# 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 or simulating common grid faults, voltage dips, and other power abnormalities. The 8500 Series provides an output voltage up to 310VAC 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 MANUAL mode, as an upgraded option with Standard mode or incorporating all functions with Advanced Mode. Advanced 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.
- Easily upgrade and keep your command set from your 6000, 7000, or 300XAC Series with the legacy program mode.

### Applicable Industries

Aerospace

Appliance

Laboratory

Networking

System Integrator

Lighting

Medical

### EEC Benefits

5 YEAR WARRANTY

### Standard

USB

LAN

### Options

RS-232 (OPT)

GPIB (OPT)

PowerTRAC AVAILABLE

DRIVER AVAILABLE

## Modes

| INPUT | MANUAL MODE | OPT 02 STANDARD MODE | OPT 01 ADVANCED MODE |
|---|---|---|---|
| Manual Operation | • | • | • |
| PC Interface (USB/LAN standard, optional RS-232, GPIB) | | • | • |
| PowerTRAC Compatibility | | • | • |
| Voltage, Frequency, Transient, and DC Bias Sweeps | | | • |

## Specifications – 8500 Series

| 8500 Series | | | | | | | |
|---|---|---|---|---|---|---|---|
| MODEL | | | 8505 | 8512 | 8520 | 8530 | 8540 | 8560 |
| **AC OUTPUT** | | | | | | | | |
| 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) | 0 - 155V | | 5A@100V | 12.5A@100V | 20A@100V | 30A@100V | 40A@100V | 60A@100V |
| | 0 - 310V | | 2.5A@200V | 6.25A@200V | 10A@200V | 15A@200V | 20A@200V | 30A@200V |
| Frequency | Range | | DC, 5 - 1200Hz Full Range Adjust | | | | | |
| | Resolution | | 0.1Hz at 0.0 - 999.9Hz , 1Hz at 1000 - 1200Hz | | | | | |
| | Accuracy | | ±0.03% of setting(≥ 15Hz) , ±0.3% of setting(<15Hz) | | | | | |
| Total Harmonic Distortion (THD) | | | ≤ 0.3% @ 50/60Hz (Full Resistive Load) | | | | | |
| Crest Factor | | | ≥ 3 | | | | | |
| Inrush Current | | | 4 | | | | | |
| Line Regulation | | | ± 0.1V | | | | | |
| Load Regulation | | | ±0.2V,<1s response time | | | | | |
| **DC OUTPUT** | | | | | | | | |
| 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) | 0 - 210V | | 3.0A@100V | 7.5A@100V | 12.0A@100V | 18.0A@100V | 24.0A@100V | 36.0A@100V |
| | 0 - 420V | | 1.5A@200V | 3.75A@200V | 6.0A@200V | 9.0A@200V | 12.0A@200V | 18.0A@200V |
| Ripple and Noise (r.m.s) | Range | L | < 700mV | | | | < 800mV | |
| | | H | < 700mV | | | | < 800mV | |
| Ripple and Noise (p-p) | | | < 6.0Vp-p | | | | < 7.0Vp-p | |
| Load Regulation | | | ±0.2V,<1s Ωresponse time | | | | | |

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| MODEL | | 8505 | 8512 | 8520 | 8530 | 8540 | 8560 |
|---|---|---|---|---|---|---|---|
| **SETTINGS** | | | | | | | |
| Start/End Angle | Range | 0-359 | | | | | |
| | Resolution | 1 | | | | | |
| Current Hi Limit (OC Fold=OFF) OC Fold Back (OC Fold = ON) | 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 | | | | | |
| | Accuracy | ± (2.0% of setting + 4 counts) | | | | | |
| OC Fold Back Response Time | | < 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 | | | | | |
| **INPUT** | | | | | | | |
| 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 | | ≥ 0.93 | ≥ 0.97 | | | | |

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| MODEL | | | 8505 | 8512 | 8520 | 8530 | 8540 | 8560 |
|---|---|---|---|---|---|---|---|---|
| MEASUREMENT | | | | | | | | |
| Voltage(AC) | Range | | 0 - 310V, 155/310V Auto Range | | | | | |
| | Resolution | | 0.1V | | | | | |
| | Accuracy | | ±(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 | | ±(0.2% of reading + 3counts) at voltage > 5V | | | | ±(0.2% of reading + 6counts) at voltage > 5V | |
| Current | 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 | L | 0.001A | | | - | | |
| | | H | 0.01A | | | | | |
| | Accuracy | 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 (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 | | V×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 | | $\sqrt{(VA)^2 - (W)^2}$ , Calculated value | | | | | |
| Crest Factor Measurement | Range | | 0.00 - 10.00 | | | | | |
| | Resolution | | 0.01 | | | | | |
| | Accuracy | | Ap / A | | | | | |

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| MODEL | | 8505 | 8512 | 8520 | 8530 | 8540 | 8560 |
|---|---|---|---|---|---|---|---|
| GENERAL | | | | | | | |
| 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 | | Terminal Block | | | | | |
| Memory | Manual | 10 x 100 (file x sequence) / MANUAL only 10 file no sequence | | | | | |
| | Standard / Advanced | 100 x 100 (file x sequence) / MANUAL, STEP, PULSE only 100 file no sequence | | | | | |
| Sync Signal/ Ext Trigger | Manual / Standard | ON/OFF | | | | | |
| | Advanced | 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 | Manual | Only PLC Remote | | | | | |
| | Standard / Advanced | Standard USB, PLC remote, LAN, Analog / Option GPIB, RS-232 | | | | | |
| Eeciency (at Full load) | | ≥ 74% | ≥ 81% | ≥ 84% | ≥ 83% | ≥ 84% | ≥ 84% |
| Response Time (Tr/Tf) | | 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 | | 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 |
| STANDARD ACCESSORIES | | | | | | | |
| Interlock Disable Key (1505) | | X1 | | | | | |
| USB Cable | | X1 | | | | | |
| Shorting bar | | X1 | | | | | |

Subject to change without prior notice.