



Wall Industries, Inc.

PSSP500 Series  
Single Output  
Up to 486 Watts  
Built-In Active PFC Function  
AC/DC Switching Power Supply

**FEATURES**

- 3 Year Warranty
- Fixed Switching Frequency
- 100% Full Load Burn-In Tested
- Universal AC Input / Full Range
- Built-In Remote Sense Function
- Built-In Remote ON/OFF Control
- Built-In Cooling Fan ON/OFF Control
- 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: PSSP500 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)	7A @ 115VAC 3.5A @ 230VAC
Inrush Current (typical)	18A @ 115VAC 36A @ 230VAC
Leakage Current	< 3.5mA @ 240VAC
Power Factor (typical)	PF > 0.95 @ 230VAC PF > 0.95 @ 115VAC and full load
Remote ON/OFF Control	RC+/RC-: Short = power on; Open = power off

**OUTPUT SPECIFICATIONS**

Output Voltage	See Table
Output Power	See Table
Voltage Tolerance (See Note 3)	1.0%
Voltage Adjustment Range	See Table
Line Regulation	0.5%
Load Regulation	0.5%
Output Current	See Table
Ripple & Noise (max) (See Note 2)	12V - 15V outputs: 240mVp-p; 27V output: 200mVp-p; 48V output: 300mVp-p
Setup, Rise Time	1500ms, 50ms @ full load
Hold Up Time (typical)	24ms @ full load
Temperature Coefficient	±0.03%/°C (0 ~ 50°C)

**PROTECTION**

Overload Protection	105 ~ 135% rated output power Protection Type: Foldback current limiting; recovers automatically after fault condition is removed
Over Voltage Protection	See Table Protection Type: Hiccup mode; recovers automatically after fault condition is removed
Fan Control, Over Temperature Protection	RTH1 or RTH2 ≥ 50°C FAN ON, ≤ 45°C FAN OFF, ≥ 70°C output shutdown

**GENERAL SPECIFICATIONS**

Switching Frequency	110KHz
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	-10°C to +50°C (refer to output load derating curve)
Storage Temperature	-20°C to +85°C
Working Humidity	20 ~ 90% RH non-condensing
Storage Humidity	10 ~ 95% RH
Vibration	10 ~ 500Hz, 2G 10min./1 cycle, period for 60min each along X, Y, Z axes.
Cooling	Forced air cooling by built-in DC fan
MTBF	133,400 hours min. @ 25°C (MIL-HDBK-217F)

**PHYSICAL SPECIFICATIONS**

Weight	1900 grams
Dimensions	170(L) x 120(W) x 93(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, light industry level, criteria A

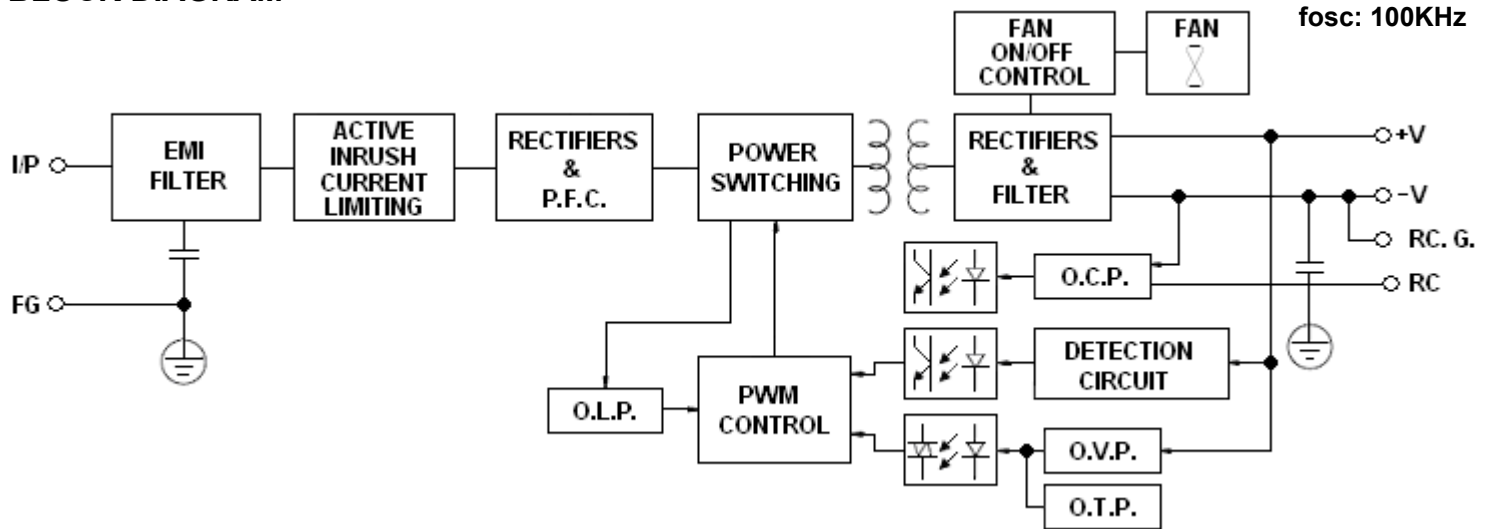
### OUTPUT VOLTAGE / CURRENT RATING CHART

Model Number	Input Voltage	Output Voltage	Voltage Adjust. Range	Over Voltage Protection	Output Current	Output Power	Efficiency
PSSP-500-12	88 ~ 264 VAC (124 ~ 370 VDC)	12 VDC	10 ~ 13.2V	13.8 ~ 16.2V	40A	480W	84%
PSSP-500-13.5		13.5 VDC	12 ~ 15V	15.5 ~ 18.2V	36A	486W	84%
PSSP-500-15		15 VDC	13.5 ~ 18V	18 ~ 21V	32A	480W	83%
PSSP-500-24		24 VDC	20 ~ 26.4V	27.6 ~ 32.4V	20A	480W	85.5%
PSSP-500-27		27VDC	24 ~ 30V	31 ~ 36.5V	18A	486W	86.5%
PSSP-500-48		48 VDC	41 ~ 56V	57.6 ~ 67.2V	10A	480W	87%

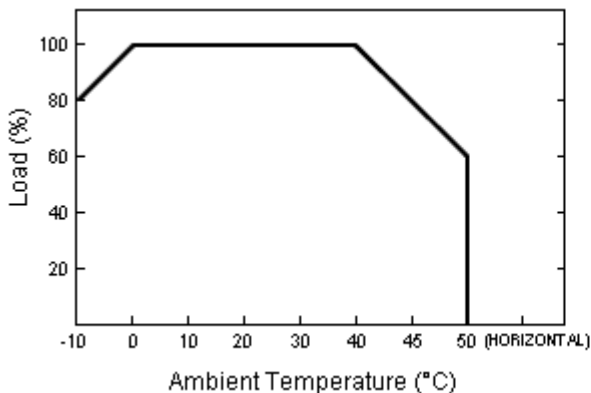
### NOTES

- All parameters NOT specially mentioned are measured at 230VAC input, rated load, and 25°C ambient temperature.
- Ripple & noise are measured at 20MHz bandwidth by using a 12" twisted pair-wire terminated with a 0.1uF & 47uF parallel capacitor.
- Tolerances include set up tolerance, line regulation, and load regulation.
- 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.
- Derating may be needed under low input voltages. Please check the derating curve for more details.

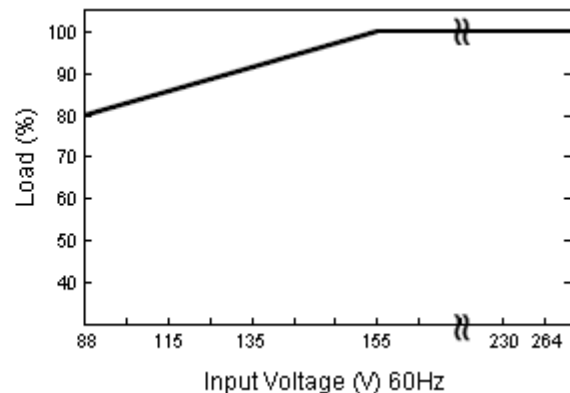
### BLOCK DIAGRAM



### DERATING CURVE



### OUTPUT DERATING VS INPUT VOLTAGE



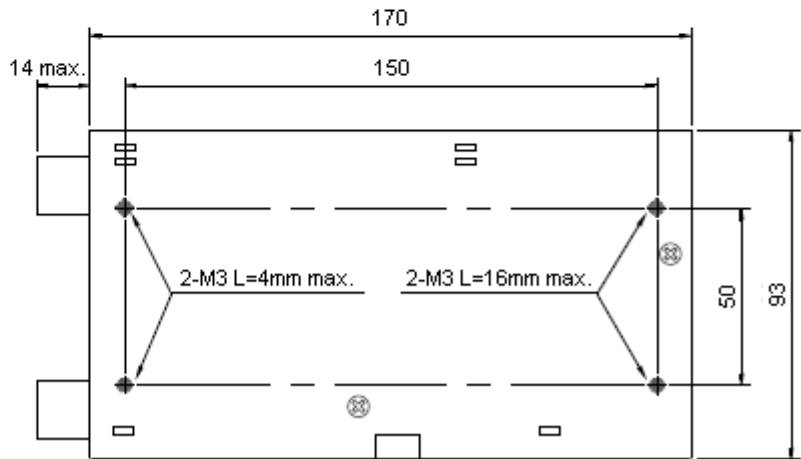
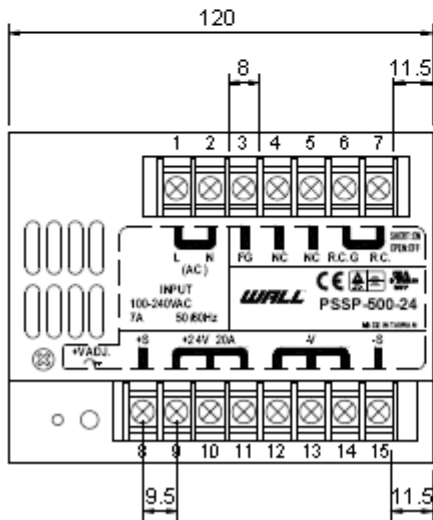
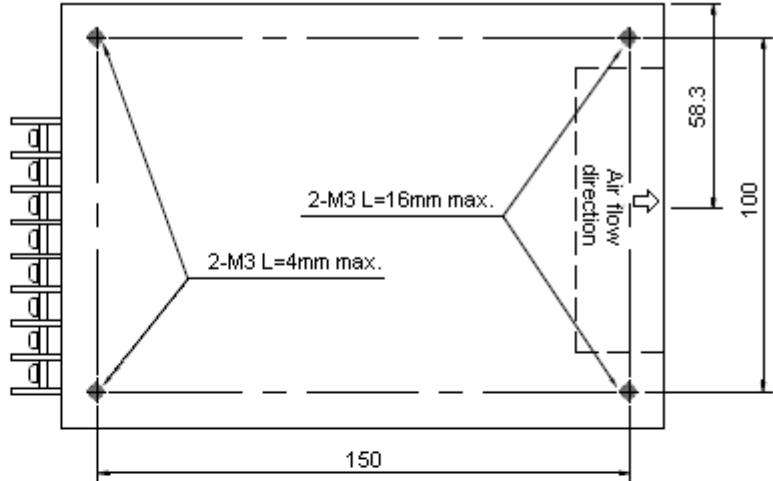


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MECHANICAL DRAWING

Unit: mm



Terminal Pin No. Assignment

Pin No.	Assignment	Pin No.	Assignment
1	AC/L	7	R.C.
2	AC/N	8	+S
3	FG	9 ~ 11	DC OUTPUT +V
4,5	NC	12 ~ 14	DC OUTPUT -V
6	R.C.G.	15	-S