

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
Latch off mode	7.5Vdc	11.7Vdc	15.6Vdc	19.5Vdc	26Vdc
Over current (max.)	5V	9V	12V	15V	20V
Auto recovery mode	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

