

Features

- . Input 90V to 264VAC, 50~60Hz suitable for worldwide use
- . Output voltage optional from 12V/5V, 24V/5V, 36V/5V, 48V/5V
- . Protections: Short Circuit / Overload / Over Voltage Protection
- . 100% full load burn-in test for 2Hrs to make every unit reliable.
- . Built-in active PFC function, PF>0.92, efficiency up to 86%
- . Cooling by free air convection, operating temperature -10~40°C
- . Long life and high reliability design with 3 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 250W 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 four models with output voltages 12V/5V, 24V/5V, 36V/5V, and 48V/5V. The product is suitable for various types of consumer electronic devices, household electronic device, communication device and so on. The 250W dual output switching power supply solution is built-in full protections of over load / short circuit and over voltage and PFC function with PF>0.92.

Technical Specification

Typ. Model	KPID-250A		KPID-250B		KPID-250C		KPID-250D	
Output								
Output Number	CH1	CH2	CH1	CH2	CH1	CH2	CH1	CH2
Output Voltage	12VDC	5V	24VDC	5V	36VDC	5V	48VDC	5V
Rated Current	15A	5A	9.4A	5A	6.3A	5A	4.7A	5A
Current Range	0 ~ 15A	0 ~ 5A	0 ~ 9.42A	0 ~ 5A	0 ~ 6.3A	0 ~ 5A	0 ~ 4.7A	0 ~ 5A
Output Power	205W Max.		250.6W		251.8W Max.		250.6W	
Voltage Tolerance	±3%	±2%	±2%	±2%	±2%	±2%	±2%	±2%
Ripple & Noise	150mVp-p	50mVp-p	150mVp-p	50mVp-p	200mVp-p	50mVp-p	200mVp-p	50mVp-p
Input								
Input voltage	90 - 264Vac or 120- 370Vdc							
Input Frequency	50-60Hz (When the input is AC)							
Input Current	3A Max. @ 100 ~240Vac 50/60Hz input							
Inrush Current	58A Max. @ 100 ~240Vac 50/60Hz input							
Efficiency (Typ.)	83%		86%		86%		86%	
Leakage Current	≤3.5mA @ full input range							
Protections								
Over current	105 ~ 170% rated output power. 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							
Environmental								
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	≤2000m @ full load and rated operating temperatures							
MTBF	≥50000Hrs @ full load and rated operating temperatures							
Mechanical								
Dimensions (L x W x H)	222.0 x 95.0 x 40.0mm (8.74 x 3.74 x 1.58 inch)							
Unit Weight	740g±20 grams							
Packing Information	18pcs/ 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	CH1:150mVp-p (Max) CH2:50mVp-p (Max)	I/P:230VAC / O/P:FULL LOAD / Ta:25°C	63mVp-p 19mVp-p	P
2	VOLTAGE TOLERANCE	CH1: -3% ~ +3% CH2: -2% ~ +2%	I/P:90VAC~264VAC O/P:FULL~MIN. LOAD / Ta:25°C	CH1: -1.06% ~+1.85% CH2: -0.96% ~+1.028%	P
3	LINE REGULATION	-0.5% ~ +0.5% (Max)	I/P:90VAC ~264VAC O/P:FULL LOAD / Ta:25°C	-0.08% ~ +0.08% of output voltage	P
4	LOAD REGULATION	-2% ~ +2% (Max)	I/P:230VAC O/P:FULL ~MIN LOAD / Ta:25°C	-1.12% ~ +1.23% of output voltage	P
5	OVER/UNDERSHOOT	<±5%	I/P: 230VAC O/P:FULL LOAD / Ta:25°C	0.9%	P
6	SET UP TIME	2500 mS (Max)	I/P:230VAC O/P:FULL LOAD / Ta:25°C	1210 mS	P
7	RISE TIME	60 mS (Max)	I/P: 230VAC O/P:FULL LOAD / Ta:25°C	33 mS	P
8	HOLD UP TIME	30 mS (Min)	I/P: 115VAC O/P:FULL LOAD / Ta:25°C	41 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	86% (Typ)	I/P:230VAC O/P:FULL LOAD / Ta:25°C	86.96%	P
4	AVERAGE EFFICIENCY	>83%	I/P:115/230VAC & O/P:25%、50%、75%、 100% LOAD & Ta:25°C	84.12% (115VAC) 84.62% (230VAC)	P
5	AC CURRENT	3A (Max)	I/P:100VAC & O/P:FULL LOAD Ta:25°C	2.72A	P
6	INRUSH CURRENT	<58A COLD START	I/P: 230VAC / O/P:FULL LOAD Ta:25°C	41.6A	P
7	LEAKAGE CURRENT	< 3.5mA	I/P:240VAC & O/P:Min LOAD Ta:25°C	L-FG:2.36mA N-FG:2.43mA	P

PROTECTION FUNCTION TEST

NO	TEST ITEM	SPECIFICATION	TEST CONDIDTION	RESULT	VERDICT
1	OVER LOAD PROTECTION	105 ~ 170% (Typ)	I/P:230VAC & O/P:TESTING Ta:25°C	125.3% 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

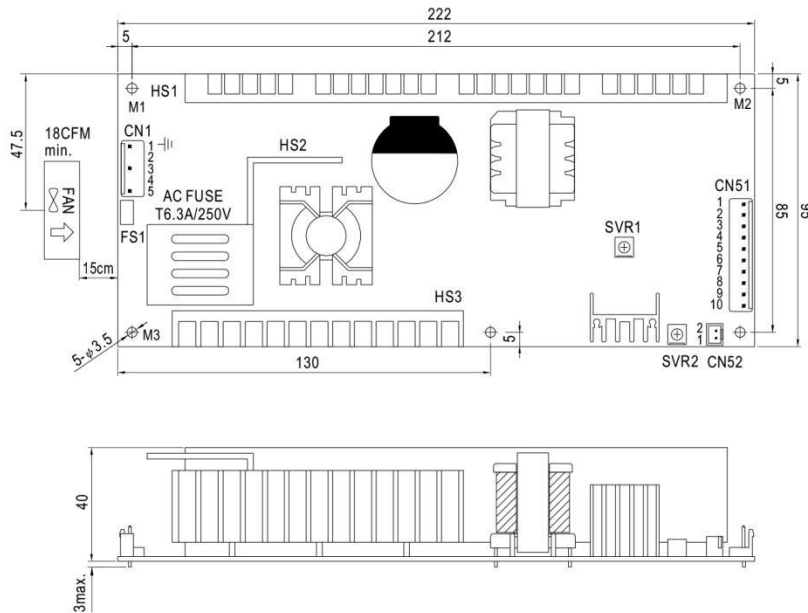
SAFETY TEST & E.M.C TEST

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:4.99mA I/P-FG: 4.81mA O/P-FG: 2.23mA 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
PASS	ZHU LI	WANG LW	ZHANG DL

Mechanical Specification

Unit:mm



AC Input Connector (CN1) : JST B5P-VH or equivalent

Pin No.	Assignment	Mating Housing	Terminal
1	FG \perp	JST VHR or equivalent	JST SVH-21T-P1.1 or equivalent
2,4	No Pin		
3	AC/N		
5	AC/L		

\perp : Grounding Required

DC Output Connector (CN51) : JST B10P-VH or equivalent

Pin No.	Assignment	Mating Housing	Terminal
1,2,3	COM1	JST VHR or equivalent	JST SVH-21T-P1.1 or equivalent
4,5,6	V1		
7,8	COM2		
9,10	V2		

Remote ON/OFF Connector(CN52):JST B2B-XH or equivalent

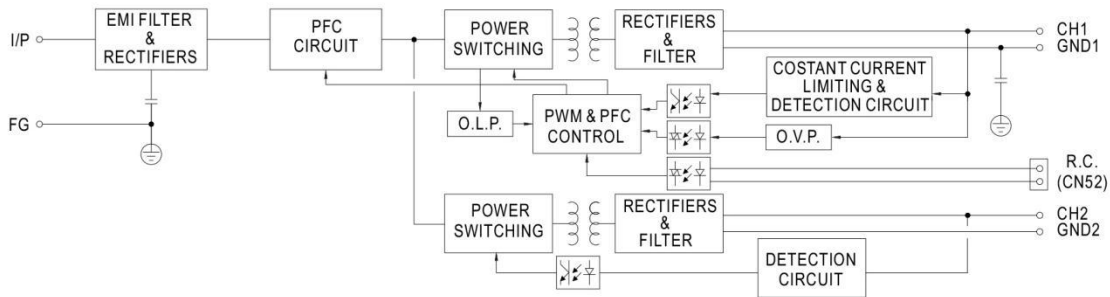
Pin No.	Status	Mating Housing	Terminal
PIN1,2 (Short)	V1: OFF V2: ON	JST XHP or equivalent	JST SXH-001T-P0.6 or equivalent
PIN1,2 (Open)	V1: ON V2: ON		

SVR1	For CH1
SVR2	For CH2



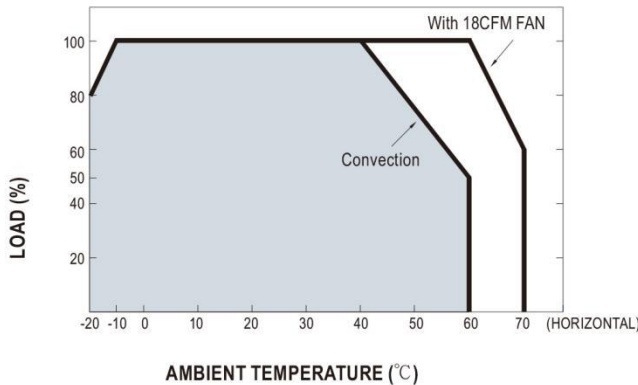
- 1.HS1,HS2,HS3 cannot be shorted.
- 2.CN1:Pin1 is safety ground. For better EMC performance,Please secure an electrical connection between M1,M2,M3,and chassis grounding.

Block Diagram



PFC fosc : 100KHz
PWM fosc : 100KHz

Derating Curve



Output Derating VS Input Voltage

