

# 8500 Series

## Programmable AC Power Source

The EEC 8500 Series is the most power dense and functionality rich power source in our history, giving you improved capability, functionality, and a reduced footprint all in one series. This series is manufactured for simulating common grid faults, voltage dips, and other power abnormalities. The 8500 Series provides an output voltage up to 310 VAC and an output frequency ranging from 5 Hz – 1,200 Hz making it the obvious solution for all kinds of applications. Not to mention, an enhanced interface to all models completely designed with the end-user in mind. Our 8500 Sources can be configured as a simple AC Power Source in Standard mode or, as an upgraded option, Programmable mode. Programmable mode adds the benefits of a sweep of voltage, frequencies, transients, and DC bias over the course of a single sequence or several different tests. The 8500 Series includes the following models: 8505, 8512, 8520, 8530, 8540, & 8560.



### Features

- 14 pre-configured waveforms allow you to simulate nearly any abnormal condition on your DUT by simply selecting the waveform you would like to output.
- With expanded output voltage to 310VAC and output frequency from 5Hz to 1200Hz, the 8500 provides a single, simple solution to meet a wide variety of testing applications.
- Advanced mode option allows you to easily simulate voltage surges, voltage drops, voltage pulses, voltage sweeps, DC bias, and frequency sweeps to help make meeting the specific needs of your testing application easier than it has ever been.
- High power density with a reduced overall footprint offers you the flexibility you need to use your 8500 Series power source in either a bench top or rack mount application.
- Legacy Mode allows you to keep your command set from your 6000, 7000, or 300XAC series.

Call +1-847-367-4077



### Applicable Industries



Aerospace



Appliance



Laboratory



Networking



System Integrator



Lighting



Medical

### EEC Benefits



### Standard

USB/RS-232 Interface

Ethernet Interface

### Options

GPIB Interface



# Modes

INPUT	STANDARD MODE	ADVANCED MODE
Manual Operation	•	•
PC Interface (USB/LAN standard, optional GPIB)	•	•
PowerTRAC Compatibility	•	•
Voltage, Frequency, Transient, and DC Bias Sweeps		•

## Specifications – 8500

8500 SPECIFICATIONS								
MODEL		8505	8512	8520	8530	8540	8560	
<b>AC OUTPUT</b>								
Phase		1Ø2W						
Power Rating		500VA	1250VA	2kVA	3kVA	4kVA	6kVA	
Voltage	Range	0 - 310V, 155/310V Auto Range						
	Resolution	0.1V						
	Accuracy	±(0.2% of setting + 3counts)				±(0.2% of setting + 6counts)		
Max. Current (r.m.s) <sup>1</sup>	0 - 155V	5A	12.5A	20A	30A	40A	60A	
	0 - 310V	2.5A	6.25A	10A	15A	20A	30A	
Frequency	Range	DC, 5 - 1200Hz Full Range Adjust						
	Resolution	0.1Hz at 0.0 - 999.9Hz , 1Hz at 1000 - 1200Hz						
	Accuracy <sup>2</sup>	±0.03% of setting(≥ 15Hz) , ±0.3% of setting(<15Hz)						
Total Harmonic Distortion (THD) <sup>3</sup>		≤ 0.3% @ 50/60Hz (Full Resistive Load)						
Crest Factor <sup>4</sup>		≥ 3	≥ 3	≥ 3	2.5	≥ 3	2.5	
Inrush Current		4	4	4	3	4	3	
Line Regulation		± 0.1V						
Load Regulation <sup>5</sup>		±0.2V,<1s response time						
<b>DC OUTPUT</b>								
Power rating		300W	750W	1200W	1800W	2400W	3600W	
Voltage	Range	0 - 420V, 210/420V Auto Range						
	Resolution	0.1V						
	Accuracy	±(0.2% of setting + 3counts)				±(0.2% of setting + 6counts)		
Max. Current (r.m.s) <sup>2</sup>	0 - 210V	3.0A	7.5A	12.0A	18.0A	24.0A	36.0A	
	0 - 420V	1.5A	3.75A	6.0A	9.0A	12.0A	18.0A	
Ripple and Noise (r.m.s) <sup>6</sup>	Range	L	< 700mV				< 800mV	
		H	< 700mV				< 800mV	
Ripple and Noise (p-p) <sup>6</sup>		< 6.0Vp-p				< 7.0Vp-p		
Load Regulation <sup>5</sup>		±0.2V,<1s response time						

# Specifications – 8500

8500 SPECIFICATIONS							
MODEL	8505	8512	8520	8530	8540	8560	
<b>SETTINGS</b>							
Start/End Angle	Range	0-359					
	Resolution	1					
Current Hi Limit (OC Fold=OFF)	0 - 155V	0.05-5.00A	0.05-12.50A	0.05-20.00A	0.10-30.00A	0.10-40.00A	0.10-60.00A
	0 - 310V	0.05-2.50A	0.05-6.25A	0.05-10.00A	0.10-15.00A	0.10-20.00A	0.10-30.00A
	Resolution	0.01A					
OC Fold Back (OC Fold = ON)	Accuracy	± (2.0% of setting + 4 counts)					
OC Fold Back Response Time <sup>7</sup>		< 1.4s					
Time	Range	1.0 - 999.9h/ 1.0 - 999.9m /1.0 - 999.9s /0.2 - 999.9ms					
	Resolution	0.1h/ 0.1m/ 0.1s/ 0.1ms					
	Accuracy	± (0.1% + 0.1 h)/ ± (0.1% + 0.1 m)/ ± (0.1% + 0.1 s)/ ± (0.1% + 0.1 ms)					
Time unit		h, m, s, ms					
Ramp up	Range	0.1 - 999.9s, 0 = OFF					
	Resolution	0.1s					
	Accuracy	± (0.1% + 1 Cycle) at Output frequency ≤ 10Hz/ ± (0.1% + 0.1 s) at Output frequency > 10Hz					
<b>INPUT</b>							
Phase		1Ø				1Ø or 3Ø	
Voltage		100 - 240 V ± 10%		200 - 240 V ± 10%		1Ø/3Ø3W: 200-240V±10% 3Ø4W: 346 - 416V ± 10%	
Max. Current		8A	18A	30A	22A	30A	1Ø :45A/3Ø3W: 38A 3Ø4W: 22A
Frequency		50 / 60 Hz					
Power Factor <sup>8</sup>		≥ 0.93	≥ 0.97				

# Specifications – 8500

8500 SPECIFICATIONS													
MODEL	8505		8512		8520		8530		8540		8560		
MEASUREMENT													
Voltage(AC)	Range		0 - 310V, 155/310V Auto Range										
	Resolution		0.1V										
	Accuracy <sup>2</sup>		±(0.2% of reading + 3counts) at voltage > 5V					±(0.2% of reading + 6counts) at voltage > 5V					
Voltage(DC)	Range		0 - 420V, 210/420V Auto Range										
	Resolution		0.1V										
	Accuracy <sup>2</sup>		±(0.2% of reading + 3counts) at voltage > 5V					±(0.2% of reading + 6counts) at voltage > 5V					
Current <sup>9</sup>	Range	L	0.050 - 1.200A		0.050 - 5.000A		-						
		Resolution	1.00 - 6.25A		4.00 - 15.62A		4.00 - 25.00A		0.10 - 37.50A		0.10 - 50.00A		0.10 - 75.00A
	Resolution <sup>3</sup>	L	0.001A					-					
		H	0.01A										
	Accuracy <sup>2</sup>	L	± (1% of reading + 10counts) at CF < 3					-					
		H	± (0.5% of reading +8counts)					± (0.5% of reading +12counts)					
Frequency	Range		0.0 - 1200Hz										
	Resolution		0.1Hz / 1Hz										
	Accuracy		±0.1Hz @ 5 - 999.9Hz. / ±1Hz @ 1000 - 1200Hz										
Power <sup>10</sup> (AC,DC)	Range	L	0.0 - 75.0W		0.0 - 300.0W		-						
		H	60 - 625W		240 - 1563W		240 - 2500W		0 - 3750W		0 - 5000W		0 - 7500W
	Resolution	L	0.1W					-					
		H	1W										
	Accuracy	L	± (1% of reading +10 counts) at PF ≥ 0.35 and voltage > 5V		± (2% of reading +15 counts) at PF ≥ 0.35 and voltage > 5V		-						
		H	± (1% of reading +5 counts) at PF ≥ 0.35 and voltage > 5V		± (1% of reading +10 counts) at PF ≥ 0.35 and voltage > 5V		± (1% of reading +20 counts) at PF ≥ 0.35 and voltage > 5V						
Power Factor	Range		0.000 - 1.000										
	Resolution		0.001										
	Accuracy		W/VA, Calculated and displayed to three significant digits										
Power Apparent (VA)	Range	L	0.0 - 75.0VA		0.0 - 300.0VA		-						
		H	60 - 625VA		240 - 1563VA		240 - 2500VA		0 - 3750VA		0 - 5000VA		0 - 7500VA
	Resolution	L	0.1VA					-					
		H	1VA										
Calculated Formula		$\sqrt{V \times A}$ , Calculated value											
Peak Current Measurement	Range		0.0 - 20.0Apk		0.0 - 50.0Apk		0.0 - 80.0Apk		0.0 - 120.0Apk		0.0 - 160.0Apk		0.0 - 240.0Apk
	Resolution		0.1A										
	Accuracy		± (0.5% of reading +8counts)					± (0.5% of reading +12counts)					
Reactive Power Measurement	Range	L	0.0 - 75.0VAR		0.0 - 300.0VAR		-						
		H	60 - 625VAR		240 - 1563VAR		240 - 2500VAR		0 - 3750VAR		0 - 5000VAR		0 - 7500VAR
	Resolution	L	0.1VAR					-					
		H	1VAR										
Calculated Formula		$\sqrt{(VA)^2 - (A)^2}$ , Calculated value											
Crest Factor Measurement	Range		0.00 - 10.00										
	Resolution		0.01										
	Accuracy		Ap / A										

# Specifications – 8500

8500 SPECIFICATIONS						
MODEL	8505	8512	8520	8530	8540	8560
<b>GENERAL</b>						
PLC Remote Control	Input:Output ON, Output OFF/Reset, Output Verify, Interlock,File Recall M1 through M7, Trigger Output: Fail, Test-in-Process					
Rear Input	AC Outlet	Terminal Block				
Memory	Std.	10 x 100 (file x sequence) / MANUAL only 10 file no sequence				
	Adv.	100 x 100 (file x sequence) / MANUAL, STEP, PULSE only 100 file no sequence				
Sync Signal/ Ext Trigger	Std.	ON/OFF				
	Adv.	ON / START / END / BOTH / OFF / EVENT, Output Signal 5V ,BNC type				
Display	4.3" TFT LCD					
Protection	OCP, OVP, OPP, OTP, LVP, RCP and FAN.					
Interface	Standard USB, PLC remote, LAN, Analog / Option GPIB, RS-232					
Eeciency (at Full load) <sup>11</sup>	≥ 74%	≥ 81%	≥ 84%	≥ 83%	≥ 84%	≥ 84%
Response Time (Tr/Tf) <sup>12</sup>	275-400usec (Typical)					
Electromagnetic compatibility (EMC)	Complies with the requirements of the following directive and standards. EMC Directive 2014/30/EU EN 55011:2016/A1:2017 (Group 1, Class A), EN 61326-1:2013, EN 61326-2-1:2013, EN 61000-3-11:2000, EN 61000-3-12:2011					
Safety	Complies with the requirements of the following directive and standards. Low Voltage Directive 2014/30/EU, EN 61010-1					
Op. / Non-Op. Temp. / Humidity <sup>13</sup>	0 to 40°C/-40 to 75°C/20 to 80%RH					
Dimension (W x H x D), mm	430 x 88 x 500	430 x 88 x 500	430 x 88 x 500	430 x 88 x 500	430 x 176 x 500	430 x 176 x 500
Weight	15KG	15KG	15KG	15KG	28KG	28KG
<b>STANDARD ACCESSORIES</b>						
Interlock Disable Key (1505)	X1					
USB Cable	X1					
Shorting bar	X1					
Power Cord (125Vac/10A)	X1	-				

Specifications subject to change