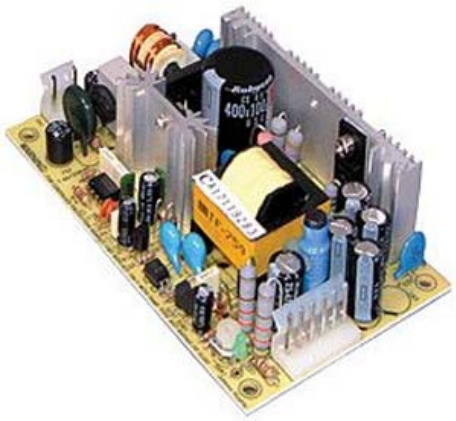
Wall Industries, Inc.

PSMPD45 Series
Dual Output
Up to 45 Watts
AC/DC Medical Power Supply

FEATURES

- Medical Application
- Low Cost, High Reliability
- Compact Size, Light Weight
- 100% Full Load Burn-In Test
- Universal AC Input/ Full Range
- UL2601-1, EN60601-1 Approved
- Built-In EMI Filter, Low Ripple Noise
- High Efficiency, Low Working Temperature
- Short Circuit, Overload, and Over Voltage Protected



SPECIFICATIONS: ***PSMPD45 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 to 440Hz
AC Current (typical)	1.2A @ 115VAC / 0.7A @ 230VAC
Inrush Current	20A @ 115VAC cold start / 40A @ 230VAC cold start.
Leakage Current	Less than 0.3mA @ 264VAC
OUTPUT SPECIFICATIONS	
Output Voltage	See Table
Output Voltage Tolerance	±4.0% (CH.1) and ±7.0% (CH.2)
Output Adjustment Range	CH1: ±10% rated output voltage.
Output Power (max)	52 Watts with 18CFM forced airflow.
Line Regulation	±1% (CH.1) and ±2% (CH.2)
Load Regulation	±3% (CH.1) and ±4% (CH.2)
Output Current	See Table
Ripple & Noise (20MHz BW)	100mVp-p typical.
Setup, Rise Time	800ms and 30ms at full load and 230VAC.
Hold-Up Time	50ms at full load and 230VAC.
Temperature Coefficient	±0.04%/°C (0~50°C) on +5V output.
PROTECTION	
Over Voltage Protection	CH.1: 115~135% rated output voltage.
Overload Protection	53~75W hiccup mode, auto-recovery.
GENERAL SPECIFICATIONS	
Switching Frequency (fixed)	45KHz
Efficiency	76% typical
Isolation Voltage (Input to Output)	4000VAC for 1 min.
Isolation Voltage (Input to FG)	1500VAC for 1min.
Isolation Resistance (Input to Output)	500VDC / 100MΩ
ENVIRONMENTAL SPECIFICATIONS	
Operating Temperature	-10°C to +60°C (refer to derating curve)
Storage Temperature	-20°C to +85°C (10%~95% RH)
Humidity (non-condensing)	20% to 90% RH
Vibration	10~500Hz, 2G 10min./1cycle, Period for 60 minutes each along X, Y, and Z axes.
MTBF	291,300 hours min. MIL-HDBK-217 (25°C)
PHYSICAL SPECIFICATIONS	
Weight	230g
Dimensions	127(L) x 76(W) x 28(H) mm PCB only
SAFETY & EMC	
Agency Approvals	UL/ CUL/ TUV/ CB/ CE
Safety Standards	UL2601-1, TUV EN60601-1, IEC601-1 Approved
EMC Standards	EN55011 class B, EN61000-4-2,3,4,5,6,8,11, EN61000-3-2,3, EN60601-1-2, ENV50204

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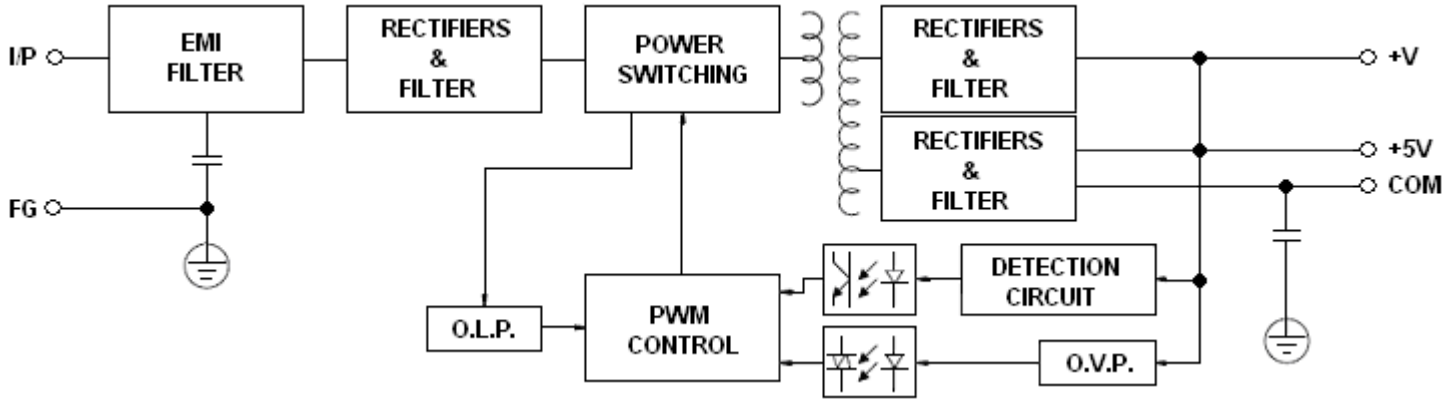
OUTPUT VOLTAGE / CURRENT RATING CHART

Model		Input Voltage	Output Voltage	Output Current Range	Output Current	Ripple & Noise	Output Power
PSMPD45A	Channel 1	90~264VAC 127~370VDC	5 VDC	0.4 ~ 5.0A	3.2A	60mVp-p	40W
	Channel 2		12 VDC	0.2 ~ 2.5A	2A	120mVp-p	
PSMPD45B	Channel 1		5 VDC	0.4 ~ 5A	3.2A	60mVp-p	45W
	Channel 2		24 VDC	0.2 ~ 1.8A	1.2A	150mVp-p	

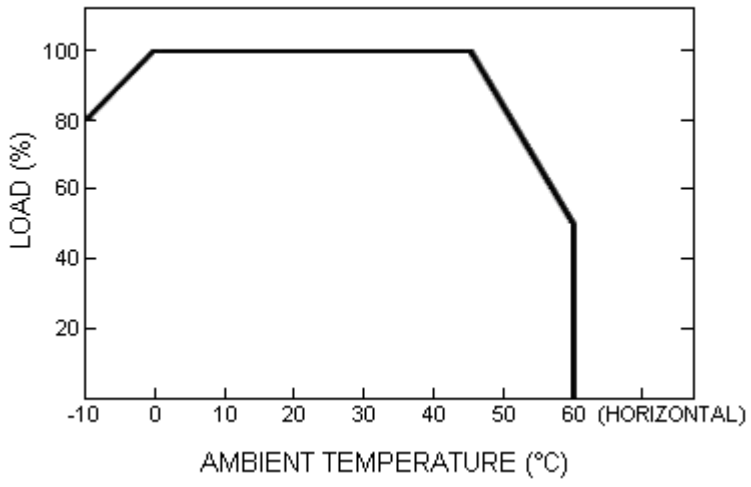
NOTES

1. All parameters are specified at 230VAC input, rated load, 25°C ambient.
2. Tolerances include set up tolerance, line regulation, load regulation.
3. Line regulation is measured from low line to high line at rated load.
4. Mounting holes M1 and M2 should be grounded for EMI purposes.
5. Ripple & noise are measured at 20MHz by using a 12" twisted pair terminated with a 0.1uF & 47uF capacitor.

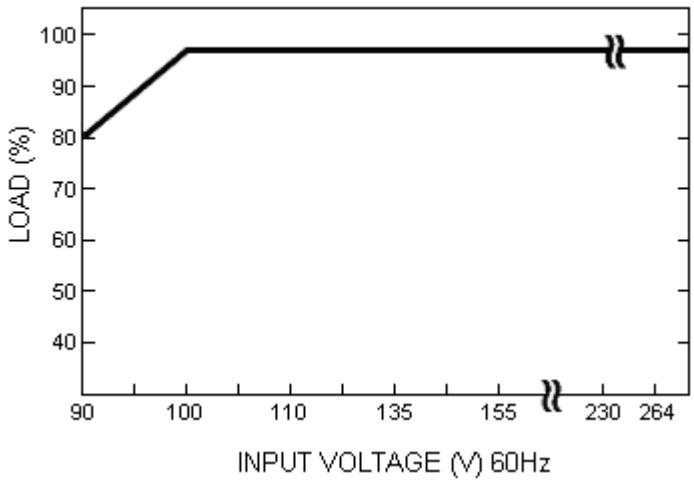
BLOCK DIAGRAM



DERATING CURVE

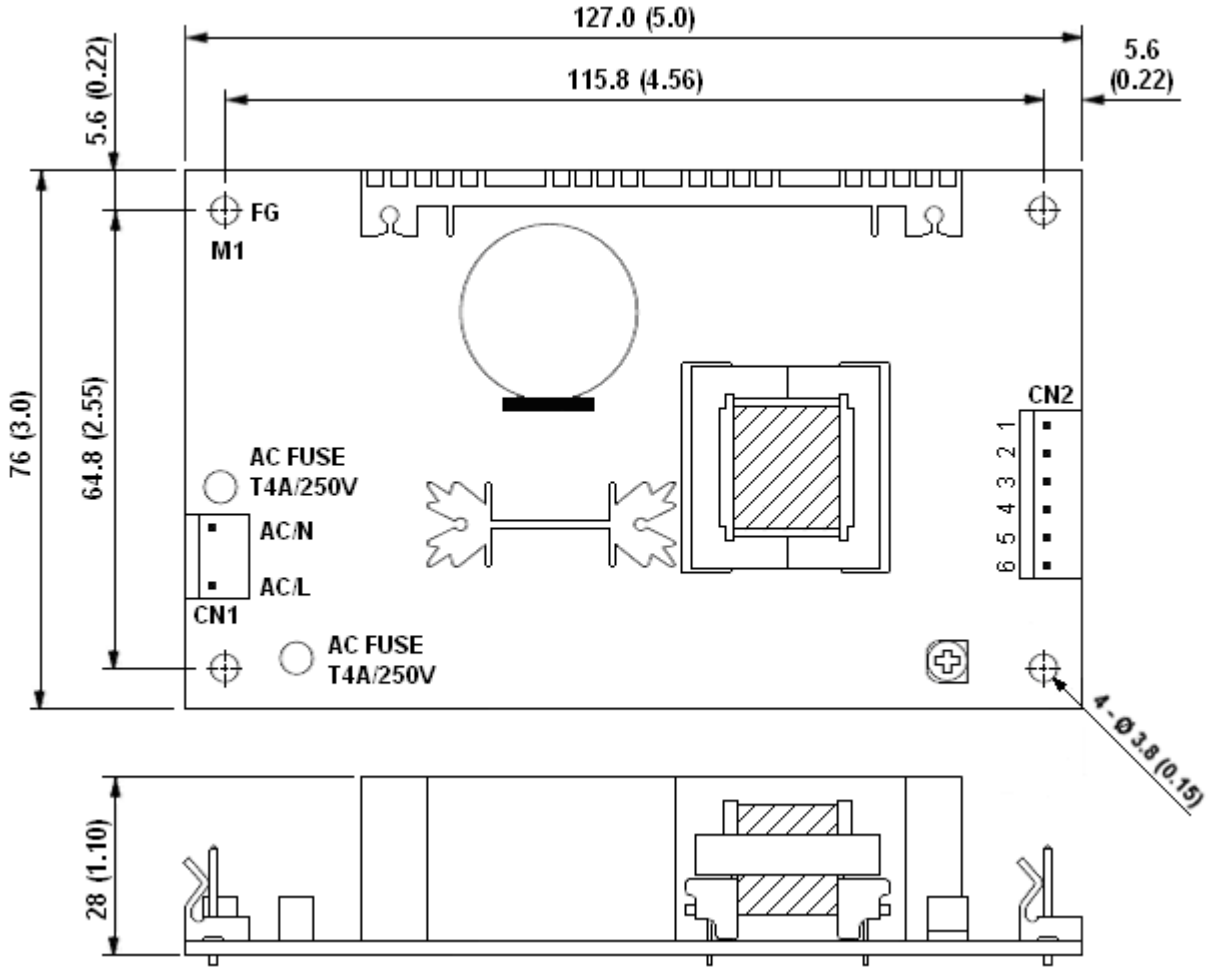


STATIC CHARACTERISTICS



MECHANICAL DRAWING

Unit: mm (inches)



AC Input Connector (CN1): Molex 5277-02 or equivalent

Pin. No	Assignment	Mating Housing	Terminal
1	AC/N	Molex 5195 or equivalent	Molex 5194 or equivalent
2	AC/L		

DC Output Connector (CN2): Molex 5273-06 or equivalent

Pin No.	Assignment	Mating Housing	Terminal
1	+V	Molex 5195 or equivalent	Molex 5194 or equivalent
2,3	+5V		
4,5	COM		
6	NC		