50W Adapter
48V & 54V Series

Single Output 50W Non-PFC Data Sheet

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

Description

This product is an 50watts AC to DC adapter intended for use in IPC Systems, Communication Systems, Embedded Systems, PoE Systems. This adapter operates at 90 to 264 VAC input voltage. The unit meets CISPR32 EN55032 CLASS B, EN55024 and FCC PART 15B Class B emission limits, and is designed for ITE application.

Features

* Full AC input voltage design with C18 socket
* Withstand 300Vac surge voltage for 5 seconds
* Full Protections: Short-circuit/ Over-voltage/ Over-current/ Over temperature operating.
* Energy efficiency level VI compliance
* Slim and compact in size
* Various DC plug types available
* IEC/EN 62368-1 design compliance
* Up to 5000 meters operating altitude (note #4)
* High reliability

Electrical Specification

Model Name	PA-1500-48	PA-1500-49
Output		
Rated power	50W	
Rated voltage	48V	54V
Rated current	1.04A	0.926A
Ripple & Noise(max.) (note #2)	250mV	250mV
Line & load regulation	±5%	
Hold-up time(typ.)	10ms	
Timing: AC ON delay / rising (max.)	3 sec / 50ms	
Input		
Rated voltage range	100~240Vac	
Operated voltage range	90~264Vac, 300Vac for 5 sec	
Current range (max.)	1.5A/100Vac	
Inrush current	No component damaged ($<I^2*t$).	

Frequency range	50-60Hz	
Leakage current (max.)	0.25mA at 240Vac	
Average efficiency (min.)	88%	88%
Protection Function		
Over voltage (max.)	130% of rated voltage, latch protection until AC input reset	
Over current (max.)	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)	300K hours @ rated load	
Environment		
Temperature (note#5)	(operating) -20~45℃ / (storage) -40~85℃	
Humidity	(operating) 10~90% RH non-condensing / (storage) 5~95% RH	
Altitude (max.)	5000 meters	
Mechanical		
Dimension	110.0(L)*50.0(W)*33mm(H)	
Vibration	10~500 Hz, 5G 20min./1cycle per axis for all axes (X, Y, Z)	
Weight (typ.)	185g	
Safety		
Standard	IEC/EN 62368-1, CNS14336-1	
Withstand voltage	Input-Output: 4242VDC	
Isolation resistance(min.)	Input-Output: 30Mohm @ 500VDC, 25℃, 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	ESD: ±8KV contact discharge / ±15KV contact discharge	
EN61000-4-3	Radiated RF immunity: 3V/m	
EN61000-4-4	EFT: ±1KV (AC port)	
EN61000-4-5	Surge: ±2KV DM / ±4KV CM	
EN61000-4-6	Conducted RF immunity: 3V/m	
EN61000-4-8	Magnetic field immunity: 3A/m	
EN61000-4-11	Voltage dip immunity	

Notes

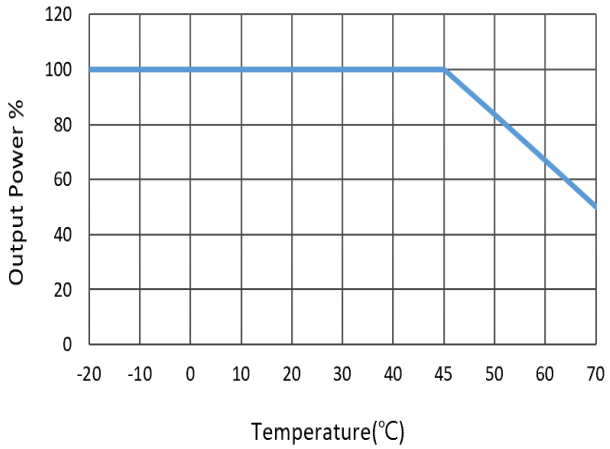
#1: All specification defined at 230Vac/50Hz, rated power and 25℃ ambient temperature if not mentioned specifically.

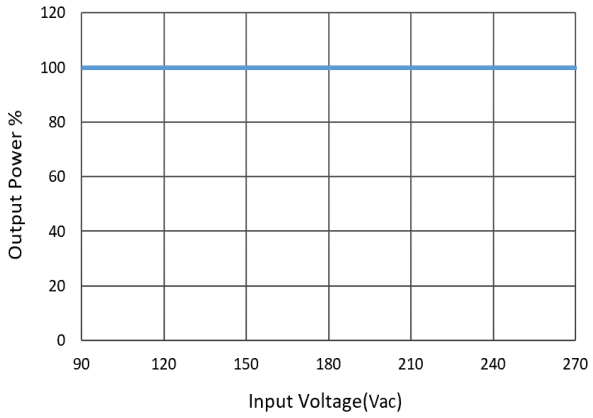
#2: Ripple noise is measured by a 30cm length, twisted wires with 0.47uF MLCC & 47uF low ESR capacitor.

#3: Calculated by Telcordia SR332 at 25℃ ambient temperature.

#4: When operating altitude is higher than 2000m, the environment temperature derating factor is 0.36℃/100m.

#5: De-rating curve of ambient temperature:





Mechanical Specification