

1 Electronic Design Spec

1.1. INPUT VOLTAGE

Rated input voltage: 100-240VAC
 Input voltage range: 90-264VAC
 Rated input frequency: 50-60Hz
 Input frequency range: 47-63Hz

1.2. CONSTANT VOLTAGE

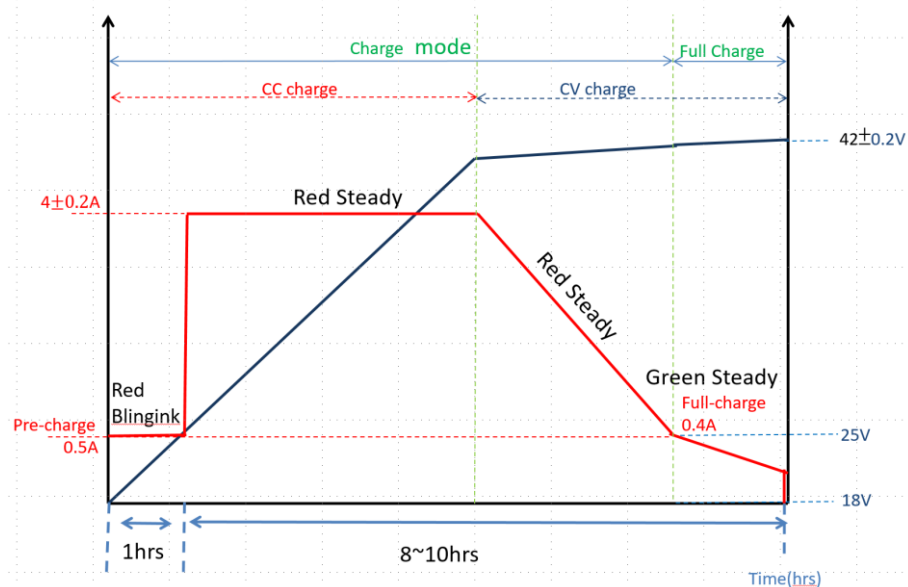
The constant voltage is 42V (168W)
 The accuracy has to be +/- 0.2V.

1.3. CONSTANT CURRENT

The constant current is 4A.
 The accuracy has to be +/- 0.2A.

1.4. Charge curve

□ Charge Curve



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 DELTA ELECTRONICS, INC.

DESCRIPTION :
 電氣規格 (Electrical Specification)

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MODEL NO. :
ADP-168W

Date	Drawn	Design (EE)	Design (ME)	DOCUMENT NAME. :	REV.
2020/02/11		Chieh	Mingche	ES-168W	S00

1.5. STATUS INDICATION (LED)

A visual indicator (LED for instance) must inform of the following status:

When PSU is stand-by mode: Green steady

When PSU is pre-charge mode: Red blinking

When PSU is charge mode: Red steady

When PSU is fully charge mode: Green steady

When PSU is over timing mode: Green 1sec/ Red 1sec blinking

When PSU is protect mode: LED off.

1.6. Harmonic

Class D

1.7. ALTITUDE

3000m

1.8. Inrush current

No damage.

1.9. Acoustic Noise

At 1 meter the noise must be < 35dB

2. CERTIFICATIONS (Safety / EMC)

The charger has to comply with regulation, standard and laws and pass every Safety and EMC certifications.

Certification: The charger has to be UL1012 and IEC/EN60335-2-29

2.1. Lightning surge immunity:


Follow the norm of IEC-61000-4-5 requirements

Line to Line: 1kV 50us 5 time performance Criterion B

2.2. Electric Fast transients (EFT):

Follow the norm of IEC-61000-4-4 requirements

IEC61000-4-4 level 3 (2kV), performance Criterion B

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2.3. Electrostatic Discharge (ESD):

Follow the norm of IEC-61000-4-2 requirements

- (1). +/-8KV air discharge performance Criterion B
- (2). +/-6KV contact discharge performance Criterion B

2.4. Voltage Dips/Short Interruption:

Follow the norm of EN61000-4-11 requirements

- (1). Voltage Dips 30% reduction 10ms, performance Criterion B
- (2). Voltage Dips 60% reduction 100ms, performance Criterion C
- (3). Voltage Dips 95% reduction 5000ms, performance Criterion C

2.5. Dielectric Withstand Voltage (HI-POT)

Primary to Secondary: 3000Vac, 10mAmax for 1 minute

2.6. Leakage current

It shall be less than 300uA at 264Vac/60Hz

2.7. Insulation Resistance (IR)

PRIMARY(L,N) to SECONDARY use 500Vdc test ; Insulation resistance limit: >10M ohm


2.8. Electromagnetic interference (EMI)

CISPR 32 Class B

3. PROTECTION

3.1. OVER VOLTAGE PROTECTION

The power supply shall auto-recovery and no damage occurs if the output is over voltage. The output voltage less than 45V.

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3.2. OUTPUT CURRENT PROTECTION

The power supply shall auto-recovery and no damage occurs if the output is over current. The output current shall less than 150% of rated output current.

3.3. OUTPUT SHORT CIRCUIT PROTECTION

The power supply shall auto-recovery and no damage occurs. If the short circuit is applied to the output.

3.4. OVER TEMPERATURE PROTECTION

The power supply shall auto-recovery and no damage occurs if the component temperature is higher than normal work.

3.5. TIMING PROTECTION

When pre-charge mode charging time over 1hour±20min, the charger stops charging and Green 1sec/ Red 1sec blinking.

When charge mode charging time over 9hours±1hour, the charger stops charging and Green 1sec/ Red 1sec blinking.

4. TEMPERATURE

4.1. Operation

4.1.1 Temperature Operating

The AC Adapter shall be capable of operating at full load with an ambient temperature range of 0°C to +40°C.

4.1.2 Temperature Storage

The AC Adapter shall be capable of withstanding ambient temperature from -20°C to +70°C.

4.1.3 Humidity Operating

The AC Adapter shall be capable of operation in relative humidity of 10% to 90%.



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4.1.4 Humidity Storage

The AC Adapter shall be capable of withstanding ambient relative humidity of 5% to 95%.

5. Reliability requirements

MTBF (standard, environmental temperature, load requirement) ≥ 30 Khour

Testing condition : full load/ 25°C .

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File Name:

SHEET 6 OF 6