

納 入 仕 様 書

アールエスコンポーターネッツリミテッド 御中

品名:スイッチング AC アダプター

型番: TW-1250P

御 承 認 欄

平成 年 月 日

アイコー電子株式会社

〒101-0021 東京都千代田区外神田 3-5-2

TEL.03-3251-1335 FAX.03-3251-1327

<http://www.aikoh-d.co.jp>



60W
Switching Power Adapter
SPECIFICATION

Model No. : **STD-1250P (Level V)**

Description : **12Volts / 5.0Amps**

Part No. : **RXTD1250P415227**

Version : **A1**

Date : **09-Mar.-2011**

Approved	Checked	Prepared



1. Feature :

- ◆ Input : Universal 100 ~ 240 Vac / 47 ~ 63 Hz Input, without any slide switch.
- ◆ Output : +12.0V / 0~5.0A
- ◆ Case Dimension : 115 (L) *53 (W) * 38 (H) mm
- ◆ Efficiency : Eff (av) \geq 87% Min
- ◆ Safety : UL / cUL / CB / GS / PSE / BSMI / RCM / CCC
- ◆ 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 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	1.4A Max.
2.4 Inrush Current	80A Max. / 230Vac (Cold start at 25 °C , full load)
2.5 Efficiency	Eff (av) \geq 87% Min (At 115 Vac & 230 Vac)
2.6 Power Consumption	Pi \leq 0.5 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	+12.00V \pm 5%
	Current	5.0A Max.
	Regulation	11.40Vmin. ~ 12.00Vtyp. ~ 12.60Vmax.
	Ripple & Noise	200mV Max.
	Total Power	60.0W 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 *(110%~150%)
4.2 Short Circuit Protection (SCP)	Automatic recovery after short-circuit fault being removed
4.3 Over Current Protection(OCP)	I out *(105%~180%)

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 / CB / GS / PSE / BSMI / RCM / CCC

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

5.4 Grounding Test : Resistance 0.1ohm Max. @ 25A

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 Hrs.(At 25°C , By MIL-HDBK-217F)



8. Mechanical :

8.1 Weight : 288 g Typical

8.2 Cable Type : Black UL1185 AWG16
(Wire + Plug)

Plug : $\phi 5.5 * \phi 2.1 * 9.5\text{mm}$

(Tuning Fork & Cannelure)

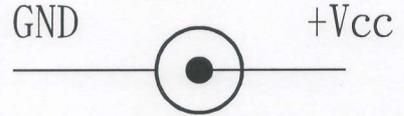
Cable Drawing No. : ADT-1749

8.3 Cable Length : 1500mm

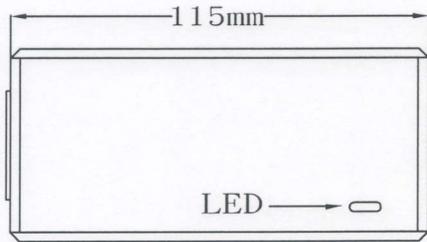
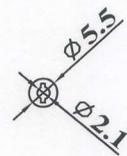
8.4 Case Dimension : 115mm(L)*53mm(W)*38mm(H)

8.5 Material Flammability : UL 94V-0

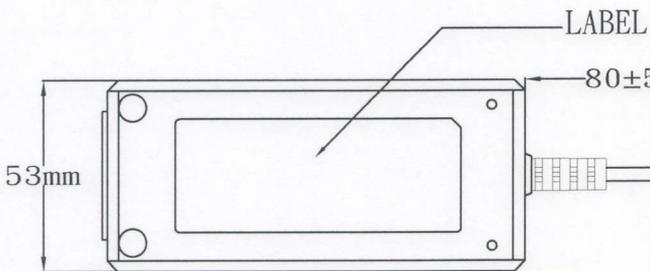
8.6 External Apperance : As drawing below (Scale \rightarrow mm)



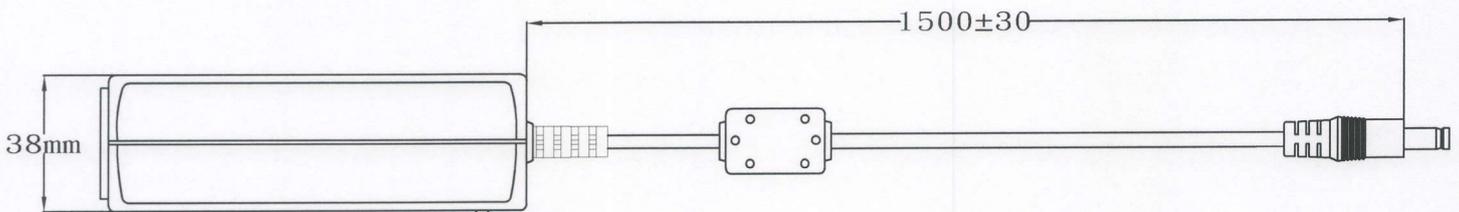
Output Cable Plug Pin Assignment



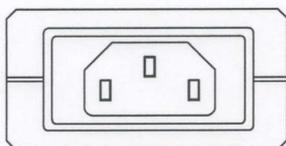
TOP-VIEW



BOTTOM-VIEW



SIDE-VIEW



FRONT-VIEW



Adapter Technology Co., Ltd.

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

100%

200%

TW-1250P
 AC ADAPTER 电源适配器
 MODEL(型号): STD-1250P
 製造元 ADAPTER TECH.
 INPUT(输入/輸入): 100-240V~47-63Hz 1.4A MAX.
 OUTPUT(输出/輸出): 12V 5.0A LPS

For use with information technology equipment. Apparate må Kun tilkoples jordet stikkontakt	FÜR DEN GEBRAUCH MIT INFORMATIONSTECHNOLOGIE AUSRÜSTUNG GEDACHT
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EFFICIENCY LEVEL
 FOR INDOOR USE ONLY

R33154

 (适用于资讯类产品)

JET AIKOH ELECTRONICS I/P: AC 100-240V 50/60Hz 101VA-140VA 1.4A O/P: DC 12V 5.0A	D/C: 1110 MADE IN CHINA 中国制造 ID NO. X XXX
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販売元 アイコー電子株式会社

"XXX"

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

ID NO. "X"

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

TW-1250P
 AC ADAPTER 电源适配器
 MODEL(型号): STD-1250P
 製造元 ADAPTER TECH.
 INPUT(输入/輸入): 100-240V~47-63Hz 1.4A MAX.
 OUTPUT(输出/輸出): 12V 5.0A LPS

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JET AIKOH ELECTRONICS I/P: AC 100-240V 50/60Hz 101VA-140VA 1.4A O/P: DC 12V 5.0A	D/C: 1110 MADE IN CHINA 中国制造 ID NO. X XXX
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販売元 アイコー電子株式会社

Label Part No.: 9443026140



A. Line Regulation Test

Test Result :

Test condition	Spec.	Reading 1	Reading 2	Reading 3
90Vac / 50 % Load	11.4 V ~ 12.6 V	12.139 V	12.142 V	12.128 V
115Vac / 50 % Load	11.4 V ~ 12.6 V	12.139 V	12.142 V	12.128 V
132Vac / 50 % Load	11.4 V ~ 12.6 V	12.139 V	12.142 V	12.128 V
180Vac / 50 % Load	11.4 V ~ 12.6 V	12.147 V	12.142 V	12.128 V
230Vac / 50 % Load	11.4 V ~ 12.6 V	12.147 V	12.142 V	12.128 V
264Vac / 50 % Load	11.4 V ~ 12.6 V	12.147 V	12.142 V	12.128 V

B. Efficiency Test

Test Result :

Test condition	Spec.	Reading 1	Reading 2	Reading 3
115Vac	87 % Min.	87.76 %	87.52 %	87.48 %
230Vac	87 % Min.	88.28 %	88.12 %	88.02 %

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

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	11.4 V ~ 12.6 V	12.236 V	12.242 V	12.221 V
115Vac / 50 % Load	11.4 V ~ 12.6 V	12.139 V	12.142 V	12.128 V
115Vac / 100 % Load	11.4 V ~ 12.6 V	12.046 V	12.057 V	12.038 V
230Vac / 0 % Load	11.4 V ~ 12.6 V	12.239 V	12.242 V	12.221 V
230Vac / 50 % Load	11.4 V ~ 12.6 V	12.147 V	12.142 V	12.128 V
230Vac / 100 % Load	11.4 V ~ 12.6 V	12.057 V	12.057 V	12.038 V



D. Ripple & Noise Test

Test Result :

Test condition	Spec.	Reading 1	Reading 2	Reading 3
115Vac / 100 % Load	200mV Max.	70 mV	66 mV	72 mV
230Vac / 100 % Load	200mV Max.	60 mV	62 mV	68 mV

E. Inrush Current

Test Result :

Test condition	Spec.	Reading 1	Reading 2	Reading 3
230Vac / 100 % Load	80A Max	46.0 A	42.0 A	48.0 A

F. Over Current Protection

Test Result :

Test condition	Spec.	Reading 1	Reading 2	Reading 3
115Vac / 100 % Load	Iout*(105%~180%)	144 %	148 %	143 %
230Vac / 100 % Load	Iout*(105%~180%)	144 %	147 %	142 %

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	≤ 0.5 W	0.30 W	0.32 W	0.36 W



Adapter Technology Co., Ltd.

Efficiency Test Report

- A. Model Number : STD-1250P (12V / 5A)
- B. DC Power Cord : UL1185 , 16AWG , 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 Dequpiment :
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

Load Conditions	100% * I ₀	75% * I ₀	50% * I ₀	25% * I ₀	0% * I ₀
Rms Output Current(mA)	5000mA	3750mA	2500mA	1250mA	0mA
Rms Output Voltage(V)	11.865V	11.959V	12.046V	12.138V	12.227V
Active Output Power(W)	59.33W	44.85W	30.12W	15.17W	0.00W
Rms Input Voltage(V)	115V	115V	115V	115V	115V
Rms Input Current(A)	1.145A	0.889A	0.628A	0.339A	0.015A
Rms Input Power(W)	69.40W	51.50W	34.20W	17.00W	0.23W
Voltage T.H.D.(%)	0.38	0.33	0.28	0.18	0.11
True Power Factor	0.527	0.504	0.474	0.436	0.131
Power Consumed by UUT(W)	10.08W	6.65W	4.09W	1.83W	0.23W
Efficiency	85.48%	87.08%	88.06%	89.25%	*
Average Efficiency	87.47%				*

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

Load Conditions	100% * I ₀	75% * I ₀	50% * I ₀	25% * I ₀	0% * I ₀
Rms Output Current(mA)	5000mA	3750mA	2500mA	1250mA	0mA
Rms Output Voltage(V)	11.865V	11.959V	12.046V	12.138V	12.239V
Active Output Power(W)	59.33W	44.85W	30.12W	15.17W	0.00W
Rms Input Voltage(V)	230V	230V	230V	230V	230V
Rms Input Current(A)	0.641A	0.495A	0.344A	0.191A	0.028A
Rms Input Power(W)	68.40W	51.30W	34.00W	17.30W	0.30W
Voltage T.H.D.(%)	0.53	0.43	0.33	0.23	0.09
True Power Factor	0.464	0.451	0.430	0.394	0.047
Power Consumed by UUT(W)	9.08W	6.45W	3.89W	2.13W	0.30W
Efficiency	86.73%	87.42%	88.57%	87.70%	*
Average Efficiency	87.61%				*

Tester : DEN



Adapter Technology Co., Ltd.

Instruction sheet Dimension : 90.0mm(L)*65.0mm(W)+/-0.1mm

100%

警告

間違った使い方をすると機器を故障させたり、発熱、発火の恐れがあります。
下記の事項を必ずお守り下さい。

- ご使用前に必ず電圧・極性等の確認をして下さい。
- 定格の範囲以内でご使用下さい。
- 高い信頼性を必要とする用途(精密機器、医療機器等)には不向きです。
- 屋内専用です。水等をかけないでください。
- 濡れた手で触ったり、湿気の多い所で使用しないで下さい。
- ショート、分解、改造は絶対しないで下さい。
- バッテリーの充電には絶対使用しないで下さい。
- ご使用时以外はコンセントより抜いて下さい。
- ご使用上の不注意により発生した事故等は責任及び保証対象外とさせていただきます。

※ 国内AC100Vのみの保証とさせていただきます。
※ 仕様は予告なく変更する場合があります。

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150%

警告

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下記の事項を必ずお守り下さい。

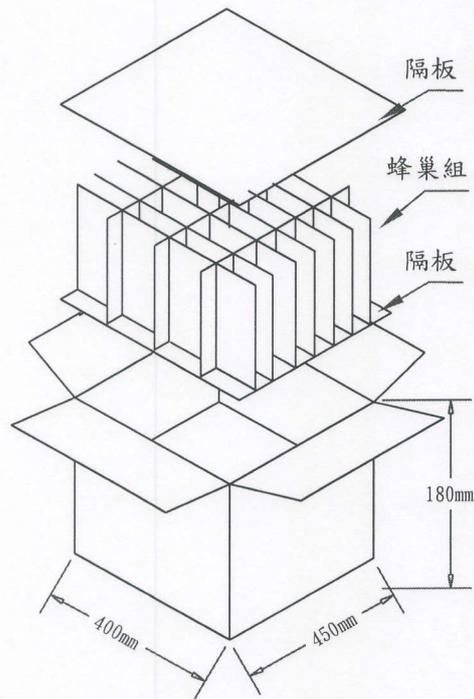
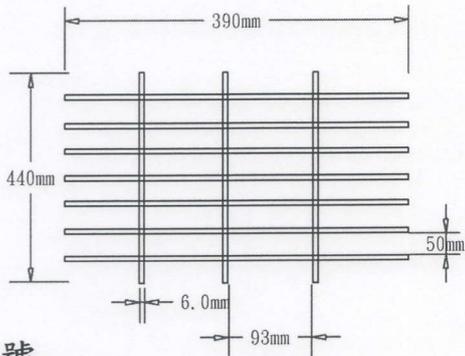
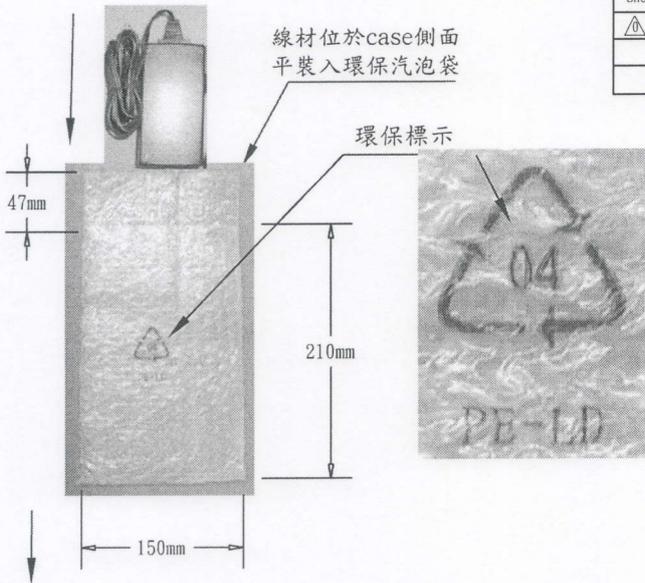
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Label Part No.: 9471120201

REVISIONS				
SHOW	REV	DESCRIPTION	DATE	APPROVED
△	A	依阿達特尺寸, 初版制作	2009/06/17	



零件料號

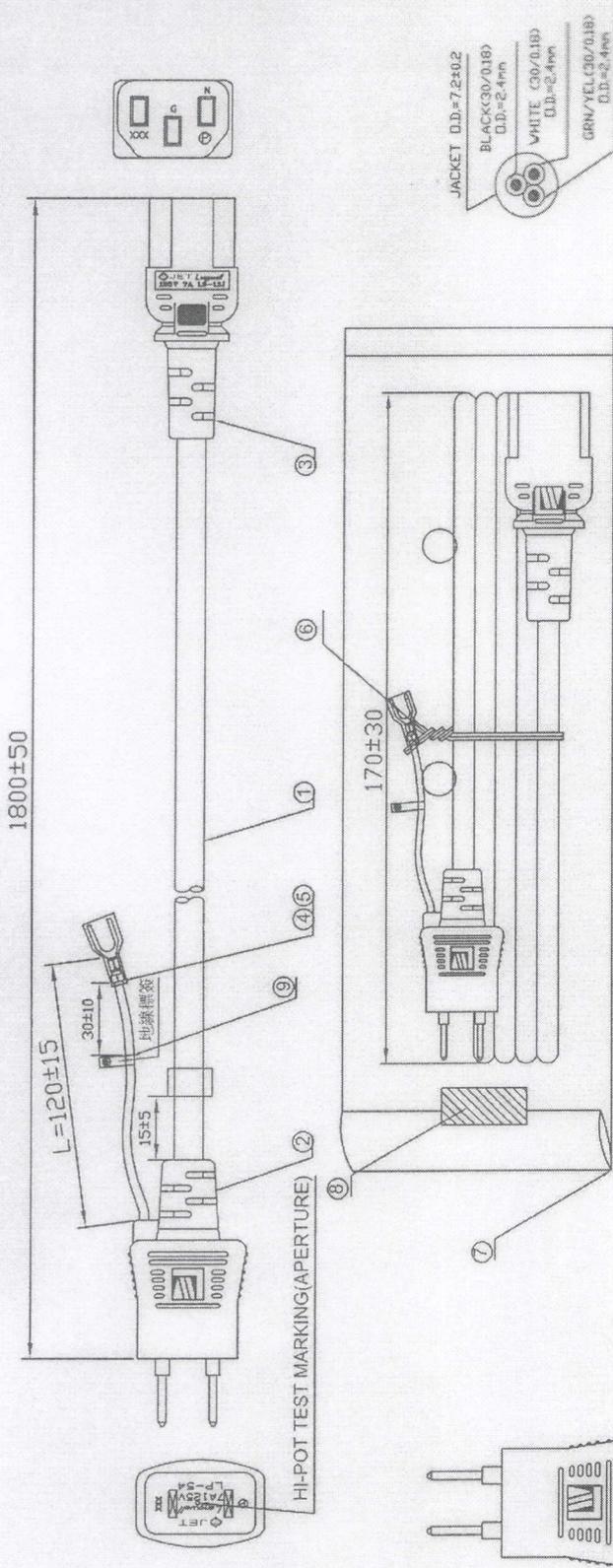
- 9550000401 1. 隔板: 440*390*6mm B=B 2/32
- 2. 數量: 32PCS
- 9520000702 3. 外箱: L*W*H=450*400*180mm A=B加強芯 1/32
- 9560000702 4. 七刀卡: 440*160*6mm(中分) B=B 3塊/32
- 9560000802 5. 三刀卡: 390*160*6mm(中分) B=B 7塊/32
- 9540000901 6. 環保汽泡袋: 210*150*47mm 無色透明, 短邊單端開口, 長邊中間位置印環保標志
- 7. 外箱標注為外徑尺寸.
- 8. 成品裝入汽泡袋折合袋口后用小膠紙封口, 銘板面位於環保標志側.
- 9. 成品豎向側立裝入蜂巢內, 方向須統一.

ADAPTER
2009.07.14
研發部

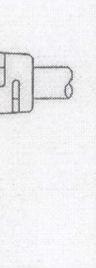
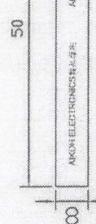
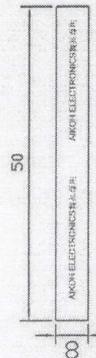
阿達特科技股份有限公司

DRAWING NO. PIS36W00001		APPROVAL 1 BY	
UNIT mm		APPROVAL 2 BY	
MODEL NO. 36W-65W(阿達特)	FILE NO. PACKAGE_Y_126	CHECKED BY(ENGINEER)	鄧應親(DEN)
SCALE	REV. A	SHEET 1/1	DRAWN BY SUN DATE: 2009/06/15

FIGURE 1



CABLE MARKING: \timesPS>E JET LONGWELL VCTF 300V 0.75mm² XXXX -F- (N.M.)



ITEM	DESCRIPTION	QTY	UM
9	LABEL	1	EA
8	TAPE	1	EA
7	PE BAG	1	EA
6	MINI TIE	1	EA
5	TUBE: J25030(JH)	1	EA
4	TERMINAL: J655BS-2(JH)	1	EA
3	(MOLDED CONNECTOR) LS-13J 7A/125V	1	EA
2	(MOLDED PLUG) LP-54 7A/125V	1	EA
1	VCTF 0.75mm ² 3C BLACK N.M. 5'11"	1	EA

Tolerance:	Approved by:	 良維科技 股份有限公司 Longwell COMPANY
>0±0.3	C.F.Y	
>1±0.5	Checked by:	
>10±1	Tony.Chen	
>20±2	Drawn by:	Customer: AIKO
Angle:	Lingling.Pei	Customer PIN:
±1°	Date: 05/13/2010	Longwell P/N:
	Scale: X	DWG. NO: PT8GKQPAL0A-05B
	Unit: mm	GW-06126
		SHEET 1 OF 1
		REV: 1

- NOTES:
- 1: CABLE: THE CORD SHALL COMPLY WITH ARTICLE 1 OF THE TECHNICAL REQUIREMENTS OF THE METI ORDINANCE APPENDIX 1 SECTIONS (1),(6),(10).
 - 2: PLUG: THE MOLDED PLUG SHALL COMPLY WITH ARTICLE 1 OF THE TECHNICAL REQUIREMENTS OF THE METI ORDINANCE APPENDIX 4 SECTION 1 & 6.
 - 3: CONNECTOR: THE MOLDED CONNECTOR SHALL COMPLY WITH ARTICLE 1 OF THE TECHNICAL REQUIREMENTS OF THE METI ORDINANCE APPENDIX 4 SECTION 1& 6 AND IEC 60320-1 STANDARDS (C13 CONNECTOR).
 - 4: THE PRODUCT SHALL BE TESTED 100% FOR ALL SAFETY ELECTRICAL ITEMS.
 - 5: COLOR: BLACK (LONGWELL P/N:0A)

REV	ECN NO.	DESCRIPTION	APPRO.	DATE
1		Initial Release		

Specification Use Only