AN IKONIX BRAND

Powering Production.™

Manual • Automated • Programmable

December 2022 V1.0

OUR STORY

Since 1978 EEC has been providing AC Power Sources for the power conversion industry. Our commitment to quality, innovation, and customer service has helped set the expectation for the industry. In 2020 we introduced the 8500 Series Power Source, the world's highest power density single phase AC Source. As of 2021 we joined the Ikonix Family to become an Ikonix brand, where we continued to innovate and shape the power conversion industry.

CUSTOMER HAPPINESS PROMISE

We aim to provide an amazing experience and quality testers that last a long time. If you're not satisfied with your power source, return it within 45 days for a full refund. Calibrate annually with us, or one of our authorized partners, and we'll extend your warranty an additional year for the service life of your power source, and at least five years after discontinuation. If it breaks during that time, we promise to fix it for free (unless abuse or excessive damage is present). When your power source reaches the end of its service life, we'll responsibly recycle it and give you a discount on a replacement.

*Annual calibration and inspection must be made in each successive year starting one year after the original purchase date in order to remain eligible for extended warranty coverage beyond the standard warranty period (five years).

5 YEAR WARRANTY

Your new power source is warranted to be free from defects in workmanship and material for a period of (5) years from date of shipment.

**5 year warranty is valid on any model purchased in 2021 or after.

ONGOING SUPPORT

We work to provide the best service and support in the industry. With decades of industry experience we are the pros you can trust to help you be compliant to NRTL standards. We'll work closely with you to help you achieve your goals. We've built a worldwide network of knowledgeable partners, so you're covered no matter where you are.

A TIMELINE OF OUR HISTORY

A HISTORY OF INNOVATION

1978 EEC is founded in Taipei City, Taiwan.

1979 Introduced the CFC Series AC power source and become the first AC power Source/Inverter professional manufacturer in Taiwan.

1988 Introduced the CFC-100W Series Digital AC power sources.

1991 The first Ikonix investment in EEC.

EEC became the sole manufacturer of Battery Charges for the Taiwan military – General Headquarters of Combined Service Force.

1994 Collaboration with Associated Research, Inc. (An Ikonix Brand) to become an ODM partner.

2001 Expanded into Suzhou, China and Japan.

2002 Introduced the 6300/6400/6500 High Power Switch Mode Power Supplies.

2008 Moved the Taipei headquarters to a larger facility in Taipei Neihu Technology Park.

2009 Announced the 61000 Series Programmable Power Source.

2020 Introduced the 8500 Series Power Source – the world's highest power density single phase AC source.

The final Ikonix purchase of all EEC shares.

2021 EEC joins the Ikonix family to become an Ikonix Brand.

CAPABILITIES & FEATURES

PRODUCT REFERENCE CHART

	Output Power Capability						Output Configurations		
Model	500 VA	1.25 kVA	2 kVA	3 kVA	4 kVA	6 kVA	1 Phase	Split 1 Phase (2 Lines/1 Neutral)	3 Phase
430XAC				•			•	•	•
460XAC						•	•	•	•
8505	•						•		
8512		•					•		
8520			•				•		
8530				•			•		
8540					•		•		
8560						•	•		

	Output Capabilities of V, Hz & A			General Features		
Model	Voltage Output Max	Frequency Output Range	Max A @ ≤110V/220V (per phase)	PC Control	CE Mark	Free GUI Available
430XAC	300/600/520*	40-1000	9.2A/4.6A	•	•	•
460XAC	300/600/520*	40-1000	18.4A/9.2A	•	•	•
8505	310	5.0-1200	5.0A/2.5A	•	•	•
8512	310	5.0-1200	12.5A/6.25A	•	•	•
8520	310	5.0-1200	20A/10A	•	•	•
8530	310	5.0-1200	30A/15A	•	•	•
8540	310	5.0-1200	40A/20A	•	•	•
8560	310	5.0-1200	60A/30A	•	•	•

x2 = the number of sources required to achieve an output rating.
x3 = the number of sources required to achieve an output rating and 3 phase.
300/600/520* = 300V phase 1Ø, 600V split 1Ø, 520V 3Ø

BROWSE OUR POWER SOURCES

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.

Applicable Industries

Aerospace

Appliance

Laboratory

Networking

System Integrator

Lighting

Medical

EEC Benefits

5 YEAR WARRANTY

1 DAY GUARANTEED SHIPMENT

Standard

USB/RS-232 Interface

Ethernet Interface

Options

GPIB Interface

PowerTRAC AVAILABLE

DRIVER AVAILABLE

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
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)[1]	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[2]		±0.03% of setting(≥ 15Hz) , ±0.3% of setting(<15Hz)					
Total Harmonic Distortion (THD)[3]			≤ 0.3% @ 50/60Hz (Full Resistive Load)					
Crest Factor[4]			≥ 3	≥ 3	≥ 3	2.5	≥ 3	2.5
Inrush Current			4	4	4	3	4	3
Line Regulation			± 0.1V					
Load Regulation[5]			±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)[2]	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)[6]	Range	L	< 700mV				< 800mV	
		H	< 700mV				< 800mV	
Ripple and Noise (p-p)[6]			< 6.0Vp-p				< 7.0Vp-p	
Load Regulation[5]			±0.2V,<1s response time					

Specifications – 8500

8500 SPECIFICATIONS							
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[7]		< 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					
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[8]		≥ 0.93	≥ 0.97				

Specifications – 8500

8500 SPECFICIATIONS								
MODEL			8505	8512	8520	8530	8540	8560
MEASUREMENT								
Voltage(AC)	Range		0 - 310V, 155/310V Auto Range					
	Resolution		0.1V					
	Accuracy[2]		±(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[2]		±(0.2% of reading + 3counts) at voltage > 5V				±(0.2% of reading + 6counts) at voltage > 5V	
Current[9]	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[3]	L	0.001A			-		
		H	0.01A					
	Accuracy[2]	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[10] (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		$\sqrt{(VA)^2 - (VA)^2}$, Calculated value					
Crest Factor Measurement	Range		0.00 - 10.00					
	Resolution		0.01					
	Accuracy		Ap / A					

Specifications – 8500

8500 SPECFICIATIONS							
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		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)[11]		≥ 74%	≥ 81%	≥ 84%	≥ 83%	≥ 84%	≥ 84%
Response Time (Tr/Tf)[12]		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[13]		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					
Power Cord (125Vac/10A)		X1	-				

Specifications subject to change

400XAC

3 Phase AC Power Sources

With a unique feature set and competitive price point, our 400XAC Series provides 3Ø AC power in a single box. Our exclusive SmartCONFIG feature allows you to switch from 1Ø to 3Ø or DC output with the push of a button. This maximizes your investment while giving you the AC power that your application needs. The 400XAC Series consists of two models: the 430XAC is a 3 kVA AC power source and the 460XAC is a 6 kVA AC power source.

Features

- Exclusive SmartCONFIG feature allows for push button switch of 1Ø, 3Ø, or DC output.
- Single phase input power requirements.
- 50 built-in memory locations with 9 test steps.
- Built-in power factor correction (PFC).
- Advanced metering circuits monitor voltage, current, peak current, power, apparent power, reactive power, power factor, and crest factor.
- External voltage sensing for accurate metering.
- Transient feature simulates voltage variations, brownouts, and transient voltage conditions.
- Programmable starting and ending angle of the output sine wave.
- Rack mount handle kit included.

Applicable Industries

Aerospace

Appliance

Laboratory

Motor

EEC Benefits

5 YEAR WARRANTY

1 DAY GUARANTEED SHIPMENT

Standard

USB/RS-232 Interface

Options

GPIB Interface

Ethernet Interface

Start Output PowerTRAC AVAILABLE

IVI DRIVER AVAILABLE

Specifications – 400XAC

INPUT			430XAC	460XAC
Phase			1Ø	1Ø or 3Ø
Voltage			200 - 240 VAC	1Ø : 200~240 VAC ± 10% 3Ø3W : 200~240 VAC ± 10% 3Ø4W : 346~416 VAC ± 10%
Frequency			47 - 63 Hz	
AC OUTPUT				
Power Rating	1Ø2W		3000 VA	6000 VA
	1Ø3W		Total 2000 VA (1000 VA per phase)	Total 4000 VA (2000 VA per phase)
	3Ø4W		Total 3000 VA (1000 VA per phase)	Total 6000 VA (2000 VA per phase)
	DC		3000 VA	6000 VA
Max. Current (RMS)	1Ø2W	5- 150 V	27.6 A @ ≤110 V	55.2 A @ ≤110 V
		5 - 300 V	13.8 A @ ≤220 V	27.6 A @ ≤220 V
	1Ø3W	5 - 150 V	9.2 A @ ≤110 V for per phase	18.4 A @ ≤110 V for per phase
		5 - 300 V	4.6 A @ ≤220 V for per phase	9.2 A @ ≤220 V for per phase
	3Ø4W	5 - 150 V	9.2 A @ ≤110 V for per phase	18.4 A @ ≤110 V for per phase
		5 - 300 V	4.6 A @ ≤220 V for per phase	9.2 A @ ≤220 V for per phase
Inrush Current (peak)	1Ø2W	5 - 150 V	110.4 A	220.8 A
		5 - 300 V	55.2 A	110.4 A
	1Ø3W	5 - 150 V	36.8 A for per phase	73.6 A for per phase
		5 - 300 V	18.4 A for per phase	36.8 A for per phase
	3Ø4W	5 - 150 V	36.8 A for per phase	73.6 A for per phase
		5 - 300 V	18.4 A for per phase	36.8 A for per phase
Phase			1Ø2W, 1Ø3W, 3Ø4W, provided option	
THD (Total Harmonic Distortion)			<0.5% (Resistive Load) at 40.0~70.0 Hz and output voltage within the 80~140 VAC at Low Range or the 160~280 VAC at High Range. <1% (Resistive Load) at 70.1~1000 Hz and output voltage within the 80~140 VAC at Low Range or the 160~280 VAC at High Range.	
Crest Factor			≥3	
Line Regulation			± 0.1 V	
Load Regulation (Hardware)			± (1% of output +1 V) at Resistive Load, <400 µS response time	
Load Regulation (Software)			± 0.2 V, <1 S response time	
DC offset			≤ ± 5 mV	
Poly-phase mode (3Ø4W) for per phase output setting			**430XAC**	**460XAC**
Voltage	Range		5.0~300 VAC (phase), 8.6~520 VAC (line), 150/300 V Auto Range	
	Accuracy		± (0.2% of setting + 3 counts)	
Frequency	Range		40~1000 Hz Full Range Adjust	
	Accuracy		± 0.03% of setting	
Starting & Ending Phase Angle	Range		0~359°	
	Accuracy		±1°(45~65 HZ)	
Current Hi Limit	5V~150 V		0.01~9.20 A	0.01~18.40 A
	5V~300 V		0.01~4.60 A	0.01~9.20 A
	Accuracy		± (2.0% of setting + 2 counts)	
OC Fold Back Response Time			<1.4 s	
Ramp-Up Timer (second)	Range		0.0~999.9 s	
	Accuracy		± (0.1% + 0.05 sec)	
Ramp-Down Timer (second)	Range		0.0~999.9 s	
	Accuracy		± (0.1% + 0.05 sec)	
Delay Timer	Range		1 s~999.9 s 0.1 m~999.9 min 0.1 h~999.9 h	
	Accuracy		± (0.1% + 0.1 sec)	
Dwell Timer	Range		0, 1s~999.9 h (0=continuous)	
	Accuracy		± (0.1% + 0.1 sec)	
Poly-phase mode (3Ø4W) for per phase measurement			**430XAC**	**460XAC**
Frequency	Range		0.0-1000 Hz	
	Resolution		0.1 Hz	
	Accuracy		± 0.1 Hz (501-1000 Hz Accuracy ± 0.2 Hz)	
Voltage	Range		0.0-420.0 V	
	Resolution		0.1 V	
	Accuracy		± (0.2% of reading + 3 counts)	

Specifications – 400XAC

Poly-phase mode (3Ø4W) for per phase measurement			430XAC	460XAC
Current (RMS)	Range	L	0.005 A~1.200 A	0.005 A~2.400 A
		H	1.00 A~13.00 A	2.00 A~26.00 A
	Accuracy	L	± (1% of reading +5 counts) at 40.0-500 Hz ± (1% of reading +5 counts) at 501-1000 Hz, CF <1.5 and Current (peak) ≤3.6 A	± (1% of reading +5 counts) at 40.0-500 Hz ± (1% of reading +5 counts) at 501-1000 Hz, CF <1.5 and Current (peak) ≤7.2 A
		H	± (1% of reading +5 counts) at 40.0-500 Hz ± (1% of reading +5 counts) at 501-1000 Hz, CF <1.5 and Current (peak) ≤27.6 A	± (1% of reading +5 counts) at 40.0-500 Hz ± (1% of reading +5 counts) at 501-1000 Hz, CF < 1.5 and Current (peak) ≤55.2 A
Current (peak)	Range		0.0 A~38.0 A	0.0 A~76.0 A
	Accuracy		± (1% of reading + 5 counts) at 40.0-70.0 Hz ± (1.5% of reading + 10 counts) at 70.1 - 500 Hz ± (1.5% of reading + 10 counts) at 501 - 1000 Hz and CF <1.5	
Power	Range	L	0.0 W~120.0 W	0.0 W~240.0 W
		H	100 W~1300 W	200 W~2600 W
	Accuracy	L	± (2% of reading +15 counts) at 40.0-500 Hz and PF ≥0.2 ± (2% of reading +30 counts) at 501-1000 Hz and PF ≥0.5	
		H	± (2% of reading +5 counts) at 40.0-500 Hz and PF ≥0.2 ± (2% of reading +15 counts) at 501-1000 Hz and PF ≥0.5	
Power Factor	Range		0 - 1.000	
	Accuracy		W / VA, Calculated and displayed to three significant digits	
Power Apparent (VA)	Range	L	0.0 VA~120.0 VA	0.0 VA~240.0 VA
		H	100 VA~1300 VA	200 VA~2600 VA
	Accuracy		V×A, Calculated value	
Power Reactive (Q)	Range	L	0.0 VAR ~ ± 120.0 VAR	0.0 VAR ~ ± 240.0 VAR
		H	0 VAR ~ ± 1300 VAR	0 VAR ~ ± 2600 VAR
	Accuracy		$\sqrt{(VA)^2 - (W)^2}$, Calculated value	
Crest Factor	Range		0 - 10.00	
	Accuracy		Ap / A, Calculated and displayed to two significant digits	
Poly-phase mode (3Ø4W) for Σ measurement			**430XAC**	**460XAC**
Frequency	Range		0.0-1000.0 Hz	
	Accuracy		± 0.1 Hz (501-1000 Hz Accuracy ±0.2 Hz)	
Voltage	Range		0.0-727.5 V	
	Calculated Formula		(A+B+C)/√3, Calculated and displayed to one significant digits	
Current (RMS)	Range	L	0.005A~1.200A	0.005A~2.400A
		H	1.00A~13.00A	2.00A~26.00A
	Calculated Formula	L	$\frac{\sum VA}{\sum V} / \sqrt{3}$	
		H		
Power	Range	L	0.0W~360.0W	0.0W~720.0W
		H	300W~3900W	600W~7800W
	Accuracy	L	$\frac{\sum P}{\sum VA}$ A Power + B Power + C Power, Calculated value	
		H		
Power Factor	Range		0 - 1.000	
	Resolution		0.001	
	Accuracy		Calculated and displayed to three significant digits	
Power Apparent (VA)	Range	L	0.0VA~360.0VA	0.0VA~720.0VA
		H	300VA~3900VA	600VA~7800VA
	Calculated Formula	L	$\sqrt{(\sum W)^2 + (\sum Q)^2}$	
		H		
Power Reactive (Q)	Range	L	0.0VAR~360.0VAR	0.0VAR~720.0VAR
		H	300VAR~3900VAR	600VAR~7800VAR
	Accuracy	L	A VAR + B VAR + C VAR, Calculated value	
		H		
Single-phase mode (1Ø2W) Setting			**430XAC**	**460XAC**
Voltage	Range		5.0~300 VAC, 150/300 V Auto Range	
	Resolution		0.1 V	
	Accuracy		± (0.2% of setting + 3 counts)	

Specifications – 400XAC

Single-phase mode (1Ø2W) Setting			430XAC	460XAC
Frequency	Range		40~1000 Hz Full Range Adjust	
	Resolution		0.1 Hz at 40.0~99.9 Hz , 1 Hz at 100~1000 Hz	
	Accuracy		± 0.03% of setting	
Starting & Ending Phase Angle	Range		0~359°	
	Resolution		1°	
	Accuracy		± 1°(45~65 HZ)	
Current Hi Limit	5V~150V		0.01~27.60 A	0.01~55.20 A
	5V~300V		0.01~13.80 A	0.01~27.60 A
	Accuracy		± (2.0% of setting + 2 counts)	
OC Fold Back Response Time			< 1.4 s	
Single-phase mode (1Ø2W) measurement			**430XAC**	**460XAC**
Frequency	Range		0.0~1000 Hz	
	Accuracy		± 0.1 Hz (501~1000 Hz Accuracy ±0.2 Hz)	
Voltage	Range		0.0~420.0 V	
	Accuracy		± (0.2% of reading + 3 counts)	
Current (RMS)	Range		0.05 A~39.00 A	0.05 A~78.00
	Accuracy		± (1% of reading +5 counts) at 40.0~500 Hz ± (1% of reading +5 counts) at 501~1000 Hz, CF <1.5 and Current (peak) ≤82.8 A	± (1% of reading +5 counts) at 40.0~500 Hz ± (1% of reading +5 counts) at 501~1000 Hz, CF <1.5 and Current (peak) ≤165.6 A
Current (peak)	Range		0.0 A~114.0 A	0.0 A~228.0 A
	Accuracy		± (1% of reading + 5 counts) at 40.0~70.0 Hz ± (1.5% of reading + 10 counts) at 70.1~500 Hz ± (1.5% of reading + 10 counts) at 501~1000 Hz and CF<1.5	
Power	Range		0 W~3900 W	0 W~7800 W
	Accuracy		± (2% of reading +5 counts) at 40.0~500 Hz and PF ≥0.2 ± (2% of reading +15 counts) at 501~1000 Hz and PF ≥0.5	
Power Factor	Range		0 - 1.000	
	Accuracy		W / VA, Calculated and displayed to three significant digits	
Power Apparent	Range		0 VA~3900 VA	0 VA~7800 VA
	Accuracy		V×A, Calculated value	
Power Reactive (Q)	Range		0 VAR~3900 VAR	0 VAR~7800 VAR
	Accuracy		$\sqrt{(VA)^2 - (W)^2}$, Calculated value	
Crest Factor	Range		0 - 10.00	
	Accuracy		Ap / A, Calculated and displayed to two significant digits	
Poly-phase mode (1Ø3W) for per phase output setting			**430XAC**	**460XAC**
Voltage	Range		5.0~300 VAC (phase), 10.0~600 VAC (line), 150/300 V Auto Range	
	Accuracy		± (0.2% of setting + 3 counts)	
Frequency	Range		40~1000 Hz Full Range Adjust	
	Accuracy		± 0.03% of setting	
Starting & Ending Phase Angle	Range		0~359°	
	Accuracy		± 1°(45~65 HZ)	
Current RI Limit	5V~150V		0.01~9.20 A	0.01~18.40 A
	5V~300V		0.01~4.60 A	0.01~9.20 A
	Accuracy		± (2.0% of setting + 2 counts)	
OC Fold Back Response Time			<1.4 s	
Poly-phase mode (1Ø3W) for per phase measurement			**430XAC**	**460XAC**
Frequency	Range		0.0-1000 Hz	
	Accuracy		± 0.1 Hz (501-1000 Hz Accuracy ±0.2 Hz)	
Voltage	Range		0.0-420.0 V	
	Accuracy		± (0.2% of reading + 3 counts)	
Current (RMS)	Range	L	0.005 A~1.200 A	0.005 A~2.400 A
		H	1.00 A~13.00 A	2.00 A~26.00 A
	Accuracy	L	± (1% of reading +5 counts) at 40.0-500 Hz ± (1% of reading +5 counts) at 501-1000 Hz, CF <1.5 and Current (peak) ≤3.6 A	± (1% of reading +5 counts) at 40.0-500 Hz ± (1% of reading +5 counts) at 501-1000 Hz, CF <1.5 and Current (peak) ≤7.2 A
		H	± (1% of reading + 5counts) at 40.0-500 Hz ± (1% of reading +5 counts) at 501-1000 Hz, CF <1.5 and Current (peak) ≤27.6 A	± (1% of reading +5 counts) at 40.0-500 Hz ± (1% of reading +5 counts) at 501-1000 Hz, CF <1.5 and Current (peak) ≤55.2 A

Specifications – 400XAC

Poly-phase mode (1Ø3W) for per phase measurement			430XAC	460XAC
Current (peak)	Range		0.0 A~38.0 A	0.0 A~76.0 A
	Accuracy		± (1% of reading + 5 counts) at 40.0-70.0 Hz ± (1.5% of reading + 10 counts) at 70.1-500 Hz ± (1.5% of reading + 10 counts) at 501-1000 Hz and CF <1.5	
Power	Range	L	0.0 W~120.0 W	0.0 W~240.0 W
		H	100 W~1300 W	200 W~2600 W
	Accuracy	L	± (2% of reading +15 counts) at 40.0-500 Hz and PF ≥0.2 ± (2% of reading +30 counts) at 501-1000 Hz and PF ≥0.5	
		H	± (2% of reading +5 counts) at 40.0-500 Hz and PF ≥0.2 ± (2% of reading +15 counts) at 501-1000 Hz and PF ≥0.5	
Power Factor	Range		0 - 1.000	
	Accuracy		W / VA, Calculated and displayed to three significant digits	
Power Apparent (VA)	Range	L	0.0 VA~120.0 VA	0.0 VA~240.0 VA
		H	100 VA~1300 VA	200 VA~2600 VA
	Accuracy		VxA, Calculated value	
Power Reactive (Q)	Range	L	0.0 VAR~120.0 VAR	0.0 VAR~240.0 VAR
		H	0 VAR~1300 VAR	0 VAR~2600 VAR
	Accuracy		$\sqrt{(VA)^2 - (W)^2}$, Calculated value	
Crest Factor	Range		0-10.00	
	Accuracy		Ap / A, Calculated and displayed to two significant digits	

Poly-phase mode (1Ø3W) for L1-L2 measurement			430XAC	460XAC
Frequency	Range		0.0-1000.0 Hz	
	Accuracy		± 0.1 Hz (501-1000 Hz Accuracy ± 0.2 Hz)	
Voltage	Range		0.0-840.0V	
	Accuracy		L1 Voltage + L2 Voltage, Calculated and displayed to one significant digits	
Current (RMS)	Range	L	0.005A~1.200A	0.005A~2.400A
		H	1.00A~13.00A	2.00~26.00A
	Calculated Formula	L	$\frac{\sum VA}{\sum V}$	
		H		
Power	Range	L	0.0W~240.0W	0.0W~480.0W
		H	200W~2600W	400W~5200W
	Accuracy	L	L1 Power + L2 Power, Calculated value	
		H		
Power Factor	Range		0 - 1.000	
	Calculated Formula		(L1 P + L2 P) / (L1 VA + L2 VA), Calculated and displayed to three significant digits	
Power Apparent (VA)	Range	L	0.0W~240.0VA	0.0W~480.0VA
		H	200W~2600VA	± 400W~5200VA
	Calculated Formula	L	$\sqrt{(\sum W)^2 + (\sum Q)^2}$ Calculated value	
		H		
Power Reactive (Q)	Range	L	0.0VAR ~ ± 240.0VAR	0.0VAR ~ ± 480.0VAR
		H	± 200VAR ~ ± 2600VAR	± 400VAR ~ ± 5200VAR
	Calculated Formula	L	L1 VAR + L2 VAR, Calculated value	
		H		

DC OUTPUT			
Max. Power		3000 W	6000 W
Max. Current	0-210 V	14.4 A	28.8 A
	0-420 V	7.2 A	14.4 A
Ripple and Noise (RMS)		Range: 5-210 V <700 mV Range: 5-420 V <1100 mV	
Ripple and Noise (p-p)		<4.0 Vp-p	

DC SETTINGS			
Voltage	Range	5-210 V / 5-420 V Selectable	
	Accuracy	± (0.2% of setting + 3 counts)	
Current Hi Limit	5 V-210 V	14.40 A	0.10 - 28.80 A
	5 V-420 V	7.20 A	0.10 - 14.40 A
	Accuracy	± (2.0% of setting + 2 counts)	
OC Fold Back Response Time		<1.4 s	

Specifications – 400XAC

DC MEASUREMENT		430XAC	460XAC
Voltage	Range	0.0-420.0 V	
	Accuracy	± (0.2% of setting + 5 counts)	
Current	Range	0.05 A~19.50 A	0.05 A~39.00 A
	Accuracy	± (1% of reading +5 counts)	
Power	Range	0 W~3900 W	0 W~7800 W
	Accuracy	± (2% of reading +5 counts)	
PROTECTION			
Software OCP		Over Current 110% of full rated current >1 second	
Output Short Shut Down Speed		<1 second	
Software OPP		When over Power 105 ~ 110% of full power >5 second. When over Power >110% of full power <1 second.	
Software OTP		Temperature over 95 degree C on the power amp and PFC heatsink	Temperature over 120 degree C on the power amp and PFC heatsink
Software OVP	L	When output frequency < 100Hz, maximum voltage deviation + 5V When output frequency 101-500Hz, maximum voltage deviation + 15V When output frequency 501-1000Hz, maximum voltage deviation + 20V	
	H	When output frequency < 100Hz, maximum voltage deviation + 10V When output frequency 101-500Hz, maximum voltage deviation + 30V When output frequency 501-1000Hz, maximum voltage deviation + 40V	
Software LVP	L	When output frequency < 100Hz, maximum voltage deviation -5V > 0.5 second When output frequency 101-500Hz, maximum voltage deviation -15V > 0.5 second When output frequency 501-1000Hz, maximum voltage deviation -20V > 0.5 second	
	H	When output frequency < 100Hz, maximum voltage deviation -10V > 0.5 second When output frequency 101-500Hz, maximum voltage deviation -30V > 0.5 second When output frequency 501-1000Hz, maximum voltage deviation -40V > 0.5 second	
Reverse Current Protection (RCP)		Over 75W	
GENERAL			
Transient (only for 40~70 Hz)		Trans-Volt 0.0-300.0 V Resolution 0.1 V Trans-Site 0°~359° Resolution 1° Trans-Time 0.5-999.9 mS Resolution 0.1 mS Trans-Cycle 0-9999, 0-Constant	
Operation Key Feature		Soft key, Numeric key, Rotary Knob	
Remote Input Signal		Test, Reset, Interlock, Recall program memory 1 through 7	
Remote Output Signal		Pass, Fail , Test-in Process	
Key Lock		Yes, Password Driven	
Memory		50 memories, 9 steps/memory	
Ext Trigger		START / END / BOTH / OFF in the Program mode, Output Signal 5 V, BNC type	
Alarm Volume Setting		Range: 0-9 ; 0 = OFF, 1 is softest volume, 9 is loudest volume.	
Graphic Display		240 x 64 dot resolution Monographic LCD/Contrast 9 Levels 1-9	
PFC		PF ≥0.97 at Full load	
Efficiency		≥78% (at Full load)	
Auto Loop cycle		0 = Continuous, OFF, 2~9999	
Over Current Fold Back		On/Off, Setting On when output current over setting Hi-A value it will fold back output voltage to keep constant output current is setting Hi-A value, Response time <1400ms	
Safety Agency		CE Listed	
Dimensions (W x H x D)		430 x 400.5 x 500 mm	
		16.93 x 15.77 x 19.69 in	
Net Weight		105.8 lbs (48 kg)	125.6 lbs (57 kg)
Operation Environment		0-40°/20-80% RH	

Specifications subject to change

Why We Use Counts
EEC publishes some specifications using "counts" which allows us to provide a better indication of the power source'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.

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