

60W ITE Power Supplies

Open Frame Series



Single Output 60W non PFC Data Sheet

For the latest revision, please visit power.liteon.com

Description

This is an AC to DC switching power supply in a package of 2 x 4 inches is a class-I PSU. This PSU capable of delivering 60 watts continuous power with convection cooling at 50°C operation temperature. It complies with worldwide safety and EMC regulations (refer to details below). This PSU is suitable for information & networking applications.

Features

- * Full AC input voltage design.
- * Withstand 300Vac surge voltage for 5 seconds
- * Full Protections: Short-circuit/ Over-voltage/ Over-current/ Over temperature
- * IEC/EN 62368-1 3rd design compliance
- * Up to 5000 meters operating altitude (note #4)
- * High efficiency and high reliability



Electrical Specification

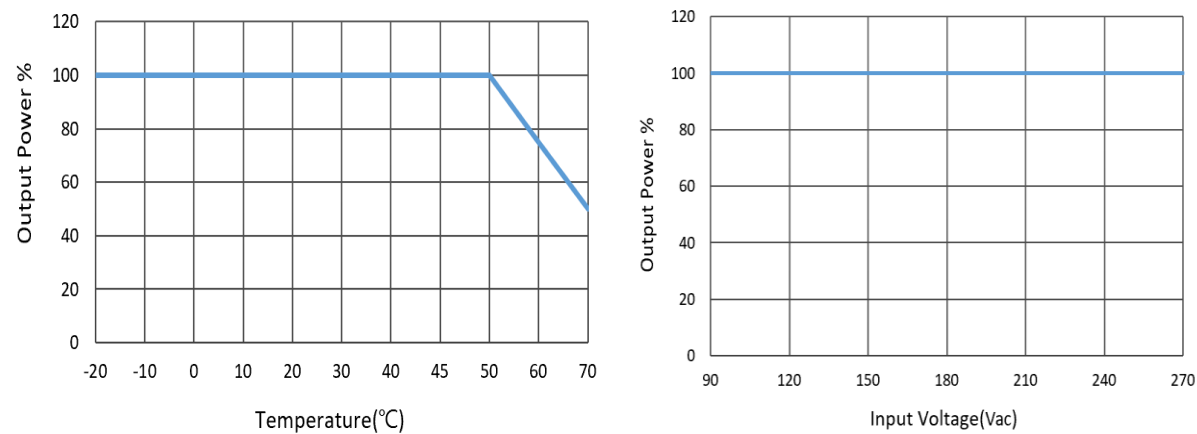
Model Name	PA-1600-42
Output	
Rated power	60W
Rated voltage	12V
Rated current	5A
Ripple & Noise(max.) (note #2)	120mV
Line & load regulation	±1%
Hold-up time(typ.)	10ms
Timing: AC ON delay / rising (max.)	2 sec / 30ms
Input	
Rated voltage range	100~240Vac
Operated voltage range (note #5)	85~264Vac, 300Vac for 5 sec
Current range (max.)	1.5A/100Vac; 0.75A/200Vac
Inrush current (typ.)	50A/115Vac; 100A/230Vac (cold start)

Frequency range	50-60Hz
Leakage current (max.)	0.5mA at 240Vac
Efficiency (typ.)	88%
Protection Function	
Over voltage (max.)	< 16.5V, latch-off protection
Over current (max.)	120%~150% of rated current, hiccup mode protection until fault is removed
Short circuit at O/P	No damage, hiccup mode protection until fault is removed
Over temperature	No damage, auto recovery until temperature is back to normal
Others	
MTBF (min.) (note#3)	500K hours @ rated load 25°C ambient
Environment	
Temperature (note#6)	(operating) -20~50°C / (storage) -40~85°C
Humidity	(operating) 10~90% RH non-condensing / (storage) 5~95% RH
Altitude (max.)	5000 meters
Mechanical	
Dimension	102.9mm(L)* 52.1mm(W)*34mm(H)
Vibration	5~200 Hz, 0.5G 90min./1cycle per axis for all axes (X, Y, Z)
Weight (typ.)	130g
Safety	
Standard	IEC/EN 62368-1 3 rd
Withstand voltage	Input-Output: 4242VDC / Input-FG: 2150VDC / Output-FG: 700VDC
Isolation resistance(min.)	Input-Output: 100Mohm @ 500VDC, 25°C, 70%RH
EMC	
EN55032 (CISPR32)	Conducted EMI: class B / Radiated EMI: class B
FCC	Conducted EMI: class B / Radiated EMI: class B
EN61000-3-2	Harmonic distortion: not applicable
EN61000-4-2 (note #5)	ESD: ±8KV contact discharge / ±15KV contact discharge
EN61000-4-3	Radiated RF immunity: 10V/m
EN61000-4-4	EFT: ±2KV (AC port)
EN61000-4-5	Surge: ±2KV DM / ±4KV CM
EN61000-4-6	Conducted RF immunity: 10V/m
EN61000-4-8	Magnetic field immunity: 10A/m
EN61000-4-11	Voltage dip immunity

Notes

#1: All specification defined at 230Vac/50Hz, rated power and 25°C ambient temperature if not mentioned specifically.

- #2: Ripple noise is measured by a 30cm length, twisted wires with 0.1uF MLCC & 47uF low ESR capacitor.
- #3: Calculated by Telcordia SR332 at 40°C ambient temperature.
- #4: When operating altitude is higher than 2000m, the environment temperature derating factor is 0.36°C/100m.
- #5: ESD was tested with system enclosure.
- #6: De-rating curve of AC input voltage and ambient temperature:



Mechanical Specification

Outline and Dimension

DIMENSION (L X W X H):101.6 X 50.8 X 28 mm

