
65 W
AC ADAPTER
SPECIFICATION

Model No. : **ATS065T-A240 (Level VI)**

Description : **24Volts / 2.71Amps**

Part No. : **ATS065TA240415215**

Version : **A1**

Date : **06-Dec.-2017**

1. Feature :

- ◆ **Input** : **Universal 100 ~ 240 Vac / 50 ~ 60 Hz Input, without any slide switch.**
- ◆ **Output** : **+24V / 0~2.71A**
- ◆ **Case Dimension** : **115 (L) *53 (W) * 38 (H) mm**
- ◆ **Efficiency** : **Eff (av) \geq 88%**
- ◆ **Safety** : **UL / cUL / GS / PSE / BSMI / CB / RCM**
- ◆ **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 Telecommunication, Computer, Industrial Controller, & OA System.**
- ◆ **Meet DoE / ErP (Stage 2) / GEMS / NRCan / CEC / EPA**

2. Input :

2.1 Voltage	Universal 100~240Vac, single phase
2.2 Frequency	50 ~ 60 Hz
2.3 Current	1.4A Max.
2.4 Inrush Current	80A Max. / 240Vac (Cold start at 25 °C , full load)
2.5 Efficiency	Eff (av) \geq 88% (At 115 Vac & 230 Vac)
2.6 Power Consumption	Pi \leq 0.21 W (At 230Vac & No load)

$$\text{※Eff (av)} = \frac{E_1 + E_2 + E_3 + E_4}{4}$$

E1=efficiency with 25% rated load ; E2= efficiency with 50% rated load
 E3=efficiency with 75% rated load ; E4= efficiency with 100% rated load

3. Output :

3.1 DC Output	Voltage	+24 V \pm 5%
	Current	2.71A Max.
	Regulation	22.80Vmin. ~ 24.00Vtyp. ~ 25.20Vmax.
	Ripple & Noise	240mV Max.
	Total Power	65 W Max.

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

4. Protection :

4.1 Over Voltage Protection (OVP)	(V out *150%) Max.
4.2 Short Circuit Protection (SCP)	Automatic recovery after short-circuit fault being removed
4.3 Over Current Protection(OCP)	(I out *180%) 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 latch .

5. Safety 、EMI and EMC Requirement :

5.1 Safety Requirement

a. Safety : UL / cUL / GS / PSE / BSMI / CB / RCM

b. Dielectric Strength : Cut off current 10mA

(1)	Primary to Secondary	3000Vac for 1 Minute
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c. Insulation Resistance :

(1)	Primary to Secondary	10 M ohm for 500Vdc
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5.2 EMI Requirement : CE / FCC Class B ; Conduction & Radiation Met.

5.3 Leakage Current : Less than 0.25mA

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. : 300,000 Hrs.(Calculated Hours At 25°C , By Telcordia SR-332)

8.Mechanical :

8.1 Weight : 310 g Typical

**8.2 Cable Type : Black UL2468 AWG18
(Wire + Plug)**

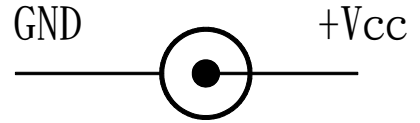
**Plug : $\phi 5.5 \times \phi 2.1 \times 9.5$ mm
(Tuning Fork & Cannelure)**

8.3 Cable Length : 1500mm

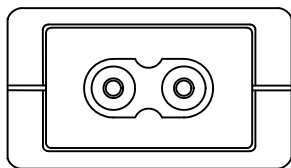
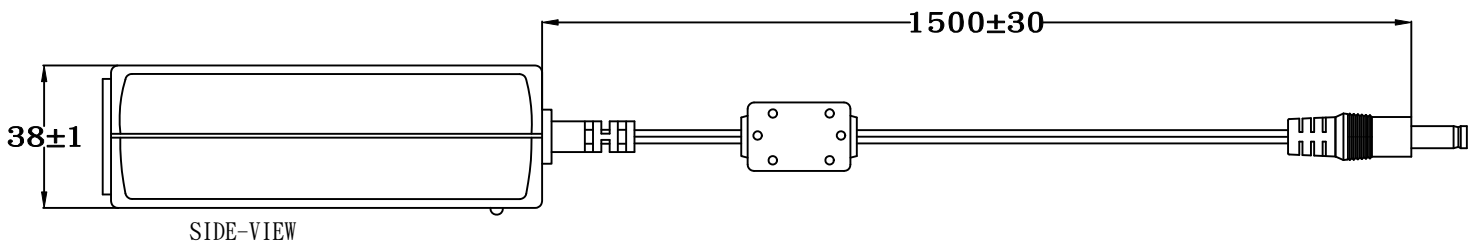
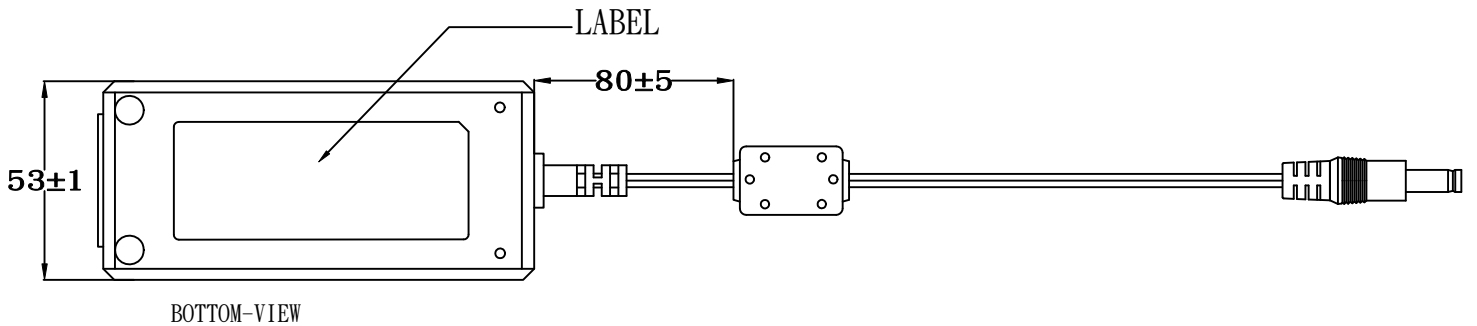
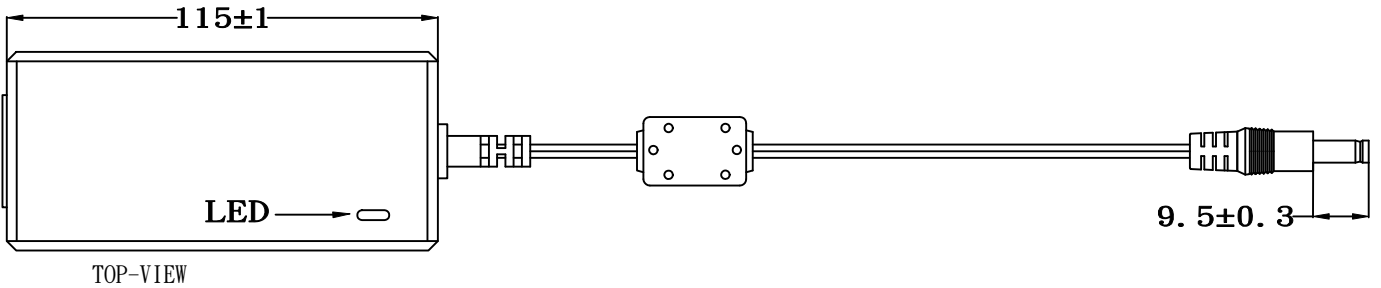
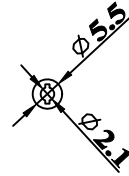
8.4 Case Dimension : 115mm(L)*53mm(W)*38mm(H)

8.5 Material Flammability : UL 94V-0

8.6 External Appearance : As drawing below (Scale \rightarrow mm)



Output Cable Plug Pin Assignment



FRONT-VIEW

8.7 Spec. Label Materials : Metalized Polyester Label (Silver Gloss)
 Color : Black Background with Silver Printing
 Label Dimension : 70.8mm(L)*40.4mm(W)+/-0.1mm
 Label Thickness : 75#

100%



"XXX"

Label supplier's code.
 It is accurate that the number of words depends on the real finished product.

ID NO. "X"

Manufacturer's code.
 It is accurate that the number of words depends on the real finished product.

200%



Label Part No.:9443084490
REV.: A

A. Line Regulation Test

Test Result :

Test condition	Spec.	Reading 1	Reading 2	Reading 3
90Vac / 50 % Load	22.8 V ~ 25.2 V	23.99V	23.95V	23.97V
115Vac / 50 % Load	22.8 V ~ 25.2 V	23.99V	23.95V	23.97V
132Vac / 50 % Load	22.8 V ~ 25.2 V	23.99V	23.95V	23.97V
180Vac / 50 % Load	22.8 V ~ 25.2 V	23.98V	23.94V	23.97V
230Vac / 50 % Load	22.8 V ~ 25.2 V	23.98V	23.94V	23.97V
264Vac / 50 % Load	22.8 V ~ 25.2 V	23.98V	23.94V	23.97V

B. Efficiency Test

Test Result :

Test condition	Spec.	Reading 1	Reading 2	Reading 3
115Vac	88 % Min.	89.12%	89.19%	89.23%
230Vac	88 % Min.	89.86%	89.86%	90.01%

$$\text{Eff (av)} = \frac{E_1 + E_2 + E_3 + E_4}{4}$$

E1=efficiency with 25% rated load ; E2= efficiency with 50% rated load
E3=efficiency with 75% rated load ; E4= efficiency with 100% rated load

C. Load Regulation Test

Test Result :

Test condition	Spec.	Reading 1	Reading 2	Reading 3
115Vac / 0 % Load	22.8 V ~ 25.2 V	24.11V	24.06V	24.08V
115Vac / 50 % Load	22.8 V ~ 25.2 V	23.99V	23.95V	23.97V
115Vac / 100 % Load	22.8 V ~ 25.2 V	23.85V	23.82V	23.84V
230Vac / 0 % Load	22.8 V ~ 25.2 V	24.11V	24.07V	24.08V
230Vac / 50 % Load	22.8 V ~ 25.2 V	23.98V	23.94V	23.97V
230Vac / 100 % Load	22.8 V ~ 25.2 V	23.85V	23.81V	23.84V

D. Ripple & Noise Test

Test Result :

Test condition	Spec.	Reading 1	Reading 2	Reading 3
115Vac / 100 % Load	240mV Max.	55.6mV	54.8mV	55.7mV
230Vac / 100 % Load	240mV Max.	34.4mV	32.1mV	22.5mV

E. Inrush Current

Test Result :

Test condition	Spec.	Reading 1	Reading 2	Reading 3
240Vac / 100 % Load	80A Max	63 A	62 A	65A

F. Over Current Protection

Test Result :

Test condition	Spec.	Reading 1	Reading 2	Reading 3
115Vac / 100 % Load	(I out *180%) Max.	132%	133%	135%
230Vac / 100 % Load	(I out *180%) Max.	129%	130%	133%

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	≤ 0.21 W	0.08W	0.08W	0.07W

Efficiency Test Report

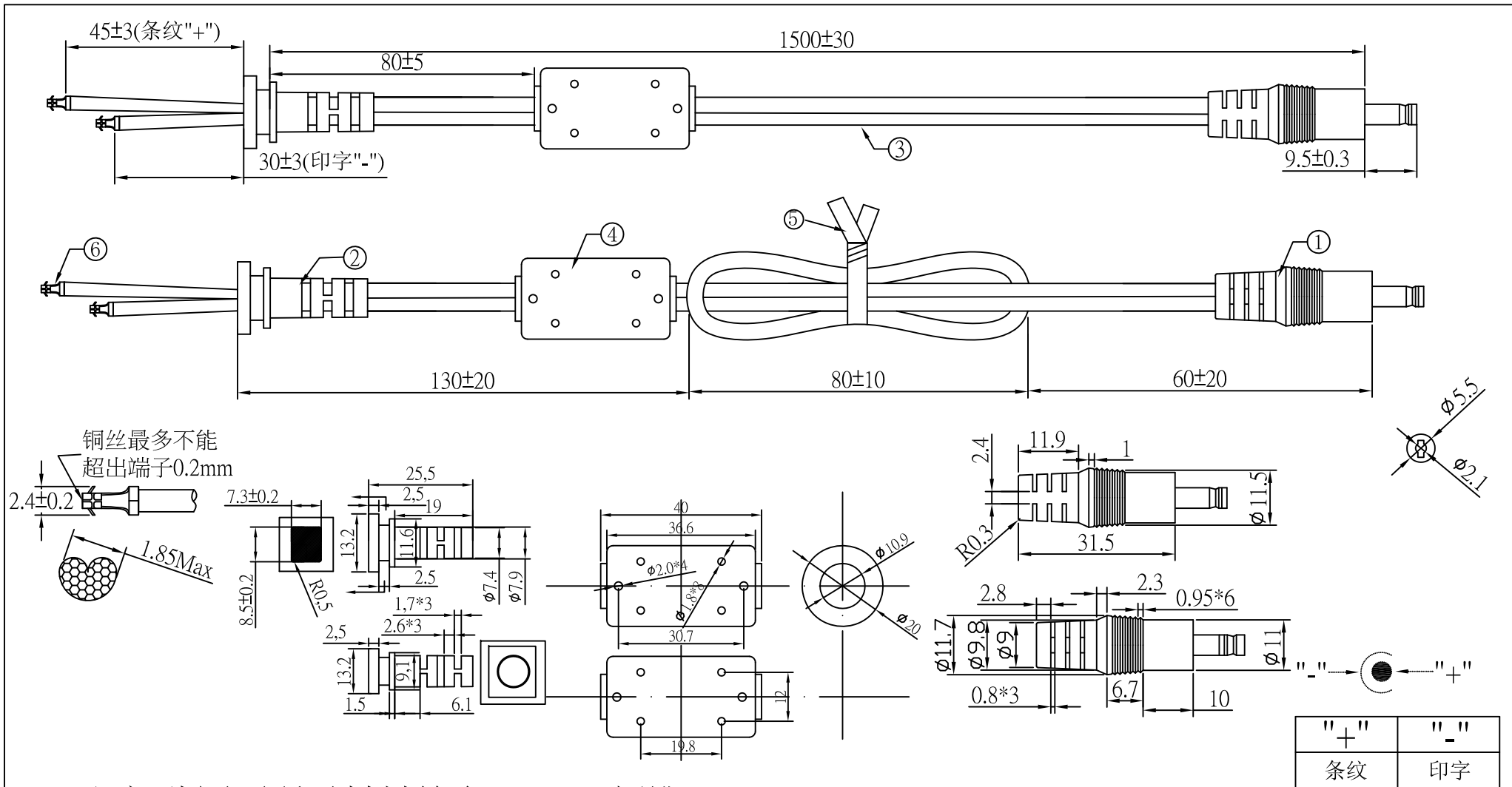
- A. Model Number : ATS065T-A240 (24V/2.71A/65W)
- B. DC Power Cord : UL1185 , 18AWG ,1.5M
- C. Average Efficiency :
DoE LEVEL VI Eff (av) \geq 88%
- D. NO Load Power Consumpti :
DoE LEVEL VI 0.21W max.
- E. Testing Dequpment :
1. AC Power Source : " ALL POWER " APW-110N
2. Electronic Load : " PRODIGIT " 3311F
3. Power Meter : "YOKOGAWA " WT310
4. Digital Meter : " FLUKE " 179
- F. AC Input Voltage : 115Vac/60Hz

Reported Quantity	Load Conditions				
	100% * I ₀	75% * I ₀	50% * I ₀	25% * I ₀	0% * I ₀
Rms Output Current(mA)	2710mA	2033mA	1355mA	678mA	0mA
Rms Output Voltage(V)	23.710V	23.790V	23.870V	23.940V	24.020V
Active Output Power(W)	64.25W	48.35W	32.34W	16.22W	0.00W
Rms Input Voltage(V)	115V	115V	115V	115V	115V
Rms Input Current(A)	1.176A	0.932A	0.673A	0.375A	0.016A
Rms Input Power(W)	72.37W	53.97W	35.92W	17.99W	0.05W
Voltage T.H.D.(%)	0.57%	0.51%	0.42%	0.28%	0.11%
True Power Factor	0.533	0.503	0.464	0.416	0.065
Power Consumed by UUT(W)	8.12W	5.62W	3.58W	1.77W	0.05W
Efficiency	88.79%	89.59%	90.04%	90.16%	*
Average Efficiency	89.64%				*

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

Reported Quantity	Load Conditions				
	100% * I ₀	75% * I ₀	50% * I ₀	25% * I ₀	0% * I ₀
Rms Output Current(mA)	2710mA	2033mA	1355mA	678mA	0mA
Rms Output Voltage(V)	23.690V	23.760V	23.850V	23.930V	24.020V
Active Output Power(W)	64.20W	48.29W	32.32W	16.21W	0.00W
Rms Input Voltage(V)	230V	230V	230V	230V	230V
Rms Input Current(A)	0.733A	0.565A	0.390A	0.209A	0.024A
Rms Input Power(W)	71.32W	53.85W	35.78W	18.01W	0.09W
Voltage T.H.D.(%)	0.50%	0.41%	0.32%	0.23%	0.11%
True Power Factor	0.428	0.419	0.399	0.373	0.022
Power Consumed by UUT(W)	7.12W	5.56W	3.46W	1.80W	0.06W
Efficiency	90.05%	89.72%	90.39%	90.16%	*
Average Efficiency	90.08%				*

Tester :Sun



注意:此圖面所需材料符合"ROHS"標準

- ① 5.5*2.1*23音叉車溝黑色半邊 (YY-PD-00186), 外模P-184號模(二次成型), 用料外PVC60P黑色 (YY-PV-00009)
- ② SR-348(A)號模, 用料PVC75P黑色 (YY-PV-00031), 吊重:1米/20磅/60秒
- ③ UL 2468 18AWG(0.16*41) BK OD:2.2*4.4 (YY-DC-00091) 裁線長度:1560+10/-0
- ④ 鐵芯規格:14.2*28.5*6.35(YY-CR-00009), 外模SR-118號模用料PVC60P黑色
- ⑤ PE无鐵芯紮帶10CM黑色(YY-ES-00001)
- ⑥ 1.8双钩机板端*2PCS(进文提供:P1815-A)
- ⑦ 單位:MM

一般公差表			
1.0mm以下	±0.1mm	15.0mm以下	±0.6mm
2.0mm以下	±0.15mm	20.0mm以下	±0.8mm
3.0mm以下	±0.20mm	30.0mm以下	±1.0mm
10.0mm以下	±0.50mm	30.0mm以上	±1.2mm

料號	R44M1G1501L		
客戶	制圖	吳遠松	
	審核		
頁次	01	核准	
圖號	ADT-0950	日期	2017/07/20

版次	04	變更內容	增加公差	日期	2017/07/20
版次	03	變更內容	增加端子	日期	2015/02/27
版次	02	變更內容	SR模號	日期	2008/11/13