

7000 Series

Automated AC Power Sources



Overview

Our 7000 Series automated AC power sources are ideal for advanced applications at competitive prices. Switch-mode technology and a direct coupled output make these sources lightweight and efficient for use on the bench-top or in a rack mount system. The graphic LCD display provides real-time data on the front panel and the easy-to-use local interface allows operators to get tests up and running quickly.



Instrument Control Software

Highlights

- 50 built-in memory locations with 9 test steps
- Surge/Drop features simulate voltage variations, brownouts and transient voltage conditions
- Programmable starting and ending angle of the output sine wave
- Metering circuits monitor voltage, current, peak current, power, apparent power, reactive power, power factor, and crest factor
- Constant current output with over current fold back feature
- Front panel lockout via password protection
- Rack mount handle kit included
- LabVIEW® Drivers available
- Free APT instrument control software available

Options

- Grounded Neutral
- 7 Memory Remote
- GPIB Interface
- Ethernet Interface

APT...Power to the Customer!



Specifications - 7000 Series

INPUT		7004	7008	7016	7040	
Phase		1 Φ				
Voltage		115/230 VAC \pm 10%		230 VAC \pm 10%		
Frequency		47 – 500 Hz				
OUTPUT						
Voltage		0 - 300 V		5 - 300 V		
Max Power		400 VA*	800 VA*	1600 VA*	4000 VA	
Max Current 1 Φ	0 - 150 V	4.6 A @ < 110 V	9.2 A @ < 110 V	18.4 A @ < 110 V	36.8 A @ < 110 V	
	0 - 300 V	2.3 A @ < 220 V	4.6 A @ < 220 V	9.2 A @ < 220 V	18.4 A @ < 220 V	
Phase		1 Φ				
Frequency		40.0 - 500 Hz				
THD		<1% (Resistive Load)				
Crest Factor		\geq 3				
Line Regulation		\pm 0.1 V				
Load Regulation		\pm (0.5% of output + 0.5 V) at Resistive Load				
MEASUREMENT						
Voltage	Range	0.0 - 400.0 V				
	Accuracy	\pm (1% of reading + 2 counts)		\pm (1% of reading + 5 counts) > 5 V		
Frequency	Range	0.0 - 500 Hz				
	Accuracy	\pm 0.1 Hz				
Current (rms)	Range	0.005 A - 6.50 A	0.005 A - 13.00 A	0.05 A - 26.00 A	0.05 A - 52.00 A	
	Accuracy	\pm (1% of reading + 5 counts)				
Current Peak	Range	0.0 A - 19.0 A	0.0 A - 38.0 A	0.0 A - 76.0 A	0.0 A - 152.0 A	
	Accuracy	\pm (1% of reading + 5 counts)				
Power	Range	0.0 W - 650 W	0.0 W - 1300 W	0.0 W - 2600 W	0.0 W - 5200 W	
	Accuracy	L	\pm (2% of reading + 15 counts) at PF > 0.2	\pm (2% of reading + 30 counts) at PF > 0.2	\pm (2% of reading + 5 counts) at PF \geq 0.2	
		H	\pm (2% of reading + 5 counts) at PF > 0.2	\pm (2% of reading + 10 counts) at PF > 0.2	Voltage > 5 V Current > 0.05 A	
Power Factor	Range	0.000 - 1.000				
	Accuracy	W/VA, Calculated and displayed to three significant digits				
GENERAL						
Rackmount Handles		Standard				
USB/RS-232 Interface		Standard				
Lockout		Key lockout or password protection				
Front Output		Universal Receptacle	Universal Receptacle	Universal Receptacle	–	
Efficiency		\geq 80% (at Full Load)				
Operation Environment		0 - 40°C / 20 - 80% RH				
Dimensions W x H x D - inches/mm	16.92 x 3.50 x 15.75 in		16.92 x 3.50 x 15.75 in		16.92 x 3.50 x 19.69 in	
	430 x 89 x 400 mm		430 x 89 x 400 mm		430 x 89 x 500 mm	
Net Weight Lbs. (kg)		36.4 lbs (16.5 kg)	40 lbs (18.2 kg)	66 lbs (30 kg)	143.3 lbs (65 kg)	

Specifications subject to change

* Output Power and Power Factor Considerations

The reactive output power specification of models 7004, 7008, and 7016 change depending on the power factor of the load. While the 7004, 7008, and 7016 are specified as 400 VA, 800 VA, and 1.6 kVA units respectively, they can actually output up to 25% more reactive power based on the power factor of the load, thus keeping the real power under the specified limit. The reactive power is at its peak when the power factor = 0.8. See chart below for more information:

	7004	7008	7016
Output Power at pf \leq 0.8	500 VA @ 400 W	1000 VA @ 800 W	2000 VA @ 1600 W
Output Power at pf > 0.8	400 VA @ \leq 400 W	800 VA @ \leq 800 W	1600 VA @ \leq 1600 W

Why We Use Counts

APT publishes some specifications using “counts” which allows us to provide a better indication of the tester’s capabilities across measurement ranges. A count refers to the lowest resolution of the display for a given measurement range.

For example, if the resolution for voltage is 1V then 2 counts = 2V.