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Industrial Automation
Panel Mount Series

LITEON

Single Output 100W Non-PFC Data Sheet

For the latest revision, please visit https://power.liteon.com

Description

This is an AC to DC switching mode power supply which can output 100 watts continuous with convection cooling. It complies with worldwide safety and EMC regulations (refer to details below). This PSU has high c/p (capability/price) value for various industrial applications.

Features

* Full AC input voltage design.
* Withstand 300Vac surge voltage for 5 seconds
* Full Protections: Short-circuit/ Over-voltage/ Over-current/ Over temperature
* LED indicator for normal output voltage operating.
* 1U low profile
* IEC/EN 62368-1 design compliance
* Up to 5000 meters operating altitude (note #4)
* High efficiency and high reliability
* Design refers to PSE Safety
* 3 years warranty

*Design refers to PSE Safety Regulations

Electrical Specification

Model Name	HA-1101-24NL	HA-1101-12NL
Output		
Rated power	100W	
Rated voltage	24V	12V
Rated current	4.5A	8.5A
Ripple & Noise(max.) (note #2)	150mV	120mV
Line & load regulation	±1%	
Hold-up time(typ.)	16ms	
Timing: AC ON delay / rising (max.)	0.5 sec / 30ms	
Input		
Rated voltage range	100~240Vac	
Operated voltage range (note #5)	85~264Vac, 300Vac for 5 sec	
Current range (max.)	6.8A/100Vac; 3.4A/200Vac	

Inrush current (typ.)	50A/115Vac; 100A/230Vac (cold start)	
Frequency range	50-60Hz	
Leakage current (max.)	0.75mA at 240Vac	
Efficiency (typ.)	90%	88%
Protection Function		
Over voltage (max.)	140% of rated voltage, latch-off protection	
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)	700K hours @ rated load	
Environment		
Temperature (note#5)	(operating) -20~70℃ / (storage) -40~85℃	
Humidity	(operating) 10~90% RH non-condensing / (storage) 5~95% RH	
Altitude (max.)	5000 meters	
Mechanical		
Dimension	129(L)*97(W)*30mm(H)	
Vibration	10~500 Hz, 5G 20min./1cycle per axis for all axes (X, Y, Z)	
Weight (typ.)	310g	
Safety		
Standard	IEC/EN 60950-1, K60950-1, IEC/EN 62368-1, CNS14336-1	
Withstand voltage	Input-Output: 4242VDC / Input-FG: 2150VDC / Output-FG: 700VDC	
Isolation resistance(min.)	Input-Output: 100Mohm @ 500VDC, 25℃, 70%RH	
EMC		
EN55032 (CISPR32)	Conducted EMI: class B / Radiated EMI: class A	
FCC	Conducted EMI: class B / Radiated EMI: class A	
EN61000-3-2	Harmonic distortion: class A	
EN61000-4-2	ESD: ±4KV contact discharge / ±8KV 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

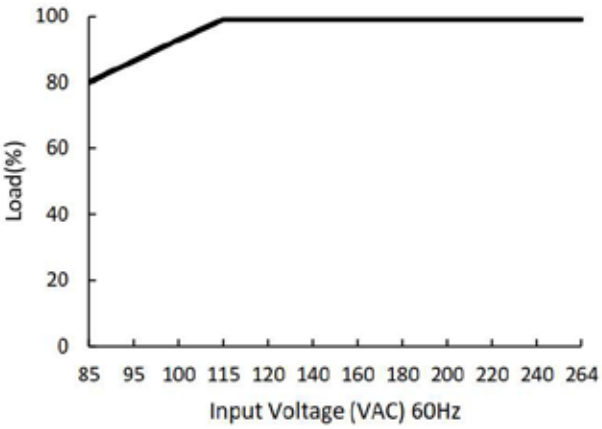
#1: All specifications are defined at 230Vac/50Hz, rated power and 25℃ ambient temperature if not mentioned specifically.

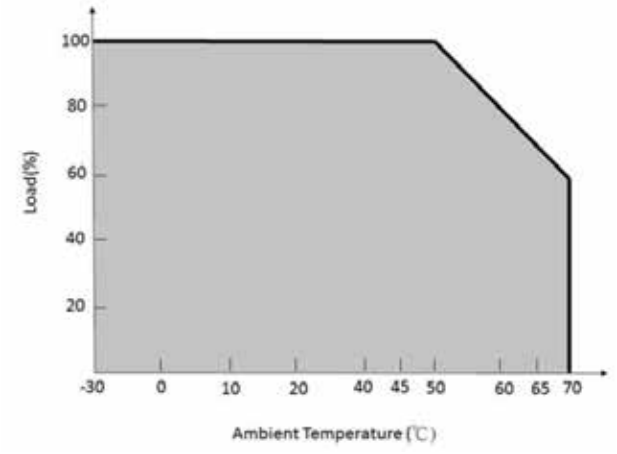
#2: Ripple noise is measured by a 30cm length, twisted wires with 0.47uF MLCC & 47uF low ESR capacitor.

#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 AC input voltage and ambient temperature:





Mechanical Specification