Industrial Automation
Enclosed Type

Single Output 200W PFC Model Data Sheet

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

Description

This is a high-power factor (PF), AC to DC switching mode power supply unit which can output 200 watts continuous with convection cooling. It complies with worldwide safety and EMC regulations (refer to details below). It is suitable for various industrial applications.

Features

* Full AC input voltage range design.
* High power factor and less fictitious power.
* 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
* High efficiency and high reliability

Electrical Specification

Model Name	HA-1201-24LF	HA-1201-12LF
Output		
Rated power	200W	
Rated voltage	24V	12V
Rated current	8.4A	16.7A
Ripple & Noise(max.) (note #2)	150mV/240mV (burst mode)	
Line & load regulation	±1%	
Hold-up time(typ.)	16ms	
Timing: AC ON delay / rising (max.)	1.5 sec / 50ms	
Input		
Rated voltage range	100~240Vac	
Operated voltage range (note #4)	85~264Vac, 300Vac for 5 sec	
Current range (max.)	2.5A/100Vac; 1.3A/200Vac	
Power factor (typ.)	>0.99/115Vac; >0.95/230Vac	
Inrush current (typ.)	40A/230Vac (cold start)	
Frequency range	50-60Hz	

Leakage current (max.)	1mA at 240Vac	
Efficiency (typ.)	89.0%	89.0%
Protection Function		
Over voltage (max.)	140% of rated voltage, hiccup mode protection until fault is removed	
Over current (max.)	135% 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#4)	(operating) -30~70℃ / (storage) -40~85℃	
Humidity	(operating) 10~90% RH non-condensing / (storage) 5~95% RH	
Altitude (max.)	2000 meters	
Mechanical		
Dimension	215(L)*115(W)*30mm(H)	
Vibration	10~500 Hz, 5G 20min./1cycle per axis for all axes (X, Y, Z)	
Weight (typ.)	490g	
Safety		
Standard	CB/IEC62368-1,TUV62368-1,UL62368-1,EN62368-1, CCC GB4943.1,BSMI CNS15598-1,KC60950-1	
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 B	
FCC	Conducted EMI: class B / Radiated EMI: class B	
EN61000-3-2	Harmonic distortion: Class D	
EN61000-4-2	ESD: ±4KV contact discharge / ±8KV contact discharge	
EN61000-4-3	Radiated RF immunity: 10V/m	
EN61000-4-4	EFT: ±1KV (AC port)	
EN61000-4-5	Surge: ±1KV DM / ±2KV CM	
EN61000-4-6	Conducted RF immunity: 10V/m	
EN61000-4-8	Magnetic field immunity: 10A/m	
EN61000-4-11	Voltage dip immunity	

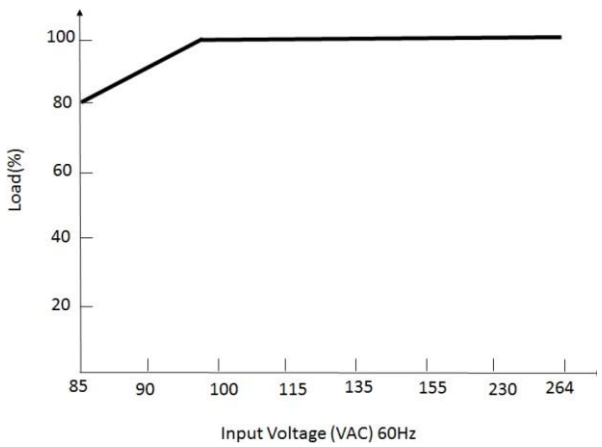
Notes

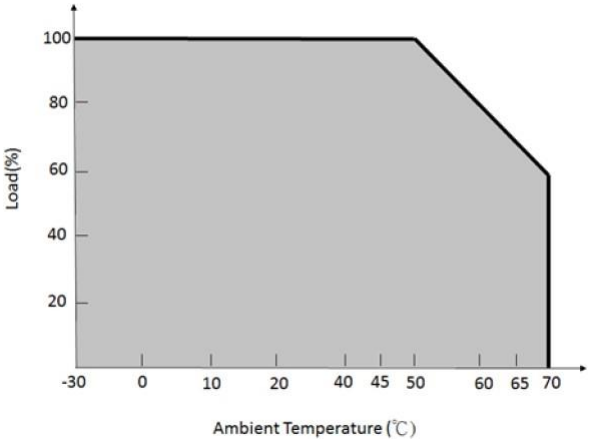
#1: All specification defined at 230Vac/50Hz, rated power and 25℃ ambient temperature if not mentioned specifically.

#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: De-rating curve of AC input voltage and ambient temperature:





Mechanical Specification

PIN NO.	PIN FUNCTION
1	AC/L
2	AC/N
3	FG
4~6	DC OUTPUT -V
7~9	DC OUTPUT +V