



Features

- . Input 115V / 230VAC selectable by switch, 50~60Hz
- . Output voltage selectable from 5V to 48Vdc constant voltage
- . Protections: Short Circuit / Overload / Over Voltage Protection
- . 100% full load burn-in test for 2Hrs to make every unit reliable.
- . All using 105°C long life electrolytic capacitors
- . High efficiency, long life and high reliability with 2 year warranty
- . LED indicator for power on and withstand 5G vibration test

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 and ultra-thin 320W LED module power supply solution with 115Vac or 230Vac input selected by switch and designed strictly according to the international safety standards. The entire series supplies different models with output voltages ranging between 5Vdc and 48Vdc that can satisfy the demands for various types of communication devices, CCTV systems, LED module, industrial equipment, laser related machine, measurement instruments and so on. This 320W LED module power supply enclosed type utilizes aluminum alloy housing with temperature controlled fan for force air convection cooling to make low temperature rise.

Technical Specification

Typ. Model	TL-320S-5	TL-320S-7.5	TL-320S-12	TL-320S-24	TL-320S-48
Output					
Output Voltage	5VDC	9VDC	12VDC	24VDC	48VDC
Rated Current	60A Max.	42.7A Max.	26.7A Max.	13.3A Max.	6.7A Max.
Current Range	0 ~ 60A	0 ~ 42.7A	0 ~ 26.7A	0 ~ 13.3A	0 ~ 6.7A
Output Power	300W Max.	320W Max.	320W Max.	320W Max.	321.6W Max.
Voltage Tolerance	±5%	±5%	±5%	±5%	±3%
Ripple & Noise	150mVp-p	200mVp-p	200mVp-p	200mVp-p	250mVp-p
Input					
Input voltage	115V / 230Vac or 220- 374Vdc				
Input Frequency	50-60Hz (When the input is AC)				
Input Current	7A Max. @ 115Vac 50/60Hz input				
Inrush Current	70A Max. @ 100 ~240Vac 50/60Hz input				
Efficiency (Typ.)	79%	83%	86%	87%	89%
Leakage Current	≤0.5mA @ full input range				
Protections					
Over current	110~135% 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)	215.0 x 115.0 x 50.0mm (8.47 x 4.53 x 1.97 inch)				
Unit Weight	680g±30 grams				
Packing Information	20pcs/ Carton, carton dimensions:47*37*20cm, 14.5kgs/ Carton				

TEST REPORT

OUTPUT FUNCTION TEST

NO	TEST ITEM	SPECIFICATION	TEST CONDIDTION	RESULT	VERDICT
1	RIPPLE & NOISE	150mVp-p (Max)	I/P:230VAC / O/P:FULL LOAD / Ta:25°C	131mVp-p	P
2	VOLTAGE TOLERANCE	-5% ~ +5% (Max)	I/P:115VAC / 230VAC O/P:FULL~MIN. LOAD / Ta:25°C	-2% ~ +2.1% of output voltage	P
3	LINE REGULATION	-1% ~ +1% (Max)	I/P:90VAC ~264VAC O/P:FULL LOAD / Ta:25°C	-0.05% ~ +0.12% of output voltage	P
4	LOAD REGULATION	-3% ~ +3% (Max)	I/P:230VAC O/P:FULL ~MIN LOAD / Ta:25°C	-0.98% ~ +0.89% of output voltage	P
5	OVER/UNDERSHOOT	<±5%	I/P: 230VAC O/P:FULL LOAD / Ta:25°C	1.1%	P
6	SET UP TIME	3000 mS (Max)	I/P:230VAC O/P:FULL LOAD / Ta:25°C	2150 mS	P
7	RISE TIME	30 mS (Max)	I/P: 230VAC O/P:FULL LOAD / Ta:25°C	27 mS	P
8	HOLD UP TIME	10 mS (Min)	I/P: 115VAC O/P:FULL LOAD / Ta:25°C	13 mS	P

INPUT FUNCTION TEST

NO	TEST ITEM	SPECIFICATION	TEST CONDIDTION	RESULT	VERDICT
1	VOLTAGE RANGE	85VAC ~ 132VAC 176VAC ~ 265VAC	I/P:TESTING O/P:FULL LOAD / Ta:25°C	83V~132VAC 165V ~ 265VAC	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	79% (Typ)	I/P:230VAC O/P:FULL LOAD / Ta:25°C	79.56%	P
4	AVERAGE EFFICIENCY	>77%	I/P:115/230VAC & O/P:25%、50%、75%、 100% LOAD & Ta:25°C	77.911% (115VAC) 78.91% (230VAC)	P
5	AC CURRENT	7.0A (Max)	I/P:100VAC & O/P:FULL LOAD Ta:25°C	6.63A	P
6	INRUSH CURRENT	<70A COLD START	I/P: 230VAC / O/P:FULL LOAD Ta:25°C	56.35A	P
7	LEAKAGE CURRENT	<0.5mA	I/P:240VAC & O/P:Min LOAD Ta:25°C	L-FG:0.38mA N-FG:0.37mA	P

PROTECTION FUNCTION TEST

NO	TEST ITEM	SPECIFICATION	TEST CONDIDTION	RESULT	VERDICT
1	OVER LOAD PROTECTION	110 ~ 135% (Typ)	I/P:230VAC & O/P:TESTING Ta:25°C	129.6% 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:6.84mA I/P-FG: 6.56mA O/P-FG:4.22mA 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 A	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 A	P

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