AC – DC

Features

- Universal 80~264V AC input voltage
- Operating ambient temperature range: -20°C ~ +40°C
- Approved to UKCA, CE, TUV-GS, cURus, RCM (C-Tick), FCC, RoHS
- EN/IEC/ES60601-1 Safety Approved
- Output SCP, OCP, OVP
- Efficiency up to 87%
- Output Voltage 12V DC

Image for Illustration Purpose
Models may vary

Ideal Power's 44ATM036T-A120-RS-2.5 36W AC/DC External Desktop Medical Power Supply (PSU) Series are certified to UKCA, CE, TUV, cURus, RCM (C-Tick), FCC, RoHS & EN 60601-1/IEC 60601-1/ES 60601-1 Standards and comply with the relevant Efficiency Regulations. These are primarily used in Medical, ITE, Audio & Video Industries and customised solutions are available upon request.

Models

Model Number	Output Voltage (V DC)	Output Current (A)	Output Power (W)	Efficiency (%)
44ATM036T-A120-RS-2.5	12	3	36	87.403

Input Data

	Min	Typical	Max	Units	Notes
Input Voltage	90	--	264	V AC	100-240VAC +/- 10%
Input Frequency	47	--	63	Hz	50-60Hz +/- 5%
Input Current	--	0.35	--	A	
Inrush Current	0	--	70	A	At cold start, 100 / 240V AC
Power Consumption	--	--	--	--	Pi≦0.1W (At 230Vac & No Load)

Output Data

	Min	Typical	Max	Units	Notes
Output Voltage	--	--	12	V	
Ripple & Noise		--	120	mVp-p	
Turn on Delay Time	--	--	3	s	At 100 Vac to 240 Vac input & Full load
Hold up Time	5	--	--	s	At Full load &100Vac/60Hz

Protection Requirements

Over Current Protection	V out *200%MAX, latch off.
Short Circuit Protection	Auto recovery.
Over Voltage Protection	Iout *200%MAX, auto recovery.

Environmental Data

	Min	Typical	Max	Units	Notes
Operating Temperature	-20	--	+40	ºC	
Storage Temperature	-20	--	+80	ºC	
Operating Humidity	20	--	80	ºC	
Storage Humidity	10	--	90	ºC	

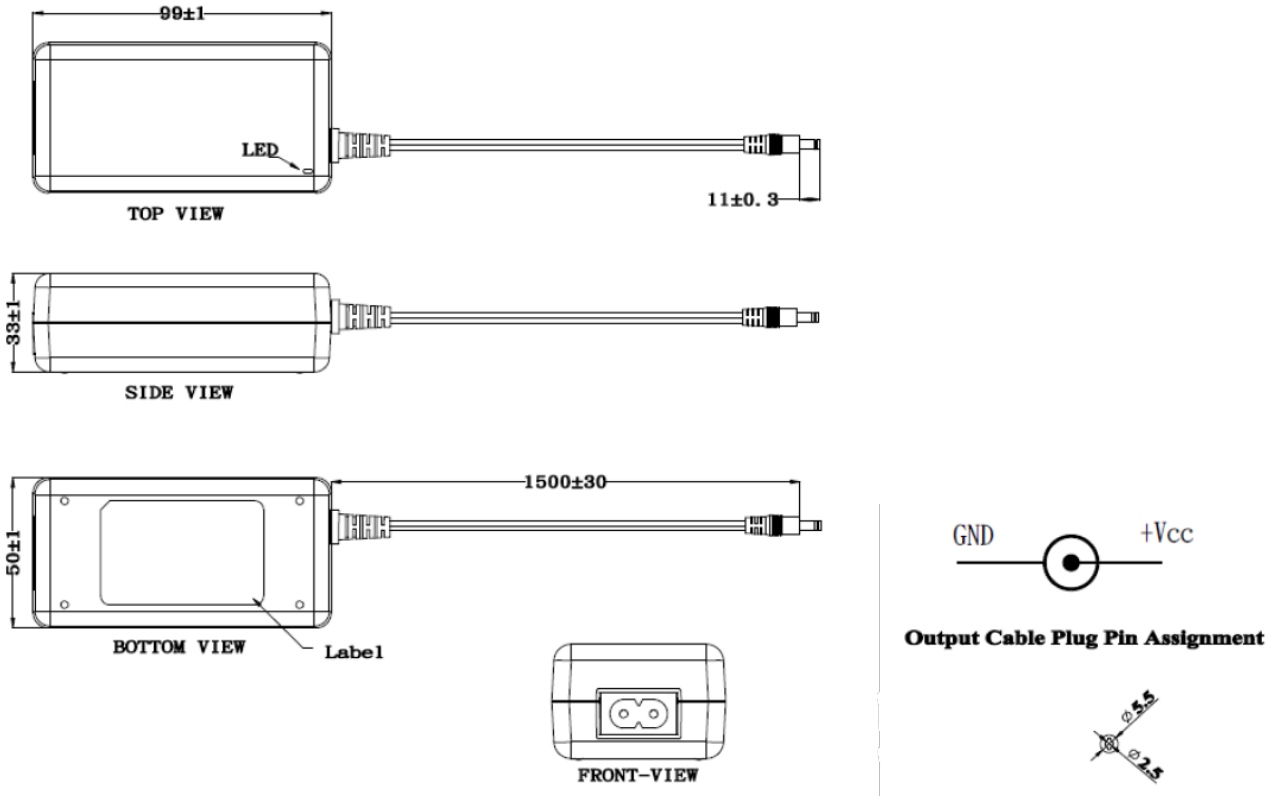
Other Information

	Min	Typical	Max	Units	Notes
Dielectric Strength	--	--	10	mA	Max. Cut off current
Insulation	--	10	--	MΩ	For 500V dc test voltage
MTBF	--	300,000	--	hrs	At 25℃
Leakage Current					Less than 100uA
Dimensions	99x50x33mm				
Approvals	UKCA, CE, TUV, cURus, RCM (C-Tick), FCC, RoHS				

EMI Emissions

Conducted & radiated	CE / FCC (Class B)

Mechanical Drawing



Label Drawing

Typical product label

Packaging Label

Test Results

A. Line Regulation Test

Test Result :

Test condition	Spec.	Reading 1	Reading 2	Reading 3
90Vac / 50 % Load	11.40V ~ 12.60V	12.07 V	12.02 V	12.04 V
115Vac / 50 % Load	11.40V ~ 12.60V	12.07 V	12.02 V	12.04 V
132Vac / 50 % Load	11.40V ~ 12.60V	12.07 V	12.02 V	12.04 V
180Vac / 50 % Load	11.40V ~ 12.60V	12.07 V	12.02 V	12.04 V
230Vac / 50 % Load	11.40V ~ 12.60V	12.07 V	12.02 V	12.04 V
264Vac / 50 % Load	11.40V ~ 12.60V	12.07 V	12.02 V	12.04 V

B. Efficiency Test

Test Result :

Test condition	Spec.	Reading 1	Reading 2	Reading 3
115Vac	87.403% Min.	88.13 %	88.26 %	88.14 %
230Vac	87.403% Min.	88.15 %	88.02 %	88.24 %
230Vac@10% load	78.303% Min	85.07 %	84.89 %	85.23 %

C. Load Regulation Test

Test Result :

Test condition	Spec.	Reading 1	Reading 2	Reading 3
115Vac / 0 % Load	11.40V ~ 12.60V	12.24 V	12.19 V	11.21 V
115Vac / 50 % Load	11.40V ~ 12.60V	12.07 V	12.02 V	12.04 V
115Vac / 100 % Load	11.40V ~ 12.60V	11.90 V	11.84 V	11.87 V
230Vac / 0 % Load	11.40V ~ 12.60V	12.24 V	12.19 V	11.21 V
230Vac / 50 % Load	11.40V ~ 12.60V	12.07 V	12.02 V	12.04 V
230Vac / 100 % Load	11.40V ~ 12.60V	11.89 V	11.84 V	11.87 V

Test Results

D. Ripple & Noise Test

Test Result :

Test condition	Spec.	Reading 1	Reading 2	Reading 3
115Vac / 100 % Load	120mVpp Max.	57.8 mV	61.2 mV	44.3 mV
230Vac / 100 % Load	120mVpp Max.	49.2 mV	51.2 mV	32.2 mV

E. Inrush Current

Test Result :

Test condition	Spec.	Reading 1	Reading 2	Reading 3
230Vac / 100 % Load	70A Max	62.9 A	63.5 A	62.1 A

F. Over Current Protection

Test Result :

Test condition	Spec.	Reading 1	Reading 2	Reading 3
115Vac / 100 % Load	I out *200% MAX	140 %	139 %	138 %
230Vac / 100 % Load	I out *200% MAX	146%	145 %	144 %

G. Short Circuit Protection

Test Result :

Test condition	Spec.	Reading 1	Reading 2	Reading 3
115Vac / 100 % Load	Auto Recovery	OK	OK	OK
230Vac / 100 % Load	Auto Recovery	OK	OK	OK

H. Input Power Consumption(No Load)

Test Result :

Test condition	Spec.	Reading 1	Reading 2	Reading 3
230Vac / 0 % Load	≦ 0.1 W	0.07W	0.07W	0.07W

Test Results

Efficiency Test Report

A. **Model Number** : **ATM036T-A120(12.0V/3.0A)**

B. **DC Power Cord** : **UL1185 , 18AWG ,1.5M**

C. **Efficiency** :

LEVEL VI **EFF(av)≧ 87.403%&Eff ≧ 78.303% @10% Load**

D. **NO Load Power Consumption** :

LEVEL VI **0.1W max.**

E. **Testing Dequipment** :

1. AC Power Source : **" Chroma 61605**

2. Electronic Load : **" PRODIGIT " 3311F**

3. Power Meter : **"YOKOGAWA " WT310**

4. Digital Meter : **" FLUKE " 179**

F. **AC Input Voltage** : **115Vac/60Hz**

Load Conditions / Reported	100%* I_0	75%* I_0	50%* I_0	25%* I_0	10%* I_0	0%* I_0
Rms Output Current(mA)	3000mA	2250mA	1500mA	750mA	300mA	0mA
Rms Output Voltage(V)	11.850V	11.939V	12.027V	12.114V	12.174V	12.201V
Active Output Power(W)	35.55W	26.86W	18.04W	9.09W	3.65W	0.00W
Rms Input Voltage(V)	115V	115V	115V	115V	115V	115V
Rms Input Current(A)	0.733A	0.594A	0.456A	0.310A	0.266A	0.199A
Rms Input Power(W)	40.86W	30.55W	20.33W	10.21W	4.20W	0.050W
Total Harmonic Distortion of the input current	162.00%	177.50%	194.32%	217.72%	239.97%	154.21%
True Power Factor	0.487	0.450	0.393	0.289	0.225	0.002
Power Consumed by UUT(W)	5.31W	3.69W	2.29W	1.12W	0.55W	0.05W
Efficiency	87.01%	87.93%	88.74%	88.99%	86.96%	*
Average Efficiency	88.17%					*

G. **AC Input Voltage** : **230Vac/50Hz**

Load Conditions / Reported	100%* I_0	75%* I_0	50%* I_0	25%* I_0	10%* I_0	0%* I_0
Rms Output Current(mA)	3000mA	2250mA	1500mA	750mA	300mA	0mA
Rms Output Voltage(V)	11.845V	11.935V	12.023V	12.112V	12.174V	12.201V
Active Output Power(W)	35.54W	26.85W	18.03W	9.08W	3.65W	0.00W
Rms Input Voltage(V)	230V	230V	230V	230V	230V	230V
Rms Input Current(A)	0.504A	0.419A	0.328A	0.235A	0.218A	0.184A
Rms Input Power(W)	40.82W	30.49W	20.40W	10.28W	4.32W	0.064W
Total Harmonic Distortion of the input current	223.85%	239.25%	253.31%	276.62%	365.71%	456.32%
True Power Factor	0.352	0.315	0.272	0.191	0.141	0.002
Power Consumed by UUT(W)	5.29W	3.64W	2.37W	1.20W	0.67W	0.06W
Efficiency	87.11%	88.15%	88.52%	88.60%	85.07%	*
Average Efficiency	88.10%					*