75W AC/DC Switching Power Supply
Model: TG-7601-ES



FEATURES

- Universal 90-264VAC input voltage.
- 216W Peak Capability.
- High Average efficiency up to 90.6%.
- High power density, compact size: 135.0 x 65.0 x 42.0 mm.
- Operating ambient temperature range: 0°C to +40°C.
- Output short circuit, over-current, over-voltage protection, over-temperature protection.
- Comply with DoE Level VI requirements.
- Operating altitude up to 5000m.
- Safety according to IEC62368-1.

Models & Ratings

Model No.	Peak Power (W) (1)	Output Power (W) (1)	Output Voltage (V)	Output Current (A)	Efficiency (%) (2)
TG-7601-ES	216	75	24	3.125	VI compliant

Notes:
1.Under any conditions, the total power of the product should not exceed the rated power.

2.Under the conditions of AC input voltage of 115V/60Hz and 230V/50Hz, temperature of 25℃, and preheating time of 30 minutes, the arithmetic mean of the loads at 25%, 50%, 75%, and 100% is measured to determine the average efficiency.

Input Specifications

Item	Operating Conditions		Min.	Typ.	Max.	Unit
Input Voltage Range	Input voltage		90	100-240	264	VAC
Input Frequency	-		47	50-60	63	Hz
Input Current	115VAC & maximum load		-	-	1.8	Arms
	230VAC & maximum load		-	-	0.85	
Inrush Current	115VAC	At 25°C, Cold start	-	-	60	A peak
	230VAC		-	-	120	
No Load Power Consumption	230VAC, no load		-	-	0.15	W
Earth Leakage Current	264VAC/63Hz		-	-	0.75	mA

Main Output Specifications

Item	Operating Conditions	Min.	Typ.	Max.	Unit
Output Voltage	-	22.8	24	25.2	VDC
Output Load	-	0	-	3.125	A
Line Regulation	90 - 264VAC, constant load	-	±1	-	%
Load Regulation	Output from 0 - 100% load	-	±2	-	%
Ripple & Noise (3)	Oscilloscope Bandwidth : 20MHz	-	-	1	%
Transient Response	40-80% and 80-40% load step, 1A/μsec slew rate	-	±5	-	%
Peak Load (4)	Refer to peak output condition	-	-	9	A
Turn on Delay Time	115/230VAC maximum load from input AC turn	-	-	1	S

	on				
Rise Time	Maximum load, 10% to 90% of output voltage	-	-	30	mS
Hold-up Time	At 25°C, 115VAC & maximum load, 90% of output voltage	16	-	-	mS
Over-voltage Protection	Output shut down and auto recovery	-	-	30	V
Over-current Protection	Output shut down and auto recovery	-	-	12	A
Short Circuit Protection	Output shut down and auto recovery	-	-	-	-
Over-temperature Protection (5)	Output shut down and auto recovery	-	-	-	-

Notes:

3. Please refer to Figure B to measure Vo, line regulation, load regulation, and ripple voltage. The output voltage is measured at the power supply output terminal.

Ripple and noise are measured at 20MHz of bandwidth by using a 12" twisted pair-wire terminated with a C1: 0.1μF ceramic or film capacitor and C2: 10μF low ESR electrolytic capacitor parallel, After 20 min warm up.

Ripple & Noise measurement circuit

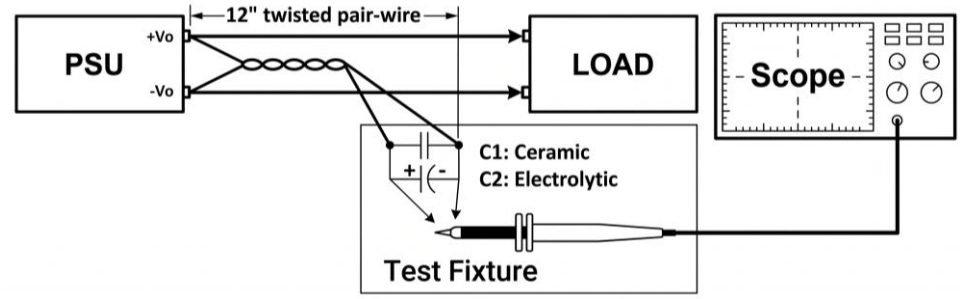
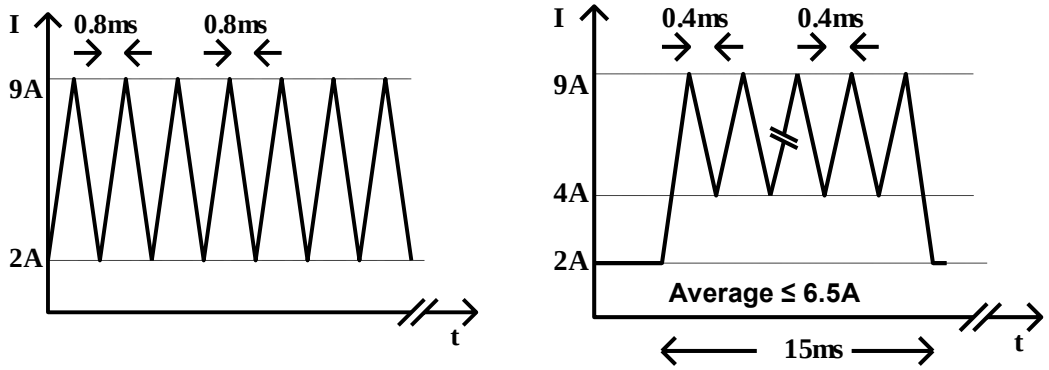


Figure B.

4. Peak Load Condition

The PSU shall able to sustain the below peak load condition at normal input voltage range without trip or damage and the output voltage shall not sag lower than 20V during these peak load conditions:



5. Over Temperature Protection

Over temperature shut down function is provided.

When ambient or internal temperature rises abnormally, over temperature protection function operates and output will be shut down. After shut down, please wait for the temperature to return to normal and automatically resume operation or remove the input and cool it down to reset over temperature protection, and then re-input.

Over temperature protection function operates at out of the specification area.

This function may not activate or cannot avoid power supply damage depending on the situation.

General Specifications

Item	Operating Conditions	Min.	Typ.	Max.	Unit
Operating Temperature	Refer to power de-rating curve	0	-	+40	°C
Storage Temperature	Non-operation	-40	-	+70	
Operating Humidity	Non-condensing	20	-	85	%
Storage Humidity		10	-	95	
Altitude	Operating altitude	-	-	5000	meter
Dielectric Strength Test	Input - Output	3,000	-	-	VAC
	Input - FG	1,800			VAC
Insulation Resistance	Input - Output	100	-	-	MΩ
	Input - FG	100	-	-	MΩ
Mean Time Between Failure	At 230VAC/50Hz, 100% load, 25°C, Telcordia SR332, issue 4.	900,000	-	-	Hrs.
Vibration	Operating：0.5G, 5 - 500Hz, 10 min/cycle, 30 min each axis (X, Y, Z)				
Shock	Non-operating (package)：20G, half-sine, 11 ms, 1 shock per direction per axis (X, Y, Z)				

Notes:
6.The electric strength test of LY production line was conducted for 3 seconds, and the leakage current was less than 10mA.

Safety Approvals

Certification	Standard	Notes & conditions
UL	UL/cUL UL62368-1, 2nd Edition	-
TUV	TUV EN62368-1, 2nd Edition	-
CB report	CB IEC62368-1, 2nd Edition	-
CCC	GB 4943.1-2022	-
KC	K 60950-1	-
SAA	AS/NZS 62368-1, 2nd Edition	-
Safety Class	Class I only	-

Electromagnetic Compatibility (EMC)

Emissions	CE	EN55032 (CISPR32) Class B	
	RE	EN55032 (CISPR32) Class B	
	Harmonic Current	IEC/EN61000-3-2 Class D	
	Flicker	IEC/EN61000-3-3	
Immunity	ESD	IEC/EN61000-4-2, level 4, Contact +/- 8KV; Air discharge +/-15KV	Criteria A
	RS	IEC/EN61000-4-3, level 3, 10V/m	Criteria A
	EFT	IEC/EN61000-4-4, level 3, +/- 2KV	Criteria A
	Surge	IEC/EN61000-4-5, level 4, Line to Line +/-2KV; Line to Earth +/-4KV	Criteria A
	CS	IEC/EN61000-4-6, level 2	Criteria A
	PFMF	IEC/EN61000-4-8, level 1	Criteria A
	DIP	IEC/EN61000-4-11	Criteria B

Dimensions and Recommended Layout

Item	Value	Unit
Weight (Typ.)	500	g
Size (L x W x H)	135.0 x 65.0 x 42.0 (Refer to outline drawing)	mm

Outline Drawing: (Unit: mm, Tolerance: ±0.5 mm)

