Wall Industries, Inc.

PSPD45 Series
Dual Output
Up to 45 Watts
AC/DC Power Supply

FEATURES

- **2 Year Warranty**
- **100% Full Load Burn-In Test**
- **Universal AC Input/ Full Range**
- **Cooling by Free Air Convection**
- **Low Leakage Current < 0.75mA**
- **Fixed Switching Frequency at 65KHz**
- **Short Circuit, Overload, and Over Voltage Protected**

SPECIFICATIONS: *PSPD45 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	90 – 264VAC (127 – 370VDC)
Input Frequency	47 ~ 440Hz
AC Current (typical)	1A @ 115VAC 0.7A @ 230VAC
Inrush Current (typical)	15A @ 115VAC 30A @ 230VAC cold start.
Leakage Current	< 0.75mA
OUTPUT SPECIFICATIONS	
Output Voltage	See Table
Output Voltage Tolerance (See Note 3)	CH 1: ±4.0% CH 2: ±7.0%
Voltage Adjustment Range	CH 1: 4.75 ~ 5.5V
Output Power	Rated output power for convection; 52W with 18CFM min. forced air.
Line Regulation	CH 1: ±1.0% CH 2: ±2.0%
Load Regulation	CH 1: ±3.0% CH 2: ±4.0%
Output Current	See Table
Ripple & Noise (See Note 2)	See Table
Setup, Rise Time	800ms, 20ms at full load
Hold Up Time	60ms at full load
Temperature Coefficient	±0.04%/°C (0~50°C) on +5V output.
PROTECTION	
Over Voltage Protection	5.75 ~ 6.75VDC on CH 1 Protection Type: Hiccup mode, recovers automatically after fault condition is removed.
Overload Protection	53 ~ 75W rated output power Protection Type: Hiccup mode, recovers automatically after fault condition is removed.
GENERAL SPECIFICATIONS	
Switching Frequency (fixed)	65KHz
Efficiency (typical)	See Table
Withstand Voltage	3KVAC (input to output), 1.5KVAC (input to FG), 0.5KVAC (output to FG).
Isolation Resistance	100MΩ / 500VDC (input to output, input to FG, 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 (non-condensing)	20% ~ 90% RH non-condensing
Storage Humidity (non-condensing)	10% ~ 95% RH
Vibration	10~500Hz, 2G 10min./1cycle, Period for 60 minutes each along X, Y, and Z axes.
MTBF	288,100 hours min. MIL-HDBK-217 (25°C)
PHYSICAL SPECIFICATIONS	
Weight	10 oz.
Dimensions	127(L) x 76(W) x 28(H) mm
Warranty	2 years
SAFETY & EMC	
Safety Standards	UL60950-1, TUV EN60950-1 Approved
EMI Conduction and 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

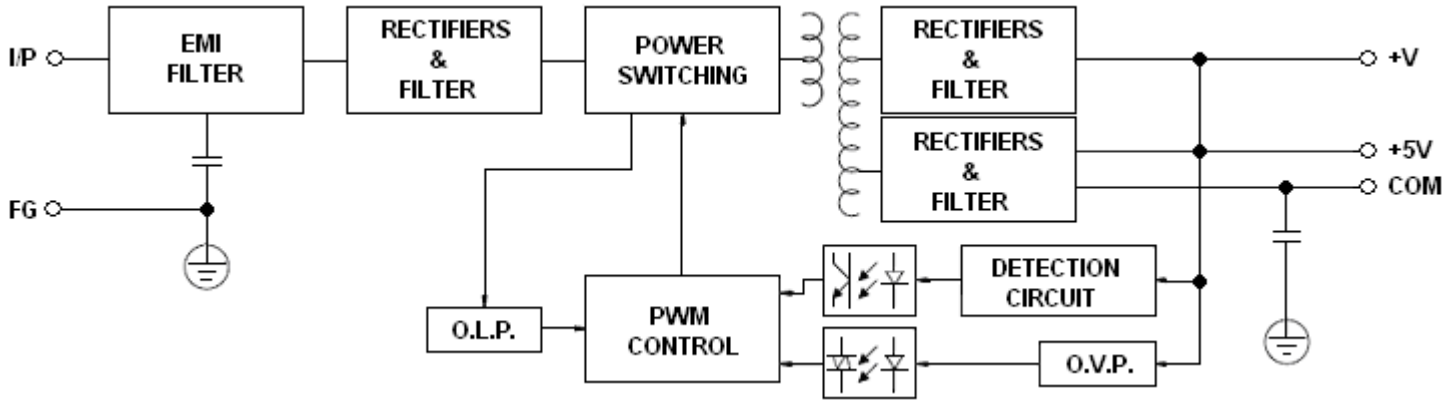
Model		Input Voltage	Output Voltage	Rated Current	Current Range	Ripple & Noise	Output Power	Efficiency
PSPD-45A	Channel 1	90 ~ 264 VAC (127 ~ 370 VDC)	5 VDC	3.2A	0.4 ~ 5A	50mVp-p	40W	77%
	Channel 2		12 VDC	2A	0.2 ~ 2.5A	120mVp-p		
PSPD-45B	Channel 1		5 VDC	3.2A	0.4 ~ 5A	50mVp-p	44.8W	78%
	Channel 2		24 VDC	1.2A	0.2 ~ 1.8A	150mVp-p		

NOTES

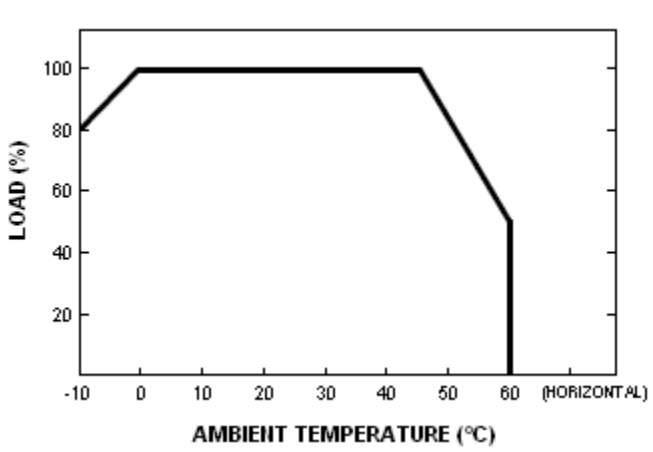
1. All parameters not specially mentioned are measured at 230VAC input, rated load, and 25°C ambient temperature.
2. Ripple & noise are measured at 20MHz using a 12" twisted pair-wire terminated with 0.1uF & 47uF capacitors in parallel.
3. Tolerance: includes set up tolerance, line regulation, and load 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. Mounting holes M1 and M2 should be grounded for EMI purposes.

BLOCK DIAGRAM

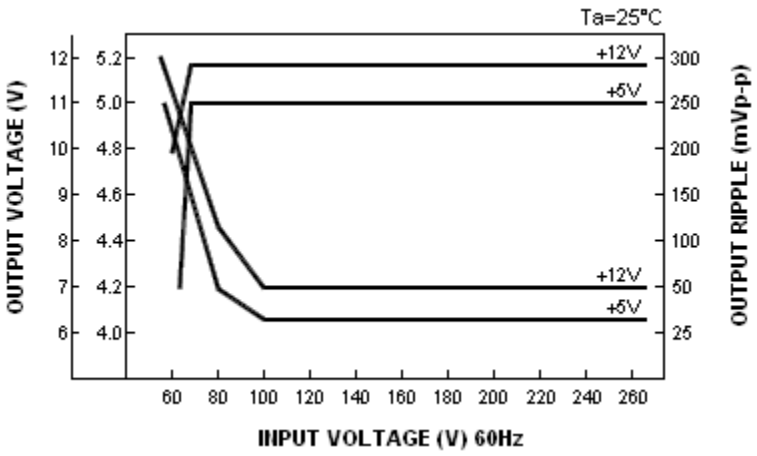
fosc: 65KHz



DERATING CURVE

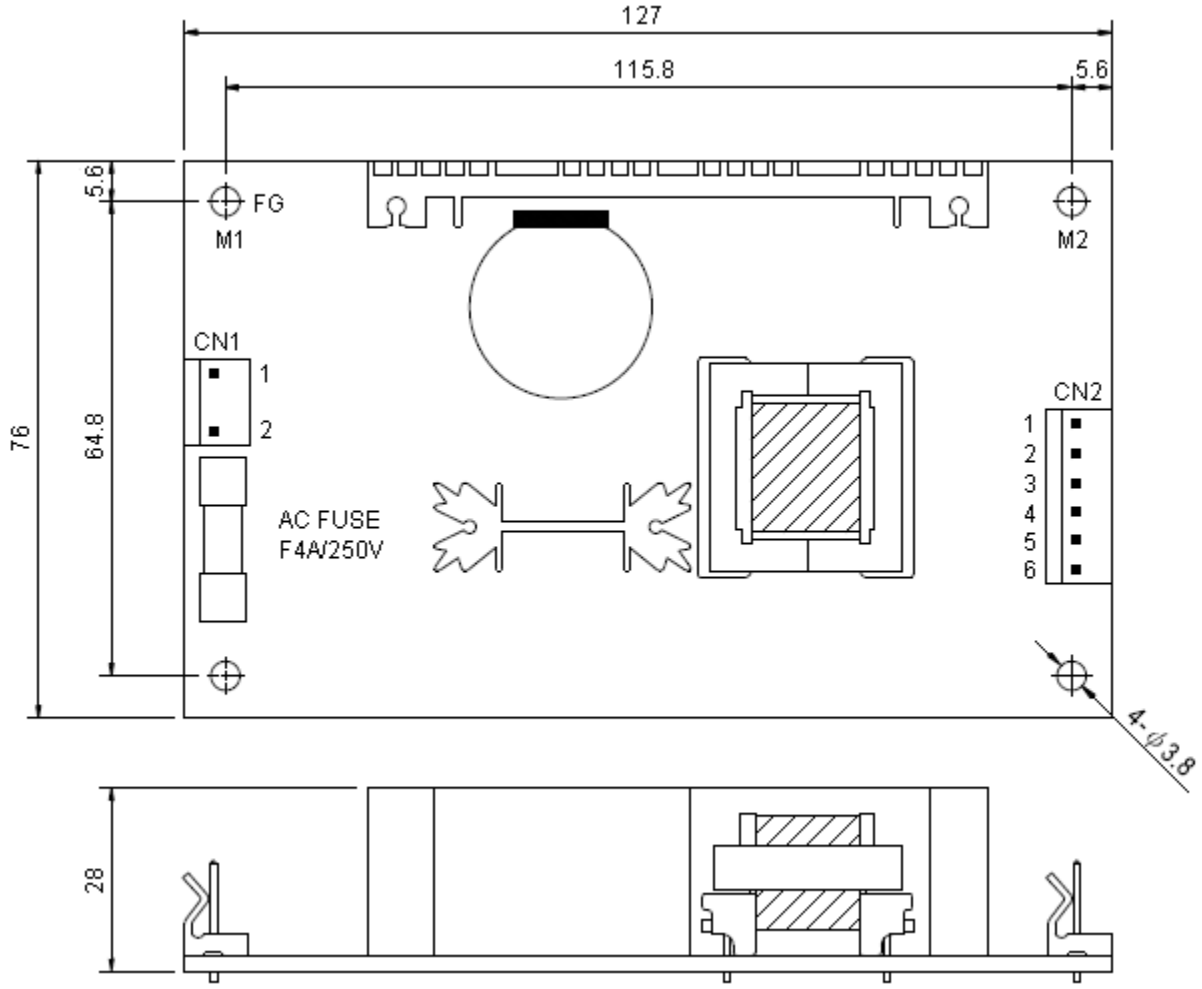


STATIC CHARACTERISTICS (A)



MECHANICAL DRAWING

Unit: mm



AC INPUT CONNECTOR (CN1)	
Pin. No	**Assignment**
1	AC/N
2	AC/L

DC OUTPUT CONNECTOR (CN2)	
Pin No.	**Assignment**
1	+V
2,3	+5V
4,5	COM
6	NC