

Industrial Automation Panel Mount Series



Single Output 150W Non-PFC Data Sheet

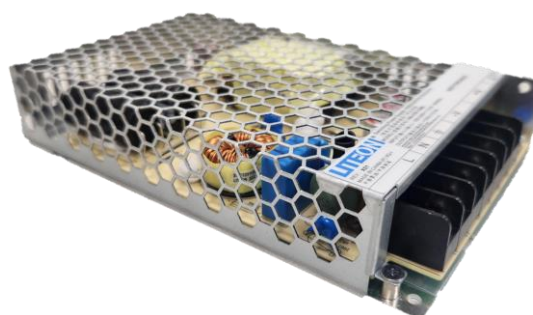
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Description

This is an AC to DC switching mode power supply which can output 150 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



Electrical Specification

Model Name	HA-1151-24NL		HA-1151-12NL
Output			
Rated power	150W		
Rated voltage	24V	12V	
Rated current	6.25A	12.5A	
Ripple & Noise(max.) (note #2)	200mV	150mV	
Line & load regulation	±1%		
Hold-up time(typ.)	16ms		
Timing: AC ON delay / rising (max.)	1.0 sec / 30ms		
Input			
Rated voltage range	100~240Vac		
Operated voltage range (note #5)	90~264Vac, 300Vac for 5 sec		
Current range (max.)	3A/100Vac; 2A/200Vac		
Inrush current (typ.)	50A/115Vac; 100A/230Vac (cold start)		
Frequency range	50-60Hz		
Leakage current (max.)	0.75mA at 240Vac		
Efficiency (typ.)	89%	89%	

Protection Function	
Over voltage (max.)	140% of rated voltage, hiccup mode protection until fault is removed
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°C / (storage) -40~85°C
Humidity	(operating) 10~90% RH non-condensing / (storage) 5~95% RH
Altitude (max.)	5000 meters
Mechanical	
Dimension	159(L)*97(W)*30mm(H)
Vibration	10~500 Hz, 5G 20min./1cycle per axis for all axes (X, Y, Z)
Weight (typ.)	350g
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°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	Not applicable
EN61000-4-2	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: 3V/m
EN61000-4-8	Magnetic field immunity: 3A/m
EN61000-4-11	Voltage dip immunity

Notes

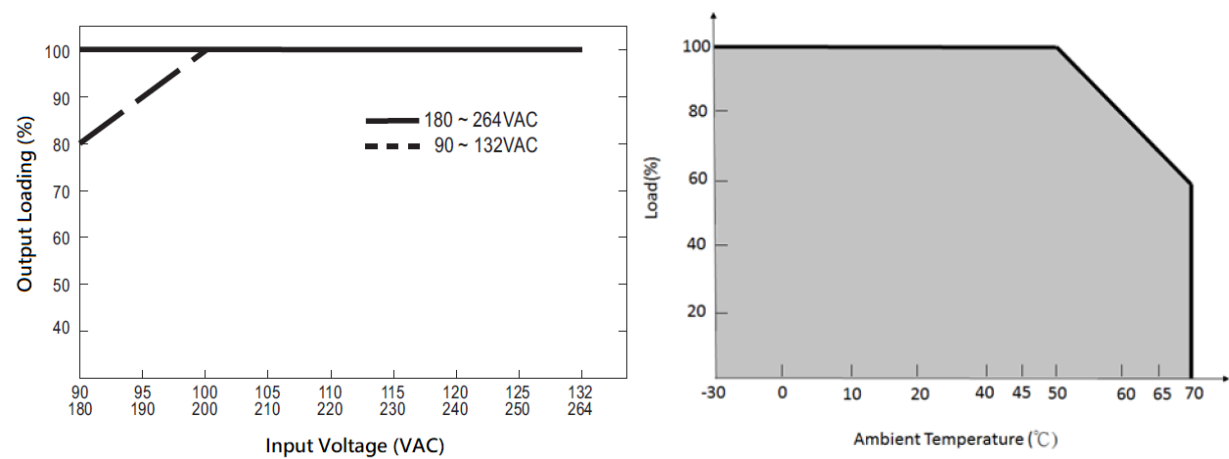
#1: All specification defined at 230Vac/50Hz, rated power and 25°C ambient temperature if not mentioned specifically.

#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 AC input voltage and ambient temperature:



Mechanical Specification

