



Features

- . Input voltage 176 ~ 264VAC 50/60Hz or 200~360VDC
- . Protections: Short Circuit / Overload / Over Voltage Protection
- . Output voltage from can be 24Vdc to 110Vdc for 1000W series
- . 100% full load burn-in test for 2Hrs to make every unit reliable.
- . All using high quality 105°C long life electrolytic capacitors
- . Efficiency is no less than 88% and 2 years guarantee.
- . Forced air cooling by built-in DC ball bearing fan

Safety Standards

- . IEC62368-1 CB report for worldwide use
- . EN 62368-1:2014/A11:2017 for European Union
- . UL62368-1 + CAN/CSA 62368-1 for USA and Canada
- . 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 high reliable 60Vdc 16.6A 1000W single output constant voltage type switching mode power supply solution with 176 ~ 264VAC or 200 ~ 360VDC input. The switching power supply utilizes aluminum alloy housing with dimensions of 291*133*68mm built-in a on/off controllable DC fan for forced air cooling. It is designed and manufactured strictly according to the international safety standards and operating temperature is suitable from -10 °C to +60 °C. This 60Vdc 16.6A power supply is suitable for various types of household appliances, payment devices, network equipments, boiler controllers, integrated POS, electric beds, sleep apnea machines and so on.

Technical Specification

Typ. Model	TL-1000S-24	TL-1000S-36	TL-1000S-48	TL-1000S-60	TL-1000S-110
Output					
Output Voltage	24VDC	36VDC	48VDC	60VDC	110VDC
Rated Current	42A Max.	28A Max.	21A Max.	16.6A Max.	9A Max.
Current Range	0 ~ 42A	0 ~ 28A	0 ~ 21A	0 ~ 16.6A	0 ~ 9A
Output Power	1000W Max.	1000W Max.	1000W Max.	1000W Max.	1000W Max.
Voltage Tolerance	±5%	±5%	±5%	±5%	±5%
Ripple & Noise	200mVp-p	300mVp-p	400mVp-p	500mVp-p	800mVp-p
Input					
Input voltage	176 ~264 Vac or 200- 360Vdc				
Input Frequency	50-60Hz (When the input is AC)				
Input Current	9A Max. @ 100 ~240Vac 50/60Hz input				
Inrush Current	80A Max. @ 100 ~240Vac 50/60Hz input				
Efficiency (Typ.)	85%	86%	87%	88%	89%
Leakage Current	≤0.5mA @ full input range				
Protections					
Over current	110~130% 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	-10°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 (W x L x H)	291.0 x 133.0 x 68.0mm (11.46 x 5.24 x 2.68 inch)				
Unit Weight	750g±40 grams				
Packing Information	20pcs/ Carton, carton dimensions:47*37*20cm, 16.2kgs/ Carton				

TEST REPORT

OUTPUT FUNCTION TEST

NO	TEST ITEM	SPECIFICATION	TEST CONDIDTION	RESULT	VERDICT
1	RIPPLE & NOISE	500mVp-p (Max)	I/P:230VAC / O/P:FULL LOAD / Ta:25°C	369mVp-p	P
2	VOLTAGE TOLERANCE	-5% ~ +5% (Max)	I/P:176VAC~264VAC O/P:FULL~MIN. LOAD / Ta:25°C	-2% ~ +2% of output voltage	P
3	LINE REGULATION	-1% ~ +1% (Max)	I/P:176VAC ~264VAC O/P:FULL LOAD / Ta:25°C	-0.09% ~ +0.09% of output voltage	P
4	LOAD REGULATION	-3% ~ +3% (Max)	I/P:230VAC O/P:FULL ~MIN LOAD / Ta:25°C	-1.12% ~ +1.15% of output voltage	P
5	OVER/UNDERSHOOT	<±5%	I/P: 230VAC O/P:FULL LOAD / Ta:25°C	0.94%	P
6	SET UP TIME	2000 mS (Max)	I/P:230VAC O/P:FULL LOAD / Ta:25°C	1540 mS	P
7	RISE TIME	50 mS (Max)	I/P: 230VAC O/P:FULL LOAD / Ta:25°C	41 mS	P
8	HOLD UP TIME	10 mS (Min)	I/P: 230VAC O/P:FULL LOAD / Ta:25°C	16 mS	P

INPUT FUNCTION TEST

NO	TEST ITEM	SPECIFICATION	TEST CONDIDTION	RESULT	VERDICT
1	VOLTAGE RANGE	176VAC~264VAC	I/P:TESTING O/P:FULL LOAD / Ta:25°C	168V~264V	P
2	FREQUENCY RANGE	50HZ - 60HZ (Typ) NO DAMAGE OSC	I/P: 176VAC ~ 240VAC O/P:FULL~MIN LOAD / Ta:25°C	TEST: OK	P
3	EFFICIENCY	>88% (Typ)	I/P:230VAC O/P:FULL LOAD / Ta:25°C	89.74%	P
4	AVERAGE EFFICIENCY	>86%	I/P:230VAC & O/P:25%、50%、75%、100% LOAD & Ta:25°C	87.19% (230VAC)	P
5	AC CURRENT	9.0A (Max)	I/P:230VAC & O/P:FULL LOAD Ta:25°C	7.88A	P
6	INRUSH CURRENT	<80A COLD START	I/P: 230VAC / O/P:FULL LOAD Ta:25°C	64..34A	P
7	LEAKAGE CURRENT	< 0.5mA	I/P:230VAC & O/P:Min LOAD Ta:25°C	L-FG:0.39mA N-FG:0.38mA	P

PROTECTION FUNCTION TEST

NO	TEST ITEM	SPECIFICATION	TEST CONDIDTION	RESULT	VERDICT
1	OVER LOAD PROTECTION	110 ~ 130% (Typ)	I/P:230VAC & O/P:TESTING Ta:25°C	122.6% 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: 1.5KVAC/min I/P- FG: 1.5KVAC/min O/P-FG:0.5KVAC/min	I/P-O/P: 1.8 KVAC/min I/P-FG: 1.8 KVAC/min O/P-FG:0.6 KVAC/min Ta:25°C	I/P-O/P:7.88mA I/P-FG: 7.59mA O/P-FG: 5.44mA 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