



Features

- . Input voltage 176 ~ 264VAC 50/60Hz or 200~360VDC
- . Output voltage select able from 3.3V to 24Vdc for 35W series
- . Protections: Short Circuit / Overload / Over Voltage Protection
- . LED indicator for power on and free air convection cooling
- . 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 78% and 2 years guarantee.

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 low cost and reliable 9Vdc 4A 36W single output switching power supply solution with 176-264Vac or 200 - 360Vdc input and designed strictly according to the international safety standards. The output voltage is adjustable by the potentiometer by +/-10% of rated output voltage. This 9Vdc 4A switch mode power supply is suitable for various types of industrial control system, mechanical and electrical equipment, electronic instruments/apparatus, household applications and so on. The switching power supply utilizes aluminum alloy housing with cellular shape cover which is better for free air convection cooling with dimensions of 129 * 98* 40mm .

Technical Specification

Typ. Model	TL-35S-3.3	TL-35S-5	TL-35S-9	TL-35S-12	TL-35S-24
Output					
Output Voltage	3.3VDC	5VDC	9VDC	12VDC	24VDC
Rated Current	7A Max.	7A Max.	4A Max.	3A Max.	1.5A Max.
Current Range	0 ~ 7A	0 ~ 7A	0 ~ 4A	0 ~ 3A	0 ~ 1.5A
Output Power	23.1W Max.	35W Max.	36W Max.	25W Max.	36W Max.
Voltage Tolerance	±5%	±5%	±5%	±5%	±5%
Ripple & Noise	100mVp-p	100mVp-p	100mVp-p	150mVp-p	200mVp-p
Input					
Input voltage	176 - 264Vac or 200- 360Vdc				
Input Frequency	50-60Hz (When the input is AC)				
Input Current	0.7Max. @ 100 ~240Vac 50/60Hz input				
Inrush Current	40A Max. @ 100 ~240Vac 50/60Hz input				
Efficiency (Typ.)	70%	75%	78%	80%	82%
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	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 (W x L x H)	129.0 x 98.0 x 40.0mm (5.08 x 3.86 x 1.58 inch)				
Unit Weight	180g±10 grams				
Packing Information	60pcs/ Carton, carton dimensions:47*37*20cm, 12.5kgs/ Carton				

TEST REPORT

OUTPUT FUNCTION TEST

NO	TEST ITEM	SPECIFICATION	TEST CONDIDTION	RESULT	VERDICT
1	RIPPLE & NOISE	100mVp-p (Max)	I/P:230VAC / O/P:FULL LOAD / Ta:25°C	72mVp-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	-0.05% ~ +0.06% of output voltage	P
4	LOAD REGULATION	-3% ~ +3% (Max)	I/P:230VAC O/P:FULL ~MIN LOAD / Ta:25°C	-0.92% ~ +0.92% of output voltage	P
5	OVER/UNDERSHOOT	<±5%	I/P: 230VAC O/P:FULL LOAD / Ta:25°C	0.91%	P
6	SET UP TIME	2000 mS (Max)	I/P:230VAC O/P:FULL LOAD / Ta:25°C	1450 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: 230VAC O/P:FULL LOAD / Ta:25°C	13 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	166V~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	78% (Typ)	I/P:230VAC O/P:FULL LOAD / Ta:25°C	78.36%	P
4	AVERAGE EFFICIENCY	>76%	I/P:230VAC & O/P:25%、50%、75%、100% LOAD & Ta:25°C	76.41% (230VAC)	P
5	AC CURRENT	0.7A (Max)	I/P:230VAC & O/P:FULL LOAD Ta:25°C	0.55A	P
6	INRUSH CURRENT	<40A COLD START	I/P: 230VAC / O/P:FULL LOAD Ta:25°C	31.63A	P
7	LEAKAGE CURRENT	< 0.5mA	I/P:230VAC & O/P:Min LOAD Ta:25°C	L-FG:0.24mA N-FG:0.24mA	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	118.8% 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:3.88mA I/P-FG: 3.43mA O/P-FG: 2.84mA 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