Industrial Automation
Panel Mount Series

Two Output 1KW PFC Model Data Sheet

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Description

This is a high-power factor (PF), AC to DC switching mode power supply unit which can output 1KW watts continuous with forced cooling by a smart FSC (fan speed control) circuitry. There is a built-in auxiliary converter (5VSB) for system control signal usage purpose. It complies with worldwide safety and EMC regulations (refer to details below). And also, 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.
* Up to 5000 meters operating altitude (note#4)
* High efficiency and high reliability.
* Remote control and DC OK signal

Electrical Specification

Model Name	PS-2102-2LA(-ROHS)	
Output		
Rated power	1000W	
Rated voltage	48V	5VSB
Rated current	21A	1.0A
Ripple & Noise(max.) (note #2)	240mV	100mV
Line & load regulation	±2.5%	±10%
Hold-up time(typ.)	16ms	
Timing: AC ON delay / rising (max.)	2 sec / 50ms	
Input		
Rated voltage range	100~240Vac	
Operated voltage range (note #5)	90~264Vac, 300Vac for 5 sec	
Current range (max.)	12A/100Vac; 6A/200Vac	

Power factor (typ.)	>0.99/115Vac; >0.95/230Vac
Inrush current (typ.)	60A/230Vac (cold start)
Frequency range	50-60Hz
Leakage current (max.)	2.0mA at 240Vac
Efficiency (typ.)	90%
Protection Function	
Over voltage (max.)	140% of rated voltage, latch-off protection
Over current (max.)	135% of rated current, latch-off protection
Short circuit at O/P	No damage, latch-off protection.
Over temperature	No damage, latch-off protection
Others	
MTBF (min.) (note#3)	700K hours @ rated load
Environment	
Temperature (note#5)	(operating) -20~60℃ / (storage) -40~85℃
Humidity	(operating) 10~90% RH non-condensing / (storage) 5~95% RH
Altitude (max.)	5000 meters
Mechanical	
Dimension	295(L)*127(W)*41mm(H)
Vibration	10~500 Hz, 5G 20min./1cycle per axis for all axes (X, Y, Z)
Weight (typ.)	1400g
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: ±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: 10V/m
EN61000-4-8	Magnetic field immunity: 30A/m
EN61000-4-11	Voltage dip immunity

Notes

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

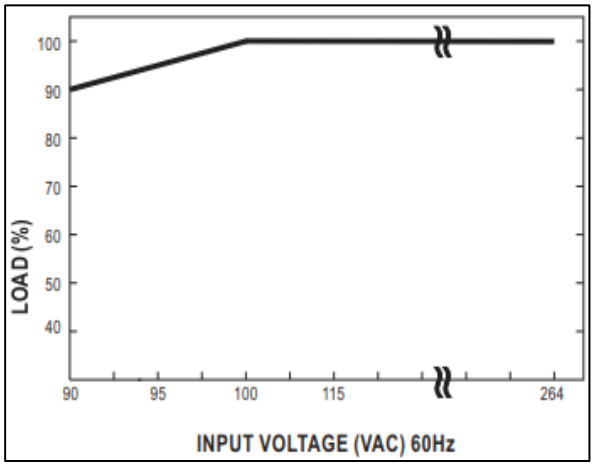
specifically.

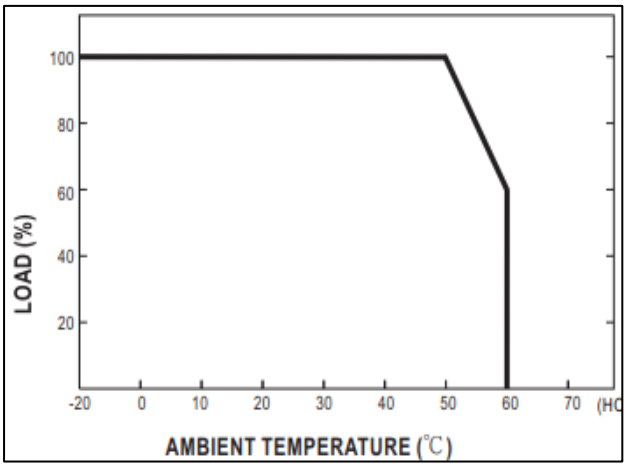
#2: Ripple noise is measured by a 30cm length, twisted wires with 0.47uF MLCC & 47uF low ESR capacitor.

#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 AC input voltage and ambient temperature:





Mechanical Specification