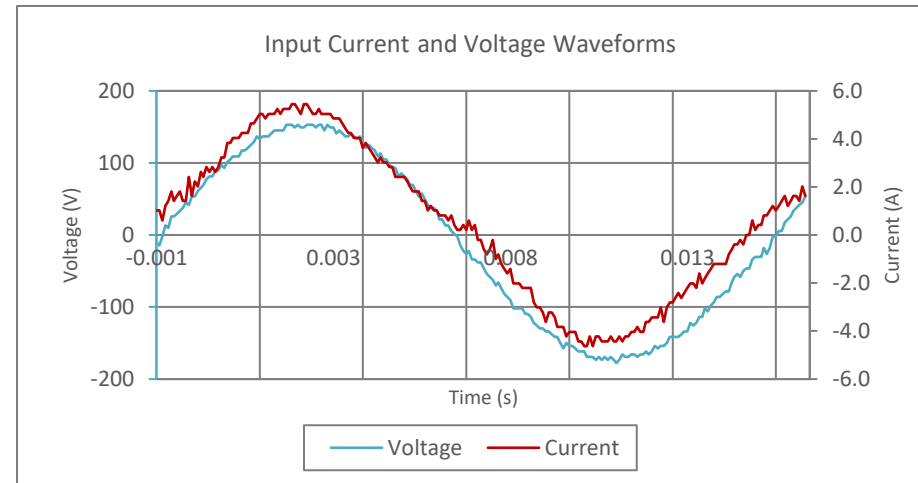


# 80 PLUS Verification and Testing Report

<b>TYPICAL EFFICIENCY (50% Load):</b>	<b>90.59%</b>
<b>AVERAGE EFFICIENCY :</b>	<b>89.88%</b>
<b>80 PLUS COMPLIANT:</b>	<b>YES</b>



<b>ID Number</b>	5338.1
<b>Manufacturer</b>	Fractal Design
<b>Model Number</b>	FD-PSU-ION-SFX-650G-BK
<b>Serial Number</b>	N/A
<b>Year</b>	2018
<b>Type</b>	SFX
<b>Test Date</b>	7/26/18

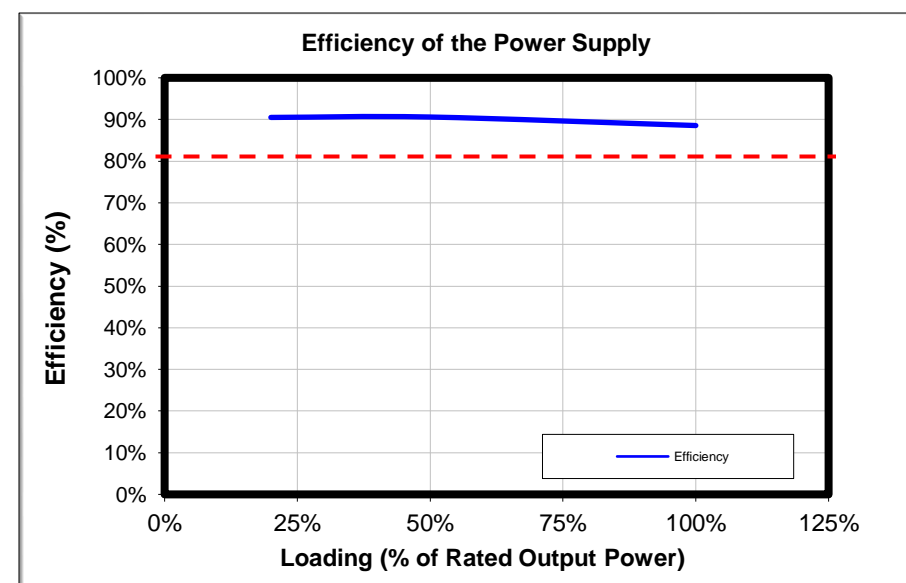
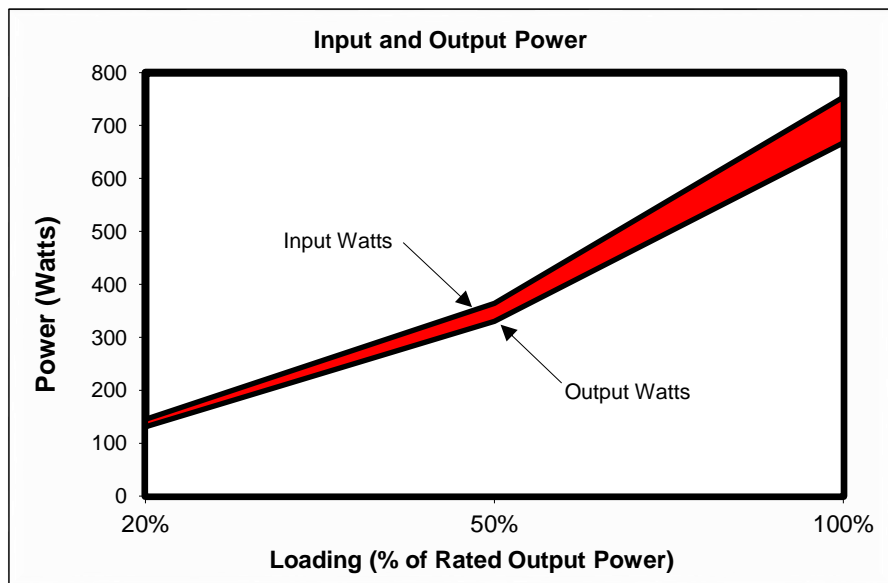


Rated Specifications	Value	Units
Input Voltage	100-240	Volts
Input Current	8-4	Amps
Input Frequency	50-60	Hz
<b>Rated Output Power</b>	<b>650</b>	<b>Watts</b>

Note: All measurements were taken with input voltage at 115 V nominal at 60 Hz.

Input AC Current Waveform (ITHD = 10.49%, 50% Load)

I <sub>RMS</sub>	PF	I <sub>THD</sub>	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		
0.81	0.81	10.97%	10%	75.38	11.99/4.59	11.96/0.03	3.32/1.02	5.03/1.02	5.12/0.25	65.19	86.48%
1.37	0.92	10.46%	20%	144.56	12.03/9.19	11.99/0.05	3.32/2.04	5.04/2.03	5.11/0.51	130.82	90.50%
3.25	0.97	10.49%	50%	364.00	12.13/23.01	12.19/0.13	3.34/5.11	5.03/5.07	5.08/1.27	329.74	90.59%
6.63	0.99	10.63%	100%	753.70	12.3/45.97	12.67/0.25	3.37/10.23	5.04/10.12	5.04/2.54	667.39	88.55%



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/>

