Wall Industries, Inc.

PSSP320 Series
Single Output
320 Watt with PFC Function
AC/DC Switching Power Supply

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 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 Protection Type: Hiccup mode; recovers automatically after fault condition is removed
Over Voltage Protection	See Table 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) 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

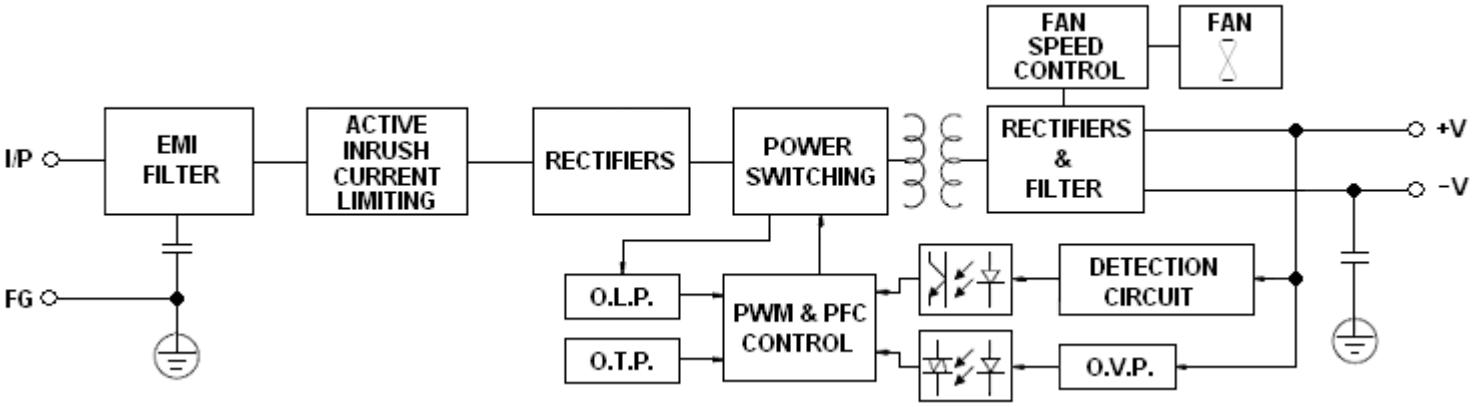
Model Number	Input Voltage	Output Voltage	Voltage Adjust. Range	Over Voltage Protection	Output Current	Output Ripple & Noise	Output Power	Efficiency
PSSP-320-3.3	88 ~ 264 VAC (124 ~ 370 VDC)	3.3 VDC	3.14 ~ 3.63V	3.8 ~ 4.5V	55A	150mVp-p	181.5W	74%
PSSP-320-5		5 VDC	4.5 ~ 5.5V	5.75 ~ 6.75V	55A	150mVp-p	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

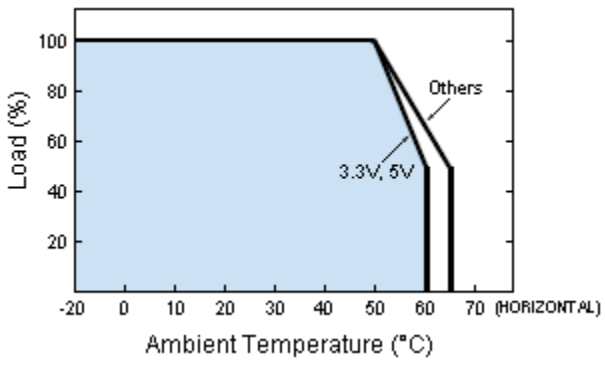
1. All parameters NOT specially mentioned are measured at 230VAC input, rated load, and 25°C ambient temperature.
2. Ripple & noise are measured at 20MHz bandwidth by using a 12" twisted pair-wire terminated with a 0.1uF & 47uF parallel capacitor.
3. Tolerances include set up tolerance, line regulation,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

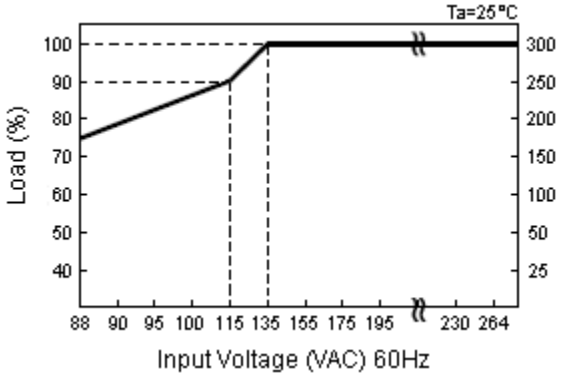
fosc: 100KHz



DERATING CURVE

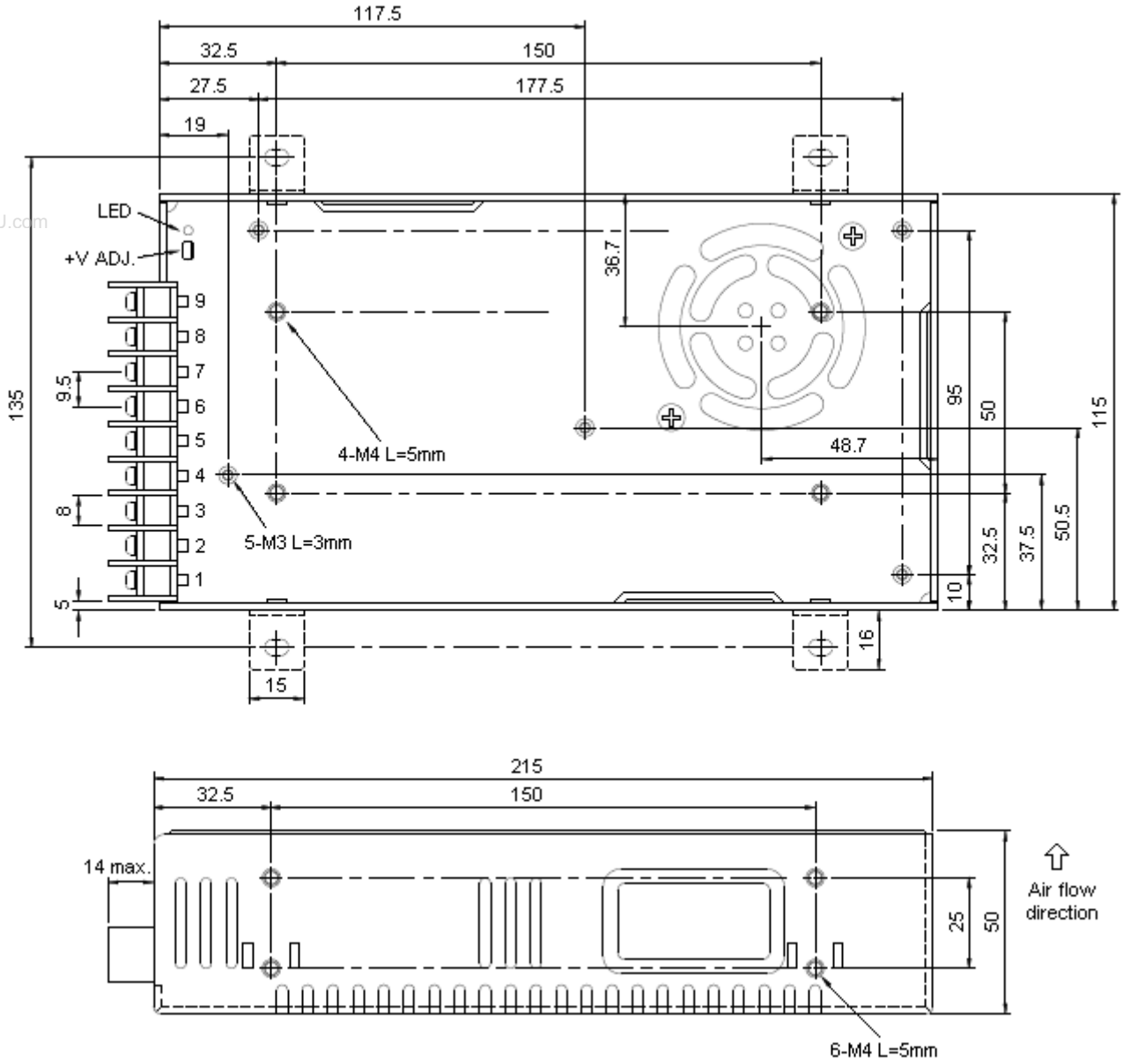


STATIC CHARACTERISTICS



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)