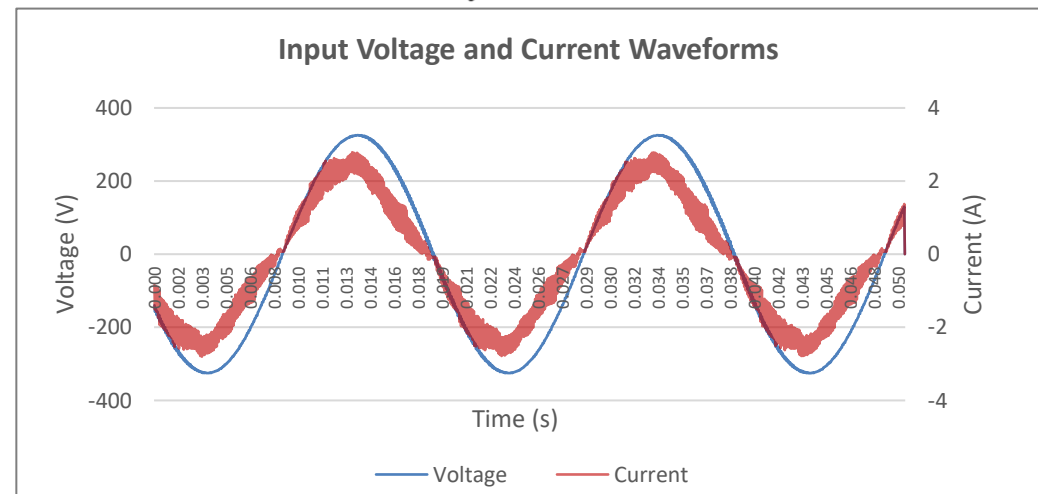


80 PLUS Verification and Testing Report

TYPICAL EFFICIENCY (50% Load):	89.80%
AVERAGE EFFICIENCY :	85.60%
80 PLUS COMPLIANT:	Bronze



ID Number	EU-1068
Manufacturer	VSP TECHNOLOGY SPREAD
Model Number	VGP650BRU PRO
Serial Number	N/A
Type	ATX12V
Test Date	6/7/24

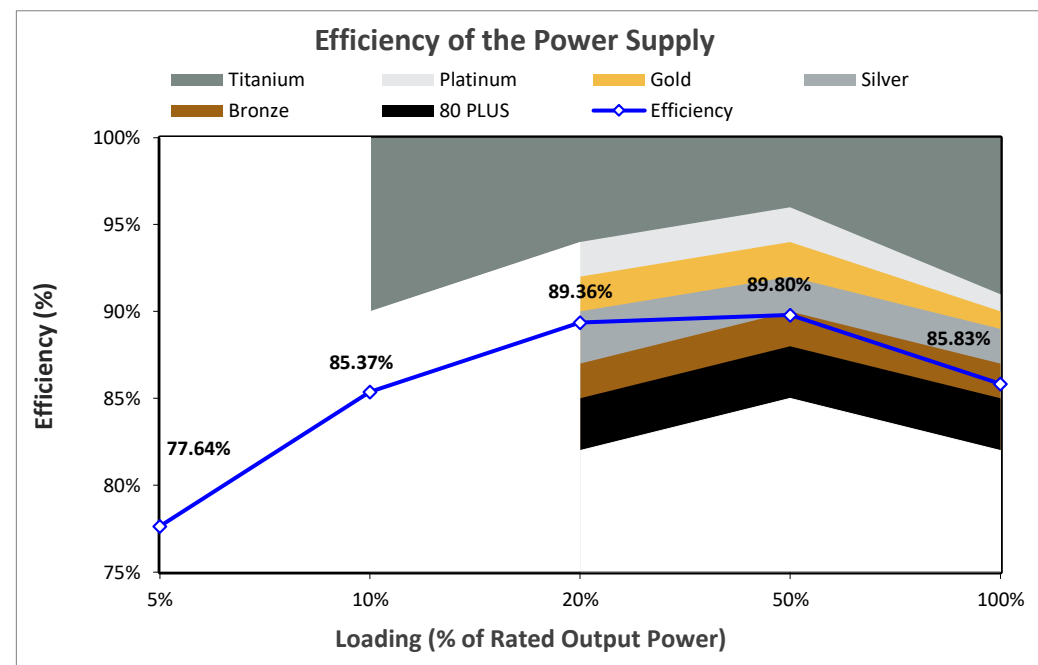
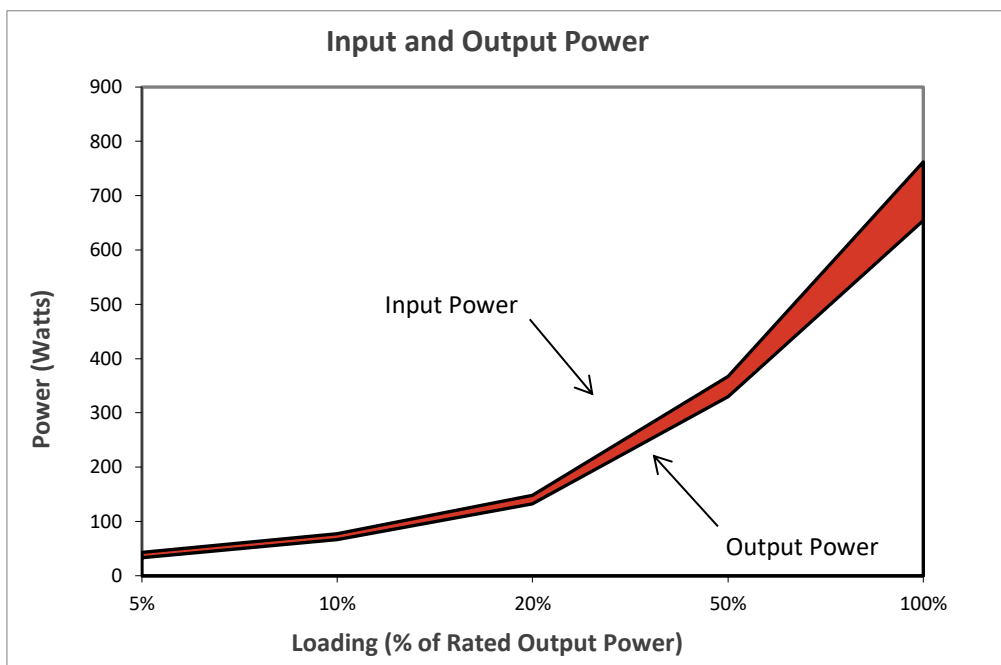


Rated Specifications	Value	Units
Input Voltage	200-240	Volts
Input Current	5	Amps
Input Frequency	50-60	Hz
Rated Output Power	650	Watts

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

Input AC Current Waveform (ITHD = 8.93%, 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	5Vstb		
0.113	0.3788	29.52	0%	9.84	No-Load						
0.248	0.7503	18.86	5%	42.79	12.25/2.27	12.16/0.013	3.39/0.55	5.15/0.55	5.12/0.105	33.22	77.64%
0.390	0.8659	12.33	10%	77.78	12.25/4.54	12.17/0.025	3.38/1.11	5.14/1.11	5.11/0.209	66.40	85.37%
0.692	0.9316	15.97	20%	148.36	12.23/9.08	12.18/0.05	3.37/2.22	5.12/2.22	5.09/0.418	132.58	89.36%
1.635	0.9767	8.93	50%	367.36	12.19/22.69	12.29/0.126	3.33/5.55	5.06/5.55	5.05/1.046	329.90	89.80%
3.351	0.9885	5.05	100%	762.19	12.12/45.37	12.47/0.251	3.27/11.09	4.95/11.09	4.97/2.091	654.21	85.83%



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/>