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ELECTRONICS

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Jameco Part Number 194862



## Declaration of RoHS Conformity

To minimize the environmental impact and take more responsibility to the earth we live, MEAN WELL hereby confirms that the following product series comply with Directive 2002/95/EC of the European Parliament - RoHS (Restriction of Hazardous Substances).

### Content of Compliance

Lead	<0.1 % by weight (1000 ppm)
Mercury	<0.1 % by weight (1000 ppm)
Cadmium	<0.01 % by weight (100 ppm)
Hexavalent Chrome (Cr <sup>+6</sup> )	<0.1 % by weight (1000 ppm)
PBBs	<0.1 % by weight (1000 ppm)
PBDEs	<0.1 % by weight (1000 ppm)

### Product Series

Please refer to the attached list for details.

### Delivery

**The actual delivery date for RoHS compliance products will depend on our inventory status.**

Please contact our sales representatives for details.

### How to Recognize

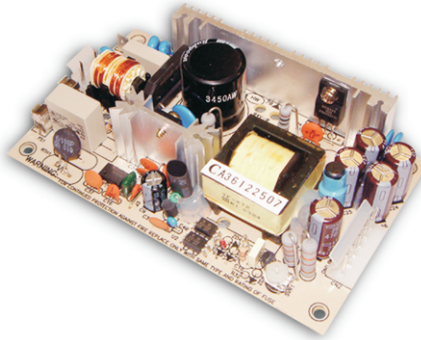
The serial number on each PSU originally was Cxxxxxxxx and right now will be changed to Rxxxxxxxx or Exxxxxxxx (or add "R" for serial number that only specify the production weeks) for RoHS compliance products for the ease of identification.

Jerry Lin / President  
MEAN WELL Enterprises Co., Ltd.

<b>Product Family</b>	<b>Series</b>
<b>G3</b>	RS-25/35/50/75/100/150, RD-35/50/65/85/125, RID-50/65/85/125, RT-50/65/85/125, RQ-50/65/85/125
<b>G2</b>	S-25/40/60/100F/150/240, T-40, D/ID/T/IT/Q/IQ-60, D/T/Q-120, SC-150
<b>PFC</b>	SP-75/100/150/200/320/480/500/750, USP-225/350, TP-75/100/150, QP-100/150/200/320/375
<b>AD</b>	ADS-55/155, AD-55/155, ADD-55/155
<b>CL/PL</b>	CLG-60/100, PLN-30/60/100
<b>DIN</b>	MDR-20/40/60, DR-30/45/60/75/100/120, DRH-120, DRP-240/480/480S, DRT-240/480/960, DR-RDN20, DR-UPS40
<b>Modular</b>	MP-450/650/1K0, MS-75/150/300, MD-100
<b>Parallel</b>	PSP-500/600/1000/1500, RSP-1000/1500, RCP-1000, RCP-1U
<b>Open Frame</b>	NFM-05/10/15/20, PM-05/10/15/20, PS/PD-25, PS-35, PS/PD/PT-45, PS/PD/PT-65, RPD/RPT-65, PD-110, PQ-100, PPQ-100, PPS/PPT-125, LPS-50/75/100, LPP-100/150, ASP-150, PPS-200, PID-250, MPS-30, MPS/MPD/MPT-45, RPS/RPD/RPT-60, MPS/MPD/MPT-65, RPS/RPD/RPT-75, MPS/MPD/MPT/MPQ-120, MPS/MPD/MPT/MPQ-200
<b>Charger</b>	GC-30, PA/PB/PS-120, ESC/ESP-120, ESC/ESP-240, PB-300/360
<b>Adaptor</b>	GS-06/15/18/25, ES-18/25, P25, P30, P40, P50, P66, U65S, MES-30/50, ATX-100, AS-120P
<b>PC/IPC Power</b>	YP-350J, IPC-200/250/300
<b>DC/DC Converter</b>	SD-25/50/100/150/200/350, SDM30, ASD10H/15H, NSD10/15, SBT, SFT, DET, SRS, SUS, SPR, SPU, SCW, SLW, SKE SKA, DCW, DLW, DKE, DKA, TKA
<b>Inverter</b>	TN/TS-1500, A301/A302
<b>Power Cord</b>	YP** + YC**

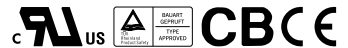
**\*\* For other products not listed above, please contact our sales representatives for availability**

2007.04 update



■ Features :

- Universal AC input/Full range
- Low leakage current<0.75mA
- Protections: Short circuit / Overload / Over voltage
- Cooling by free air convection
- 100% full load burn-in test
- Fixed switching frequency at 65KHz
- 2 years warranty

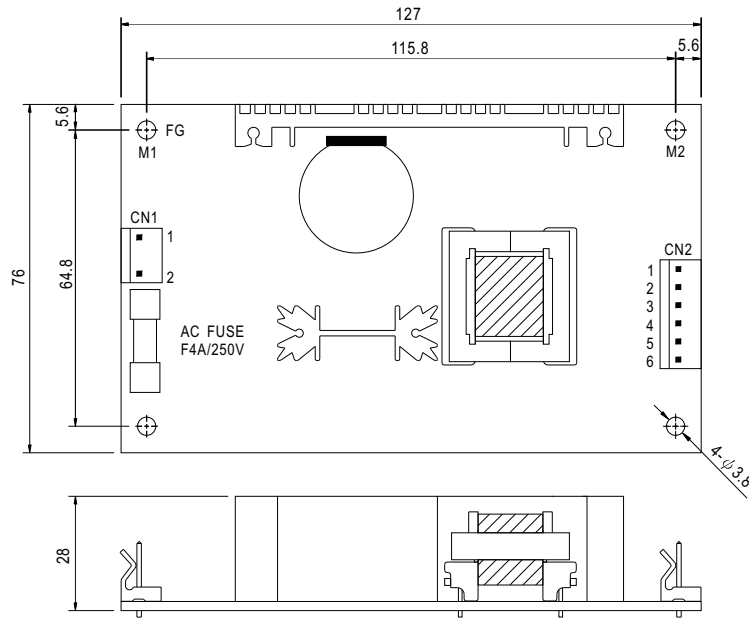


**SPECIFICATION**

MODEL		PD-45A		PD-45B	
OUTPUT	OUTPUT NUMBER	CH1	CH2	CH1	CH2
	DC VOLTAGE	5V	12V	5V	24V
	RATED CURRENT	3.2A	2A	3.2A	1.2A
	CURRENT RANGE	0.4 ~ 5A	0.2 ~ 2.5A	0.4 ~ 5A	0.2 ~ 1.8A
	RATED POWER	40W		44.8W	
	OUTPUT POWER (max.)	Rated output power for convection; 52W with 18CFM min. Forced air			
	RIPPLE & NOISE (max.) Note.2	50mVp-p		120mVp-p	
	VOLTAGE ADJ. RANGE	CH1:4.75 ~ 5.5V		CH1:4.75 ~ 5.5V	
	VOLTAGE TOLERANCE Note.3	±4.0%	±7.0%	±4.0%	±7.0%
	LINE REGULATION	±1.0%	±2.0%	±1.0%	±2.0%
	LOAD REGULATION	±3.0%	±4.0%	±3.0%	±4.0%
	SETUP, RISE TIME	800ms, 20ms at full load			
HOLD UP TIME (Typ.)	60ms at full load				
INPUT	VOLTAGE RANGE	90 ~ 264VAC 127 ~370VDC			
	FREQUENCY RANGE	47 ~ 440Hz			
	EFFICIENCY(Typ.)	77%		78%	
	AC CURRENT (Typ.)	1A/115VAC 0.7A/230VAC			
	INRUSH CURRENT (Typ.)	COLD START 15A/115VAC 30A/230VAC			
	LEAKAGE CURRENT	<0.75mA			
PROTECTION	OVERLOAD	53 ~ 75W rated output power Protection type : Hiccup mode, recovers automatically after fault condition is removed.			
	OVER VOLTAGE	5.75 ~ 6.75VDC on CH1 Protection type : Hiccup mode, recovers automatically after fault condition is removed.			
ENVIRONMENT	WORKING TEMP.	-10 ~ +60°C (Refer to output load derating curve)			
	WORKING HUMIDITY	20 ~ 90% RH non-condensing			
	STORAGE TEMP., HUMIDITY	-20 ~ +85°C, 10 ~ 95% RH			
	TEMP. COEFFICIENT	±0.04%/°C (0 ~ 50°C) on +5V output			
	VIBRATION	10 ~ 500Hz, 2G 10min./1cycle, Period for 60min.each along X, Y, Z axes			
SAFETY & EMC (Note 4)	SAFETY STANDARDS	UL60950-1, TUV EN60950-1 Approved			
	WITHSTAND VOLTAGE	I/P-O/P:3KVAC I/P-FG:1.5KVAC O/P-FG:0.5KVAC			
	ISOLATION RESISTANCE	I/P-O/P, I/P-FG, O/P-FG:100M Ohms/500VDC			
	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			
OTHERS	MTBF	288.1K hrs min. MIL-HDBK-217F (25°C)			
	DIMENSION	127*76*28mm (L*W*H)			
	PACKING	0.2Kg; 72pcs/16Kg/1.35CUFT			
NOTE	<p>1. All parameters NOT specially mentioned are measured at 230VAC input, rated load and 25°C of ambient temperature.</p> <p>2. Ripple &amp; noise are measured at 20MHz of bandwidth by using a 12" twisted pair-wire terminated with a 0.1uf &amp; 47uf parallel capacitor.</p> <p>3. Tolerance : includes set up tolerance, line regulation and load regulation.</p> <p>4. The power supply is considered a component which will be installed into a final equipment. The final equipment must be re-confirmed that it still meets EMC directives.</p> <p>5. Mounting holes M1 and M2 should be grounded for EMI purposes.</p>				

**Mechanical Specification**

Unit:mm



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

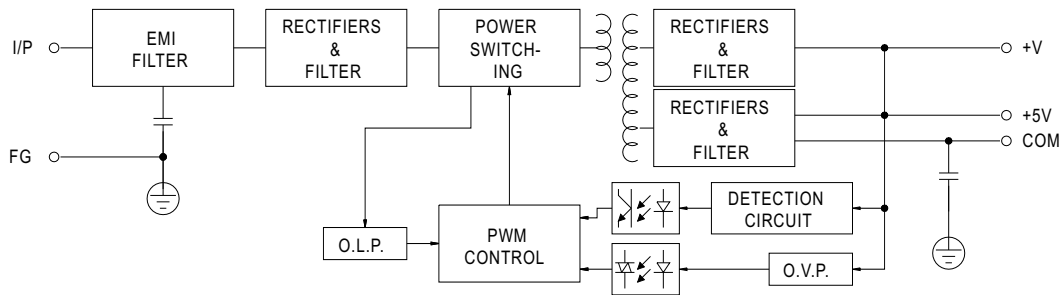
Pin No.	Assignment	Mating Housing	Terminal
1	AC/N	Molex 5195 or equivalent	Molex 5194 or equivalent
2	AC/L		

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

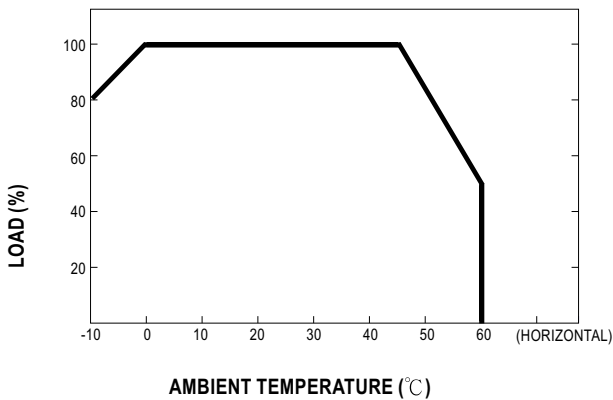
Pin No.	Assignment	Mating Housing	Terminal
1	+V	Molex 5195 or equivalent	Molex 5194 or equivalent
2,3	+5V		
4,5	COM		
6	NC		

**Block Diagram**

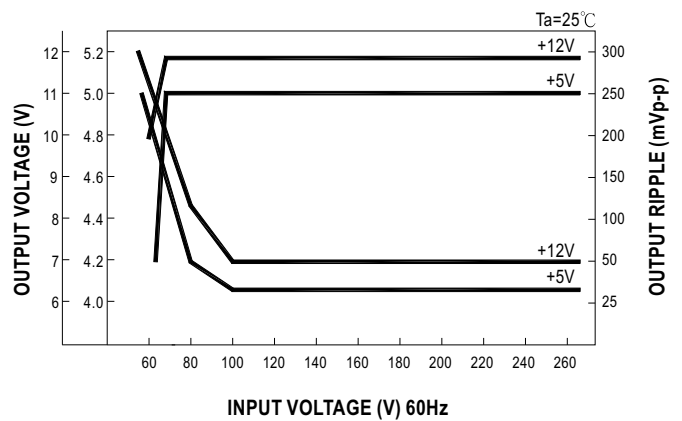
fosc : 65KHz



**Derating Curve**



**Static Characteristics (A)**





NO	TEST ITEM	TEST CONDITION / SPECIFICATION	RESULT	VERDICT																																													
15	INSULATION RESISTANCE	SPEC: O/P-FG 500VDC / 50M Ohms MIN. I/P-O/P 500VDC / 50M Ohms MIN. I/P-FG 500VDC / 50M Ohms MIN.	A: O/P-FG: >1000M Ohms I/P-O/P: >1000M Ohms I/P-FG : >1000M Ohms	P																																													
16	DIELECTRIC / WITHSTAND VOLTAGE	SPEC: I/P- O/P: 3000VAC / 1 min (10mA CUT-OFF) I/P - FG: 1500VAC / 1 min (10mA CUT-OFF) O/P - FG : 500VAC / 1min (10mA CUT-OFF)	A: NO BREAK I/P-O/P :4mA I/P-FG :3.4 mA O/P-FG :4.6 mA	P																																													
17	BURNIN TEST	I/P: 230VAC O/P:FULL LOAD TA:25.5°C BURN-IN DURATION:4hrs	NO BREAK	P																																													
18	ENVIRONMENT TEST	1.LOW TEMPERATURE TEST I/P:83VAC O/P:FULL LOAD AMBIENT TEMPERATURE:-10°C	A: AFTER 1.5 hrs POWER ON OK	P																																													
		2.HIGH AMBIENT TEMPERATURE FULL LOAD TEST I/P:230 VAC O/P:FULL LOAD AMBIENT TEMPERATURE:50°C	A: AFTER 1 hrs NON BREAK																																														
		3.ACCELERATED LIFE TEST I/P:267 VAC O/P:FULL LOAD POWER ON :3 min POWER OFF :5 sec AMBIENT TEMPERATURE:85° C AMBIENT HUMIDITY:95%	A: AFTER 14 hrs NON BREAK																																														
19	TEMPERATURE RISE T rise OF PARTS	<p>A: I/P :230VAC O/P :FULL LOAD AFTER 4hrs BURN-IN TA:25.5°C</p> <table border="1"> <thead> <tr> <th></th> <th>POSITION</th> <th>P/N</th> <th>TEMP</th> <th>T rise</th> </tr> </thead> <tbody> <tr> <td></td> <td>BD1</td> <td>BRIDGE DIODE</td> <td>50.6°C</td> <td>25.6°C</td> </tr> <tr> <td></td> <td>Q1</td> <td>MAIN TRANSISTOR</td> <td>63.4°C</td> <td>38.4°C</td> </tr> <tr> <td></td> <td>D1</td> <td>CLAMPING DIODE</td> <td>73.1°C</td> <td>48.1°C</td> </tr> <tr> <td></td> <td>C5</td> <td>I/P CAP</td> <td>52.1°C</td> <td>27.1°C</td> </tr> <tr> <td></td> <td>T1</td> <td>MAIN TRANSFORMER</td> <td>75.4°C</td> <td>50.3°C</td> </tr> <tr> <td></td> <td>D4</td> <td>O/P DIODE</td> <td>74.1°C</td> <td>49.1°C</td> </tr> <tr> <td>*</td> <td>D5</td> <td>O/P DIODE</td> <td>77.8°C</td> <td>52.8°C</td> </tr> <tr> <td></td> <td>C22</td> <td>O/P CAP</td> <td>66.5°C</td> <td>41.5°C</td> </tr> </tbody> </table>			POSITION	P/N	TEMP	T rise		BD1	BRIDGE DIODE	50.6°C	25.6°C		Q1	MAIN TRANSISTOR	63.4°C	38.4°C		D1	CLAMPING DIODE	73.1°C	48.1°C		C5	I/P CAP	52.1°C	27.1°C		T1	MAIN TRANSFORMER	75.4°C	50.3°C		D4	O/P DIODE	74.1°C	49.1°C	*	D5	O/P DIODE	77.8°C	52.8°C		C22	O/P CAP	66.5°C	41.5°C	* NOTE1
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20	LIFE CYCLE	<p>SUPPOSE C22 IS THE MOST CRITICAL COMPONENT I/P:230VAC O/P:FULL LOAD Ta:25°C C22:66.5°C Life:81468 hrs I/P:230VAC O/P:FULL LOAD Ta:50°C C22:83°C Life:25842 hrs</p>		P																																													
21	CRITICAL COMPONENT RECORD ( FOR QC INSPECTION REFERENCE ONLY )	<p>FUSE : CQ GFE 3A/250V BRIDGE DIODE : LT KBJ 408G. (GLASS) LINE FILTER : TF484 ET-20V TRANSFOMER : ER-28 TF449 POWER SWITCHER : K2545 6A/600V TO-220F OUTPUT DIODE : BYQ-26-200 10A/200V TO-220F OUTPUT CAPACITOR : ELNA 820uf/16V 105°C(M) RJH INPUT CAPACITOR : RNBYCON 100uf/400V 85°C USP P.C.B : 128mm x 76mm 2 OZ CEM-3</p>																																															
DATE	SAMPLE	TEST RESULT	TEST	APPROVAL																																													
971127	PD-45	.NOTE1:WORKING TEMPERATURE >= 45°C OUTPUT SHOULD DERATING.	H.C.LIOU	Max Lin																																													