

Industrial Adapter Power Delivery 5/9/12/15/20V Series



Variable Single Output 65W Non-PFC Data Sheet

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Description

This series is a class 1, single-output AC to DC 65W green adapter with C6 inlet type. It can be operated from AC 90V~264V with high efficiency performance for various ITE, industrial and networking application. It also complies with world-wide Safety and EMC regulations.

Features

- * Full AC input voltage design with C6 socket
- * Full Protections: Short-circuit/ Over-voltage/ Over-current/ Over temperature operating.
- * Energy efficiency level VI compliance
- * Slim and compact in size
- * Universal USB Type-C DC plug
- * IEC/EN 62368-1 design compliance
- * Up to 5000 meters operating altitude (note #4)
- * High reliability



Electrical Specification

Model Name	PA-1650-58				
Output					
Rated power	65W				
Rated voltage	5/9/12/15/20V, Vout auto switching				
Rated current	5V	9V	12V	15V	20V
	3A				3.25A
Ripple & Noise(max.) (note #2)	5V	9V	12V	15V	20V
	<180mV	<210mV	<350mV		
Line & load regulation	±5%				
Hold-up time(typ.)	10ms				
Timing: AC ON delay / rising (max.)	3 sec / 30ms				
Input					
Rated voltage range	100~240Vac				
Operated voltage range	90~264Vac				
Current range (max.)	1.6A/100Vac				
Inrush current	No component damaged (<I ² *t).				

Frequency range	50-60Hz				
Leakage current (max.)	0.25mA at 240Vac				
Average efficiency (min.)	5V	9V	12V	15V	20V
	81.83%	87.83%	88.3%	88.85%	89%
Protection Function					
Over voltage (max.)	5V	9V	12V	15V	20V
<i>Latch off mode</i>	7.5Vdc	11.7Vdc	15.6Vdc	19.5Vdc	26Vdc
Over current (max.)	5V	9V	12V	15V	20V
<i>Auto recovery mode</i>	3.9A				4.2A
Short circuit at O/P	No damage, auto recovery when fault is removed				
Over temperature	Latch off when OTP protection triggers off				
Others					
MTBF (min.) (note#3)	100K hours @ rated load				
Environment					
Temperature (note#5)	Operating: 0~35°C / Storage: -20~85°C				
Humidity	Operating: ~95% RH non-condensing / Storage: ~95% RH				
Altitude (max.)	5000 meters				
Mechanical					
Dimension	90.0(L)*51.0(W)*28.5mm(H)				
Vibration	10~500 Hz, 5G 20min./1cycle per axis for all axes (X, Y, Z)				
Weight (typ.)	218g				
Safety					
Standard	IEC/EN 60950-1, K60950-1, IEC/EN 62368-1, CNS14336-1				
Withstand voltage	Input-Output: 4242VDC / Input-FG: 2150VDC				
Isolation resistance(min.)	Input-Output: 30Mohm @ 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	Harmonic distortion: not applicable				
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°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 ambient temperature: N/A

Mechanical Specification

