



<http://www.bobbintron.com>

**BOBBINTRON ELECTRICAL CORPORATION**

## SPECIFICATION FOR PRELIMINARY

<b>APPROVAL SIGNATURE</b>
<b>DATE :</b>

**CUSTOMER :** Digi International    **PART NO :** 24000112    **REV.** \_\_\_\_\_

**DESCRIPTION :** AC to DC 18Watt Desktop SMPS

**PLEASE SIGN AND RETURN ONE COPY.**

**ALL PRODUCTION UNITS WILL BE BUILT ACCORDING  
TO THIS SPECIFICATIONS.**

**MODEL NO:** AP0181-18E

**AGENCY APPROVAL:** \_\_\_\_\_

**PRESENTED BY:** Ben Yang    **NO.** \_\_\_\_\_

**CHECKED BY:** Ben Yang

**APPROVED BY:** Johnson Lin

**DATE : 05/30/2012**

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**BOBBINTRON ELECTRICAL CORPORATION  
SWITCHING POWER SUPPLY  
SPECIFICATION**

**MODEL : AP0181-18E****ISSUED : 05/30/2012****DWG NO :****REV. A****1. Input**

- |                                      |   |
|--------------------------------------|---|
| <b>1.1 AC input voltage range :</b>  | <b>90VAC ~ 254VAC (universal)</b>   |
| <b>1.2 AC input voltage rating :</b> | <b>100VAC~240VAC</b>  |
| <b>1.3 AC input Frequency :</b>      | <b>47Hz to 63Hz</b>   |
| <b>1.4 AC input current :</b>        | <b>0.50 A (rms) max. for 115VAC<br/>0.30 A (rms) max. for 230VAC</b>            |
| <b>1.5 MAX. In-rush current :</b>    | <b>25A MAX. @ 115VAC<br/>50 A max. @ 230Vac<br/>at 25°C ambient cold start.</b> |
| <b>1.6 Leakage current :</b>         | <b>3.5 mA max.</b>  |

**2. Output characteristics:**

- |  |                          |
|--|--------------------------|
| <b>2.1 Output voltage :</b>            | <b>18V</b>               |
| <b>2.2 Max. load current :</b>         | <b>1A</b>                |
| <b>2.3 Min load current :</b>          | <b>0A</b>                |
| <b>2.4 Tolerance :</b>                 | <b>±5 %</b>              |
| <b>2.5 Output Ripple &amp; Noise :</b> | <b>Output Voltage 1%</b> |

**\* Ripple & Noise test conditions :**

- (1) Measured by-pass capacitors 0.1uF / 10uF at output connector terminal  
And oscilloscope set at 20 Mhz. ( tested by oscilloscope )**

**3. General characteristics :**

**3.1 Max. output power : 18 watts continuous.**

**3.2 Efficiency : 78% ( Minimum ) at max load & 220VAC.**

**3.3 Turn no delay : 3 second max. at 100VAC**

**3.4 Hold up time : 10ms Min. at max load 120VAC**

**3.5 Transient response : output return within  $\pm 10\%$  tolerance of nominal voltage within 1m sec.  
for 50% load change, 120Hz 50% duty cycle.**

**3.6 Short circuit protection : protection against short circuit for output  
Note : The output can be shorted permanently without damage.**

**3.6.1 (1) Any protect condition shall cause no damage and no component fail.  
(2) Automatic recovery when removal of protect condition.**

**3.7 Temperature coefficient : 0.2% per °C maximum over entire operating temperature range for Va output .**

**4. Environmental :**

**4.1 Operating temperature : -40°C to 75 °C**

**4.2 Storage temperature : -40°C to 85°C**

**4.3 Operating relative humidity : 10% to 85%**

**4.4 Storage relative humidity : 5% to 95%**

**5. Safety requirement :(Meet) (1) UL 1950  
(2) CE**

**6. EMI requirement :** CISPR EN55022 class B rules.

**7. Hi-pot test :**

**7.1 Primary to secondary :** 4242VDC for 1 sec. 10mA

**8. Insulation resistance**

**8.1 Input to output :** > 7Mohm. 500VDC

**9. Reliability**

**9.1 MTBF :** 50K hours min.  
@ full load at 25°C ambient temperature.

**9.2 Burn in :** 4hrs. 40 ±5°C, 115VAC or 230VAC  
ON/OFF cycling 70% ~ full load nominal line .

**9.3 Vibration :** Frequency range : 5-200Hz.

Vibration amplitude 0.5g ±10% over entire frequency range.

A complete sweep of the frequencies from 5-200Hz at 0.4 decades per mins. duration, if insufficient resonant point are established to provide for 30 minutes input per axis, then a constant acceleration continuous sweep at one octave per minute ( 0.3 decade / min. ) shall be applied for the duration.

**9.4 Altitude :** will operate properly at any altitude between 0 to 10000ft.

**10. Mechanical :**

**10.1 Dimensions :** 150mmlong  
90mmwidth



**bec**

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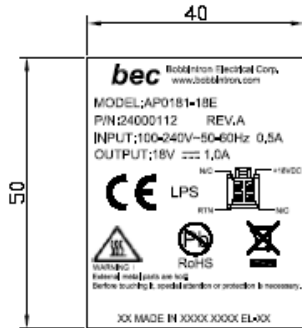
**BOBBINTRON ELECTRICAL CORPORATION**


Blank area for drawing or notes.



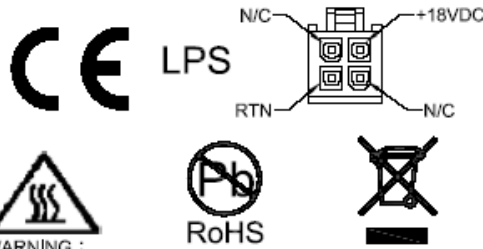
由 AUTODESK 教育產品製造

MARK	REV.	DESCRIPTION	DATE	ISSUED	APPROV.

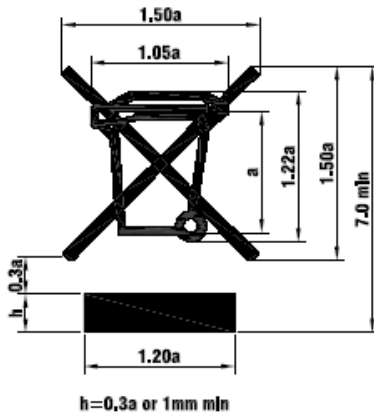


**bec** Bobbintron Electrical Corp.  
www.bobbintron.com

MODEL:AP0181-18E  
P/N:24000112 REV.A  
INPUT:100-240V~50-60Hz 0.5A  
OUTPUT:18V = 1.0A



WARNING :  
External metal parts are hot!!  
Before touching it, special attention or protection is necessary.



XX MADE IN XXXX XXXX EL-23

FACTORY CODE      DATE CODE  
                                 XX XX      廠牌UL代碼  
                                 Year Month

MADE IN TAIWAN OR  
CHINA CTRL BY OA

**NOTES:**

- 1.TOLERANCE: ±0.1mm
- 2.MATERIAL:8B35V T=0.254mm  
+Adhesive 3M467MP
- 3.COLOR:White TEXT ON BLACK BASE
- 4.PRINTING SHOULD BE FREE OF UNCLEAR PRINTING,  
PEELING AND SCRACHES
- 5.GLUE:TO MEET WITH UL APPROVAL

CODE	FACTORY
	Bobbintron
HZ	GAN SOUTH (HJ Zhou)

<b>bec</b> Bobbintron Electrical Corp. www.bobbintron.com		DESCRIPTION	APPROVED
		NAME PLATE	
DIM.	TOL.	MATERIAL	MODEL NAME
~8	0.1		AP0181-18E
8~25	0.12	QTY PCS/SET	DWG NO.
25~80	0.15	SCALE	101053007
80~250	0.2	UNIT	FILE NAME
250~	0.3	SHEET OF	REV. A
		PART NO.	DESIGNED Lillian 5/30/12