

80 PLUS Verification and Testing Report

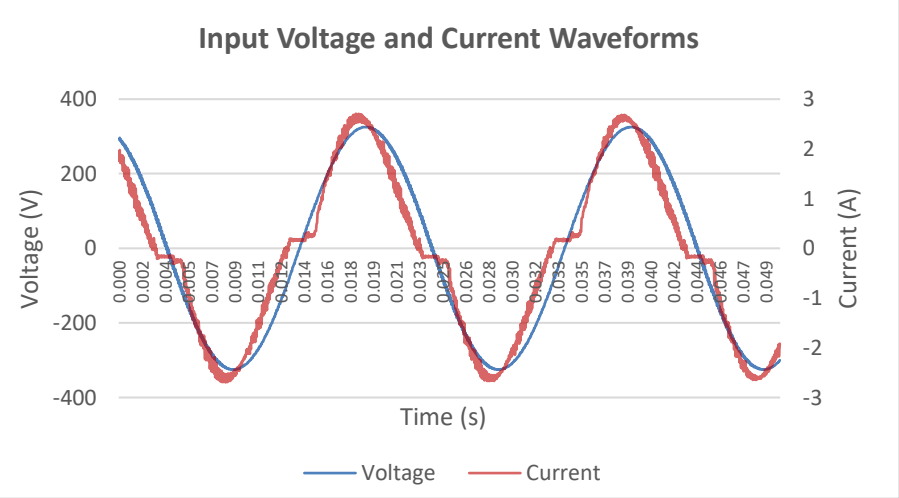
TYPICAL EFFICIENCY (50% Load):	91.13%
AVERAGE EFFICIENCY :	88.60%
80 PLUS COMPLIANT:	Silver



ID Number	EU-945
Manufacturer	Micro-Star International Co., Ltd.
Model Number	MAG A650BN
Serial Number	N/A
Year	2023
Type	ATX12V
Test Date	3/31/23

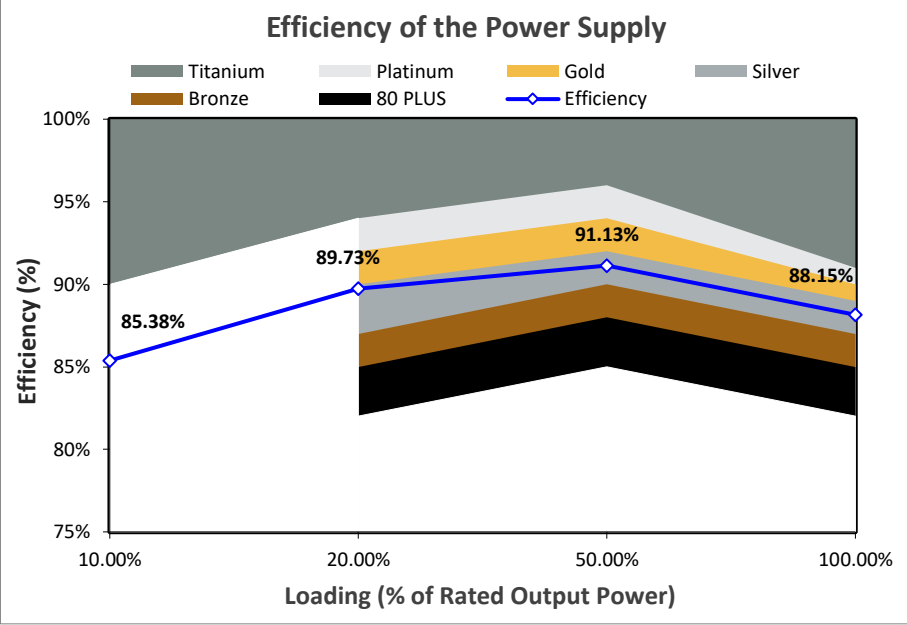
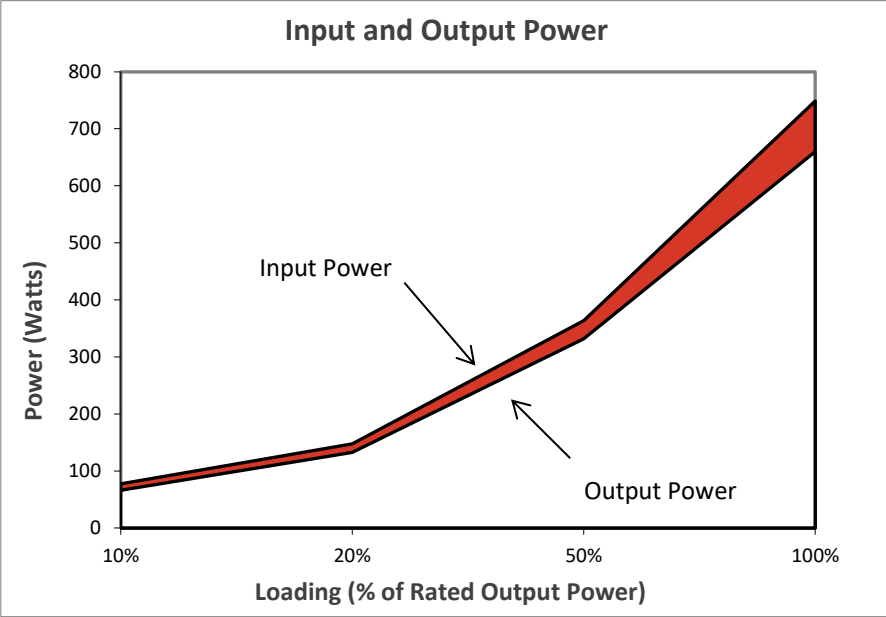
Rated Specifications		Value	Units
Input Voltage		230	Volts
Input Current		10-5	Amps
Input Frequency		50-60	Hz
Rated Output Power		650	Watts

Note: All measurements were taken with input voltage at 230 V nominal at 50 Hz.



Input AC Current Waveform (ITHD = 19.59%, 50% Load)

I _{RMS} (A)	PF	I _{THD} (%)	Load	Input Watts	DC Terminal Voltage (V)/ DC Load Current (A)					Output Watts	Efficiency	
					12V (cumulative of 12V1, 12V2, etc.)		-12V	3.3V	5V			5Vsb
0.395	0.8565	33.43	10%	77.73	12.24/4.55		11.53/0.03	3.3/1.11	5.02/1.11	5.09/0.21	66.37	85.38%
0.693	0.9268	27.83	20%	147.78	12.23/9.1		11.57/0.06	3.3/2.23	5.02/2.22	5.09/0.42	132.60	89.73%
1.628	0.9710	19.59	50%	363.68	12.22/22.79		11.65/0.13	3.3/5.57	5.02/5.51	5.07/1.05	331.43	91.13%
3.302	0.9856	14.16	100%	748.79	12.2/45.42		11.84/0.25	3.31/11.14	5.03/11.02	5.03/2.1	660.04	88.15%



These tests were conducted by a third party independent testing firm on behalf of the 80 PLUS Program. 80 PLUS is a certification program to promote highly-efficient power supplies (greater than 80% efficiency in the active mode) in technology applications. <http://www.80plus.org/>