

**Features**

- . Input 90V to 264VAC, 50~60Hz suitable for worldwide use
- . Output voltage optional from 5V/12V and 5V/24V
- . Protections: Short Circuit / Overload / Over Voltage Protection
- . 100% full load burn-in test for 2Hrs to make every unit reliable.
- . Fixed switching frequency at 65KHz, low leakage current <0.5mA
- . Cooling by free air convection, operating temperature 0~45°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 dual output 65W open frame switching power supply solution with wide range 90-264Vac input and designed strictly according to the international safety standards. The entire series supplies two models with output voltages 5V/12V and 5V/24V. The product is suitable for various types of consumer electronic devices, household electronic device, communication device and so on. The 65W dual output switching power supply solution is built-in full protections of over load / short circuit and over voltage. The design is in low leakage current <0.5mA and with fixed working switching frequency at 65KHz

**Technical Specification**

Typ. Model	KPD-65A		KPD-65B	
<b>Output</b>				
Output Number	CH1	CH2	CH1	CH2
Output Voltage	5VDC	12VDC	5VDC	24VDC
Rated Current	5.5A	2.8A	3.5A	2A
Current Range	0.4 ~ 5.5A	0.2 ~ 3.2A	0.4 ~ 3.5A	0.2 ~ 2.6A
Output Power	61.1W Max.		65.5W Max.	
Voltage Tolerance	±4%	±7%	±4%	±7%
Ripple & Noise	100mVp-p	150mVp-p	100mVp-p	200mVp-p
<b>Input</b>				
Input voltage	90 - 264Vac or 120- 370Vdc			
Input Frequency	50-60Hz (When the input is AC)			
Input Current	1.5A Max. @ 100 ~240Vac 50/60Hz input			
Inrush Current	40A Max. @ 100 ~240Vac 50/60Hz input			
Efficiency (Typ.)	78%		81%	
Leakage Current	≤1mA @ full input range			
<b>Protections</b>				
Over current	73~105W. Auto-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	0°C to +45°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 76.0 x 42.0mm (5.00 x 3.00 x 1.65 inch)			
Unit Weight	240g±15 grams			
Packing Information	54pcs/ Carton, carton dimensions:47*37*20cm, 15kgs/ Carton			

## TEST REPORT

### OUTPUT FUNCTION TEST

NO	TEST ITEM	SPECIFICATION	TEST CONDIDTION	RESULT	VERDICT
1	RIPPLE & NOISE	CH1:100mVp-p (Max) CH2:150mVp-p (Max)	I/P:230VAC / O/P:FULL LOAD / Ta:25°C	39mVp-p 87mVp-p	P
2	VOLTAGE TOLERANCE	CH1: -4% ~ +4% CH2:-7% ~ +7%	I/P:90VAC~264VAC O/P:FULL~MIN. LOAD / Ta:25°C	CH1: -0.76% ~+2.58% CH2: -0.96% ~+4.78%	P
3	LINE REGULATION	-2% ~ +2% (Max)	I/P:90VAC ~264VAC O/P:FULL LOAD / Ta:25°C	-0.6% ~ +0.8% of output voltage	P
4	LOAD REGULATION	-4% ~ +4% (Max)	I/P:230VAC O/P:FULL ~MIN LOAD / Ta:25°C	-0.95% ~ +2.36% of output voltage	P
5	OVER/UNDERSHOOT	<±5%	I/P: 230VAC O/P:FULL LOAD / Ta:25°C	1.0%	P
6	SET UP TIME	800 mS (Max)	I/P:230VAC O/P:FULL LOAD / Ta:25°C	750 mS	P
7	RISE TIME	50 mS (Max)	I/P: 230VAC O/P:FULL LOAD / Ta:25°C	28 mS	P
8	HOLD UP TIME	20 mS (Min)	I/P: 115VAC O/P:FULL LOAD / Ta:25°C	39 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	72V~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	78% (Typ)	I/P:230VAC O/P:FULL LOAD / Ta:25°C	79.39%	P
4	AVERAGE EFFICIENCY	>75%	I/P:115/230VAC & O/P:25%、50%、75%、 100% LOAD & Ta:25°C	76.85% (115VAC) 77.32% (230VAC)	P
5	AC CURRENT	1.5A (Max)	I/P:100VAC & O/P:FULL LOAD Ta:25°C	1.36A	P
6	INRUSH CURRENT	<40A COLD START	I/P: 230VAC / O/P:FULL LOAD Ta:25°C	21.4A	P
7	LEAKAGE CURRENT	< 1mA	I/P:240VAC & O/P:Min LOAD Ta:25°C	L-FG:0.537mA N-FG:0.436mA	P

### PROTECTION FUNCTION TEST

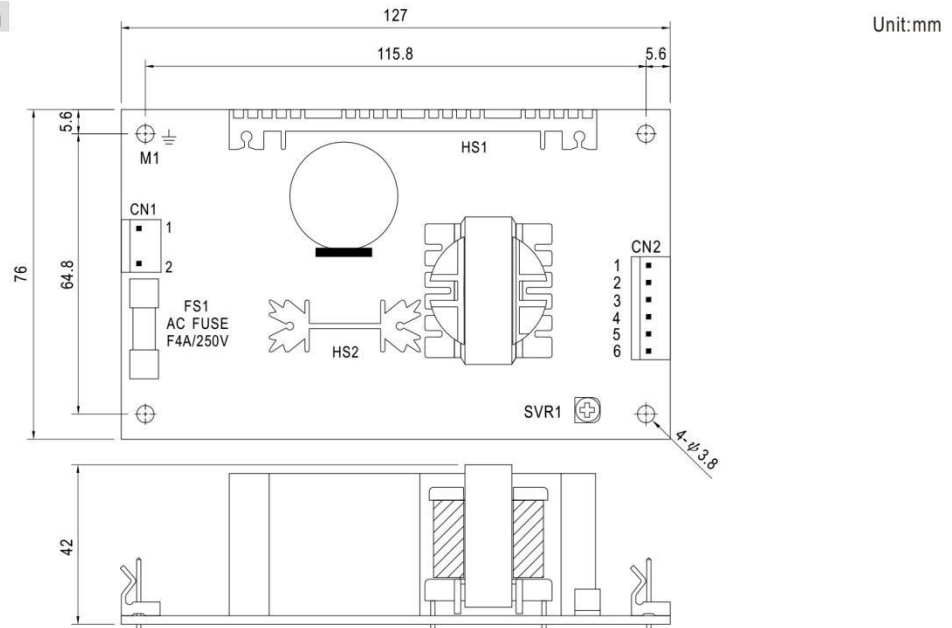
NO	TEST ITEM	SPECIFICATION	TEST CONDIDTION	RESULT	VERDICT
1	OVER LOAD PROTECTION	115 ~ 150% (Typ)	I/P:230VAC & O/P:TESTING Ta:25°C	140.4% HICCUP MODE	P
2	OVER VOLTAGE PROTECTION	115 ~ 135% (Typ)	I/P:230VAC O/P:MIN LOAD & Ta:25°C	Hiccup mode ,recovers automatically after fault condition is removed	P
3	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:0.5KVAC/min	I/P-O/P: 3.6 KVAC/min I/P-FG: 2.4KVAC/min O/P-FG: 0.6KVAC/min Ta:25°C	I/P-O/P:6.83mA I/P-FG: 6.87mA O/P-FG: 3.66mA NO DAMAGE	P
2	ISOLATION RESISTANCE	I/P-O/P:500VDC>100MΩ I/P-FG: 500VDC>100MΩ O/P-FG:500VDC>100MΩ	I/P-O/P: 500 VDC I/P-FG: 500 VDC O/P-FG: 500 VDC Ta:25°C	I/P-O/P: 9999MΩ I/P-FG: 9999MΩ O/P-FG:9999 MΩ 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
<b>PASS</b>	<b>ZHU LI</b>	<b>WANG LW</b>	<b>ZHANG DL</b>

**Mechanical Specification**



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

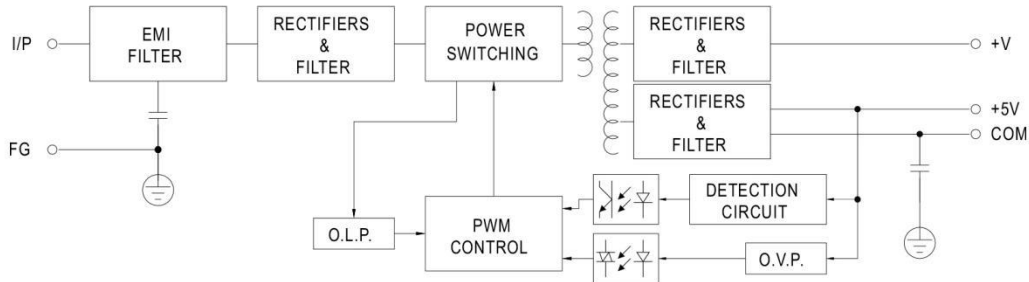
Pin No.	Assignment	Mating Housing	Terminal
1	+V	Molex 5195 or equivalent	Molex 5194 or equivalent
2,3	+5V		
4,5	COM		
6	NC		

⊥ : Grounding Required

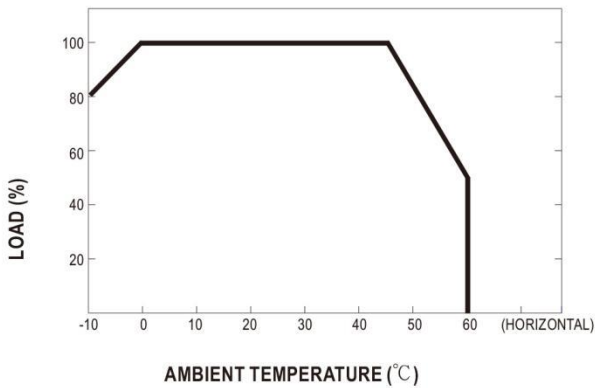
- ⚠ 1.HS1,HS2 cannot be shorted
- 2.M1 is safety ground

fosc : 65KHz

**Block Diagram**



**Derating Curve**



**Output Derating VS Input Voltage**

