 27V            | 48V          |
|                       | RATED CURRENT  | 36A  | 16.6A        | 13.3A          | 8.3A         | 7.4A           | 4.167A       |
|                       | CURRENT RANGE (convection)   | 0 ~ 26A  | 0 ~ 12.5A    | 0 ~ 10A        | 0 ~ 6.25A    | 0 ~ 5.56A      | 0 ~ 3.13A    |
|                       | CURRENT RANGE (20.5CFM FAN)  | 0 ~ 36A  | 0 ~ 16.6A    | 0 ~ 13.3A      | 0 ~ 8.3A     | 0 ~ 7.4A       | 0 ~ 4.167A   |
|                       | RATED POWER (convection)   | 130W   | 150W         | 150W           | 150W         | 150W           | 150W         |
|                       | RATED POWER (20.5CFM FAN)  | 180W   | 199.2W       | 199.5W         | 199.2W       | 199.8W         | 200W         |
|                       | RIPPLE & NOISE (max.) Note.2   | 100mVp-p   | 100mVp-p     | 100mVp-p       | 150mVp-p     | 150mVp-p       | 250mVp-p     |
|                       | VOLTAGE ADJ. RANGE   | 4.5 ~ 5.5V   | 10.8 ~ 13.2V | 13.5 ~ 16.5V   | 21.6 ~ 26.4V | 24.3 ~ 30V     | 43.2 ~ 52.8V |
|                       | VOLTAGE TOLERANCE Note.3   | ±4.0%  | ±3.0%        | ±3.0%          | ±2.0%        | ±2.0%          | ±2.0%        |
|                       | LINE REGULATION  | ±0.5%  | ±0.5%        | ±0.5%          | ±0.5%        | ±0.5%          | ±0.5%        |
|                       | LOAD REGULATION  | ±1.0%  | ±1.0%        | ±1.0%          | ±1.0%        | ±1.0%          | ±1.0%        |
|                       | SETUP, RISE TIME   | 1200ms, 60ms/230VAC    2500ms, 60ms/115VAC at full load  |              |                |              |                |              |
| HOLD TIME (Typ.)      | 12ms/230VAC/115VAC at full load  |  |              |                |              |                |              |
| INPUT                 | VOLTAGE RANGE  | 90 ~ 264VAC    127 ~ 370VDC  |              |                |              |                |              |
|                       | FREQUENCY RANGE  | 47 ~ 63Hz  |              |                |              |                |              |
|                       | POWER FACTOR (Typ.)  | PF>0.94/230VAC    PF>0.98/115VAC at full load  |              |                |              |                |              |
|                       | EFFICIENCY (Typ.)  | 86%  | 89%          | 89%            | 89%          | 90%            |              |
|                       | AC CURRENT (Typ.)  | 2.2A/115VAC    1.2A/230VAC   |              |                |              |                |              |
|                       | INRUSH CURRENT (Typ.)  | COLD START 70A/230VAC  |              |                |              |                |              |
| LEAKAGE CURRENT       | <2mA / 240VAC  |  |              |                |              |                |              |
| PROTECTION            | OVER LOAD  | 105 ~ 135% rated output power<br>Protection type : Hiccup mode, recovers automatically after fault condition is removed                            |              |                |              |                |              |
|                       | OVER VOLTAGE   | 5.6 ~ 7.25V  | 13.8 ~ 16.2V | 17.25 ~ 20.25V | 27.6 ~ 32.4V | 31.05 ~ 36.45V | 57.6 ~ 67.2V |
|                       | OVER TEMPERATURE   | 110°C (TSW1) Detect on heatsink of power transistor<br>Protection type : Shut down o/p voltage, recovers automatically after temperature goes down |              |                |              |                |              |
| ENVIRONMENT           | WORKING TEMP.  | -20 ~ +70°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  | ±0.05%/°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   | 108.4Khrs min.    MIL-HDBK-217F (25°C)   |              |                |              |                |              |
|                       | DIMENSION  | 127*76.2*34.6mm (L*W*H)  |              |                |              |                |              |
|                       | PACKING  | 0.37Kg; 36pcs/14.3Kg/0.91CUFT  |              |                |              |                |              |
| 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. HS1, HS2 &amp; HS3 can not be shorted.</li> </ol> |  |              |                |              |                |              |

## Mechanical Specification

Unit:mm



AC Input Connector (CN1) : JST B3P-VH or equivalent

| Pin No. | Assignment | Mating Housing        | Terminal                       |
|---------|------------|-----------------------|--------------------------------|
| 1       | AC/L       | JST VHR or equivalent | JST SVH-21T-P1.1 or equivalent |
| 2       | No Pin     |                       |                                |
| 3       | AC/N       |                       |                                |

DC Output Connector (CN5) : JST B8P-VH or equivalent

| Pin No. | Assignment | Mating Housing        | Terminal                       |
|---------|------------|-----------------------|--------------------------------|
| 1~4     | +V         | JST VHR or equivalent | JST SVH-21T-P1.1 or equivalent |
| 5~8     | -V         |                       |                                |

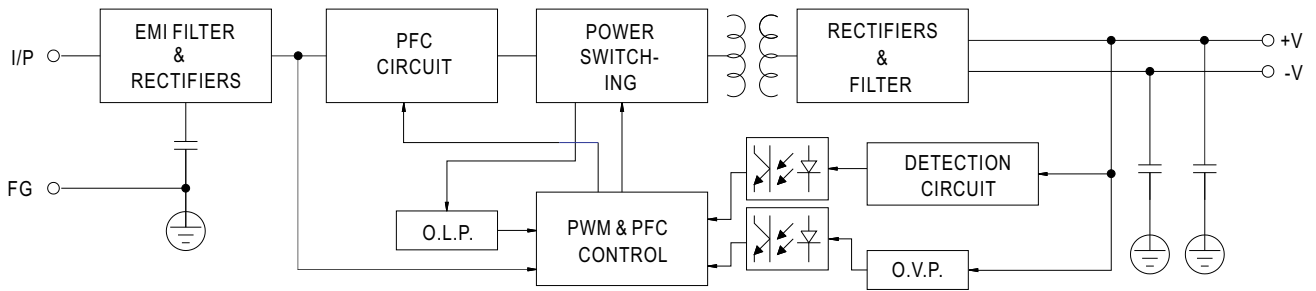
Remote Sense(CN3) : Molex 5045-02 or equivalent

| Pin No. | Assignment | Mating Housing           | Terminal                 |
|---------|------------|--------------------------|--------------------------|
| 1       | RS-        | Molex 5051 or equivalent | Molex 4809 or equivalent |
| 2       | RS+        |                          |                          |

⚠ HS1,HS2 & HS3 can not be shorted

## Block Diagram

fosc : 100KHz



## Derating Curve

## Output Derating VS Input Voltage

