90W Adapter
54V Series

Single Output 90W PFC Data Sheet

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Description

This product is an 90watts AC to DC adapter intended for use in IPC Systems, Communication Systems, Embedded Systems, PoE Systems. This adapter operates at 90 to 264 VAC input voltage. The unit meets CISPR32 EN55032 CLASS B, EN55024 and FCC PART 15B Class B emission limits, and is designed for ITE application.

Features

* Full AC input voltage design with C14 socket
* Withstand 300Vac surge voltage for 5 seconds
* 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-1900-66
Output	
Rated power	90W
Rated voltage	54V
Rated current	1.67A
Ripple & Noise(max.) (note #2)	500mV
Line & load regulation	±5%
Hold-up time(typ.)	10ms
Timing: AC ON delay / rising (max.)	3 sec / 50ms
Input	
Rated voltage range	100~240Vac
Operated voltage range	90~264Vac, 300Vac for 5 sec
Current range (max.)	2A/100Vac
Inrush current	No component damaged ($<I^2*t$).

Frequency range	50-60Hz
Leakage current (max.)	0.25mA at 240Vac
Average efficiency (min.)	88%
Protection Function	
Over voltage (max.)	130% of rated voltage, latch protection until AC input reset
Over current (max.)	150% of rated current, latch protection until AC input reset
Short circuit at O/P	No damage, latch protection until AC input reset
Over temperature	No damage, latch protection until AC input reset
Others	
MTBF (min.) (note#3)	300K hours @ rated load
Environment	
Temperature (note#5)	(operating) -20~45℃ / (storage) -40~85℃
Humidity	(operating) 10~90% RH non-condensing / (storage) 5~95% RH
Altitude (max.)	5000 meters
Mechanical	
Dimension	150.0(L)*65.0(W)*35mm(H)
Vibration	10~500 Hz, 5G 20min./1cycle per axis for all axes (X, Y, Z)
Weight (typ.)	185g
Safety	
Standard	IEC/EN 62368-1, CNS14336-1
Withstand voltage	Input-Output: 4242VDC
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: Class D
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

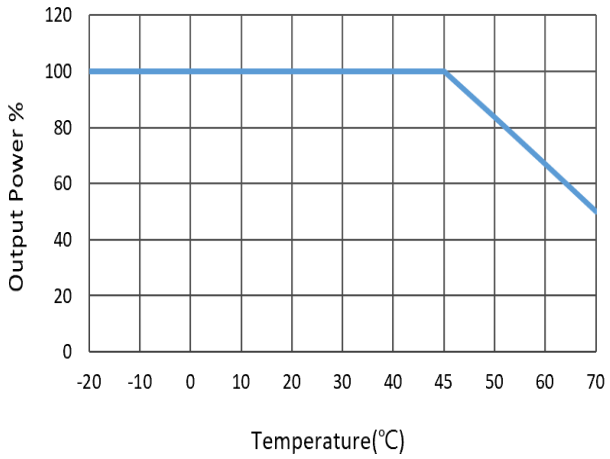
#1: All specification defined at 230Vac/50Hz, rated power and 25℃ ambient temperature if not mentioned specifically.

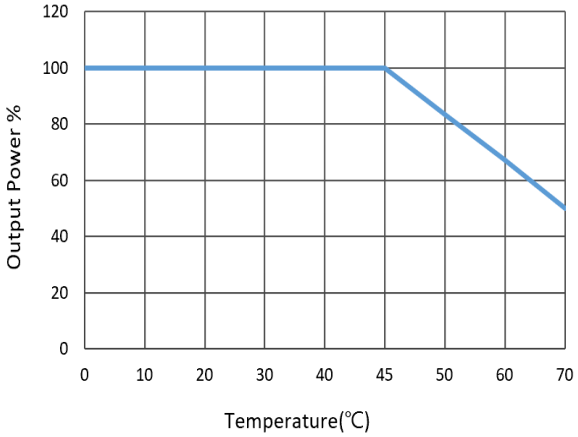
#2: Ripple noise is measured by a 30cm length, twisted wires with 0.47uF MLCC & 47uF low ESR capacitor.

#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 ambient temperature:





Mechanical Specification