



**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>0.94, efficiency up to 89%
- . 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 475W open frame security system 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/54V, 24V/54V, 5V/54V, and 27V/54V. The product is suitable for various types of consumer electronic devices, household electronic device, communication device and so on. The 475W dual output security system switching power supply solution is built-in full protections of over load / short circuit and over voltage and PFC function with PF>0.94, with dimensions of 180\*174\*35mm.

**Technical Specification**

Typ. Model	KNW-475A01		KNW-475A02		KNW-475A03		KNW-475A04	
<b>Output</b>								
Output Number	CH1	CH2	CH1	CH2	CH1	CH2	CH1	CH2
Output Voltage	12VDC	54V	24VDC	54V	5VDC	54V	27VDC	54V
Rated Current	7A	7.2A	3.5A	7.2A	10A	7.2A	4.2A	7.2A
Current Range	0.4 ~ 7A	0.5 ~ 7.2A	0.4 ~ 3.5A	0.5 ~ 7.2A	0.4 ~ 10A	0.5 ~ 7.2A	0.4 ~ 4.2A	0.5 ~ 7.2A
Output Power	475W Max.		475W		430W Max.		475W	
Voltage Tolerance	±3%	±2%	±2%	±2%	±2%	±2%	±2%	±2%
Ripple & Noise	150mVp-p	300mVp-p	150mVp-p	300mVp-p	200mVp-p	300mVp-p	200mVp-p	300mVp-p
<b>Input</b>								
Input voltage	90 - 264Vac or 120- 370Vdc							
Input Frequency	50-60Hz (When the input is AC)							
Input Current	7A Max. @ 100 ~240Vac 50/60Hz input							
Inrush Current	80A Max. @ 100 ~240Vac 50/60Hz input							
Efficiency (Typ.)	88%		89%		87%		89%	
Leakage Current	≤3.5mA @ full input range							
<b>Protections</b>								
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							
<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	≤2000m @ full load and rated operating temperatures							
MTBF	≥50000Hrs @ full load and rated operating temperatures							
<b>Mechanical</b>								
Dimensions (L x W x H)	180.0 x 174.0 x 35.0mm (7.09 x 6.85 x 1.78 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) CH2:300mVp-p (Max)	I/P:230VAC / O/P:FULL LOAD / Ta:25°C	89mVp-p 215mVp-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% ~ +1.28% of output voltage	P
5	OVER/UNDERSHOOT	<±5%	I/P: 230VAC O/P:FULL LOAD / Ta:25°C	0.96%	P
6	SET UP TIME	3000 mS (Max)	I/P:230VAC O/P:FULL LOAD / Ta:25°C	2150 mS	P
7	RISE TIME	60 mS (Max)	I/P: 230VAC O/P:FULL LOAD / Ta:25°C	39 mS	P
8	HOLD UP TIME	10 mS (Min)	I/P: 115VAC O/P:FULL LOAD / Ta:25°C	12 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	85V~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	89% (Typ)	I/P:230VAC O/P:FULL LOAD / Ta:25°C	89.65%	P
4	AVERAGE EFFICIENCY	>87%	I/P:115/230VAC & O/P:25%、50%、75%、 100% LOAD & Ta:25°C	87.46% (115VAC) 87.992% (230VAC)	P
5	AC CURRENT	7A (Max)	I/P:100VAC & O/P:FULL LOAD Ta:25°C	5.85A	P
6	INRUSH CURRENT	<80A COLD START	I/P: 230VAC / O/P:FULL LOAD Ta:25°C	53.2A	P
7	LEAKAGE CURRENT	< 3.5mA	I/P:240VAC & O/P:Min LOAD Ta:25°C	L-FG:1.25mA N-FG:1.13mA	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	135.2% 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:5.89mA I/P-FG: 5.80mA O/P-FG: 2.86mA 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