

**Features**

- . Input 90V to 264VAC, 50~60Hz suitable for worldwide use
- . Built in active PFC function, PWM control and regulated
- . Protections: Short Circuit / Overload / Over Voltage Protection
- . 100% full load burn-in test for 2Hrs to make every unit reliable.
- . Small and compact size, LED indicator for power on
- . Cooling by free air convection, operating temperature -20~60°C
- . Long life and high reliability design with 2 years warranty

**Safety Standards**

- . IEC62368-1 CB report for worldwide use
- . UL62368-1 + CAN/CSA 62368-1 for USA and Canada
- . EN 62368-1:2014/A11:2017 for European Union
- . AS/NZS 62368.1:2018 for Australia and New Zealand
- . J62368-1 for Japan and GB4943.1 for China market.



**Product Description:**

It is a highly reliable triple output 125W open frame switching power supply solution with wide range 90-264Vac input and designed strictly according to the safety standards. The entire series supplies two models with output voltages 3.3V/5V/12V, 5V/12V/-12V, 5V/15V/-15V and 5V/24V/12V that can satisfy the demands for various types of consumer electronic devices, household electronic device, communication device and so on. The 125W triple output power supply solution is built-in full protections of over load / short circuit and over voltage. The design is built-in active PFC function and compact size of 5” x 3” and long life >140K hours with 3 years warranty.

**Technical Specification**

Typ. Model	KPPT-125A			KPPT-125B		
<b>Output</b>						
Output Number	CH1	CH2	CH3	CH1	CH2	CH3
Output Voltage	3.3VDC	5VDC	12VDC	5VDC	12VDC	-12VDC
Rated Current	10A	8A	0.5A	11.5A	3A	0.5A
Current Range	1 ~ 10A	0.8 ~ 8A	0.05 ~ 0.5A	1 ~ 11.5A	0.3 ~ 3A	0.05 ~ 0.5A
Output Power	79W Max.			99.5W Max.		
Voltage Tolerance	±3%	±5%	±6%	±3%	±5%	±6%
Ripple & Noise	100mVp-p	100mVp-p	150mVp-p	100mVp-p	150mVp-p	150mVp-p
<b>Input</b>						
Input voltage	90 - 264Vac or 120- 370Vdc					
Input Frequency	50-60Hz (When the input is AC)					
Input Current	1.7A Max. @ 100 ~240Vac 50/60Hz input					
Inrush Current	25A Max. @ 100 ~240Vac 50/60Hz input					
Efficiency (Typ.)	75%			78%		
Leakage Current	≤2mA @ full input range					
<b>Protections</b>						
Over current	130 ~ 160% rated output power. Hiccup mode, Recovery when the fault is removed					
Short Circuit	No damage. Auto-Recovery when the fault is removed					
Over temperature	Shut down o/p voltage, re-power on to recover					
<b>Environmental</b>						
Operation Temperature	-20°C to +40°C, 20%RH to 90%RH					
Storage Temp, Humidity	-45~ +85°C, 10%RH to 95%RH					
Operation Altitude	≤3000m @ full load and rated operating temperatures					
MTBF	≥50000Hrs @ full load and rated operating temperatures					
<b>Mechanical</b>						
Dimensions (L x W x H)	127.0 x 76.2 x 34.6mm (5.00 x 3.00 x 1.36 inch)					
Unit Weight	370g±10 grams					
Packing Information	36pcs/ Carton, carton dimensions:47*37*20cm, 14.3kgs/ Carton					

**TEST REPORT**
**OUTPUT FUNCTION TEST**

NO	TEST ITEM	SPECIFICATION	TEST CONDIDTION	RESULT	VERDICT
1	RIPPLE & NOISE	CH1:100/ CH2:100/ CH3:150mVp-p	I/P:230VAC / O/P:FULL LOAD / Ta:25°C	59mVp-p /65mVp-p /99mVp-p	P
2	VOLTAGE TOLERANCE	CH1: ±3% CH2: ±5% CH3: ±6%	I/P:90VAC~264VAC O/P:FULL~MIN. LOAD / Ta:25°C	CH1: -0.89% ~+1.86% CH2: -2.11% ~+3.86% CH3: -1.77% ~+4.10%	P
3	LINE REGULATION	CH1: -0.5% ~ +0.5% (Max)	I/P:90VAC ~264VAC O/P:FULL LOAD / Ta:25°C	-0.3% ~ +0.3% of output voltage	P
4	LOAD REGULATION	CH1: -1.5% ~ +1.5% (Max)	I/P:230VAC O/P:FULL ~MIN LOAD / Ta:25°C	-0.65% ~ +0.96% of output voltage	P
5	OVER/UNDERSHOOT	<±5%	I/P: 230VAC O/P:FULL LOAD / Ta:25°C	0.88%	P
6	SET UP TIME	2000 mS (Max)	I/P:230VAC O/P:FULL LOAD / Ta:25°C	1230 mS	P
7	RISE TIME	30 mS (Max)	I/P: 230VAC O/P:FULL LOAD / Ta:25°C	25 mS	P
8	HOLD UP TIME	24 mS (Min)	I/P: 115VAC O/P:FULL LOAD / Ta:25°C	28 mS	P

**INPUT FUNCTION TEST**

NO	TEST ITEM	SPECIFICATION	TEST CONDIDTION	RESULT	VERDICT
1	VOLTAGE RANGE	90VAC~264VAC	I/P:TESTING O/P:FULL LOAD / Ta:25°C	82V~264V	P
2	FREQUENCY RANGE	50HZ - 60HZ (Typ) NO DAMAGE OSC	I/P: 100VAC ~ 240VAC O/P:FULL~MIN LOAD / Ta:25°C	TEST: OK	P
3	EFFICIENCY	75% (Typ)	I/P:230VAC O/P:FULL LOAD / Ta:25°C	75.88%	P
4	AVERAGE EFFICIENCY	>73%	I/P:115/230VAC & O/P:25%、50%、75%、 100% LOAD & Ta:25°C	74.05% (115VAC) 74.63% (230VAC)	P
5	AC CURRENT	1.7A (Max)	I/P:100VAC & O/P:FULL LOAD Ta:25°C	1.48A	P
6	INRUSH CURRENT	<25A COLD START	I/P: 230VAC / O/P:FULL LOAD Ta:25°C	19.38A	P
7	LEAKAGE CURRENT	< 2mA	I/P:240VAC & O/P:Min LOAD Ta:25°C	L-FG:0.986mA N-FG:0.985mA	P

**PROTECTION FUNCTION TEST**

NO	TEST ITEM	SPECIFICATION	TEST CONDIDTION	RESULT	VERDICT
1	OVER LOAD PROTECTION	130 ~ 160% (Typ)	I/P:230VAC & O/P:TESTING Ta:25°C	140.5% HICCUP MODE	P
2	OVER VOLTAGE PROTECTION	115 ~ 135% (Typ)	I/P:230VAC O/P:MIN LOAD & Ta:25°C	Hiccup mode ,recovers automatically after fault condition is removed	P
3	SHORT PROTECTION	SHORT OUTPUT 1 HOUR NO DAMAGE	I/P:264VAC O/P:FULL LOAD & Ta:25°C	NO DAMAGE HICCUP MODE	P

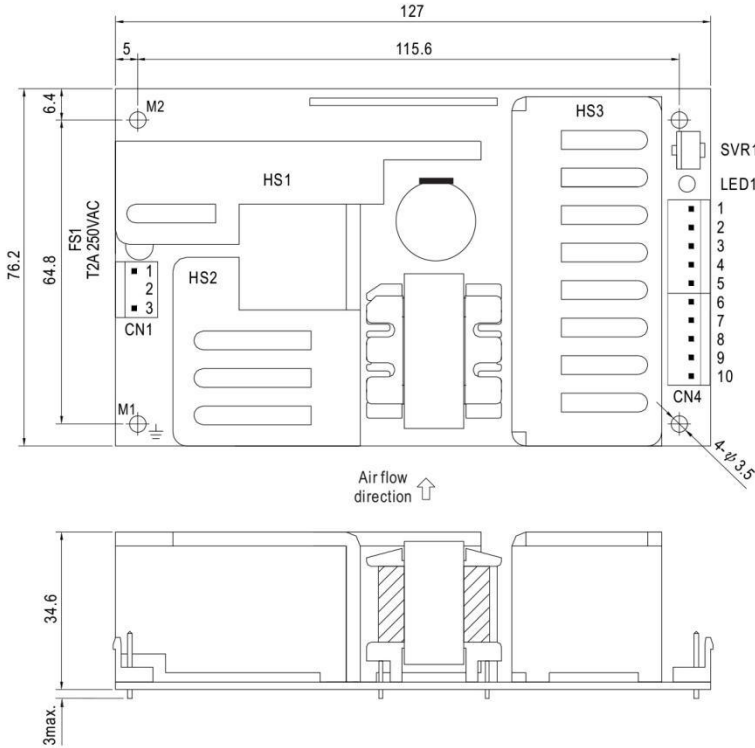
**SAFETY TEST & E.M.C TEST**

NO	TEST ITEM	SPECIFICATION	TEST CONDIDTION	RESULT	VERDICT
1	WITHSTAND VOLTAGE	I/P-O/P: 3KVAC/min I/P- FG: 2KVAC/min O/P-FG:1.5KVAC/min	I/P-O/P: 3.6 KVAC/min I/P-FG: 2.4KVAC/min O/P-FG: 1.8KVAC/min Ta:25°C	I/P-O/P:4.08mA I/P-FG: 3.87mA O/P-FG: 3.03mA NO DAMAGE	P
2	ISOLATION RESISTANCE	I/P-O/P:500VDC>100M Ω I/P-FG: 500VDC>100M Ω O/P-FG:500VDC>100M Ω	I/P-O/P: 500 VDC I/P-FG: 500 VDC O/P-FG: 500 VDC Ta:25°C	I/P-O/P: 9999M Ω I/P-FG: 9999M Ω O/P-FG:9999 M Ω NO DAMAGE	P
3	CONDUCTION	BS EN/EN55032(CISPR32), FCC PART 15 / CISPR22 CAN	I/P: 230 VAC (50HZ) O/P: FULL/50% LOAD Ta: 25°C	PASS Test by certified Lab	P
4	RADIATION	BS EN/EN55032(CISPR32), FCC PART 15 / CISPR22 CAN	I/P: 230 VAC (50HZ) O/P: FULL LOAD Ta: 25°C	PASS Test by certified Lab	P
5	SURGE	BS EN/EN61000-4-5 LIGHT INDUSTRY L-N: 1KV	I/P: 230 VAC/50HZ O/P: FULL LOAD Ta: 25°C	CRITERIA B	P
6	E.S.D	BS EN/EN61000-4-2 LIGHT INDUSTRY AIR: 8KV / Contact: 4KV	I/P: 230 VAC/50HZ O/P: FULL LOAD Ta: 25°C	CRITERIA B	P

TEST RESULT	TESTER	REVIEW	APPROVAL
PASS	ZHU LI	WANG LW	ZHANG DL

**Mechanical Specification**

Unit:mm



AC Input Connector (CN1) : JST B3P-VH or equivalent

Pin No.	Assignment	Mating Housing	Terminal
1	AC/L	JST VHR or equivalent	JST SVH-21T-P1.1 or equivalent
2	No Pin		
3	AC/N		

DC Output Connector (CN4) : JST B5P-VH\*2 or equivalent

Pin No.	Assignment	Mating Housing	Terminal
1	CH3	JST VHR or equivalent	JST SVH-21T-P1.1 or equivalent
2,3	CH2		
4~8	GND		
9,10	CH1		

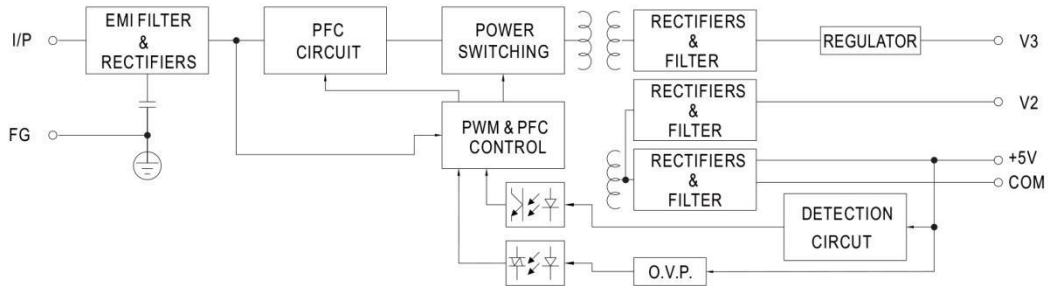
⊥ : Grounding Required



- 1.HS1,HS2 & HS3 cannot be shorted.
- 2.M1 is safety ground. For better EMC performance, Please secure an electrical connection between M1,M2 and chassis grounding.

**Block Diagram**

fosc : 100KHz



**Derating Curve**

**Output Derating VS Input Voltage**

