Anex

Aqirys Magnetar LE 750W

Lab ID#: AQ75002369
Receipt Date: Feb 6, 2024
Test Date: Feb 26, 2024

Report: 24PS2369A
Report Date: Feb 29, 2024

DUT INFORMATION

Brand	Aqirys
Manufacturer (OEM)	Kinpower
Series	Magnetar LE
Model Number	AQRYS_MAGLE750W
Serial Number	
DUT Notes	

DUT SPECIFICATIONS

Rated Voltage (Vrms)	100-240
Rated Current (Arms)	15
Rated Frequency (Hz)	50-60
Rated Power (W)	750
Type	ATX12V
Cooling	120mm Rifle Bearing Fan (EFS-12E12H)
Semi-Passive Operation	✗
Cable Design	Fully Modular

TEST EQUIPMENT

Electronic Loads	Chroma 63601-5 x2 Chroma 63600-2 63640-80-80 x10 63610-80-20
AC Sources	Chroma 6530, APM SP300VAC4000W-P
Power Analyzers	RS HMC8015, N4L PPA1530, N4L PPA5530
Oscilloscopes	Picoscope 4444, Rigol DS7014, Siglent SDS2104X PLUS
Sound Analyzer	Bruel & Kjaer 2270 G4
Microphone	Bruel & Kjaer Type 4955-A
Temperature Logger	Picoscope TC-08
Tachometer	UNI-T UT372
Multimeters	Keysight 34465A, Keithley 2015 - THD
UPS	FSP Champ Tower 3kVA, CyberPower OLS3000E 3kVA
Isolation Transformer	4kVA

www.cybenetics.com -info@cybenetics.com
CYBENETICS LTD
Syrou 6, Latsia, 2231, Nicosia Cyprus

Anex

Aqirys Magnetar LE 750W

RESULTS

Temperature Range (°C /°F)	30-32 / 86-89.6
ErP Lot 3/6 Ready	✓
(EU) No 617/2013 Compliance	✓
ALPM (Alternative Low Power Mode) compatible	✓

115V

Average Efficiency	89.101%
Efficiency With 10W (≤500W) or 2% (>500W)	69.308
Average Efficiency 5VSB	83.496%
Standby Power Consumption (W)	0.0522000
Average PF	0.976
Avg Noise Output	29.41 dB(A)
Efficiency Rating (ETA)	PLATINUM
Noise Rating (LAMBDA)	A-

230V

Average Efficiency	90.985%
Average Efficiency 5VSB	81.448%
Standby Power Consumption (W)	0.0922000
Average PF	0.935
Avg Noise Output	28.96 dB(A)
Efficiency Rating (ETA)	PLATINUM
Noise Rating (LAMBDA)	A-

POWER SPECIFICATIONS

Rail		3.3V	5V	12V	5VSB	-12V
Max. Power	Amps	16	16	62.5	2.5	0.3
	Watts	103		750	12.5	3.6
Total Max. Power (W)		750				

HOLD-UP TIME & POWER OK SIGNAL (230V)

Hold-Up Time (ms)	20.7
AC Loss to PWR_OK Hold Up Time (ms)	18.5
PWR_OK Inactive to DC Loss Delay (ms)	2.2

www.cybenetics.com -info@cybenetics.com
CYBENETICS LTD
Syrou 6, Latsia, 2231, Nicosia Cyprus

Anex

Aqirys Magnetar LE 750W

CABLES AND CONNECTORS

Modular Cables

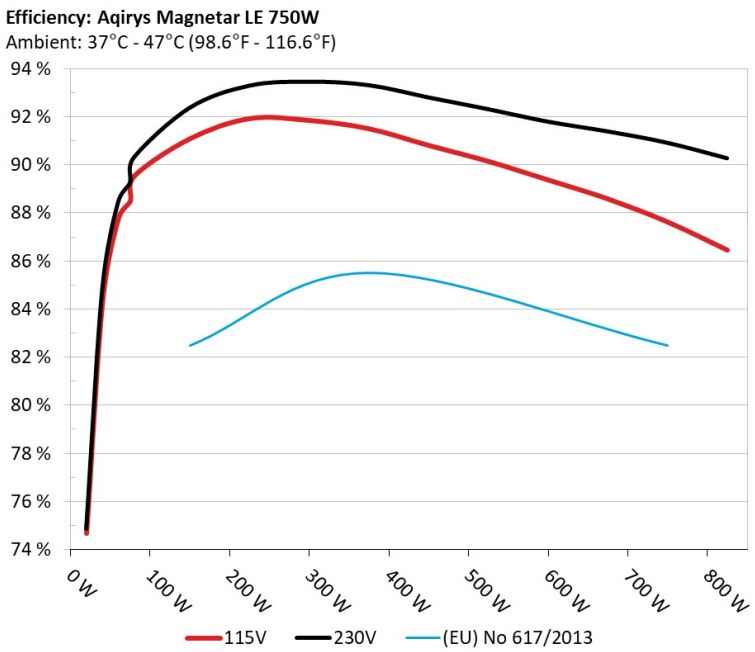
Description	Cable Count	Connector Count (Total)	Gauge	In Cable Capacitors
ATX connector 20+4 pin (550mm)	1	1	18-22AWG	No
4+4 pin EPS12V (600mm)	2	2	18AWG	No
6+2 pin PCIe (550mm+150mm)	3	6	18AWG	No
SATA (450mm+155mm+155mm)	2	6	18AWG	No
4-pin Molex (450mm+150mm+150mm)	1	3	18AWG	No

www.cybenetics.com -info@cybenetics.com
CYBENETICS LTD
Syrou 6, Latsia, 2231, Nicosia Cyprus

Anex

Aqirys Magnetar LE 750W

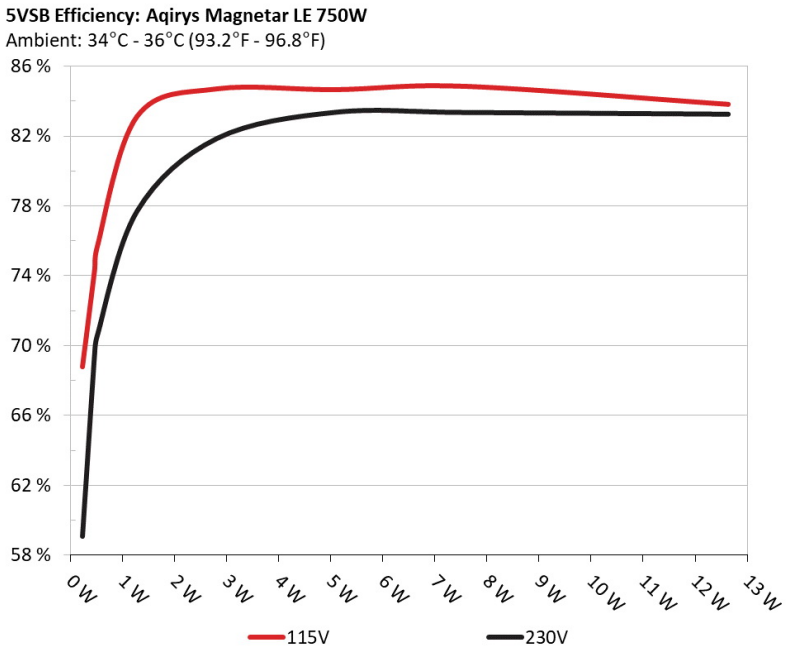
EFFICIENCY UNDER HIGH AMBIENT TEMPERATURE



INFO

The PSU`s efficiency under high ambient temperatures with 115V and 230V input. For this graph the results of the 10-110% load regulation table are used

5VSB EFFICIENCY



INFO

This graph depicts the efficiency levels of the 5VSB rail with 115V and 230V input

Anex

Aqirys Magnetar LE 750W

5VSB EFFICIENCY -115V (ERP LOT 3/6 & CEC)

Test #	5VSB	DC/AC (Watts)	Efficiency	PF/AC Volts
1	0.045A	0.231W	68.29%	0.04
	5.13V	0.338W		114.86V
2	0.09A	0.462W	73.769%	0.073
	5.129V	0.626W		114.86V
3	0.55A	2.813W	84.192%	0.286
	5.115V	3.341W		114.86V
4	1A	5.101W	84.149%	0.362
	5.101V	6.062W		114.86V
5	1.5A	7.629W	84.332%	0.413
	5.086V	9.046W		114.86V
6	2.5A	12.639W	83.308%	0.464
	5.055V	15.172W		114.86V

5VSB EFFICIENCY -230V (ERP LOT 3/6 & CEC)

Test #	5VSB	DC/AC (Watts)	Efficiency	PF/AC Volts
1	0.045A	0.231W	58.591%	0.014
	5.129V	0.395W		229.86V
2	0.09A	0.462W	68.923%	0.023
	5.128V	0.671W		229.85V
3	0.55A	2.813W	81.345%	0.114
	5.114V	3.459W		229.85V
4	1A	5.101W	82.845%	0.185
	5.101V	6.157W		229.85V
5	1.5A	7.629W	82.83%	0.226
	5.085V	9.21W		229.85V
6	2.501A	12.639W	82.732%	0.306
	5.055V	15.277W		229.85V

Anex

Aqirys Magnetar LE 750W

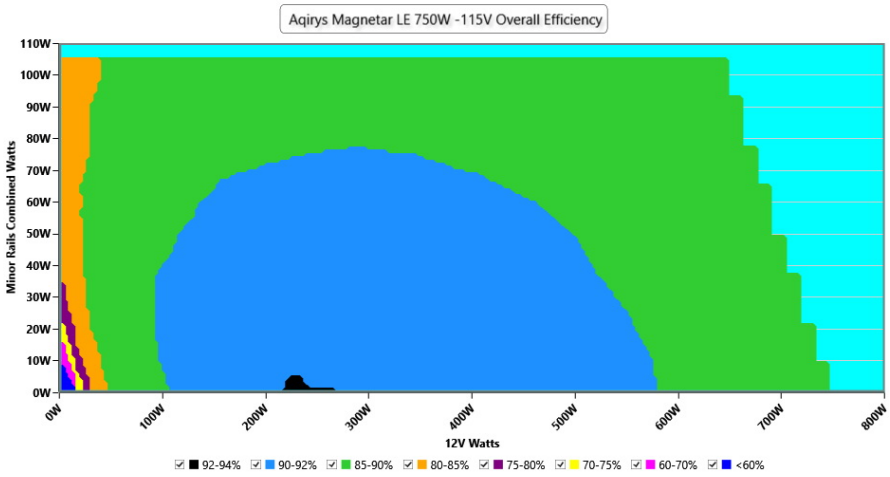
115V

www.cybenetics.com -info@cybenetics.com
CYBENETICS LTD
Syrou 6, Latsia, 2231, Nicosia Cyprus

Anex

Aqirys Magnetar LE 750W

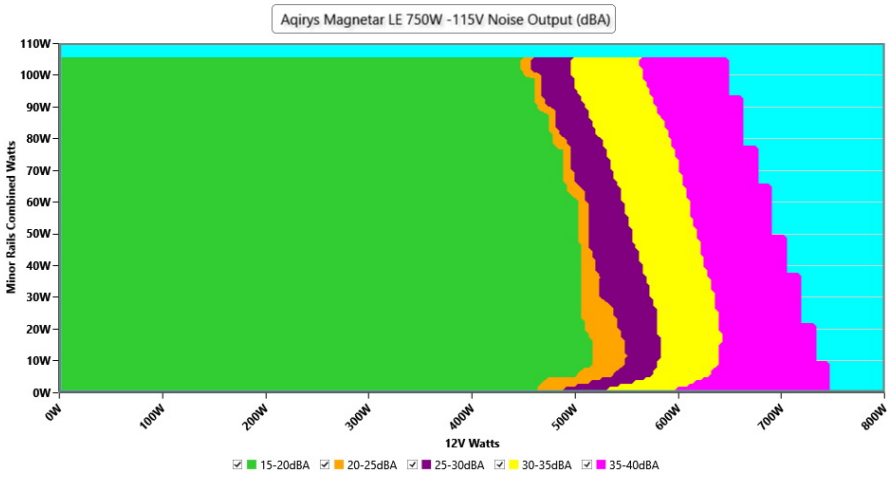
EFFICIENCY GRAPH 115V



INFO

This graph depicts the PSU's efficiency throughout its entire operational range. For the generation of the efficiency and noise graphs we set our loaders to auto mode through our custom-made software before trying thousands of possible load combinations

NOISE GRAPH 115V



INFO

The PSU's noise in its entire operational range and under 30-32 °C ambient is depicted in this graph. The X axis represents the load on the +12V rail(s) while the Y axis is the load on the minor rails

www.cybenetics.com -info@cybenetics.com
CYBENETICS LTD
Syrou 6, Latsia, 2231, Nicosia Cyprus

Anex

Aqirys Magnetar LE 750W

VAMPIRE POWER -115V

Detailed Results

	Average	Min	Limit Min	Max	Limit Max	Result
Mains Voltage RMS:	114.86 V	114.82 V	113.85 V	114.90 V	116.15 V	PASS
Mains Frequency:	60.00 Hz	59.99 Hz	59.40 Hz	60.02 Hz	60.60 Hz	PASS
Mains Voltage CF:	1.418	1.417	1.340	1.419	1.490	PASS
Mains Voltage THD:	0.15 %	0.12 %	N/A	0.20 %	2.00 %	PASS
Real Power:	0.052 W	0.034 W	N/A	0.072 W	N/A	N/A
Apparent Power:	9.262 W	9.217 W	N/A	9.297 W	N/A	N/A
Power Factor:	0.006	N/A	N/A	N/A	N/A	N/A

INFO

This graph is generated by the PPA Standby Power Analysis software which takes full control of the power analyzer during the whole procedure. This application features all of the EN50564 & IEC62301 test limits for standby power software testing

www.cybenetics.com -info@cybenetics.com
CYBENETICS LTD
Syrou 6, Latsia, 2231, Nicosia Cyprus

Anex

Aqirys Magnetar LE 750W

10-110% LOAD TESTS 115V

Test	12V	5V	3.3V	5VSB	DC/AC (Watts)	Efficiency	Fan Speed (RPM)	PSU Noise (dB[A])	Temps (In/Out)	PF/AC Volts
10%	4.392A	1.988A	1.996A	0.983A	74.997	87.99%	867	18.9	40.08°C	0.916
	12.160V	5.029V	3.306V	5.088V	85.233				44.28°C	114.83V
20%	9.787A	2.992A	3.008A	1.183A	149.923	90.583%	869	18.9	40.74°C	0.954
	12.161V	5.013V	3.291V	5.072V	165.507				45.25°C	114.81V
30%	15.541A	3.499A	3.522A	1.385A	224.92	91.419%	869	18.9	41.02°C	0.974
	12.153V	5.002V	3.279V	5.055V	246.031				46.06°C	114.79V
40%	21.313A	4.008A	4.039A	1.588A	300.005	91.339%	870	19.0	41.54°C	0.979
	12.143V	4.99V	3.268V	5.039V	328.455				47.08°C	114.77V
50%	26.693A	5.027A	5.075A	1.793A	374.377	91%	873	19.0	42.22°C	0.985
	12.133V	4.974V	3.252V	5.021V	411.402				48.23°C	114.74V
60%	32.135A	6.051A	6.119A	1.999A	449.317	90.307%	1301	29.5	42.7°C	0.989
	12.121V	4.958V	3.236V	5.003V	497.545				49.23°C	114.72V
70%	37.599A	7.082A	7.173A	2.206A	524.252	89.644%	1609	35.6	43.28°C	0.991
	12.105V	4.942V	3.221V	4.986V	584.821				50.34°C	114.68V
80%	43.139A	8.119A	8.237A	2.313A	599.454	88.869%	1771	38.1	43.72°C	0.992
	12.090V	4.926V	3.205V	4.971V	674.541				51.77°C	114.66V
90%	49.014A	8.649A	8.77A	2.421A	674.49	88.081%	1774	38.1	44.81°C	0.992
	12.078V	4.913V	3.192V	4.956V	765.762				53.84°C	114.63V
100%	54.890A	9.183A	9.342A	2.53A	749.621	87.121%	1772	38.1	45.57°C	0.991
	12.068V	4.9V	3.179V	4.941V	860.438				55.66°C	114.6V
110%	60.446A	10.243A	10.536A	2.537A	824.651	85.951%	1771	38.1	46.59°C	0.991
	12.058V	4.881V	3.16V	4.928V	959.447				57.52°C	114.58V
CL1	0.114A	12.575A	12.735A	0A	104.295	82.012%	860	18.7	40.74°C	0.941
	12.174V	4.93V	3.211V	5.095V	127.172				46.26°C	114.81V
CL2	0.114A	16.136A	0A	0A	81.394	82.245%	867	18.9	40.95°C	0.927
	12.175V	4.958V	3.267V	5.107V	98.964				47.98°C	114.83V
CL3	0.114A	0A	16.314A	0A	54.181	76.531%	855	18.5	40.89°C	0.907
	12.171V	4.982V	3.236V	5.108V	70.797				49.91°C	114.83V
CL4	62.088A	0A	0A	0.003A	749.557	88.286%	1785	38.3	45.4°C	0.992
	12.072V	4.979V	3.252V	5.033V	849.014				56.36°C	114.6V

www.cybenetics.com -info@cybenetics.com
CYBENETICS LTD
Syrou 6, Latsia, 2231, Nicosia Cyprus

Anex

Aqirys Magnetar LE 750W

20-80W LOAD TESTS 115V

Test	12V	5V	3.3V	5VSB	DC/AC (Watts)	Efficiency	Fan Speed (RPM)	PSU Noise (dB[A])	Temps (In/Out)	PF/AC Volts
20W	1.220A	0.495A	0.496A	0.195A	19.991	74.178%	861	18.7	36.55°C	0.802
	12.167V	5.049V	3.326V	5.121V	26.949				39.63°C	114.85V
40W	2.684A	0.694A	0.695A	0.293A	39.993	83.778%	863	18.8	37.64°C	0.872
	12.173V	5.045V	3.322V	5.115V	47.735				41.01°C	114.84V
60W	4.151A	0.892A	0.895A	0.391A	59.993	87.266%	864	18.8	38.25°C	0.904
	12.172V	5.041V	3.318V	5.11V	68.749				42.02°C	114.84V
80W	5.612A	1.092A	1.095A	0.49A	79.929	89.03%	866	18.8	39.35°C	0.918
	12.171V	5.037V	3.314V	5.104V	89.778				43.33°C	114.83V

RIPPLE MEASUREMENTS 115V

Test	12V	5V	3.3V	5VSB	Pass/Fail
10% Load	26.75mV	17.29mV	16.37mV	10.42mV	Pass
20% Load	21.02mV	16.78mV	16.06mV	11.55mV	Pass
30% Load	20.66mV	17.24mV	16.26mV	13.19mV	Pass
40% Load	22.71mV	19.19mV	16.67mV	14.26mV	Pass
50% Load	24.40mV	21.30mV	16.83mV	15.45mV	Pass
60% Load	26.49mV	22.12mV	17.70mV	17.09mV	Pass
70% Load	27.92mV	24.12mV	19.90mV	18.52mV	Pass
80% Load	27.62mV	26.79mV	20.21mV	20.58mV	Pass
90% Load	31.20mV	28.69mV	22.11mV	22.63mV	Pass
100% Load	41.30mV	33.33mV	22.88mV	25.26mV	Pass
110% Load	41.07mV	34.23mV	24.84mV	27.23mV	Pass
Crossload1	30.38mV	19.43mV	20.23mV	10.15mV	Pass
Crossload2	20.15mV	18.02mV	18.31mV	9.34mV	Pass
Crossload3	20.56mV	35.72mV	21.81mV	8.47mV	Pass
Crossload4	38.57mV	20.97mV	17.02mV	22.06mV	Pass

www.cybenetics.com -info@cybenetics.com
CYBENETICS LTD
Syrou 6, Latsia, 2231, Nicosia Cyprus

Anex

Aqirys Magnetar LE 750W

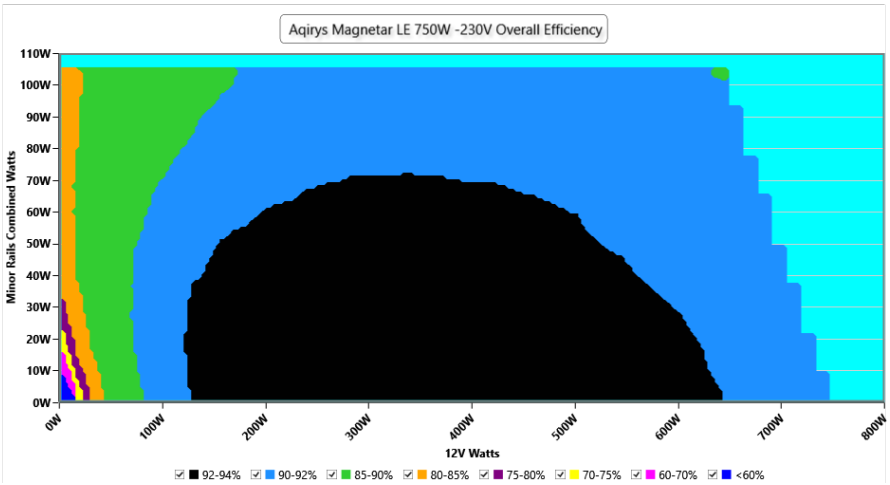
230V

www.cybenetics.com -info@cybenetics.com
CYBENETICS LTD
Syrou 6, Latsia, 2231, Nicosia Cyprus

Anex

Aqirys Magnetar LE 750W

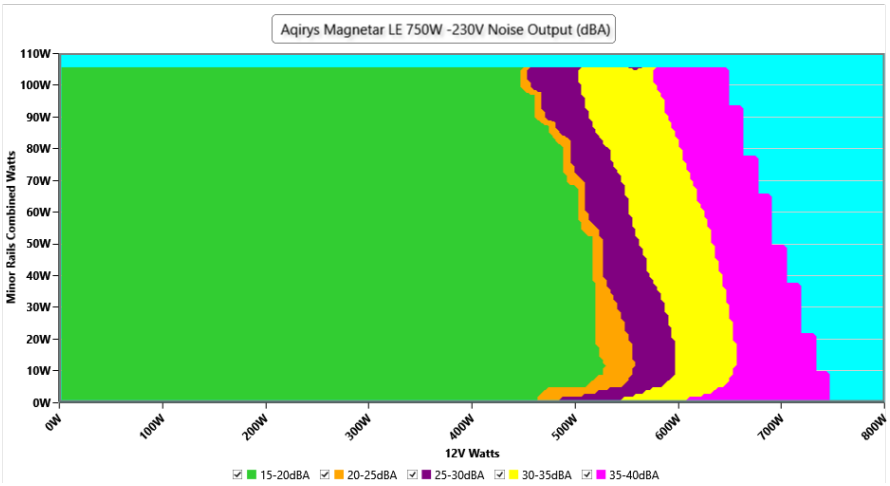
EFFICIENCY GRAPH 230V



INFO

This graph depicts the PSU's efficiency throughout its entire operational range. For the generation of the efficiency and noise graphs we set our loaders to auto mode through our custom-made software before trying thousands of possible load combinations

NOISE GRAPH 230V



INFO

The PSU's noise in its entire operational range and under 30-32 °C ambient is depicted in this graph. The X axis represents the load on the +12V rail(s) while the Y axis is the load on the minor rails

www.cybenetics.com -info@cybenetics.com
CYBENETICS LTD
Syrou 6, Latsia, 2231, Nicosia Cyprus

Anex

Aqirys Magnetar LE 750W

VAMPIRE POWER -230V

Detailed Results

	Average	Min	Limit Min	Max	Limit Max	Result
Mains Voltage RMS:	229.88 V	229.83 V	227.70 V	229.93 V	232.30 V	PASS
Mains Frequency:	50.00 Hz	50.00 Hz	49.50 Hz	50.00 Hz	50.50 Hz	PASS
Mains Voltage CF:	1.417	1.417	1.340	1.418	1.490	PASS
Mains Voltage THD:	0.12 %	0.11 %	N/A	0.14 %	2.00 %	PASS
Real Power:	0.092 W	0.055 W	N/A	0.141 W	N/A	N/A
Apparent Power:	31.657 W	31.604 W	N/A	31.712 W	N/A	N/A
Power Factor:	0.003	N/A	N/A	N/A	N/A	N/A

INFO

This graph is generated by the PPA Standby Power Analysis software which takes full control of the power analyzer during the whole procedure. This application features all of the EN50564 & IEC62301 test limits for standby power software testing

www.cybenetics.com -info@cybenetics.com
CYBENETICS LTD
Syrou 6, Latsia, 2231, Nicosia Cyprus

Anex

Aqirys Magnetar LE 750W

10-110% LOAD TESTS 230V

Test	12V	5V	3.3V	5VSB	DC/AC (Watts)	Efficiency	Fan Speed (RPM)	PSU Noise (dB[A])	Temps (In/Out)	PF/AC Volts
10%	4.388A	1.988A	1.996A	0.983A	75.002	88.762%	866	18.8	40.18°C	0.785
	12.172V	5.029V	3.306V	5.088V	84.501				44.42°C	229.84V
20%	9.787A	2.992A	3.008A	1.183A	149.934	91.878%	866	18.8	40.65°C	0.885
	12.162V	5.013V	3.291V	5.071V	163.188				45.18°C	229.83V
30%	15.544A	3.499A	3.522A	1.385A	224.936	92.799%	868	18.9	41.21°C	0.924
	12.151V	5.002V	3.28V	5.055V	242.391				46.28°C	229.82V
40%	21.317A	4.008A	4.039A	1.588A	300.022	92.963%	869	18.9	41.85°C	0.944
	12.142V	4.99V	3.268V	5.038V	322.732				47.4°C	229.8V
50%	26.703A	5.027A	5.074A	1.793A	374.42	92.82%	870	19.0	42.05°C	0.956
	12.130V	4.974V	3.252V	5.021V	403.387				48.06°C	229.79V
60%	32.143A	6.051A	6.119A	1.999A	449.353	92.312%	1259	28.8	42.79°C	0.964
	12.119V	4.958V	3.236V	5.003V	486.781				49.36°C	229.78V
70%	37.607A	7.083A	7.173A	2.206A	524.283	91.824%	1597	35.4	43.3°C	0.97
	12.103V	4.942V	3.221V	4.986V	570.966				50.31°C	229.76V
80%	43.149A	8.12A	8.237A	2.314A	599.483	91.302%	1769	38.0	43.7°C	0.974
	12.088V	4.926V	3.205V	4.971V	656.599				51.76°C	229.76V
90%	49.020A	8.65A	8.771A	2.421A	674.514	90.897%	1772	38.1	44.79°C	0.977
	12.077V	4.913V	3.192V	4.956V	742.063				54.01°C	229.74V
100%	54.894A	9.184A	9.344A	2.53A	749.643	90.423%	1773	38.1	45.76°C	0.98
	12.068V	4.899V	3.178V	4.941V	829.045				55.79°C	229.73V
110%	60.454A	10.244A	10.537A	2.537A	824.674	89.781%	1773	38.1	46.78°C	0.982
	12.057V	4.881V	3.16V	4.928V	918.538				57.69°C	229.71V
CL1	0.115A	12.575A	12.737A	0A	104.297	82.898%	864	18.8	40.85°C	0.854
	12.174V	4.931V	3.211V	5.095V	125.816				46.35°C	229.83V
CL2	0.114A	16.135A	0A	0A	81.395	82.924%	872	19.0	40.48°C	0.816
	12.174V	4.959V	3.267V	5.107V	98.158				47.51°C	229.84V
CL3	0.114A	0A	16.319A	0A	54.182	77.212%	858	18.6	40.02°C	0.749
	12.156V	4.982V	3.235V	5.108V	70.173				49.04°C	229.84V
CL4	62.095A	0A	0A	0.003A	749.576	91.444%	1788	38.4	45.37°C	0.979
	12.071V	4.979V	3.252V	5.033V	819.715				56.33°C	229.72V

Anex

Aqirys Magnetar LE 750W

20-80W LOAD TESTS 230V

Test	12V	5V	3.3V	5VSB	DC/AC (Watts)	Efficiency	Fan Speed (RPM)	PSU Noise (dB[A])	Temps (In/Out)	PF/AC Volts
20W	1.220A	0.495A	0.496A	0.195A	19.998	74.367%	859	18.7	36.61°C	0.49
	12.160V	5.049V	3.326V	5.121V	26.892				39.68°C	229.85V
40W	2.688A	0.694A	0.695A	0.293A	39.998	84.294%	860	18.7	37.45°C	0.652
	12.163V	5.045V	3.322V	5.115V	47.45				40.8°C	229.85V
60W	4.152A	0.892A	0.895A	0.391A	59.998	87.953%	863	18.8	38.49°C	0.74
	12.169V	5.041V	3.318V	5.109V	68.217				41.98°C	229.84V
80W	5.614A	1.092A	1.095A	0.49A	79.94	89.815%	864	18.8	39.16°C	0.795
	12.169V	5.037V	3.314V	5.103V	89.005				43.02°C	229.84V

RIPPLE MEASUREMENTS 230V

Test	12V	5V	3.3V	5VSB	Pass/Fail
10% Load	19.90mV	16.12mV	15.03mV	9.85mV	Pass
20% Load	20.46mV	17.71mV	15.60mV	10.98mV	Pass
30% Load	20.92mV	18.27mV	16.26mV	12.52mV	Pass
40% Load	22.30mV	19.71mV	16.57mV	13.65mV	Pass
50% Load	23.22mV	19.71mV	16.26mV	15.24mV	Pass
60% Load	24.04mV	20.43mV	16.36mV	17.29mV	Pass
70% Load	27.11mV	23.61mV	17.60mV	18.57mV	Pass
80% Load	25.93mV	25.30mV	19.50mV	20.27mV	Pass
90% Load	27.67mV	27.05mV	20.01mV	22.01mV	Pass
100% Load	37.95mV	30.82mV	23.09mV	24.27mV	Pass
110% Load	40.92mV	33.67mV	22.81mV	25.53mV	Pass
Crossload1	31.20mV	33.36mV	22.02mV	9.71mV	Pass
Crossload2	20.71mV	18.89mV	17.34mV	9.03mV	Pass
Crossload3	21.38mV	35.82mV	21.55mV	9.19mV	Pass
Crossload4	37.72mV	18.85mV	16.63mV	21.89mV	Pass

www.cybenetics.com -info@cybenetics.com
CYBENETICS LTD
Syrou 6, Latsia, 2231, Nicosia Cyprus

Anex

Aqirys Magnetar LE 750W

Top side

Power specifications label

CERTIFICATIONS 115V

CERTIFICATIONS 230V

Aristeidis Bitziopoulos
Lab Director