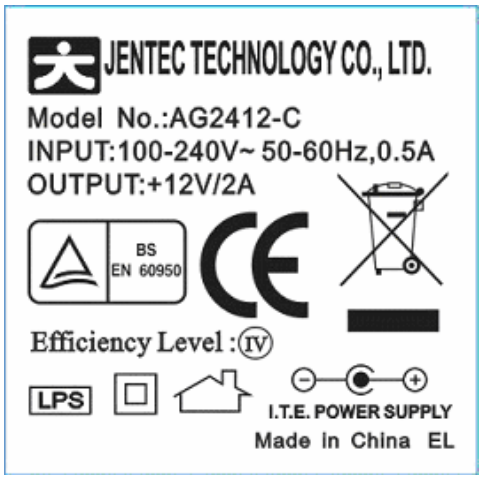
	MODEL NO.	AG2412-C281	**SHEET NO**	1
	DESCRIPTION	**SWITCHING MODE AC ADAPTER**	**ISSUED DATE:**	JUL/06/2007
			REVISED DATE:	

APPROVAL SIGNATURE
DATE:

CUSTOMER : Phidgets Inc.

Model : AG2412-C281(2A0F) Phidgets REV.00

AC Input	100-240Vac	DC Output	12V/2A	PC / NP
DC O/P cable	2468 20# 2.1X5.5X9.5mm 180° Tuning fork +Kink 6FT			
AC plug	UK 3Pin	Packaging	PE Bag	



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Version History:

Date	Version	Description
JUL/06/2007	00	First released

CONTAINS:

INTRODUCTION

This documents specifies ONE voltage +12V power supply for electronic data processing equipment. The power supply will provide power to all system components.

1.0 INPUT REQUIREMENTS

1.1 Input Voltage Designing Range: 90~264 VAC.

1.2 Line Frequency Designing Range: 47 HZ to 63 HZ.

1.3 In-Rush Current: 30 A max. less under 115V conditions.
Interruption of the input voltage for duration sufficient to cause the output voltage to drop below the regulation setting shall cause reactivation of in rush limiting capability. (Full-load 25℃ Cold-start)

1.4 Input Current: 0.5 A max. at any line voltage specified in 2.1 at output full load condition.

2.0 OUTPUT REQUIREMENTS

2.1Output Power (Rated Power)

The unit total output power from all voltage under steady state condition will not exceed 24W watts

2.2Output Regulation

Label Information per Safety Agencies according to UL1950 and or EN60950 Requirements.

2.2.1 Input Rated Voltage Range: 100~240 VAC.

2.2.2 Line Rated Frequency: 50 HZ to 60 HZ.

2.2.3 Static Load

TABLE 2.2.3

Output	Voltage	Minimum Load	Maximum Load	Surge Current
1	+12V	0A	2A	------

2.2.4Output Voltage

The output voltage shall be statically regulated for all combinations of load (min./ max.), line and environment, including cross regulation (if any)as shown:

TABLE 2.2.4

Output #	Voltage	Range	Tolerance
1	+12V	+11.4V~+12.6V	-5%,+5%

NOTE: Test measurement will be made at the output connector on the power Supply output cord and well connected on the mating connector.

2.2.5 Ripple and Noise

Differential ripple and noise at the power supply output shall be as

shown below when measured under constant load range of 0.01 ~2A with an oscilloscope with at bandwidth of 20MHz.

TABLE 2.2.5

Output #	Voltage	Maximum peak to peak ripple and noise
1	+12V	120 mV

NOTE: Test measurement will be made at the output connector on the power Supply output cord. With used an aluminum Electrolytic capacitor of 10uf and ceramic of 0.1uf parallel on output terminal can prevent unknown noise pick up.

2.3 Transient Response and Deviation

The load regulation for +12V is less than +/-10% while the measuring is down by changing the measured output loading from +20% to +80% of rated load .

2.4 Turn on, Hold up Time

During turn on and turn off, no voltage shall exceed its nominal voltage by more than 10% and no output will change its polarity with respect to its return line. All outputs shall reach their steady state values within 2 seconds of turn on and the hold up time for the output must be at least 10 mS tested at 110VAC/50HZ input with 80% maximum load on output.

2.5 Efficiency

The efficiency (watt out/watt in) shall be a minimum of 78.6 % under line input 115Vac/60Hz and full load.

3.0 PROTECTION

3.1 Input Current

An input fuse with a rating of 2A/250V Amps, shall be provided to protect the power supply and the input wiring. Note: The fuse shall be an unchangeable unit.

3.2 Output Voltage (OVP)

The power supply shall shut down all outputs when any output voltage reaches to it's over voltage protection trigger point. (Maximum=130% output voltage)

Note: This is not a repeatable test, when it triggers it is a perennial shut down.

3.3 Output Current (OCP)

Overload conditions shall cause both the output current and the output voltages to decrease. Removal of an output overload conditions shall permit automatic recovery of the output voltage. The over current protection point Maximum=300% for all outputs . Note : The total output power should not over Rated power to operate ,otherwise will caused the power supply to damage.

3.4 Short Circuit Protection (SCP)

The power supply shall be protected from damage of accidentally short on the output terminal.

4.0 MECHANICAL

Introduction

The power supply will provide

Output power connector show as in

Table 4.1

FRONT VIEW OF OUTPUT CONNECTOR

Table 4.1 Pin out for DC Connector

PIN #	**Output Voltage**
	

4.2 General Requirements

The power supply must not exceed an audible noise level of 32 dB while operating under any combination of specified load and input voltages and frequencies. This noise level shall be measured according to IEC standards 651 type 1, with the sound level meter pointed directly at the power supply in a free-field condition, at a distance of 1 meter and by selecting nominal “A” weighting frequency attenuation.

4.3 Power Supply Dimensions

The dimensions of the power supply are shown : (75x 50.5x55 m/m)

4.4 Input / Output Connection

AC PLUG	UK 3PIN
DC OUTPUT	2468 20# 2.1X5.5X9.5mm 180° Tuning fork +Kink 6FT

4.5Unit Color: BLACK

5.0 RELIABILITY

5.1 Reliability

The design and construction of this power supply shall exhibit a minimum mean time between failure of 50,000 hours full rated load operation at 25.0℃, According to the MIL-HDBK-217F.

5.2 Burn-in

The power supply will be performed 100% burn-in at 40℃(±5℃) under 80%-100% of full load on all power supplies.

6.0 ENVIRONMENT

6.1 Storage

The power supply shall be capable of withstanding the following environmental conditions for extended periods of time, without sustaining electrical and/or mechanical damage and subsequent operational deficiencies:

6.1.1 Ambient temperature: -25℃ ～ +85℃

6.1.2 Relative Humidity: 10% ～ 95%

6.2 Operation

The power supply shall be capable of operating continuously in any mode without performance deterioration in the following environmental conditions:

6.2.1 Ambient Temperature: 0℃ ～ 40℃

6.2.2 Relative Humidity: 10% ～95%.

7.0 EMI EMISSIONS

The power supply meets the radiated and conducted emission requirements for a CISPR22(EN55022) class B

8.0 SAFETY

The power supply must be certified or meet of the following safety standards:

	Certified	Meet
TUV-BS	★	
CE	★	

8.1 Dielectric Strength (Hi-Pot) Test System:

Withstand AC 3 K V/10mA, for 2 sec./ min., primary to secondary.

8.2 Insulation Resistance:

Primary to secondary: 10 M OHM at 500 VDC .

8.3 Leakage current: ≦ 0.25mA

9.0 ENVIROMENTAL PROTECTION

9.1 RoHS and WEEE

This product from design to production all the parts and process should meet the requirement of Restriction of the use of certain hazardous substances in electrical and electronic equipment RoHS directive 2002/95/EC and also meet the directive 2002/96/EC of Waste electrical and electronic equipment (WEEE) .

9.2 EPA/CEC/MEPS regulation

To meet the energy saving trend, this product has designed to meet the American EPA energy star program for the EPS regulation , or requirement of CEC 400-2006-002, AS/NZS/4665.2.2005 for Australia and New Zealand.

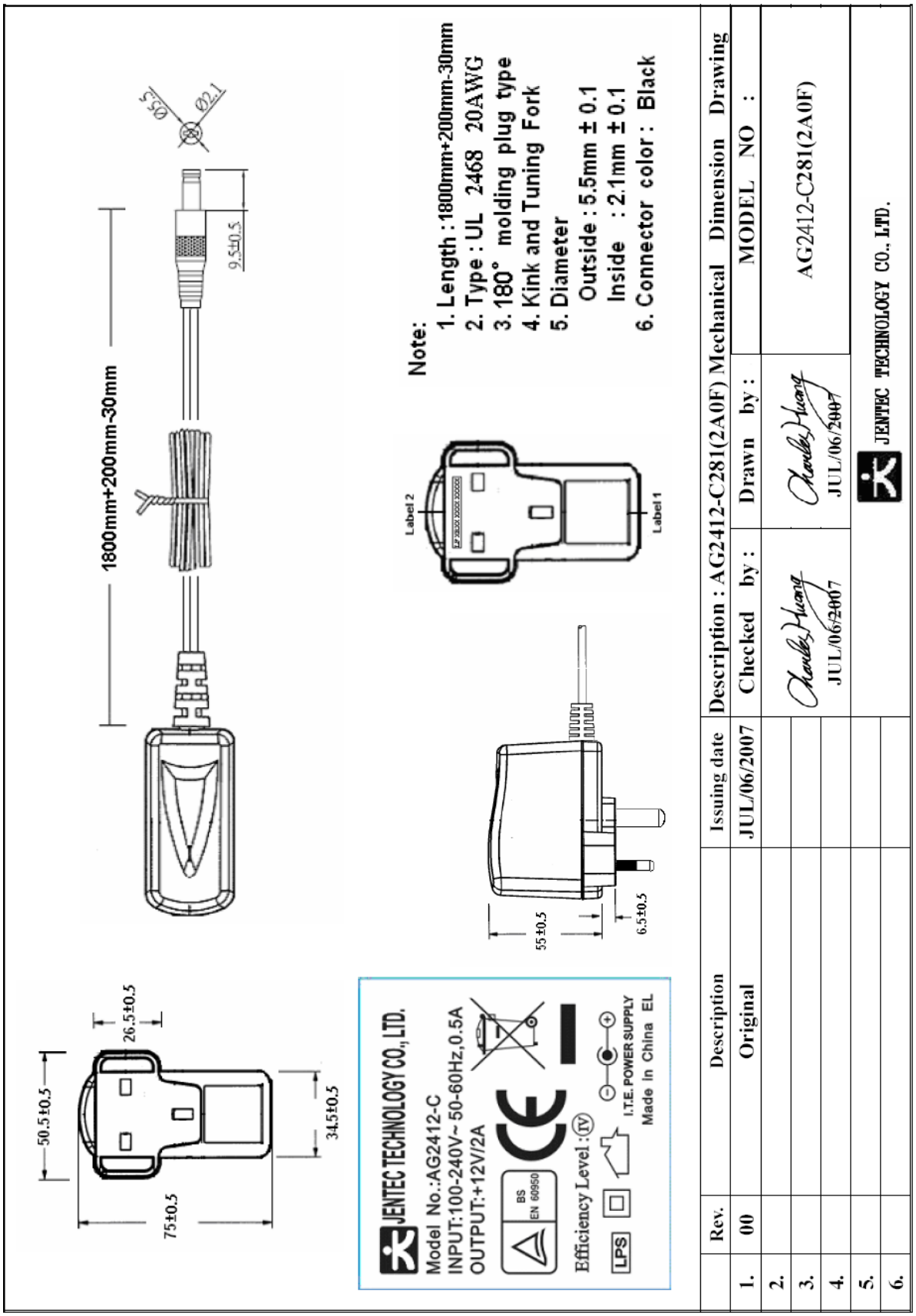
10.0 PACKAGING: PE Bag .

11.0 LABEL/MARKING

White Background with Green wordings and marks

＊Remain Updated＊

12.0 OUTLOOKING



13.0 SAFETY CERTIFICATIONS

Certificate

TÜV Group Asia

Certificate no. TA 50089302 01

License Holder:
Jentec Technology Co., Ltd.
14F-9, No. 2, Jian-Ba Rd.
Chung-Ho City, Taipei Hsien 235
Taiwan

Manufacturing Plant:
Super Union Industries Ltd.
No. 2, Chang-Jin Rd.
Chang-Jang-Bu Industries District
Ho Au Chun, Heng Gang Zhen
Lung Gang Qu, Guang Dong
P.R. China

Test report no.: ZTW1-HWH 10017486 001 **Client Reference:** C148b0020-b1/CSC

Tested to:
BS EN 60950-1:2002

Certified Product: (Switching Power Adapter) **License Fee - Units**

Type Designaton	: AF24XX-C	8
XX stands for	: 09, 10, 11 or 12	1
Rated Voltage	: 1) AC 100-240V, 50-60Hz 2) AC 200-240V, 50-60Hz	
Rated Current	: 0.5A	
Output	: see constructional dataform	
max. Ambient Temperature	: 40°C	
Protection Class	: II	

Remark: The equipment is also tested and complies with sub-clause 2.5 as limited power source.

9

Appendix: 1

Product Safety • Quality Assurance TÜV Rheinland Approved

Licensed Test mark: BS EN 60950-1

TÜV Rheinland Taiwan Ltd.
Signatures
i. V. Dipl.-Ing. R. Schuler
Dipl.-Ing. A. Klinker

Date of Issue (day/mo/yr)
27/07/2006

TÜV Rheinland Taiwan Ltd. - Tel (02) 2516-6040 - Fax (02) 2504-5040

Certificate

TÜV Group Asia

Certificate no. TA 50089302 02

License Holder:
Jentec Technology Co., Ltd.
14F-9, No. 2, Jian-Ba Rd.
Chung-Ho City, Taipei Hsien 235
Taiwan

Manufacturing Plant:
Super Union Industries Ltd.
No. 2, Chang-Jin Rd.
Chang-Jang-Bu Industries District
Ho Au Chun, Heng Gang Zhen
Lung Gang Qu, Guang Dong
P.R. China

Test report no.: ZTW1-HWH 10017486 001

Client Reference: C148b0020-b1/CSC

Tested to:
BS EN 60950-1:2002

Certified Product: (Switching Power Adapter) — **License Fee - Units**

as page 01
Addition

Type Designation: 1) AG24XX-C — 1
2) AH24XX-C — 1
XX stands for : 1) 12, 13, 14 or 15 — 1
2) 15, 16, 17, 18, 19, 20, 21, 22, 23 or 24
Output : see constructional dataform

Remark: The equipment is also tested and complies with sub-clause 2.5 as limited power source.

Appendix: 1

Licensed Test mark: BS EN 60950-1

TÜV Rheinland Taiwan Ltd.
Signatures

Dipl.-Ing. R. Scheller — Dipl.-Ing. A. Klinker

Date of Issue (day/mo/yr) 27/07/2006

TÜV Rheinland Taiwan Ltd. - Tel (02) 2516-6040 - Fax (02) 2504-5040

CE

VERIFICATION OF COMPLIANCE

This Verification of Compliance is hereby issued to the product designated below.

Product	ADAPTOR
Model	AX24XX-X (The first X = H, F, G; The other X = 0-9, A-Z)
Trade name	JENTEC
Applicant	Jentec Technology Co., Ltd. 17F, No. 2, Jian-Ba Rd., Chung-Ho City, Taipei Hsien, Taiwan, R.O.C.
Applicable Standard(s)	EN 55022: 1998 + A1: 2000 + A2: 2003 EN 61000-3-2: 2000 EN 61000-3-3: 1995 + A1: 2001 EN 55024: 1998 + A1: 2001 + A2: 2003 IEC 61000-4-2: 1995 + A1: 1998 + A2: 2000; IEC 61000-4-3: 2002 + A1: 2002; IEC 61000-4-4: 1995 + A1: 2000 + A2: 2001; IEC 61000-4-5: 1995 + A1: 2000; IEC 61000-4-6: 1996 + A1: 2000; IEC 61000-4-8: 1993 + A1: 2000; IEC 61000-4-11: 1994 + A1: 2000
Report No.	51027106-E
Test Laboratory	Compliance Certification Services Inc. No. 81-1, Lane 210, Bade Rd., 2, Luchu Hsiang, Taoyuan Hsien, Taiwan, R.O.C. Tel: +886-3-3240332/ Fax: +886-3-3245235

This device has been tested and found to comply with the stated standard(s), which is(are) required by the Council Directive of 89/336/EEC, Amended by 92/31/EEC and 93/68/EEC. The test results are indicated in the test report and are applicable only to the tested sample identified in the report.

Kurt Chen

Kurt Chen / Director of Linkou Laboratory
Date: November 4, 2005