

# Industrial Adapter

## Power Delivery 5/9/12/15/20V Series

**LITEON**

### Variable Single Output 45W Non-PFC Data Sheet

For the latest revision, please visit [power.liteon.com](http://power.liteon.com)

#### Description

This series is a class 1, single-output AC to DC 45W green adapter with C6 inlet type. It can be operated from AC 90V~264V with high efficiency performance for various ITE, industrial and networking application. It also complies world-wide Safety and EMC regulations.

#### Features

- \* Full AC input voltage design with C6 socket
- \* 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-1450-50				
Output					
Rated power	45W				
Rated voltage	5/9/12/15/20V, Vout auto switching				
Rated current	5V	9V	12V	15V	20V
	3A				2.25A
Ripple & Noise (max.) (note #2)	5V	9V	12V	15V	20V
	<180mV	<210mV	<180mV		<300mV
Line & load regulation	±5%				
Hold-up time (typ.)	10ms				
Timing: AC ON delay / rising (max.)	3 sec / 30ms				
Input					
Rated voltage range	100~240Vac				
Operated voltage range	90~264Vac				
Current range (max.)	1.3A/90Vac				
Inrush current	No component damaged (<I <sup>2</sup> *t).				

Frequency range	50-60Hz				
Leakage current (max.)	50μA at 240Vac/50Hz				
Average efficiency (min.)	5V	9V	12V	15V	20V
	81.83%	87.3%;	88.3%	88.85%	
Protection Function					
Over voltage (max)	5V	9V	12V	15V	20V
Latch off	7.5Vdc	13.5Vdc	16Vdc	20Vdc	26Vdc
Over current (max.)	5V	9V	12V	15V	20V
Auto Recovery	3.1-3.9A				2.4-2.925A
Short circuit at O/P	No damage, auto recovery when fault is removed				
Over temperature	Latch off when OTP protection triggers off				
Others					
MTBF (min.) (note#3)	100K hours @ rated load				
Environment					
Temperature (note#5)	(operating) 0~35℃ / (storage) -20~85℃				
Humidity	(operating) 10~90% RH non-condensing / (storage) 5~95% RH				
Altitude (max.)	5000 meters				
Mechanical					
Dimension	94.0(L)*40.0(W)*26.5mm(H)				
Vibration	10~500 Hz, 5G 20min./1cycle per axis for all axes (X, Y, Z)				
Weight (typ.)	168g				
Safety					
Standard	IEC/EN 60950-1, K60950-1, IEC/EN 62368-1, CNS14336-1				
Withstand voltage	Input-Output: 4242VDC / Input-FG: 2150VDC				
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

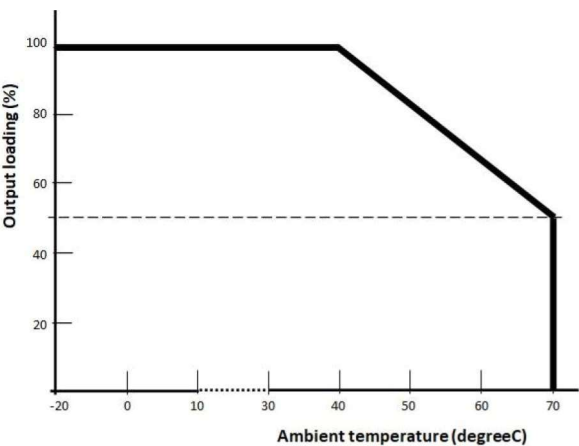
#1: All specification defined at 230Vac/50Hz, rated power and 25°C ambient temperature if not mentioned specifically.

#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°C ambient temperature.

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

#5: De-rating curve of ambient temperature:



Mechanical Specification

