



**Specification for Approval**

**Customer : ELFA AB**

**Part Name : AC ADAPTER**

**Description : 24Volts / 8.3Amps**

**Model No. : STD-24083 (LEVEL V)**

**Customer P / N : 69-234-87**

**Product P / N : RXTD24083D15204**

**Issued Date : 03 - Feb. - 2012**

**Version : A2**

**Issued Stamp :**

**Customer's Approval Signature**

**ADAPTER TECHNOLOGY CO.,LTD.**

**Office (Taiwan) : 6F-9,No.258, Liancheng Rd.,Zhonghe District,New Taipei City 235,Taiwan (R.O.C.)**

**TEL : +886-2-8226-2279**

**FAX : +886-2-8226-2238**

**E-mail : service\_tw@ adaptertech.com.tw ; service@ adaptertech.com.tw**

**Factory (China) : BOAYANG ELECTRONICS CO., LTD.**

**Di Feng Gong Ye Qu 2 Hao,Xiasha Liuwu Village, Shipai Town, Dong Guan City,**

**Guang Dong Province,China**

**TEL : 86-0769-8136-9899 ; 86-0769-8136-0909 ; 86-0769-8136-9008**

**86-0769-8186-8338 ; 86-0769-8186-8900**

**FAX : 86-0769-8136-9009**



**200W  
AC ADAPTER  
SPECIFICATION**

**Model No.** : **STD-24083 (LEVEL V)**

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**Description** : **24Volts / 8.3Amps**

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**Part No.** : **RXTD24083D15204**

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**Version** : **A2**

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**Date** : **03 - Feb. - 2012**

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<b>Approved</b>	<b>Checked</b>	<b>Prepared</b>





## 1. Feature :

- ◆ **Input** : Universal 100 ~ 240 Vac / 47 ~ 63 Hz Input, without any slide switch.
- ◆ **Output** : +24V / 0 ~ 8.3A
- ◆ **Case Dimension** : 183.2(L) \* 81.0(W) \* 42.3(H) mm
- ◆ **Efficiency** : Eff (av)  $\geq$  87%
- ◆ **Safety** : CUL / UL / GS / PSE / BSMI
- ◆ **EMI** : CE / FCC Class B ; Conduction & Radiation Met.
- ◆ **Protection** : OVP (Over Voltage Protection) 、 SCP (Short Circuit Protection) 、 OCP (Over Current Protection) 、 OTP (Over Temperature Protection)
- ◆ High frequency design , less power consumption.
- ◆ Suitable for usage at Telecommunication, Computer, Industrial Controller, & OA System.
- ◆ Meet Energy Star V / Erp ( Stage 2) / MEPS V.

## 2. Input :

2.1 Voltage	Universal 100 ~ 240Vac, single phase
2.2 Frequency	47 ~ 63 Hz
2.3 Current	2.8A Max.
2.4 Inrush Current	100A Max. / 240Vac (Cold start at 25 °C , full load)
2.5 Efficiency	Eff (av) $\geq$ 87% (At 115 Vac & 230 Vac)
2.9 Power Consumption	Pi $\leq$ 0.5W ( At 240Vac & No load)
2.7 Power Factor (PF)	Pi $\geq$ 0.9 (At 115 Vac & 230 Vac, At Full load)

$$\text{※Eff (av)} = \frac{E1 + E2 + E3 + E4}{4}$$

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	+24.00V $\pm$ 5%
	Current	8.3A Max.
	Regulation	22.8Vmin. ~ 24.0Vtyp. ~ 25.2max.
	Ripple & Noise	480mV Max.
	Total Power	200W Max.

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



## 4. Protection :

4.1 Over Voltage Protection (OVP)	Vout * (105% ~ 150%)
4.2 Over Current Protection(OCP)	Iout * (105% ~ 150%)
4.3 Short Circuit Protection (SCP)	Latch.
4.4 Over Temperature Protection (OTP)	Latch.

Remark : When Short Circuit Protection or Over Current Protection or Over Voltage Protection or Over Temperature Protection is activated, the power supply will latch.

## 5. Safety 、EMI and EMC Requirement :

### 5.1 Safety Requirement

a. Safety : CUL / UL / GS / PSE / BSMI

b. Dielectric Strength : Cut off current 10mA

(1)	Primary to Secondary	1800Vac for 1 Minute
(2)	Primary to Frame Ground	1500Vac for 1 Minute

c. Insulation Resistance :

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

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

5.3 Leakage Current : Less than 3.5mA

## 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. : 50,000 hours min. (at 25°C, by MIL-HDBK-217F)

### 8. Mechanical :

8.1 Weight : 820g Typical

8.2 Cable Type : Black UL2464 AWG16 \* 4C  
( Wire + Plug )

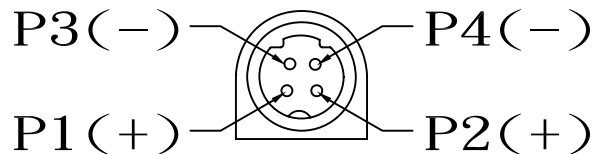
Plug : 4 Pin Din

8.3 Cable Length : 1500mm

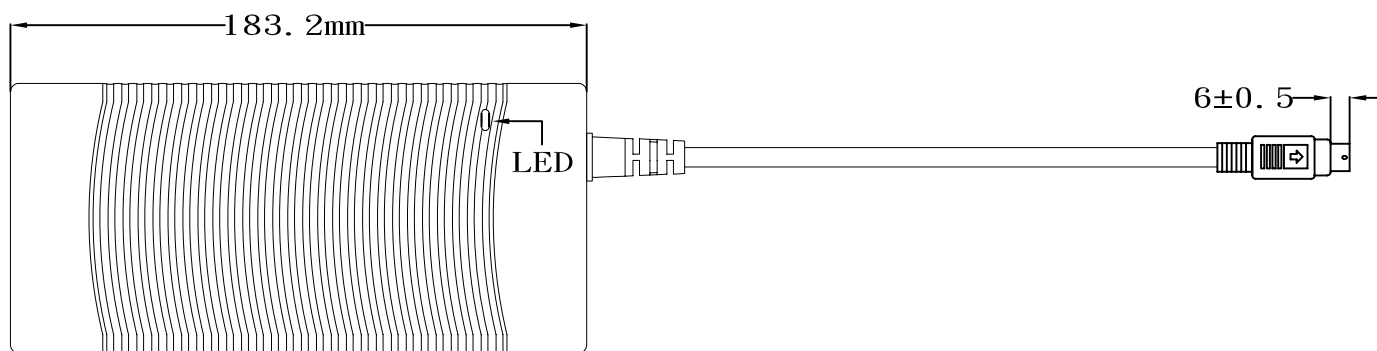
8.4 Case Dimension : 183.2mm(L)\*81.0mm(W)\*42.3mm(H)

8.5 Material Flammability : UL 94V-0

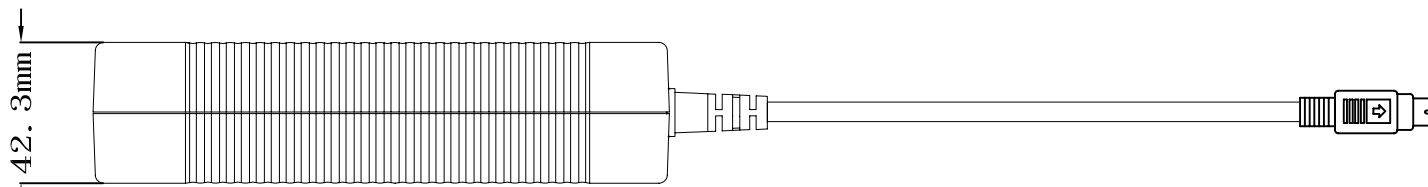
8.6 External Appearance : As drawing below ( Scale → mm )



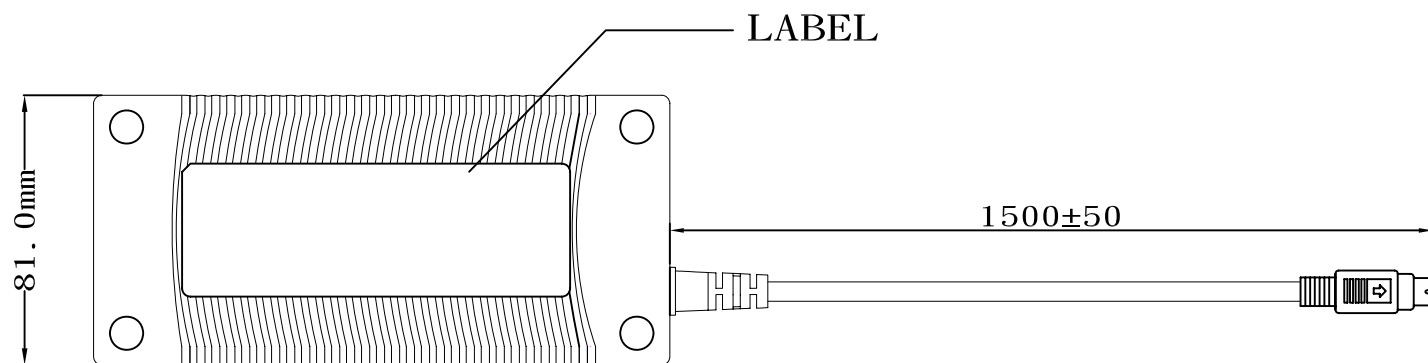
**Output Cable Plug Pin Assignment**



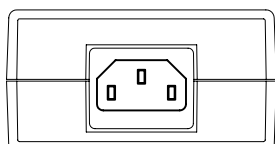
**TOP-VIEW**



**SIDE-VIEW**



**BOTTOM-VIEW**



**FRONT-VIEW**



# Adapter Technology Co., Ltd.

8.7 Spec. Label Materials : Metalized Polyester Label ( Silver Gloss )  
 Color : Black Background with Silver Printing  
 Label Dimension : 39mm(H)\*119mm(W)

## 100%

**NORDIC POWER**

**AC ADAPTER 交換式電源供應器**  
**Model (型號) : STD-24083**  
**INPUT (輸入) : 100-240V ~ 47-63Hz 2.8A MAX.**  
**OUTPUT (輸出) : 24V === 8.3A**  
**FOR INDOOR USE ONLY**

For use with information technology equipment only  
 Laite on Liitettävä suojamaadoituskoskettimilla  
 varustettuun pistorasiaan  
 Apparatet må tilkobles jordet stikkontakt  
 Apparaten skall anslutas till jordat uttag

RoHS R33154

**EFFICIENCY LEVEL V**

**PS E JET**  
 I/P : AC 100-240V 50/60Hz 220VA-235VA 2.8A  
 O/P : DC 24V 8.3A 必ず接地接続を行って下さい

**UL US LISTED I.T.E. POWER SUPPLY 60JJ E225703**

**D/C:1205**  
**MADE IN CHINA**  
 ID NO. A  
 XXX  
 ADAPTER TECH.

### "XXX"

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

## 160%

**NORDIC POWER**

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**UL US LISTED I.T.E. POWER SUPPLY 60JJ E225703**

**D/C:1205**  
**MADE IN CHINA**  
 ID NO. A  
 XXX  
 ADAPTER TECH.

# Label Part No. : 9443030761



## A. Line Regulation Test

Test Result :

Test condition	Spec.	Reading 1	Reading 2	Reading 3
90Vac / 50 % Load	24.2 V ~ 25.2 V	24.205V	24.089V	23.960V
115Vac / 50 % Load	24.2 V ~ 25.2 V	24.205V	24.089V	23.960V
132Vac / 50 % Load	24.2 V ~ 25.2 V	24.205V	24.089V	23.960V
180Vac / 50 % Load	24.2 V ~ 25.2 V	24.205V	24.090V	23.960V
230Vac / 50 % Load	24.2 V ~ 25.2 V	24.205V	24.090V	23.960V
264Vac / 50 % Load	24.2 V ~ 25.2 V	24.205V	24.090V	23.960V

## B. Efficiency Test

Test Result :

Test condition	Spec.	Reading 1	Reading 2	Reading 3
115Vac	87 % Min.	90.81%	91.04%	91.01%
230Vac	87 % Min.	92.08%	92.11%	91.84%

$$\text{Eff (av)} = \frac{E1 + E2 + E3 + E4}{4}$$

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	24.2 V ~ 25.2 V	24.377V	24.225V	24.113V
115Vac / 50 % Load	24.2 V ~ 25.2 V	24.207V	24.091V	23.961V
115Vac / 100 % Load	24.2 V ~ 25.2 V	24.043V	23.960V	23.807V
230Vac / 0 % Load	24.2 V ~ 25.2 V	24.370V	24.224V	24.113V
230Vac / 50 % Load	24.2 V ~ 25.2 V	24.206V	24.090V	23.961V
230Vac / 100 % Load	24.2 V ~ 25.2 V	24.041V	23.959V	23.807V

## D. Ripple & Noise Test

Test Result :

Test condition	Spec.	Reading 1	Reading 2	Reading 3
115Vac / 100 % Load	480mV Max.	147mV	166mV	137mV
230Vac / 100 % Load	480mV Max.	162mV	184mV	157mV





## E. Inrush Current

Test Result :

Test condition	Spec.	Reading 1	Reading 2	Reading 3
240Vac / 100 % Load	100A Max.	77.9A	78.6A	76.9A

## F. Over Voltage Protection

Test Result :

Test condition	Spec.	Reading 1	Reading 2	Reading 3
115Vac	Vout*(105%~150%)	137%	135%	134%
230Vac	Vout*(105%~150%)	133%	136%	134%

## G. Over Current Protection

Test Result :

Test condition	Spec.	Reading 1	Reading 2	Reading 3
115Vac	Iout*(105%~150%)	124%	125%	128%
230Vac	Iout*(105%~150%)	124%	125%	129%

## H. Short Circuit Protection

Test Result :

Test condition	Spec.	Reading 1	Reading 2	Reading 3
115Vac	Latch	OK	OK	OK
230Vac	Latch	OK	OK	OK

## I. Input Power Consumption(No Load)

Test Result :

Test condition	Spec.	Reading 1	Reading 2	Reading 3
230Vac / 0 % Load	$\leq 0.5$ W	0.468W	0.432W	0.460W

## J. Power Factor

Test Result :

Test condition	Spec.	Reading 1	Reading 2	Reading 3
115Vac / 100 % Load	$\geq 0.9$	0.990	0.991	0.994
230Vac / 100 % Load	$\geq 0.9$	0.988	0.987	0.991



## Efficiency Test Report

- A. Model Number : STD-24083 ( 24V / 8.3A )
- B. DC Power Cord : UL2464 , 16AWG\*4C , 1.5M
- C. Average Efficiency :
- Energy Star V : 87% min.
- Erp ( Stage 2 ) : 87% min.
- MEPS V : 87% min.
- D. NO Load Power Consumption :
- Energy Star V : 0.5W max.
- Erp ( Stage 2 ) : 0.5W max.
- MEPS V : 0.5W max.
- E. Testing Dequpment :
1. AC Power Source : "APE" APW-110N
2. Electronic Load : " PRODIGIT " 3356
3. Power Meter : "YOKOGAWA" WT210
4. Digital Meter : " FLUKE " 45
- F. AC Input Voltage : 115Vac/60Hz

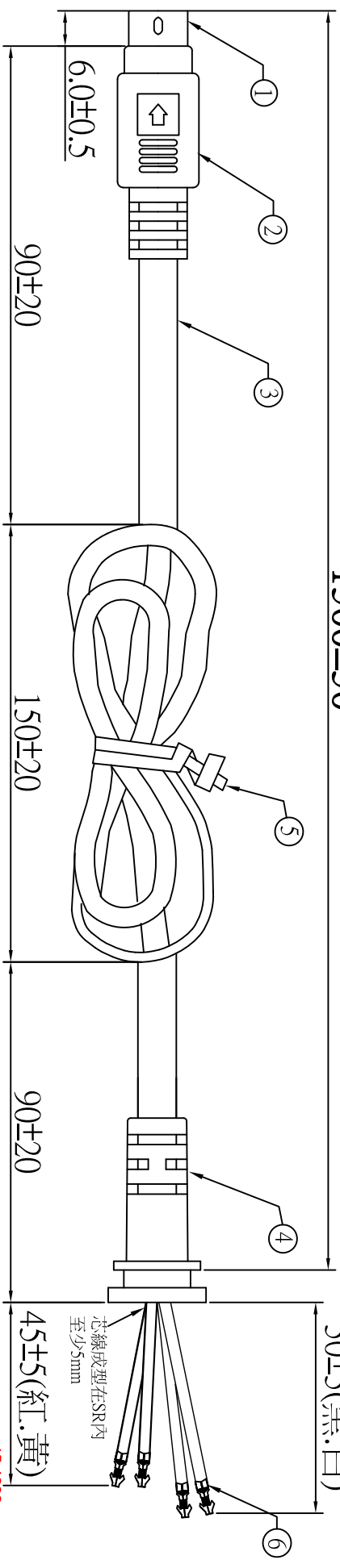
Reported Quantity	Load Conditions				
	100%* I <sub>0</sub>	75%* I <sub>0</sub>	50%* I <sub>0</sub>	25%* I <sub>0</sub>	0%* I <sub>0</sub>
Rms Output Current(mA)	8300mA	6225mA	4150mA	2075mA	0mA
Rms Output Voltage(V)	24.013V	24.078V	24.147V	24.215V	24.286V
Active Output Power(W)	199.31W	149.89W	100.21W	50.25W	0.00W
Rms Input Voltage(V)	115V	115V	115V	115V	115V
Rms Input Current(A)	1.893A	1.411A	0.943A	0.487A	0.061A
Rms Input Power(W)	217.80W	162.70W	108.92W	56.23W	0.35W
Voltage T.H.D.(%)	0.42	0.18	0.12	0.10	0.09
True Power Factor	0.992	0.994	0.995	0.993	0.050
Power Consumed by UUT(W)	18.49W	12.81W	8.71W	5.98W	0.35W
Efficiency	91.51%	92.12%	92.00%	89.36%	*
Average Efficiency	91.25%				*

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

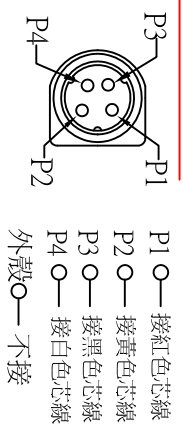
Reported Quantity	Load Conditions				
	100%* I <sub>0</sub>	75%* I <sub>0</sub>	50%* I <sub>0</sub>	25%* I <sub>0</sub>	0%* I <sub>0</sub>
Rms Output Current(mA)	8300mA	6225mA	4150mA	2075mA	0mA
Rms Output Voltage(V)	24.007V	24.076V	24.144V	24.214V	24.285V
Active Output Power(W)	199.26W	149.87W	100.20W	50.24W	0.00W
Rms Input Voltage(V)	230V	230V	230V	230V	230V
Rms Input Current(A)	0.937A	0.712A	0.494A	0.357A	0.034A
Rms Input Power(W)	213.94W	160.94W	108.60W	55.64W	0.41W
Voltage T.H.D.(%)	0.13	0.12	0.13	0.15	0.10
True Power Factor	0.994	0.984	0.958	0.678	0.053
Power Consumed by UUT(W)	14.68W	11.07W	8.40W	5.40W	0.41W
Efficiency	93.14%	93.12%	92.26%	90.30%	*
Average Efficiency	92.21%				*

Tester : Wentsai

1500±50



**焊接極性正視圖**



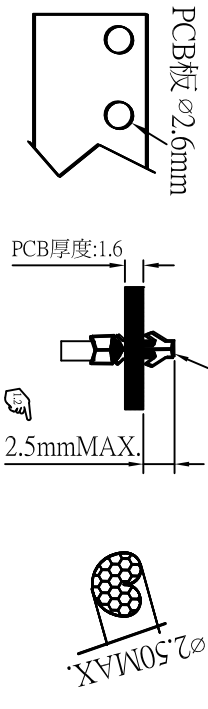
- P1 ○—接紅色芯線
- P2 ○—接黃色芯線
- P3 ○—接黑色芯線
- P4 ○—接白色芯線
- 外殼○—不接

**相關測試要求:**

- 一.電性測試:
- 1.耐電壓:AC 500V/秒,測試無異常;
- 2.絕緣抵抗:DC 500V 20MΩ 以上;
- 3.導通測試:無斷線,短路,極性反;
- 二.拉力測試:電線與S/R間吊重9.1kg經過1分鐘無斷線脫落等異常.
- 三.搖擺測試:

電線與PG間吊重200g,40回/分,角度±60°往復1000回不完全斷線,且外觀無脫落,斷裂等異常.

**鉚合後要求:**

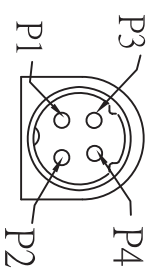
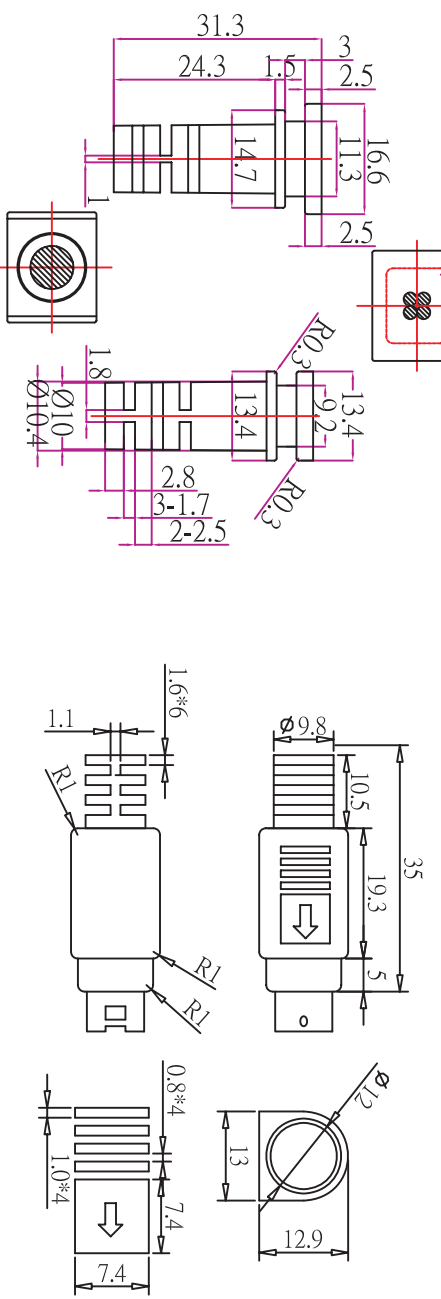
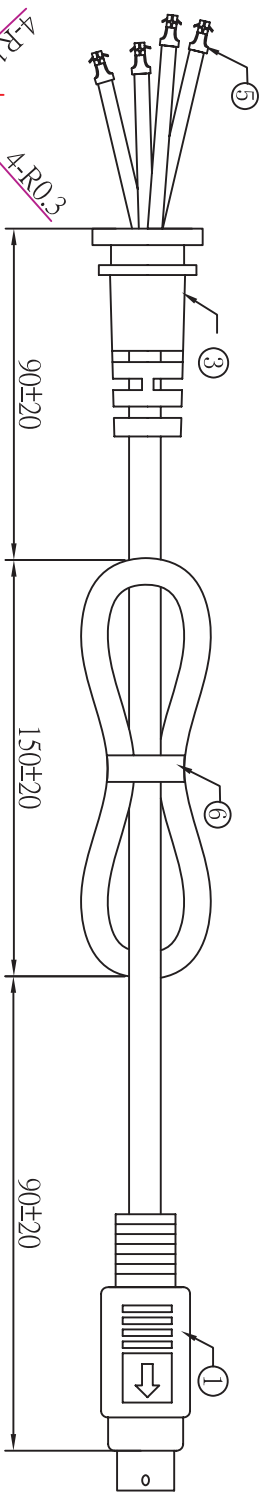
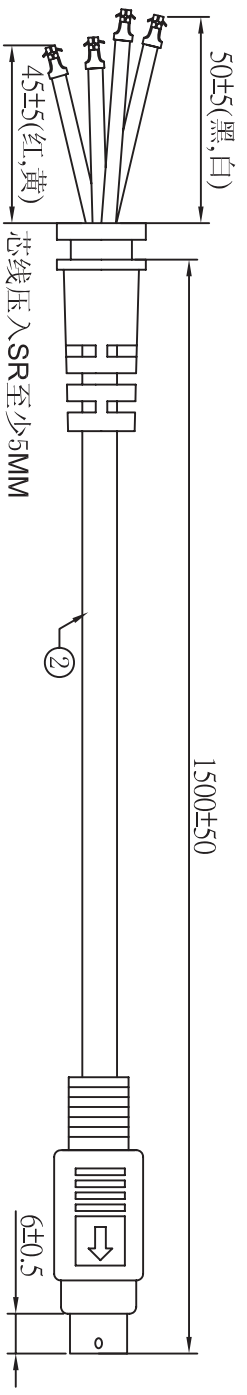


**阿達特料號:**

Terminal	P1811T2P-2B或同級品
扎帶	PE有鐵絲 黑
S/R	模具編號: DM-SR-3263 用料: 黑色軟質PVC
Wire	UL 2464 16AWG (0.254/26)/4C(紅,黑,白,黃)黑霧面OD:φ6.5mm
Plug	模具編號: DM-PG-3316 用料: 內模:透明PE 外模:黑色軟質PVC
Pin	POWER DIN 4PIN 成型式
序號	部品 規 格

投影	第一角法	單位 mm	比例	份數
制作日期	3RD ANGLE	DIM.	SCALE	QTY.
2011.08.13	校圖	承認	APPD.	公差
	DRW.	APPD.	APPD.	TOLERANCE
				一般公差
				±0.3

1.2	2011.11.07	追加端子鉚壓的尺寸要求!
1.1	2011.11.07	修正筆誤標示尺寸及S/R模號!
REV.	DATE	變更
<b>阿達特</b>		
客戶名	ADT037	
品名	ADT037	
DWG.NO.	1.2	



正面圖

芯線	黃色	紅色	白色	黑色
PIN	P1	P2	P3	P4

注意:此圖面所需材料符合"ROHS"標準

- ① 4PIN 粗針成型式,外模P-180號模(二次成型),大網尾,單箭頭,用料外PVC60P黑色
- ② UL 2464 16AWG(0.254\*26\*4C(紅,黑,白,黃)過粉線 BK亮 OD:6.5 裁線長度:1560+10/-0
- ③ SR-511 号模,用料PVC60P黑色(YT-PVC-00009):吊重:1米/20磅/60秒
- ④ PE有鐵芯紫帶14CM(YT-ES-00001)
- ⑤ 机板端:JD262A(旗欣提供)\*4PCS
- ⑥ 絕緣阻抗:20Ω,導通阻抗:1.5Ωmax
- ⑦ 單位:.MM

料號	R44R1515013		
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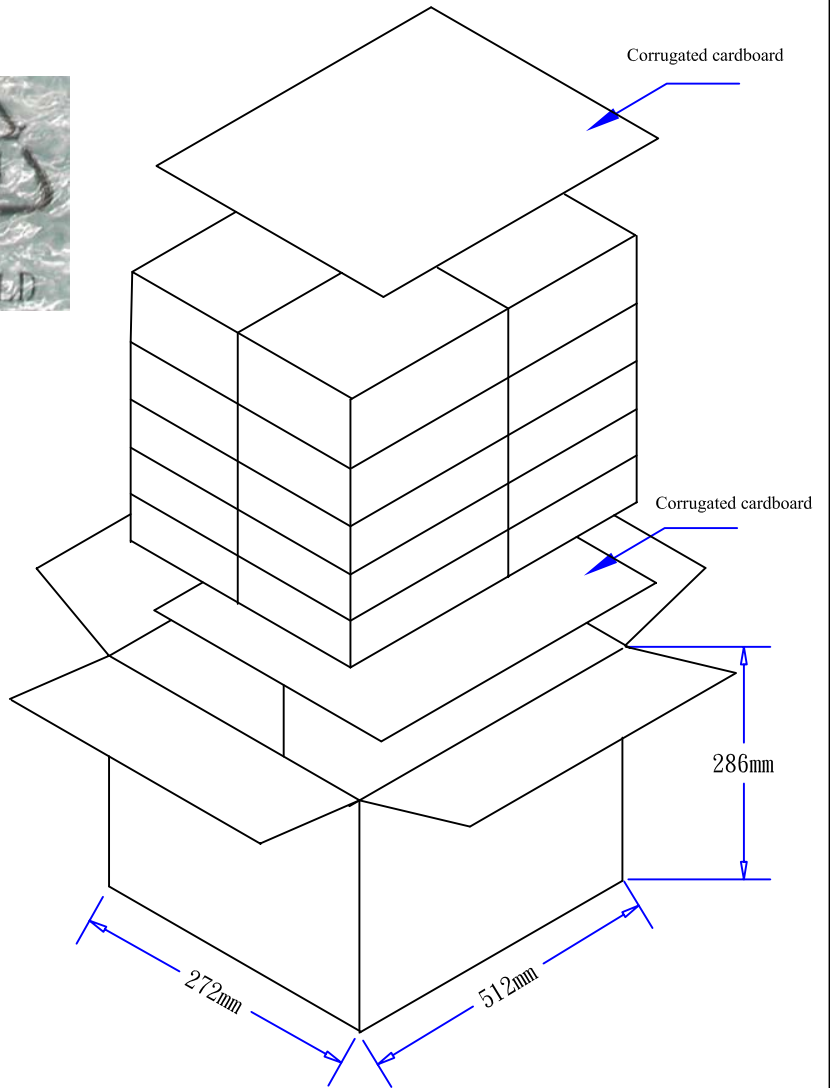
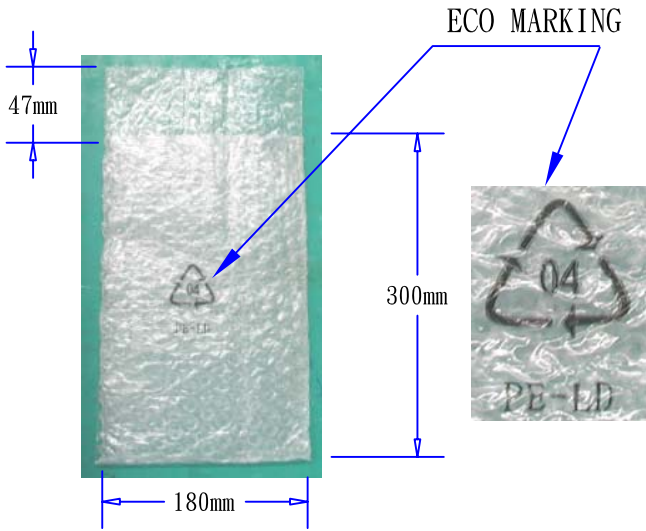
客戶	阿達特	制圖	吳遠松
版次	01	初審	
頁數	01	審核	
		批准	

泰岳電子有限公司

圖號	ADT-1642	日期	2010/04/01
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# PIS200W0003

REVISIONS				
SHOW	REV	DESCRIPTION	DATE	APPROVED
△	A	按客户要求, 初版制作	10/07/22	
	B			
	C			



- 1. Corrugated cardboard: .500\*260\*6mm      B=B      9550013001      2/20
- 2. Q'ty: 4\*5=20PCS
- 3. Master carton: L\*W\*H=512\*272\*286mm      K=K      9520017101      1/20
- 4. White box: L\*W\*H=250\*130\*50mm      350P+CE      9510008101      1/1
- 5. PE bubble bag: 300\*180\*47mm, no color and clear.
- 5. Carton, box marks with dimension
- 6. Above materials should be compliance with RoHS

Adapter Technology Co., Ltd

DRAWING NO. 10-07-22-1			APPROVAL2	
UNIT	200W 白盒裝		APPROVAL1	
mm	ADT-0045		ENGINEER	
SCALE	REV. A	SHEET 1/1	DRAWN BY	