Wall Industries, Inc.

PSPSP1000 Series
1000 Watt Single Output
Built-In Active PFC Function
AC/DC Switching Power Supply

FEATURES

- **3 Year Warranty**
- **100% Full Load Burn-In Tested**
- **Universal AC Input / Full Range**
- **Built-In Remote Sense Function**
- **Built-In Remote ON/OFF Control**
- **Built-In Active PFC Function, PF > 0.95**
- **Current Sharing up to 2 units or 2000W**
- **AC Input Active Surge Current Limiting**
- **Built-In Constant Current Limiting Circuit**
- **Built-In Active Current Sharing and Parallel Function**
- **Short Circuit, Overload, Over Voltage, and Over Temperature Protected**



SPECIFICATIONS: *PSPSP1000 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 6)	90 ~ 264VAC (127 ~ 370VDC)
Input Frequency	47 to 63Hz
AC Current (typical)	11.2A @ 115VAC 5.6A @ 230VAC
Inrush Current (typical)	32A @ 115VAC 63A @ 230VAC
Leakage Current	< 2mA @ 240VAC
Power Factor (typical)	0.96 @ 230VAC 0.96 @ 115VAC and full load
Remote ON/OFF Control	RC+/RC-: 0 ~ 0.8V = power on; 4 ~ 10V = power off sink current < 20mA
OUTPUT SPECIFICATIONS	
Output Voltage	See Table
Output Power	See Table
Voltage Tolerance (See Note 3)	5V output: 6%, 12V output: 3%, 13.5V & 15V outputs: 2%, 24V - 48V outputs: 1%
Voltage Adjustment Range	See Table
Line Regulation	5V output: 0.5%, 12V - 15V outputs: 0.3%, 24V - 48V outputs: 0.2%
Load Regulation	5V output: 2.0%, 12V - 48V outputs: 0.5%,
Output Current	See Table
Ripple & Noise (max) (See Note 2)	5V output: 100mVp-p; 12V - 27V outputs: 150mVp-p; 48V output: 200mVp-p
Setup, Rise Time	1500ms, 50ms @ 230VAC 1500ms, 50ms @ 115VAC and full load
Hold Up Time (typical)	24ms @ 230VAC 24ms @ 115VAC and full load
Temperature Coefficient	±0.03%/°C (0 ~ 50°C)
PROTECTION	
Overload Protection	115 ~ 140% rated output power Protection Type: Constant current limiting; 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	95°C (TSW1) detect on the heatsink of PFC MOSFET 90°C (TSW2) detect the winding of output choke Protection Type: Shutdown output voltage; recovers automatically after temperature goes down
GENERAL SPECIFICATIONS	
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 +60°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, 60min each along X, Y, Z axes.
MTBF	59,600 hours min. @ 25°C (MIL-HDBK-217F)
PHYSICAL SPECIFICATIONS	
Weight	4700 grams
Dimensions	278(L) x 129(W) x 127(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

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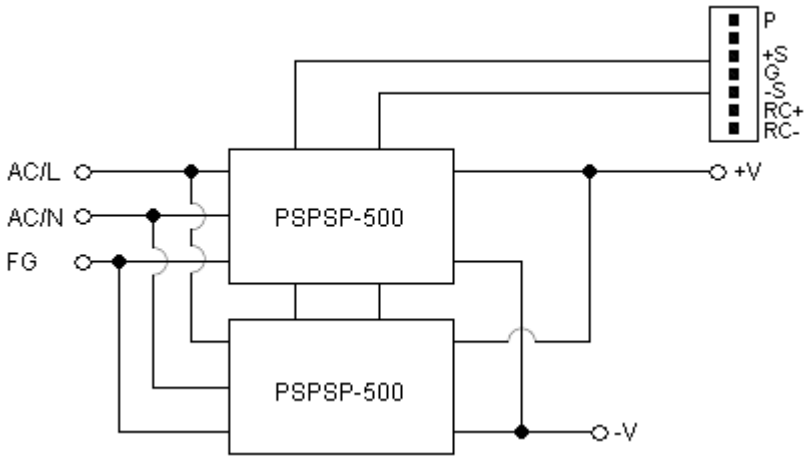
OUTPUT VOLTAGE / CURRENT RATING CHART

Model Number	Input Voltage	Output Voltage	Voltage Adjust. Range	Over Voltage Protection	Output Current	Output Power		Efficiency
						Rated Power	Peak Load (4)	
PSPSP1000-5	90 ~ 264 VAC (127 ~ 370 VDC)	5 VDC	4.75 ~ 5.5V	5.75 ~ 6.75V	145A	725W	800W	77%
PSPSP1000-12		12 VDC	10 ~ 13.2V	13.8 ~ 16.2V	75A	900W	1000W	84%
PSPSP1000-13.5		13.5 VDC	12 ~ 15V	15.5 ~ 18.2V	67A	904.5W	1000W	84%
PSPSP1000-15		15 VDC	13.5 ~ 18V	18 ~ 21V	60A	900W	1000W	84%
PSPSP1000-24		24 VDC	20 ~ 26.4V	27.6 ~ 32.4V	37.6A	902.4W	1000W	86%
PSPSP1000-27		27VDC	24 ~ 30V	31 ~ 36.5V	33.6A	907.2W	1000W	86%
PSPSP1000-48		48 VDC	41 ~ 56V	57.6 ~ 67.2V	19A	912W	1000W	86%

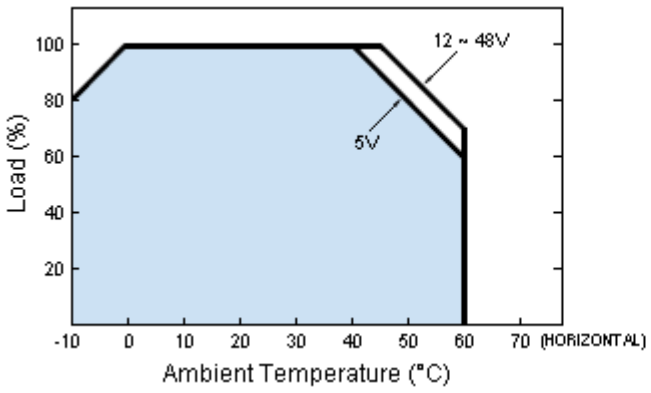
NOTES

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. 10% Duty cycle maximum within every 30 seconds (max.). Average output power should not exceed the rated power.
5. 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.
6. Derating may be needed under low input voltages. Please check the derating curve for more details.

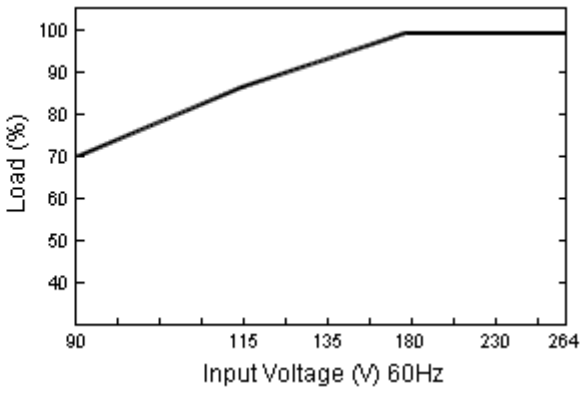
BLOCK DIAGRAM



DERATING CURVE

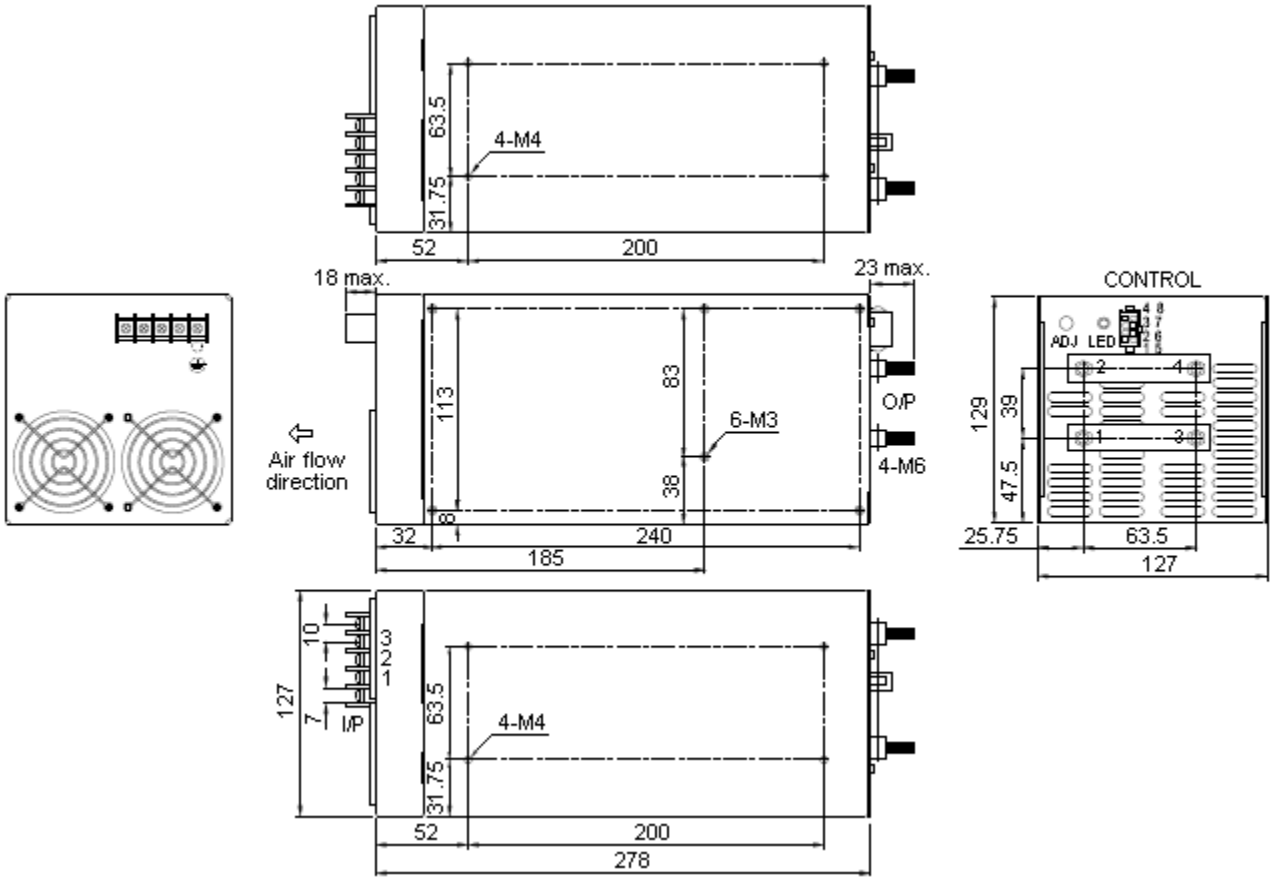


OUTPUT DERATING VS INPUT VOLTAGE



MECHANICAL DRAWING

Unit: mm



AC INPUT TERMINAL PIN NO. ASSIGNMENT	
Pin No.	**Assignment**
1	AC/L
2	AC/N
3	FG

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**	**Mating Connector**	**Terminal**
1	P (Current Share)	MOLEX 5557-NR	MOLEX 5556 Female Crimp Terminal Receptacle
2	-S		
3	G		
4	RC-		
5	NC		
6	NC		
7	+S		
8	RC+		