

## FEATURES

- 3 Year Warranty
- Built-In Fan Speed Control
- Fixed Switching Frequency
- 100% Full Load Burn-In Tested
- Universal AC Input / Full Range
- Forced Air Cooling by Built-In DC Fan
- Built-In Active PFC Function, PF > 0.95
- Short Circuit, Overload, Over Voltage, and Over Temperature Protected



## SPECIFICATIONS: PSSP320 Series

All specifications are based on 25°C, Nominal Input Voltage, and Maximum Output Current unless otherwise noted.  
We reserve the right to change specifications based on technological advances.

### INPUT SPECIFICATIONS

|                                  |   |
|----------------------------------|---|
| Input Voltage Range (See Note 5) | 88 ~ 264VAC (124 ~ 370VDC)  |
| Input Frequency                  | 47 to 63Hz  |
| AC Current (typical)             | 3.3V output: 2.5A @ 115VAC, 1.5A @ 230VAC<br>5V-48V outputs: 5A @ 115VAC, 2.5A @ 230VAC |
| Inrush Current (typical)         | 20A @ 115VAC 40A @ 230VAC   |
| Leakage Current                  | < 1mA @ 240VAC  |
| Power Factor (typical)           | PF > 0.95 @ 230VAC PF > 0.98 @ 115VAC and full load                                     |

### OUTPUT SPECIFICATIONS

|                                   |  |
|-----------------------------------|--|
| Output Voltage                    | See Table  |
| Output Power                      | See Table  |
| Voltage Tolerance (See Note 3)    | 5V & 7.5V outputs: 2.0%; Other outputs: 1.0%                           |
| Voltage Adjustment Range          | See Table  |
| Line Regulation                   | 3.3V-7.5V outputs: 0.5%; 12V-15V outputs: 0.3%; 24V-48V outputs: 0.2%  |
| Load Regulation                   | 3.3V output: 1.5%; 5V & 7.5V outputs: 1.0%; 12V - 48V outputs: 0.5%    |
| Output Current                    | See Table  |
| Ripple & Noise (max) (See Note 2) | See Table  |
| Setup, Rise Time                  | 800ms, 50ms @ 230VAC and full load 2500ms, 50ms @ 115VAC and full load |
| Hold Up Time (typical)            | 16ms @ 230VAC and full load 16ms @ 115VAC and full load                |
| Temperature Coefficient           | ±0.03%/°C (0 ~ 50°C)   |

### PROTECTION

|                             |   |
|-----------------------------|---|
| Overload Protection         | 105 ~ 135% rated output power<br>Protection Type: Hiccup mode; recovers automatically after fault condition is removed  |
| Over Voltage Protection     | See Table<br>Protection Type: Shutdown output voltage, re-power on to recover.  |
| Over Temperature Protection | 80°C ±5°C (70°C ±5°C: 3.3V & 5V only) (TSW1: detect on heatsink of power transistor)<br>Protection Type: Shutdown output voltage; recovers automatically after temperature goes down. |

### GENERAL SPECIFICATIONS

|                      |   |
|----------------------|---|
| Switching Frequency  | 100KHz  |
| Efficiency (typical) | See Table   |
| Withstand Voltage    | 3000VAC (Input to Output), 1500VAC (Input to FG), 500VAC (Output to FG) |
| Isolation Resistance | 100MΩ/500DC (Input to Output, Input to FG, and Output to FG)            |

### ENVIRONMENTAL SPECIFICATIONS

|                     |   |
|---------------------|---|
| Working Temperature | -20°C to +65°C (refer to output load derating curve)          |
| Storage Temperature | -40°C to +85°C  |
| Working Humidity    | 20 ~ 90% RH non-condensing                                    |
| Storage Humidity    | 10 ~ 95% RH   |
| Vibration           | 10 ~ 500Hz, 2G 10min./1 cycle, 60min each along X, Y, Z axes. |
| Cooling             | Forced air cooling by built-in DC fan                         |
| MTBF                | 207,000 hours min. @ 25°C (MIL-HDBK-217F)                     |

### PHYSICAL SPECIFICATIONS

|            |                            |
|------------|----------------------------|
| Weight     | 1179 grams                 |
| Dimensions | 215(L) x 115(W) x 50(H) mm |
| Warranty   | 3 years                    |

### SAFETY & EMC

|                            |   |
|----------------------------|---|
| Safety Standards           | UL60950-1, TUV EN60950-1 approved   |
| 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 |

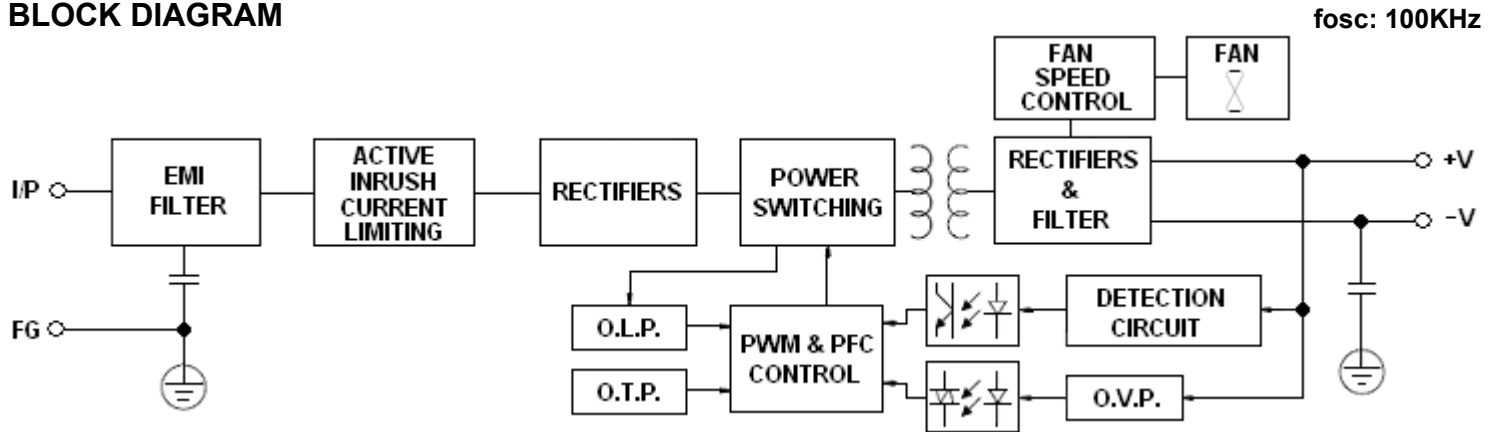
**OUTPUT VOLTAGE / CURRENT RATING CHART**

| Model Number  | Input Voltage                   | Output Voltage | Voltage Adjust. Range | Over Voltage Protection | Output Current | Output Ripple & Noise | Output Power | Efficiency |
|---------------|---------------------------------|----------------|-----------------------|-------------------------|----------------|-----------------------|--------------|------------|
| PSSP-320-3.3  | 88 ~ 264 VAC<br>(124 ~ 370 VDC) | 3.3 VDC        | 3.14 ~ 3.63V          | 3.8 ~ 4.5V              | 55A            | 150mVp-p              | 181.5W       | 74%        |
| PSSP-320-5    |                                 | 5 VDC          | 4.5 ~ 5.5V            | 5.75 ~ 6.75V            | 55A            | 150mVp-p              | 275W         | 79%        |
| PSSP-320-7.5  |                                 | 7.5 VDC        | 6 ~ 9V                | 9.4 ~ 10.9V             | 40A            | 150mVp-p              | 300W         | 83%        |
| PSSP-320-12   |                                 | 12 VDC         | 10 ~ 13.2V            | 13.8 ~ 16.2V            | 25A            | 150mVp-p              | 300W         | 86%        |
| PSSP-320-13.5 |                                 | 13.5 VDC       | 12 ~ 15V              | 15.5 ~ 18.2V            | 22A            | 150mVp-p              | 297W         | 86%        |
| PSSP-320-15   |                                 | 15 VDC         | 13.5 ~ 18V            | 18 ~ 21V                | 20A            | 150mVp-p              | 300W         | 86%        |
| PSSP-320-24   |                                 | 24 VDC         | 20 ~ 26.4V            | 27.6 ~ 32.4V            | 13A            | 150mVp-p              | 312W         | 87%        |
| PSSP-320-27   |                                 | 27 VDC         | 26 ~ 31.5V            | 33.7 ~ 39.2V            | 11.7A          | 200mVp-p              | 315.9W       | 88%        |
| PSSP-320-36   |                                 | 36 VDC         | 32.4 ~ 39.6V          | 45 ~ 52.5V              | 8.8A           | 220mVp-p              | 316.8        | 87%        |
| PSSP-320-48   |                                 | 48 VDC         | 41 ~ 56V              | 57.6 ~ 67.2V            | 6.7A           | 240mVp-p              | 321.6W       | 89%        |

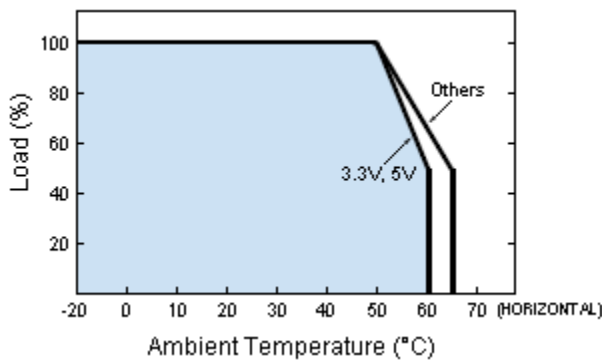
**NOTES**

1. All parameters NOT specially mentioned are measured at 230VAC input, rated load, and 25°C ambient temperature.
2. Ripple & noise are measured at 20MHz bandwidth by using a 12" twisted pair-wire terminated with a 0.1uF & 47uF parallel capacitor.
3. Tolerances include set up tolerance, line regulation, and load regulation.
4. The power supply is considered a component, which will be installed into 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.

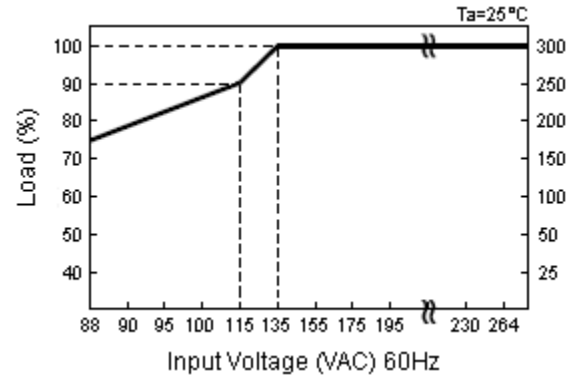
**BLOCK DIAGRAM**



**DERATING CURVE**

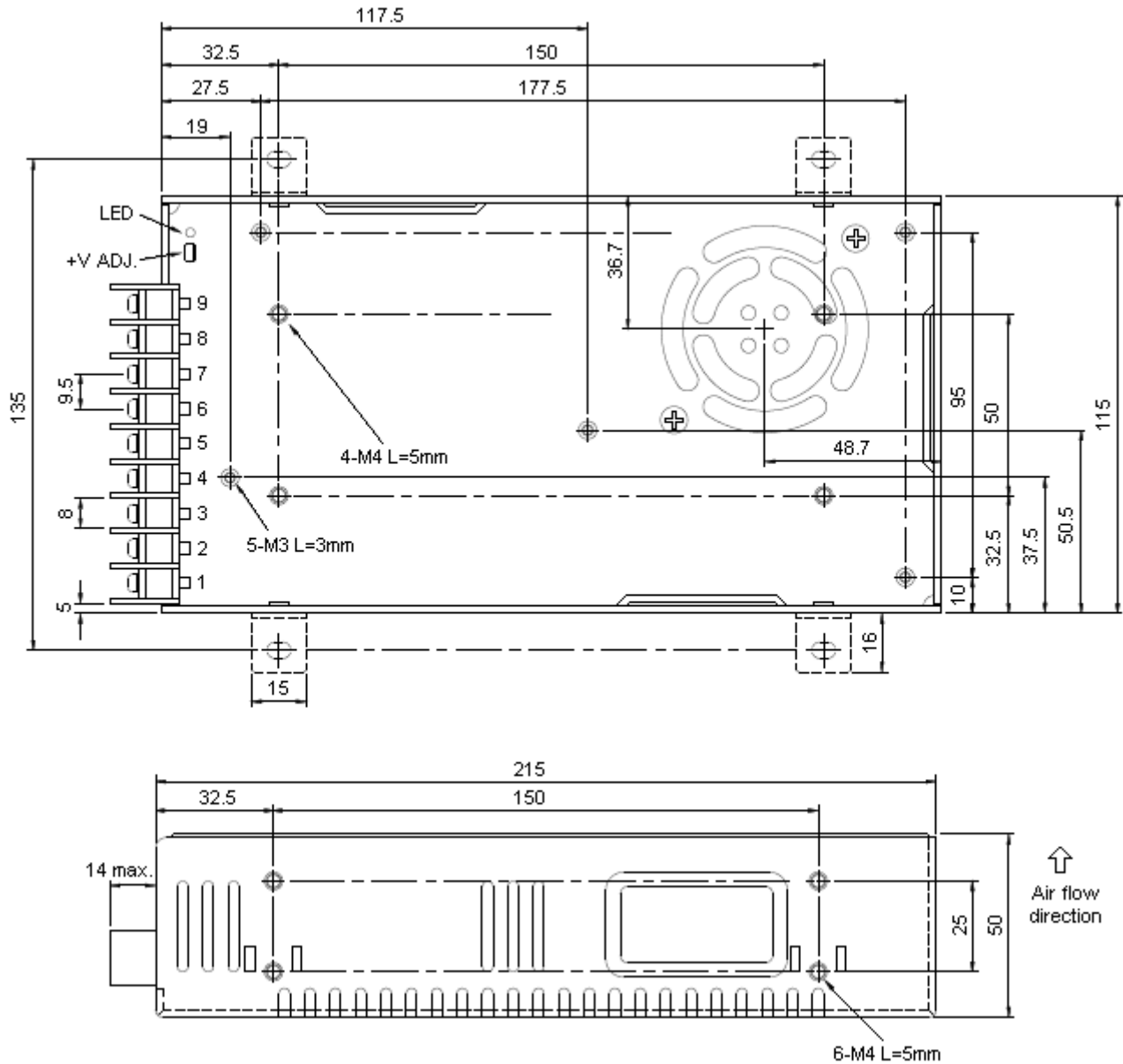


**STATIC CHARACTERISTICS**



**MECHANICAL DRAWING**

Unit: mm



**Terminal Pin No. Assignment**

| Pin No. | Assignment     |
|---------|----------------|
| 1       | AC/L           |
| 2       | AC/N           |
| 3       | FG             |
| 4 ~ 6   | DC OUTPUT (-V) |
| 7 ~ 9   | DC OUTPUT (+V) |