


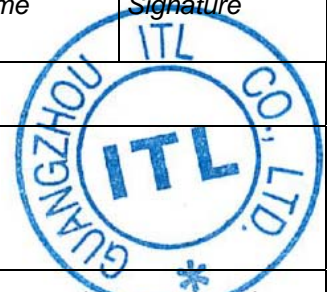


Applicant:	Shenzhen Huoniu Technology Co., Ltd Blk 5 The 4th Industrial Zone, Xitian Community, Gongming Town Guangming New District, Shenzhen, Guangdong 518106 China		
Manufacturer:	Shenzhen Huoniu Technology Co., Ltd Blk 5 The 4th Industrial Zone, Xitian Community, Gongming Town Guangming New District, Shenzhen, Guangdong 518106 China		
Test item:	Class 2 Power Supply		
Identification:	HNBExxyyyWU, HNBExxyyyWX	Trade mark:	 HUONIU
Receipt No.:	E0601	Date of receipt:	2016-02-27
Test Laboratory Name:	Guangzhou ITL Co., Ltd		
Testing location:	1-2 floor, South Block, Building A2, No.3 Keyan Lu, Science City, Guangzhou, Guangdong, China		
Test specification:	CFR Title 10: Energy PART 430—ENERGY CONSERVATION PROGRAM FOR CONSUMER PRODUCTS Appendix Z to Subpart B of Part 430—Uniform Test Method for Measuring the Energy Consumption of External Power Supplies Subpart C—Energy and Water Conservation Standards § 430.32 Energy and water conservation standards and their effective dates. (w) Class A external power supplies.		
Test Result:	The a. m. test item passed.		
Compiled by:		Checked by:	
2016-03-14	Frank Fan	2016-03-14	Anpuu
<i>Date</i>	<i>Name</i>	<i>Date</i>	<i>Name</i>
			
	<i>Signature</i>		<i>Signature</i>
Other Aspects:			
Abbreviations: ok / P = passed fail / F = failed n .a. / N = not applicable			
This test report relates to the a. m. test sample. Without permission of the test center this test report is not permitted to be duplicated in extracts. This test report does not entitle to carry any safety mark on this or similar products.			



1. Test Sites

Test sites: Guangzhou ITL Co., Ltd

1-2 floor, South Block, Building A2, No.3 Keyan Lu, Science City, Guangzhou Guangdong, China

2. List of Test and Measurement Equipment

Kind of Equipment	Manufacturer	Model	S/N	Calibrated until
Power analyzer	XITRON	2801	ITL-241	Mar. 25, 2016
Digital power meter	YAKOGAWA	WT200	ITL-003j	Mar. 06, 2016
Ac power source	KIKUSUI	PCR 2000	ITL-001d	Non-calibrated Equipment
DC electric load	KIKUSUI	PLZ 300W	ITL-004b	Aug. 29, 2016

2.1 Test Conditions

Ambient Temperature	23.7°C
Relative Humidity	60% RH
Total harmonic distortion (THD) of the electricity supply voltage 230V/115V	0.07%

3. General Product Information

The EUT is switching mode power supply, model list:

Model name	Output Voltage	Output Current	Output Wattage
HNBExxxxyyWU, HNBExxxxyyWX	3.0-15.0Vd.c.	0.1-1.2A	7.5W Max.

Note:

“xxx” can be 030 to 150 denotes output voltage from 3.0V to 15.0V with step 0.1V;

“yyy” can be 010 to 120 denotes output current from 0.1A to 1.2A with step 0.01A.

All models are identical to each other, except for type of plug, model number, rating and electrical parameters of some components.

All tests were performed on the model HNBE060120WU as representative unless otherwise stated.

3.1 Product Function and Intended Use

The product covered by this report is a household, dry location use only power supply, direct plug-in power supply.

3.2 Ratings and System Details

Model name	Input	Output	Dc output cord length
HNBE060120WU	100-240V~, 50/60Hz, 0.3A MAX	6.0Vd.c., 1.2A	180cm

Test Summary

Table I-1. Energy Conservation Standards for Direct Operation EPSs* (Compliance Starting February 10, 2016.)

Single-Voltage External AC-DC Power Supply, Basic-Voltage		
Nameplate Output Power (P_{out})	Minimum Average Efficiency in Active Mode (expressed as a decimal)	Maximum Power in No-Load Mode [W]
$P_{out} \leq 1$ W	$\geq 0.5 \times P_{out} + 0.16$	≤ 0.100
1 W < $P_{out} \leq 49$ W	$\geq 0.071 \times \ln(P_{out}) - 0.0014 \times P_{out} + 0.67$	≤ 0.100
49 W < $P_{out} \leq 250$ W	≥ 0.88	≤ 0.210
$P_{out} > 250$ W	≥ 0.875	≤ 0.500
Single-Voltage External AC-DC Power Supply, Low-Voltage		
Nameplate Output Power (P_{out})	Minimum Average Efficiency in Active Mode (expressed as a decimal)	Maximum Power in No-Load Mode [W]
$P_{out} \leq 1$ W	$\geq 0.517 \times P_{out} + 0.087$	≤ 0.100
1 W < $P_{out} \leq 49$ W	$\geq 0.0834 \times \ln(P_{out}) - 0.0014 \times P_{out} + 0.609$	≤ 0.100
49 W < $P_{out} \leq 250$ W	≥ 0.870	≤ 0.210
$P_{out} > 250$ W	≥ 0.875	≤ 0.500
Single-Voltage External AC-AC Power Supply, Basic-Voltage		
Nameplate Output Power (P_{out})	Minimum Average Efficiency in Active Mode (expressed as a decimal)	Maximum Power in No-Load Mode [W]
$P_{out} \leq 1$ W	$\geq 0.5 \times P_{out} + 0.16$	≤ 0.210
1 W < $P_{out} \leq 49$ W	$\geq 0.071 \times \ln(P_{out}) - 0.0014 \times P_{out} + 0.67$	≤ 0.210
49 W < $P_{out} \leq 250$ W	≥ 0.880	≤ 0.210
$P_{out} > 250$ W	≥ 0.875	≤ 0.500
Single-Voltage External AC-AC Power Supply, Low-Voltage		
Nameplate Output Power (P_{out})	Minimum Average Efficiency in Active Mode (expressed as a decimal)	Maximum Power in No-Load Mode [W]

$P_{out} \leq 1 \text{ W}$	$\geq 0.517 \times P_{out} + 0.087$	≤ 0.210
$1 \text{ W} < P_{out} \leq 49 \text{ W}$	$\geq 0.0834 \times \ln(P_{out}) - 0.0014 \times P_{out} + 0.609$	≤ 0.210
$49 \text{ W} < P_{out} \leq 250 \text{ W}$	≥ 0.870	≤ 0.210
$P_{out} > 250 \text{ W}$	≥ 0.875	≤ 0.500
Multiple-Voltage External AC-AC Power Supply		
Nameplate Output Power (P_{out})	Minimum Average Efficiency in Active Mode (expressed as a decimal)	Maximum Power in No-Load Mode [W]
$P_{out} \leq 1 \text{ W}$	$\geq 0.497 \times P_{out} + 0.067$	≤ 0.300
$1 \text{ W} < P_{out} \leq 49 \text{ W}$	$\geq 0.075 \times \ln(P_{out}) + 0.561$	≤ 0.300
$P_{out} > 49 \text{ W}$	≥ 0.860	≤ 0.300

* Excludes any device that requires Federal Food and Drug Administration (FDA) listing and approval as a medical device in accordance with section 513 of the Federal Food, Drug, and Cosmetic Act (21 U.S.C.360(c)) and any AC-DC EPS with nameplate output voltage less than 3 volts and nameplate output current greater than or equal to 1,000 milliamps that charges the battery of a product that is fully or primarily motor operated. Additionally, consistent with EPCA, certain EPSs used for certain life safety and security equipment do not need to meet the no-load mode requirements.

TEST AND CALCULATED RESULTS**Calculated energy performance requirement (LEVEL VI):**

Model name	Nameplate output	Active	No load
HNBE060120WU	7.2W	80.01%	≤0.1 W

Test Results

Sample #1

	No Load	Load condition			
Percentage of nameplate current	0%	25%	50%	75%	100%
DC output current (mA)		300	600	900	1200
DC output voltage (V)	6.17	6.13	6.10	6.06	6.02
DC output power (W)		1.839	3.660	5.454	7.224
AC input current (mA)		29.76	53.31	75.18	96.13
AC input voltage (V)	230.00	230.00	230.00	230.00	230.00
AC supply frequency (Hz)	50.00	50.00	50.00	50.00	50.00
AC input power (W)	0.057	2.301	4.520	6.735	8.945
Total Harmonic distortion (THD)V%	0.10	0.10	0.10	0.10	0.10
Total Harmonic distortion (THD)A%	67.10	93.50	92.70	91.70	91.10
True power factor (W/VA)	0.211	0.337	0.369	0.390	0.405
Power consumed by EUT (W)	0.057	0.462	0.860	1.281	1.721
Efficiency		79.922%	80.973%	80.980%	80.760%
Average*		80.659%			

	No Load	Load condition			
Percentage of nameplate current	0%	25%	50%	75%	100%
DC output current (mA)		300	600	900	1200
DC output voltage (V)	6.17	6.13	6.10	6.06	6.02
DC output power (W)		1.839	3.660	5.454	7.224
AC input current (mA)		46.44	82.57	113.98	144.77
AC input voltage (V)	115.00	115.00	115.00	115.00	115.00
AC supply frequency (Hz)	60.00	60.00	60.00	60.00	60.00
AC input power (W)	0.042	2.227	4.437	6.635	8.942
Total Harmonic distortion (THD)V%	0.10	0.10	0.10	0.10	0.10
Total Harmonic distortion (THD)A%	85.60	90.50	87.80	85.40	83.00
True power factor (W/VA)	0.232	0.417	0.466	0.505	0.536
Power consumed by EUT (W)	0.042	0.388	0.777	1.181	1.718
Efficiency		82.577%	82.488%	82.200%	80.787%
Average*		82.013%			

*) Arithmetic average of efficiency at load conditions 1-4.

Test Results


Sample #2

	No Load	Load condition			
		25%	50%	75%	100%
Percentage of nameplate current	0%	25%	50%	75%	100%
DC output current (mA)		300	600	900	1200
DC output voltage (V)	6.17	6.13	6.10	6.06	6.02
DC output power (W)		1.839	3.660	5.454	7.224
AC input current (mA)		29.88	53.10	75.16	96.03
AC input voltage (V)	230.00	230.00	230.00	230.00	230.00
AC supply frequency (Hz)	50.00	50.00	50.00	50.00	50.00
AC input power (W)	0.057	2.310	4.500	6.731	8.936
Total Harmonic distortion (THD)V%	0.10	0.10	0.10	0.10	0.10
Total Harmonic distortion (THD)A%	71.60	93.40	92.60	91.70	91.00
True power factor (W/VA)	0.210	0.336	0.368	0.389	0.405
Power consumed by EUT (W)	0.057	0.471	0.840	1.277	1.712
Efficiency		79.610%	81.333%	81.028%	80.842%
Average*		80.703%			

	No Load	Load condition			
		25%	50%	75%	100%
Percentage of nameplate current	0%	25%	50%	75%	100%
DC output current (mA)		300	600	900	1200
DC output voltage (V)	6.17	6.13	6.10	6.06	6.02
DC output power (W)		1.839	3.660	5.454	7.224
AC input current (mA)		46.46	82.32	113.98	144.75
AC input voltage (V)	115.00	115.00	115.00	115.00	115.00
AC supply frequency (Hz)	60.00	60.00	60.00	60.00	60.00
AC input power (W)	0.042	2.230	4.421	6.634	8.942
Total Harmonic distortion (THD)V%	0.10	0.10	0.10	0.10	0.10
Total Harmonic distortion (THD)A%	80.90	90.20	87.90	85.30	83.00
True power factor (W/VA)	0.231	0.417	0.466	0.505	0.536
Power consumed by EUT (W)	0.042	0.391	0.761	1.180	1.718
Efficiency		82.466%	82.787%	82.213%	80.787%
Average*		82.063%			


*) Arithmetic average of efficiency at load conditions 1-4.

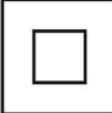

Label

 **Class 2 Power Supply**


HUNIU
MODEL:HNBE060120WX
INPUT:AC 100-240V~
50/60Hz 0.3A MAX
OUTPUT:6.0V $\overline{\text{---}}$ 1.2A

CAUTION/ATTENTION
 Risk of electric shock,
 Dry location use only.
 Risque de choc électrique Des emplacement
 secs utilisation seulement


 Intertek
 4004907
 CONFORMS TO
 UL STD 1310
 CERTIFIED TO
 CSA STD C22.2 No. 223

Feb.,2016






MADE IN CHINA

 **Class 2 Power Supply**


HUNIU
MODEL:HNBE060120WU
INPUT:AC 100-240V~
50/60Hz 0.3A MAX
OUTPUT:6.0V $\overline{\text{---}}$ 1.2A

CAUTION/ATTENTION
 Risk of electric shock,
 Dry location use only.
 Risque de choc électrique Des emplacement
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 CONFORMS TO
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Feb.,2016



MADE IN CHINA

Photo



(for HNBExxyyyWU)



(for HNBExxyyyWU)

Photo



(for HNBExxyyyWX)

--End of report--