

# ***Astek Globe***

## **Model: AAM036-S120**

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### **1. Feature :**

- ◆ Input : Universal 100 ~ 240 Vac / 50 ~ 60 Hz Input, without any slide switch.
- ◆ Output : +12.0V / 0~3A
- ◆ Case Dimension : 100 (L) \* 50 (W) \* 33 (H) mm
- ◆ Efficiency : Eff (av)  $\geq$  87.403%
- ◆ Safety : UL / cUL / T-mark  
ANSI/AAMI ES60601-1:2012(60601 3.1rd edition)
- ◆ EMI : CE / FCC Class B ; Conduction & Radiation Met.
- ◆ Protection : OVP (Over Voltage Protection)、SCP (Short Circuit Protection)、OCP (Over Current Protection)
- ◆ High frequency design , less power consumption.
- ◆ Suitable for usage at Medical.
- ◆ Meet DoE Level VI/ ErP ( Stage 2 ) / GEMS / NRCan / CEC

### **2. Input :**

<b>2.1 Voltage</b>	<b>Universal 100~240Vac, single phase</b>
<b>2.2 Frequency</b>	<b>50 ~ 60 Hz</b>
<b>2.3 Current</b>	<b>1A Max.</b>
<b>2.4 Inrush Current</b>	<b>70A Max. / 230Vac (Cold Start At 25 °C , Full Load)</b>
<b>2.5 Efficiency</b>	<b>Eff (av) <math>\geq</math> 87.403% (At 115 Vac &amp; 230 Vac)</b>
<b>2.6 Power Consumption</b>	<b>P<sub>i</sub> <math>\leq</math> 0.1 W ( At 230Vac &amp; No Load)</b>

$$\text{※Eff (av)} = \frac{E_1 + E_2 + E_3 + E_4}{4} \quad \begin{array}{l} E_1=\text{efficiency with 25\% rated load} ; E_2=\text{efficiency with 50\% rated load} \\ E_3=\text{efficiency with 75\% rated load} ; E_4=\text{efficiency with 100\% rated load} \end{array}$$

### **3. Output :**

<b>3.1 DC Output</b>	<b>Voltage</b>	<b>+12.00V <math>\pm</math> 5%</b>
	<b>Current</b>	<b>3 A Max.</b>
	<b>Regulation</b>	<b>11.40Vmin. ~ 12.00Vtyp. ~ 12.60Vmax.</b>
	<b>Ripple &amp; Noise</b>	<b>120 mVpp Max.</b>
	<b>Total Power</b>	<b>36W Max.</b>

Remark : For ripple & noise measurement, use a 20MHz bandwidth frequency oscilloscope, and add a 0.1μF multilayer Cap. and a Low ESR Electrolytic Cap. (10 μF) at output connector terminals. (At nominal line voltage, Full Load)

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## 4. Protection :

<b>4.1 Over Voltage Protection (OVP)</b>	V out *200% MAX.
<b>4.2 Short Circuit Protection (SCP)</b>	Automatic recovery after short-circuit fault being removed
<b>4.3 Over Current Protection(OCP)</b>	I out *200% MAX

**Remark :** When Short Circuit Protection or Over Current Protection is activated, the power supply will shutdown automatically.  
Once the abnormal condition resulting in the failure being removed, the power supply will restart accordingly. When Over Voltage Protection is activated, the power supply will shutdown .

## 5. Safety、EMI and EMC Requirement :

### 5.1 Safety Requirement

- a. Safety : UL / cUL  
b. Dielectric Strength : ANSI/AAMI ES60601-1:2012(60601 3.1rd edition)  
10mA Max. Cut off current

(1)	Primary to Secondary	4000Vac for 1 Minute
(2)	Primary to Frame Ground	2000Vac for 1 Minute

- c. Insulation Resistance :

(1)	Primary to Secondary	10 M OHMS for 500Vdc
(2)	Primary to Frame Ground	10 M OHMS for 500Vdc

- 5.2 EMI Requirement : CE / FCC Class B ; Conduction & Radiation Met.

- 5.3 Leakage Current : Less than 300uA

## 6. Operation and Environment Performance :

### 6.1 Temperature Range

Operating	+ 0 °C ~ + 40 °C
Storage	- 20 °C ~ + 80 °C

### 6.2 Humidity Range(Non-condensing)

Operating	20% ~ 80% RH
Storage	10% ~ 90% RH

### 6.3 Cooling : By natural air.

## 7. M.T.B.F. : 300,000Hrs.(Calculated Hours at 25°C , By Telcordia SR-332)

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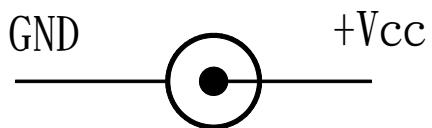
## 8.Mechanical :

8.1 Weight : 170 g Typical

8.2 Cable Type : Black UL1185 18AWG  
( Wire + Plug )

Plug : Ø5.5\*Ø2.5\*12mm

( Tuning Fork & Cannelure )



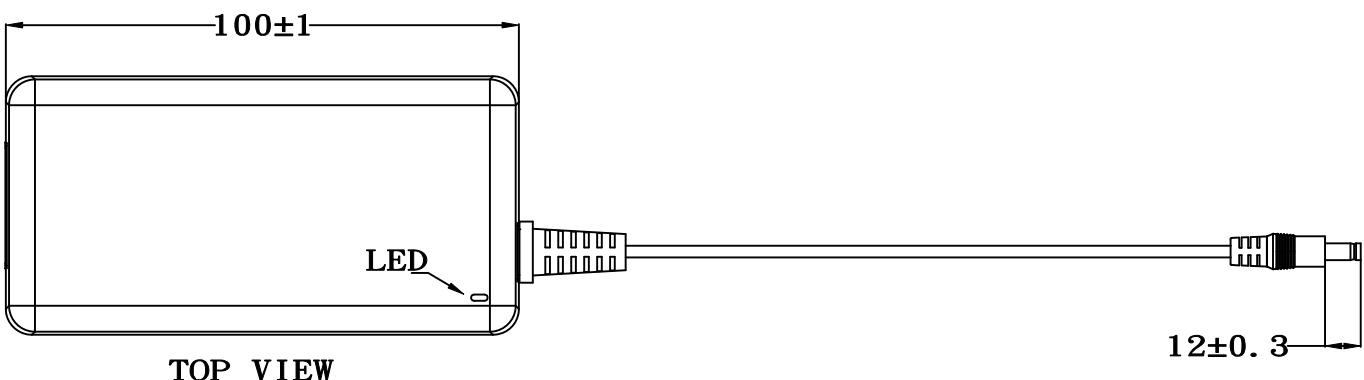
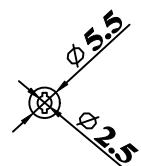
**Output Cable Plug Pin Assignment**

8.3 Cable Length : 1500mm

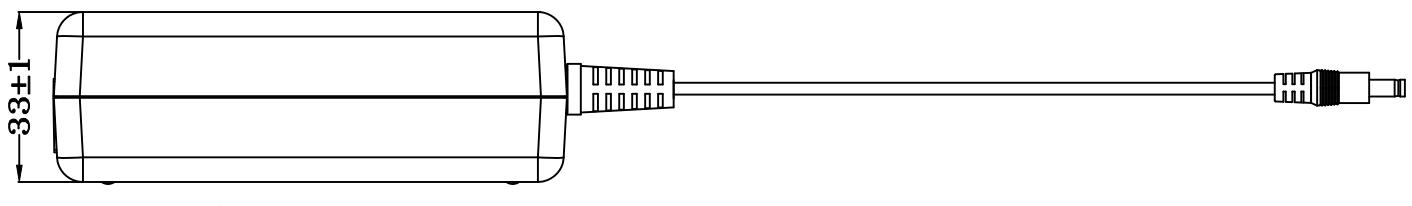
8.4 Case Dimension : 100mm(L)\*50mm(W)\*33mm(H)

8.5 Material Flammability : UL 94V-0

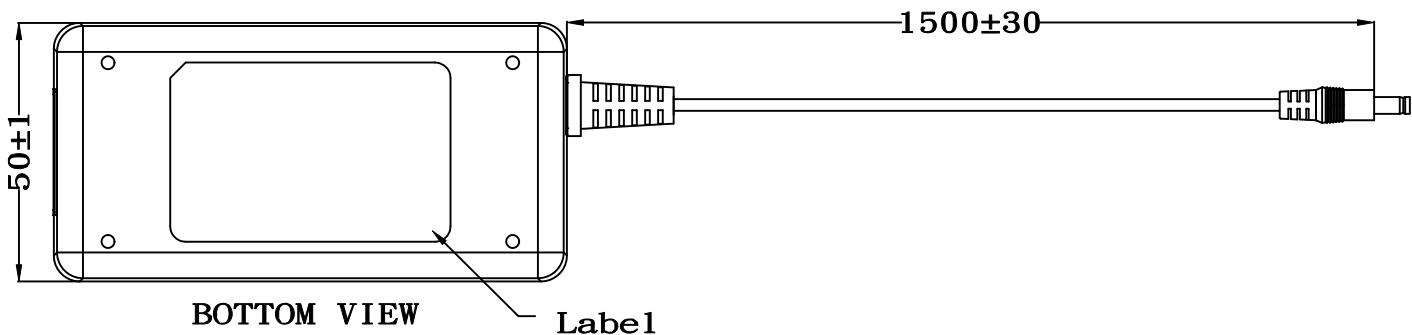
8.6 External Apperance : As drawing below ( Scale → mm )



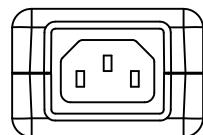
TOP VIEW



SIDE VIEW



BOTTOM VIEW



FRONT-VIEW