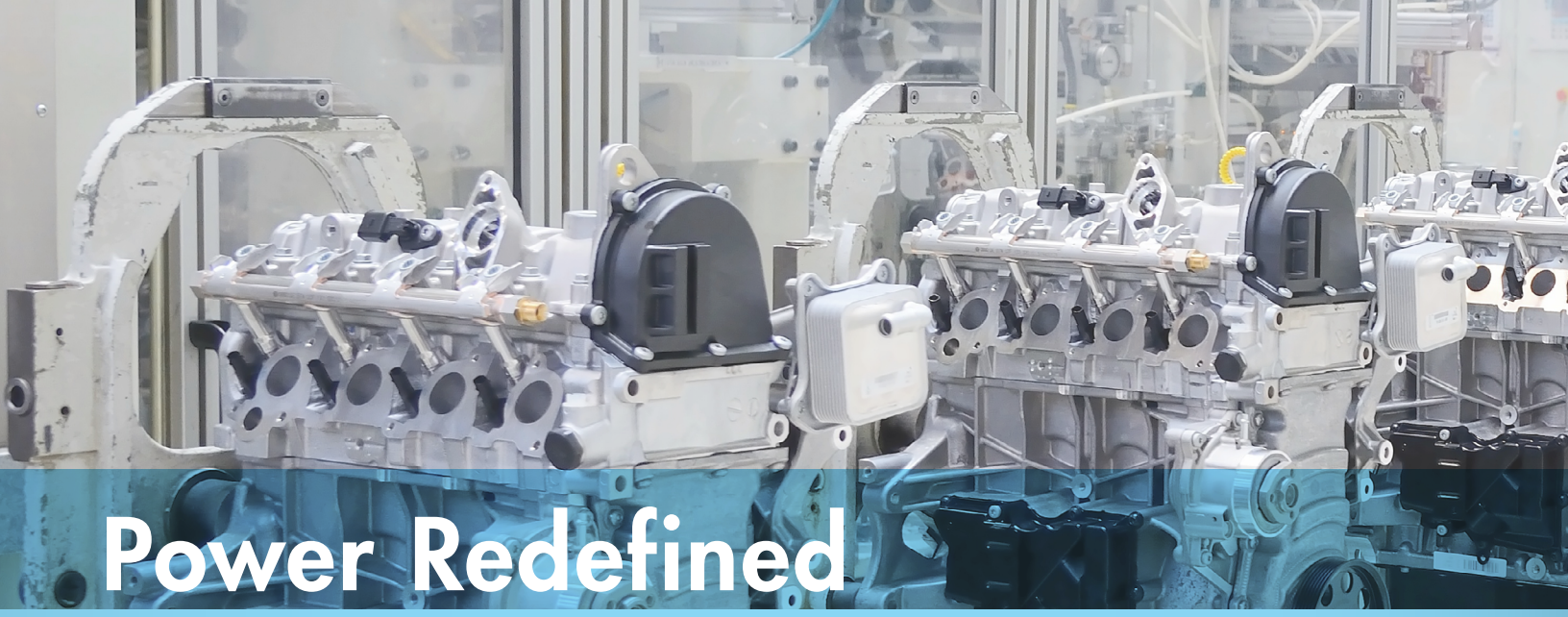
AC Power Sources

Manual • Automated • Modular • Programmable

Power Redefined

3 Phase AC Power Sources • Modular AC Power Sources • Manual AC Power Sources
Programmable AC Power Sources • Power Converters • Automated AC Power Sources



Power Redefined

Our Power Sources are designed and supported in the USA. We're factory direct, so you'll never have to deal with a middle man. Our highly trained sales staff focuses on every customer no matter the size of the order. From our industry-leading warranty to our return and repair policies, we have redefined how the power source industry does business. When you compare our dedicated people and extensive support programs, to our competitors, you'll be sure to choose APT.

CHANGING the way the POWER SOURCE INDUSTRY DOES BUSINESS

When you choose APT, you're choosing a partner that will continue to assist you throughout the life of your product, no matter what the application.

UNPARALLELED SERVICE & SUPPORT

No competitor can match our dedication to service and support. With 10 business day shipping on all modelsand 10 business day turnaround on all repairs, APT keeps your business up and running with minimal down-time.

TRADE-IN & TRADE-UP

We are proud to have a generous and responsible trade-in program. It is our little way of saying thanks for continuing to use our instruments. Simply send us your old instrument and we'll give you a credit towards your purchase. We accept any brand, make or model towards your trade-in discount of your new APT instrument.*
*Offer only available in North America.

PowerTRAC™ AC Power Source Control and Data Capture Software

Our new PowerTRAC software takes the industry standard Power Source control software to the next level with data capture. Quickly export your test results to an Excel spreadsheet and improve traceabilty.

- Complete control from anywhere
- Real world simulation of voltage and frequency
- Visually see what your output and transients look like

AVAILABLE AS A FREE DOWNLOAD!

3-Year Warranty

Your new instrument includes a standard 3-Year warranty. This guarantees your new product to be free from defects in workmanship for the appropriate warranty period. There is no cost for this warranty and no requirements for calibration or inspection.

Customer Happiness Guarantee

Our Customer Happiness Guarantee ensures we keep you completely satisfied throughout your entire purchasing experience with us. From selecting the right product for your application to support and training, we guarantee your experience will be nothing less than excellent. If for ANY reason you're not completely satisfied with your experience, you can simply return your instrument within 45 days of purchase for a full refund.

10 Day Guaranteed Shipment

Every APT power source ships from our facility within 10 business days of purchase. If we ship late, we will cover ground shipping (Domestic U.S. shipments only).

Product Reference Chart

	Output Power Capability									Output Configurations		
Model	500 VA	1 kVA	2 kVA	3 kVA	4 kVA	6 kVA	8 kVA	12 kVA	18 kVA	1 Phase	Split 1 Phase (2 Lines/1 Neutral)	3 Phase
105	●									●		
5005	●									●		
5010		●								●		
5020			●							●		
5040					●					●		
6010		●								●		
6020			●							●		
6040					●					●		
7004	●									●		
7008		●								●		
7016			●							●		
7040					●					●		
310XAC		●	x2	x3						x1	x2	x3
320XAC			●		x2	x3				x1	x2	x3
460XAC						●				●	●	●
8505	●									●		
8512			●							●		
8520				●						●		
8540						●				●		

Product Reference Chart

	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
105	300	50/60	4.6A/2.3A			
5005	300	40-450	4.6A/2.3A			
5010	300	40-450	9.2A/4.6A			
5020	300	40-450	18.4A/9.2A			
5040	300	40-450	36.8A/18.4A			
6010	300	40-500	9.2A/4.6A	●		●
6020	300	40-500	18.4A/9.2A	●		●
6040	300	40-500	36.8A/18.4A	●		●
7004	300	40-500	4.6A/2.3A	●	●	●
7008	300	40-500	9.2A/4.6A	●	●	●
7016	300	40-500	18.4A/9.2A	●	●	●
7040	300	40-500	36.8A/18.4A	●	●	●
310XAC	300/600/520*	40-1000	9.2A/4.6A	●	●	●
320XAC	300/600/520*	40-1000	18.4A/9.2A	●	●	●
460XAC	300/600/520*	40-1000	18.4A/9.2A	●	●	●
8505	310	5.0-1200	5.0A/2.5A	Progammable Mode Only	●	Progammable Mode Only
8512	310	5.0-1200	12.5A/6.25A	Progammable Mode Only	●	Progammable Mode Only
8520	310	5.0-1200	20A/10A	Progammable Mode Only	●	Progammable Mode Only
8540	310	5.0-1200	40A/20A	Progammable Mode Only	●	Progammable Mode Only

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

8500 Series

Programmable AC Power Source

The APT 8500 Series is the most power dense and functionality rich source in APT history, giving you improved capability, functionality, and a reduced footprint in one series. These new models provide an output voltage of 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. Configure this power source as a simple bench top AC Power Source in Manual mode or, as an upgraded option, Programmable mode, to be used with an interface to a PC. The 8500 Series includes the following models: 8505, 8512, 8520, 8540

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.
- Programmable 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.

Standard

- USB/RS-232 Interface
- Ethernet Interface

Options

- GPIB Interface

IVI DRIVER AVAILABLE

Start Output
PowerTRAC™ AVAILABLE

Applicable Industries

Aerospace | Appliance | Laboratory | Networking | System Integrator | Lighting | Medical

APT Benefits

WARRANTY 3 YEAR WARRANTY

10 DAY GUARANTEED SHIPMENT

Modes

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

Specifications – 8500

INPUT			8505	8512	8520	8540
Phase			1Ø2W			
Voltage			100 - 240 V ± 10%			200 - 240 V ± 10%
Max. Current			8A	18A	30A	30A
Power Factor			≥0.93 at Full load	≥0.97 at Full load		
AC OUTPUT						
Power Rating	1Ø2W		500VA	1250VA	2000VA	4000VA
Max. Current (RMS)	1Ø2W	0 - 155V	5A @ 100V	12.5A @ 100V	20A @ 100V	40A @ 100V
		0 - 310V	2.5A @ 200V	6.25A @ 200V	10A @ 200V	20A @ 200V
Inrush Current (peak)	1Ø2W	0 - 155V	20A	50A	80A	160A
		0 - 310V	10A	25A	40A	80A
Frequency			5.0 - 1200 Hz			
Phase			1Ø2W			
THD (Total Harmonic Distortion)			≤0.3% @ 50/60Hz (Full Resistive Load) ≤1.1% @ 5 -1000Hz (Full Resistive Load) ≤1.2% @1001-1200Hz (Full Resistive Load)			
Crest Factor			≥3			
Line Regulation			± 0.1 V			
Load Regulation (Hardware)			± (1% of output +0.5V) @ Resistive Load, < 400µS response time			
Load Regulation (Software)			±0.2V, <1S response time			
DC offset			DC Offset ≤±30mV (typical)			
DC OUTPUT						
Power Rating			300W	750W	1200W	2400W
Max. Current	0 - 210V		3.0A	7.5A	12.0A	24.0A
	0 - 420V		1.5A	3.75A	12.0A	24.0A
Ripple & Noise (rms)	Range	L	< 700mV			< 800mV
		H	< 700mV			< 800mV
Ripple & Noise (p-p)			< 6.0Vp-p			< 7.0Vp-p
SETTINGS			**8505**	**8512**	**8520**	**8540**
Voltage (AC)	Range		0 - 310V, 155/310V Auto Range			
	Resolution		0.1V			
	Accuracy		±(0.2% of setting + 3 counts)			±(0.2% of setting + 6counts)
Voltage (DC)	Range		0 - 420V, 210/420V Auto Range			
	Resolution		0.1V			
	Accuracy		±(0.2% of setting + 3counts)			±(0.2% of setting + 6counts)
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)			
Start Angle	Range		0~359o			
	Resolution		1o			

Specifications – 8500 Series

SETTINGS			8505	8512	8520	8540
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 - 40.00A
	(0 - 310V		0.05 - 2.50A	0.05 - 6.25A	0.05 - 10.00A	0.10 - 20.00A
	Resolution		0.01 A			
	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 0.1 - 999.9ms			
	Resolution		0.1h 0.1Min 0.1s 0.1ms			
	Accuracy		± (0.1% + 0.1 Hour) ± (0.1% + 0.1 Minute) ± (0.1% + 0.1 sec) ± (0.1% + 0.1 ms)			
Time Unit†			Hour, Minute, Second, 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 sec) at Output frequency > 10Hz			
MEASUREMENT						
Frequency	Range		0.0~1200Hz			
	Resolution		0.1Hz / 1Hz			
	Accuracy		±0.1Hz @ 5 - 999.9Hz. ±1Hz @ 1000 - 1200Hz			
Voltage (AC)	Range		0 - 310V, 155/310V Auto Range			
	Resolution		0.1V			
	Accuracy		±(0.2% of reading + 3 counts) at voltage > 5V			±(0.2% of reading + 6 counts) at voltage > 5V
Voltage (DC)	Range		0 - 420V, 210/420V Auto Range			
	Resolution		0.1V			
	Accuracy		±(0.2% of reading + 3 counts) at voltage > 5V			±(0.2% of reading + 6 counts) at voltage > 5V
Current (AC, DC)	Range	L	0.0 - 75.0W	0.0 - 300.0W		-
		H	60 - 625W	240 - 1563W	240 - 2500W	0 - 5000W
	Resolution	L	0.1W			-
		H	1W			
	Accuracy	L	± (1% of reading +10 counts) at PF ≥ 0.3 and voltage > 5V	± (2% of reading +15 counts) at PF ≥ 0.3 and voltage > 5V		-
		H	± (1% of reading +5 counts) at PF ≥ 0.3 and voltage > 5V	± (1% of reading +10 counts) at PF ≥ 0.3 and voltage > 5V	± (1% of reading +10 counts) at PF ≥ 0.3 and voltage > 5V	± (1% of reading +20 counts) at PF ≥ 0.3 and voltage > 5V
Power (AC, DC)	Range	L	0.0 - 75.0W	0.0 - 300.0W		-
		H	60 - 625W	240 - 1563W	240 - 2500W	0 - 5000W
	Resolution	L	0.1W			-
		H	1W			
	Accuracy	L	± (1% of reading +10 counts) at PF ≥ 0.3 and voltage > 5V	± (2% of reading +15 counts) at PF ≥ 0.3 and voltage > 5V		-
		H	± (1% of reading +5 counts) at PF ≥ 0.3 and voltage > 5V	± (1% of reading +10 counts) at PF ≥ 0.3 and voltage > 5V	± (1% of reading +10 counts) at PF ≥ 0.3 and voltage > 5V	± (1% of reading +20 counts) at PF ≥ 0.3 and voltage > 5V
Power Factor	Range		0.000 - 1.000			
	Resolution		0.001			
	Accuracy		W/VA, Calculated and displayed to three significant digits			

† Available on in programmable mode option

MEASUREMENT			8505	8512	8520	8540
Power Apparent (VA)†	Range	L	0.0 - 75.0VA	0.0 - 300.0VA		
		H	60 - 625VA	240 - 1563VA	240 - 2500VA	0 - 5000VA
	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 -160.0Apk
	Resolution		0.1A			
	Accuracy		± (0.5% of reading + 8 counts)			± (0.5% of reading +12 counts)
Reactive Power Measurement†	Range	L	0.0 - 75.0VAR	0.0 - 300.0VAR		-
		H	60 - 625VAR	240 - 1563VAR	240 - 2500VAR	0 - 5000VAR
	Resolution	L	0.01A			
		H	0.01A			
	Calculated Formula		$\sqrt{(VA)2 - (W)2}$			
Crest Factor Measurement†	Range		0.00 - 10.00			
	Resolution		0.01			
	Calculated Formula		Ap / A			
Software OCP			≤110% of full rated current (102% < Io ≤110%), >5 second output shut down >110% of full rated current, <1.5 second output shut down			
Output Short Shut Down Speed			<1 second			
Software OPP			≤110% of full rated current (102% < Po ≤110%), >5 second output shut down >110% of full rated current, <1.5 second output shut down			
Software OVP			Over voltage 105% of full rated voltage			
Software VSENSE OVP		H	When measurement voltage exceeds setting voltage 10V			
		L	When measurement voltage exceeds setting voltage 5V			
Software VSENSE LVP		H	When measurement voltage is lower than setting voltage 10V			
		L	L When measurement voltage is lower than setting voltage 5V			
Hardware OTP			Temperature over 108oC on power component of the PFC and DDC Temperature over 100oC on heatsink of the power amplifier			
Software RCP (Reverse Current Protection)			When reverse power over 5% of full rated power			
Hardware FAN FAIL			When fan fails and fan is blocked			
DIMENSION						
Dimension by Model (mm)	W		430	430	430	430
	H		88	88	88	176
	D		500	500	500	500
Weight			15KG / 33LBS	15KG /33LBS	15KG /33LBS	28KG / 61.7LBS
Storage Environment			-40° to 75°C			
Operation Environment			0-40oC/20-85% RH			

† Available on in programmable mode option

460XAC

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 460XAC is a 6 kVA AC power source.

Features

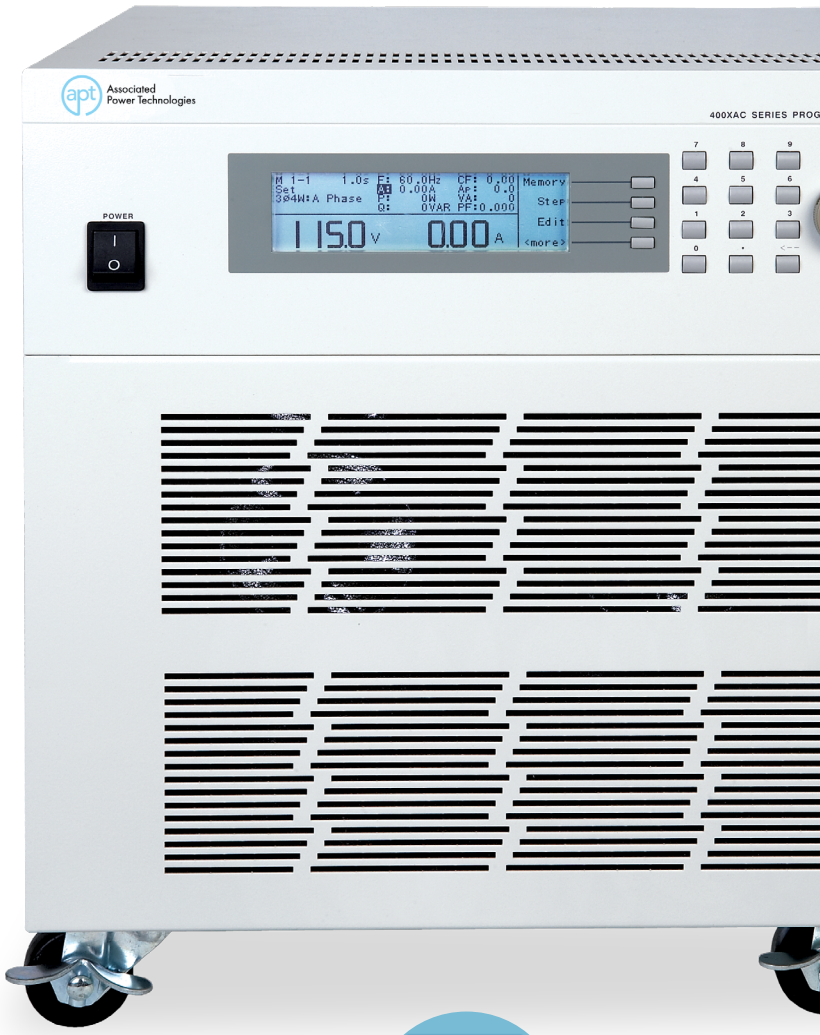
- Exclusive SmartCONFIG feature allows for push button switch of 1Ø, 3Ø, or DC output
- Single phase input power requirements
- 50 built-in memory locations with 9 test steps
- Built-in power factor correction (PFC)
- Advanced metering circuits monitor voltage, current, peak current, power, apparent 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

Standard

- USB/RS-232 Interface

Options

- GPIB Interface
- Ethernet Interface



DRIVER AVAILABLE

Start Output
PowerTRAC™ AVAILABLE

Applicable Industries

Aerospace | Appliance | Laboratory | Motor

APT Benefits

3 YEAR WARRANTY

10 DAY GUARANTEED SHIPMENT

INPUT			460XAC
Phase			1Ø or 3Ø
Voltage			1Ø : 200~240 VAC ± 10% 3Ø3W : 200~240 VAC ± 10% 3Ø4W : 346~416 VAC ± 10%
Frequency			47 - 63 Hz
AC OUTPUT			
Power Rating	1Ø2W		6000 VA
	1Ø3W		Total 4000 VA (2000 VA per phase)
	3Ø4W		Total 6000 VA (2000 VA per phase)
	DC		6000 VA
Max. Current (RMS)	1Ø2W	5- 150 V	55.2 A @ ≤110 V
		5 - 300 V	27.6 A @ ≤220 V
	1Ø3W	5 - 150 V	18.4 A @ ≤110 V for per phase
		5 - 300 V	9.2 A @ ≤220 V for per phase
	3Ø4W	5 - 150 V	18.4 A @ ≤110 V for per phase
		5 - 300 V	9.2 A @ ≤220 V for per phase
Inrush Current (peak)	1Ø2W	5 - 150 V	220.8 A
		5 - 300 V	110.4 A
	1Ø3W	5 - 150 V	73.6 A for per phase
		5 - 300 V	36.8 A for per phase
	3Ø4W	5 - 150 V	73.6 A for per phase
		5 - 300 V	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		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	0.01~18.40 A
	5V~300 V	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		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 – 460XAC

Poly-phase mode (3Ø4W) for per phase measurement			460XAC
Current (RMS)	Range	L	0.005 A~2.400 A
		H	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) ≤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) ≤55.2 A
Current (peak)	Range		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~240.0 W
		H	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~240.0 VA
		H	200 VA~2600 VA
	Accuracy		V×A, Calculated value
Power Reactive (Q)	Range	L	0.0 VAR ~ ± 240.0 VAR
		H	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			460XAC
Frequency	Range		0.0-1000.0 Hz
	Accuracy		± 0.1 Hz (501-1000 Hz Accuracy ±0.2 Hz)
Voltage	Range		± 0.1 Hz (501-1000 Hz Accuracy ±0.2 Hz)
	Calculated Formula		(A+B+C)/√3, Calculated and displayed to one significant digits
Current (RMS)	Range	L	0.005A~2.400A
		H	2.00A~26.00A
	Calculated Formula	L	$\frac{\sum VA}{\sum V} / \sqrt{3}$
		H	
Power	Range	L	0.0W~720.0W
		H	600W~7800W
	Accuracy	L	A Power + B Power + C Power, Calculated value
		H	
Power Factor	Range		0 - 1.000
	Resolution		0.001
	Accuracy		$\frac{\sum P}{\sum VA}$ Calculated and displayed to three significant digits
Power Apparent (VA)	Range	L	0.0VA~720.0VA
		H	600VA~7800VA
	Calculated Formula	L	$\sqrt{(\sum W)^2 + (\sum Q)^2}$
		H	
Power Reactive (Q)	Range	L	0.0VAR~720.0VAR
		H	600VAR~7800VAR
	Accuracy	L	A VAR + B VAR + C VAR, Calculated value
		H	

Single-phase mode (1Ø2W) Setting		460XAC
Voltage	Range	5.0~300 VAC, 150/300 V Auto Range
	Resolution	0.1 V
	Accuracy	± (0.2% of setting + 3 counts)

Single-phase mode (1Ø2W) Setting			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		0.01~55.20 A
	5V~300V		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			**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~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) ≤165.6 A
Current (peak)	Range		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~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~7800 VA
	Accuracy		V×A, Calculated value
Power Reactive (Q)	Range		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			**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		0.01~18.40 A
	5V~300V		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			**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~2.400 A
		H	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) ≤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) ≤55.2 A

Specifications – 460XAC

Poly-phase mode (1Ø3W) for per phase measurement			460XAC
Current (peak)	Range		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~240.0 W
		H	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~240.0 VA
		H	200 VA~2600 VA
	Accuracy		VxA, Calculated value
Power Reactive (Q)	Range	L	0.0 VAR~240.0 VAR
		H	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			**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~2.400A
		H	2.00~26.00A
	Calculated Formula	L	$\frac{\sum VA}{\sum V}$
		H	
Power	Range	L	0.0W~480.0W
		H	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~480.0VA
		H	± 400W~5200VA
	Calculated Formula	L	$\sqrt{(\sum W)^2 + (\sum Q)^2}$ Calculated value
		H	
Power Reactive (Q)	Range	L	0.0VAR ~ ± 480.0VAR
		H	± 400VAR ~ ± 5200VAR
	Calculated Formula	L	L1 VAR + L2 VAR, Calculated value
		H	
DC OUTPUT			
Max. Power			6000 W
Max. Current	0-210 V		28.8 A
	0-420 V		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		0.10 - 28.80 A
	5 V-420 V		0.10 - 14.40 A
	Accuracy		± (2.0% of setting + 2 counts)
OC Fold Back Response Time			<1.4 s

DC MEASUREMENT		460XAC
Voltage	Range	0.0-420.0 V
	Accuracy	± (0.2% of setting + 5 counts)
Current	Range	0.05 A~39.00 A
	Accuracy	± (1% of reading +5 counts)
Power	Range	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 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		125.6 lbs (57 kg)
Operation Environment		0-40°/20-80% RH

Specifications subject to change

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.

300XAC Series

Modular AC Power Sources

Our 300XAC Series modular AC power sources incorporate the latest in modular technology, making them ideal for the most demanding applications. These versatile AC power sources can be configured for 1Ø stand-alone operation or linked together for up to 5.4 kVa of AC power in 1Ø or up to 6 kVA of AC power in 3Ø output configurations.

Features

- Modular design allows operator to connect up to 3 instruments together for 1Ø or 3Ø applications requiring up to 18kVA of AC power
- Configure 2 sources for 1Ø/2W output voltages up to 600VAC
- 50 built-in memory locations with 9 test steps
- Standard DC output capability
- Transient feature simulates voltage variations, brownouts, and transient voltage conditions
- Constant current output with over current fold back feature
- Rack mount handle kit included

Standard

- USB/RS-232 Interface

Options

- Grounded Neutral
- GPIB Interface
- 7 Remote Memories
- Ethernet Interface
- Linking Card

Start Output
PowerTRAC™ AVAILABLE

NI LabVIEW
DRIVER AVAILABLE

Applicable

Aerospace | Appliance | Laboratory | Networking | System Integrator

APT Benefits

WARRANTY 3 YEAR WARRANTY

10 DAY GUARANTEED SHIPMENT

The Modular AC Source Advantage

What is a modular AC power source?

We use the term modular to define the capability of our 300XAC Series to be interconnected. The interconnection among up to three individual 300XAC Series Power Sources, allows for higher power outputs and different power configurations than an individual instrument could allow for Parallel or Polyphase modes.

What is Parallel mode?

Parallel mode allows the operator to increase the output current of the system by a factor of 2 or 3 depending on the number of sources that are interconnected.

What is Polyphase mode?

Polyphase mode allows the operator to increase the total power output of the system as well as change the output power configuration of the system.

Advantages

SmartDETECT

This exclusive feature automatically determines how many power sources are linked together. After the check is completed the 300XAC Series will automatically change the programming output function based on the number of linked sources.

SmartCONFIG Feature

This exclusive feature allows the operator to easily change the output of the linked sources to Parallel or Polyphase mode with the push of a button.

Main/Secondary Relationship

The main/secondary relationship between linked 300XAC instruments synchronizes the firmware of each power source so the output and phase angle separation is regulated. It also gives the operator the capability to program parameters for all linked sources from the front panel of the master instrument.

Exclusive Linking Card (option 08)

With the Linking Card option installed, up to three 300XAC instruments can be interconnected for Parallel or Polyphase output.

Benefits

- Easy to change from 1Ø to 3Ø output
- No need to have separate sources for 1Ø to 3Ø applications
- Allows for future expansion if power requirements change
- Greater mobility of the AC power sources
- Ability to generate 3Ø power if only 1Ø is available

Make Linking Your 300XAC A Breeze.

Download our Linking Guide at aptsources.com/300XAC

Specifications – 300XAC Series

INPUT			310XAC	320XAC
Phase			1Ø	
Voltage			100 - 240 VAC ±10%	
Frequency			47 - 63 Hz	
OUTPUT				
Voltage			5 - 300 V	
Max Power			1 kVA	2 kVA
Max Current 1Ø	0 - 150 V		9.2 A @ ≤110 V	18.4 A @ ≤110 V
	0 - 300 V		4.6 A @ ≤220 V	9.2 A @ ≤220 V
Phase			1Ø (Parallel/Poly-Phase Linking for 1Ø3W or 3Ø4W)	
Frequency			40.0 - 1000 Hz	
THD			<1% (Resistive Load)	
Crest Factor			Inrush CF ≥3 at 110 V, Continuous Current CF ≥3 at 110 V	
Line Regulation			± 0.1 V	
Load Regulation			± 0.5 V	
DC OUTPUT VOLTAGE				
Voltage			5 - 420 V	
Max Power			1000 W	2000 W
Max Current 1Ø	0 - 210 V		4.8 A	9.6 A
	0 - 420 V		2.4 A	4.8 A
Ripple & Noise (Peak to Peak)			<3.0 V	
MEASUREMENT				
Voltage	Range		0.0 - 400.0 V	
	Accuracy		± (1% of reading + 2 counts) >5 V	
Frequency	Range		0.0 - 1000 Hz	
	Accuracy		0.0 - 500 Hz ± 0.1 Hz, 501 - 1000 Hz ± 0.2 Hz	
Current (RMS)	Range		0.005 A - 13.00 A	0.005 A - 26.00 A
	Accuracy		± (1% of reading + 5 counts)	
Current Peak	Range		0.0 A - 38.0 A	0.0 A - 76.0 A
	Accuracy		± (1% of reading + 5 counts)	
Power	Range		0.0 W - 1300 W	0.0 W - 2600 W
	Accuracy	L	± (2% of reading + 15 counts) at PF ≥0.2	
		H	± (2% of reading + 5 counts) at PF ≥0.2	
Power Apparent (VA)	Range		0.0 VA - 1300 VA	0.0 VA - 2600 VA
	Calculated Formula		V×A, Calculated value	
Power Reactive (Q)	Range		0.0 VAR - 1300 VAR	0.0 VAR - 2600 VAR
	Calculated Formula		$\sqrt{(VA)^2-(W)^2}$, Calculated value	
Power Factor	Range		———— 0.000 - 1.000	
	Calculated Formula		W/VA, Calculated and displayed to three significant digits	
Crest Factor	Range		0.0 - 10.0	
	Accuracy		A peak / Arms, Calculated and displayed to two significant digits	
OPTIONS				
Grounded Neutral	Option 2		All Models	
GPIB Interface	Option 3		All Models	
7 Remote Memory	Option 4		All Models	
Ethernet Interface	Option 6		All Models	
Linking Card	Option 8		All Models	
GENERAL				
Operation Environment			0 - 40°C / 20 - 80% RH	
Dimensions (W x H x D)			16.92 x 5.26 x 20.87 in	16.92 x 5.26 x 20.87 in
			430 x 133.5 x 530 mm	430 x 133.5 x 530 mm
Net Weight			47.16 lbs (21 kg)	49 lbs (22 kg)

Linking Parallel Output 1Ø2W			310XAC	320XAC
Linked Unit			2 - 3 Units, 1Ø2W (L1 - N)	
Voltage	Phase		5 - 300 V	
Power Max	# Units	2	1.8 kVA	3.6 kVA
		3	2.7 kVA	5.4 kVA
Max Current Line (RMS)	0 - 150 V	L(2)	14.72 A @ 20 V -110 V	29.44 A @ 20 V -110 V
		L(3)	22.08 A @ 20 V - 110 V	44.16 A @ 20 V - 110 V
	0 - 300 V	H(2)	7.36 A @ 20 V - 220 V	14.72 A @ 20 V - 220 V
		H(3)	11.04 A @ 20 V - 220 V	22.08 A @ 20 V - 220 V
Linking Polyphase Output 1Ø3W			**310XAC**	**320XAC**
Linked Units			2 Units @ 180°, 1Ø3W (L1-L2 - N)	
Voltage	Phase		10 - 600 V	
	Line		5 - 300 V	
Power	Max		2 kVA	4 kVA
Max Current Phase	0 - 300 V	L(1)	9.2 A @ ≤110 V	18.4 A @ ≤110 V
	0 - 600 V	H(1)	4.6 A @ ≤220 V	9.2 A @ ≤220 V
Max Current Line	0 - 300 V	L(2)	9.2 A @ ≤220 V	18.4 A @ ≤220 V
	0 - 600 V	H(2)	4.6 A @ ≤440 V	9.2 A @ ≤440 V
Linking Polyphase Output 3Ø4W			**310XAC**	**320XAC**
Linked Units			3 Units @ 120°, 3Ø4W (L1-L2-L3 - N)	
Voltage	Phase		5 - 300 V	
	Line		5 - 520 V	
Power	Max		3 kVA	6 kVA
Max Current Phase	0 - 150 V	L(1)	9.2 A @ ≤110 V	18.4 A @ ≤110 V
	0 - 300 V	H(1)	4.6 A @ ≤220 V	9.2 A @ ≤220 V
Max Current Line	0 - 150 V	L(3)	9.2 A @ ≤190.5 V	18.4 A @ ≤190.5 V
	0 - 300 V	H(3)	4.6 A @ ≤381 V	9.2 A @ ≤381 V
Max Current Phase Delta	0 - 260 V	L(3)	5.31 A @ ≤190.5 V	10.62 A @ ≤190.5 V
	0 - 520 V	H(3)	2.65 A @ ≤381 V	5.31 A @ ≤381 V
Linking Parallel DC Output 1Ø2W			**310XAC**	**320XAC**
Linked Units			2 - 3 Units, 1Ø2W (L1 - N)	
Voltage Power	Line		5 - 420 V	
Power Max	# Units	2	1.8 kVA	3.6 kVA
		3	2.7 kVA	5.4 kVA
Max Current Line	0 - 210 V	L(2)	7.68 A @ 50 V - 210 V	15.36 A @ 50 V - 210 V
		L(3)	11.52 A @ 50 V - 210 V	23.04 A @ 50 V - 210 V
	0 - 420 V	H(2)	3.84 A @ 50 V - 420 V	7.68 A @ 50 V - 420 V
		H(3)	5.76 A @ 50 V - 420 V	11.52 A @ 50 V - 420 V

Specifications – 300XAC Series

Measurement (Total) Linking Parallel 1Ø2W			310XAC	320XAC
Voltage	Range		0.0 - 400.0 V	
	Accuracy		± (1% of reading + 2 counts) >5 V	
Frequency	Range		0.0 - 1000.0 Hz	
	Accuracy	L	± 0.1 Hz @ 0.0 - 500 Hz	
		H	± 0.2 Hz @ 501 - 1000 Hz	
Current (RMS)	Range	2	0.00 A - 26.00 A	0.00 A - 52.00 A
		3	0.00 A - 39.00 A	0.00 A - 78.00 A
	Accuracy	L	± (1.5% of reading +15 counts) x # of Linked Units @ 40.0 - 70.0 Hz & Current is >1.0 A	
		H	± (1.5% of reading +15 counts) x # of Linked Units @ 70.1- 1000 Hz & Current is >5.00 A	
Power (W)	Range	2	0 W - 2600 W	0 W - 5200 W
		3	0 W - 3900 W	0 W - 7800 W
	Accuracy		± (2% of reading + 10 counts) x (# of Linked Units) at PF ≥0.2, 40 - 500 Hz, and Current >5.0 A ± (2% of reading + 10 counts) x (# of Linked Units) at PF ≥0.3, 501 - 1000 Hz, and Current >5.0 A	
Power Apparent (VA)	Range	2	0 W - 2600 VA	0 W - 5200 VA
		3	0 W - 3900 VA	0 W - 7800 VA
	Accuracy		V x A, Calculated Value	
Power Reactive (Q)	Range	2	0 W - 2600 VA	0 W - 5200 VA
		3	0 W - 3900 VA	0 W - 7800 VA
	Accuracy		$\sqrt{(VA)^2 - (W)^2}$, Calculated Value	
Power Factor	Range		0 - 1.000	
	Accuracy		W / VA, Calculated and displayed to three significant digits	

Measurement (Total) Linking Polyphase 1Ø3W			310XAC	320XAC
Voltage	Range	2	L1 Voltage + L2 Voltage	
	Accuracy		Summation of linked sources, Calculated and displayed to one significant digit	
Frequency	Range		0.0 - 1000.0 Hz	
	Accuracy	L	± 0.1 Hz @ 0.0 - 500 Hz	
		H	± 0.2 Hz @ 501 - 1000 Hz	
Current (RMS)	Range	2	(L1 Current + L2 Current)/2	
	Accuracy		± (1% of reading + 5 counts) at 40 - 70 Hz ± (1% of reading + 5 counts) at 70.1 - 500 Hz, and output current (RMS) >0.200 A ± (1% of reading + 5 counts) at 501 - 1000 Hz, and output current (RMS) >0.300 A	
Power (W)	Range	2	L1 Power + L2 Power	
	Accuracy	2	L1 Power + L2 Power, Calculated Value	
Power Apparent (VA)	Range	2	L1 VA + L2 VA	
	Accuracy	2	L1 VA + L2 VA, Calculated Value	
Power Reactive (Q)	Range	2	L1 VAR + L2 VAR	
	Accuracy	2	L1 VAR + L2 VAR, Calculated Value	
Power Factor	Range		0 - 1.000	
	Accuracy		(L1 P + L2 P) / (L1 VA + L2 VA), Calculated and displayed to three significant digits	

Measurement (Total) Linking Polyphase 3Ø4W			310XAC	320XAC
Voltage	Range		(A+B+C)/3	
	Accuracy		(A+B+C)/3 , Calculated and displayed to one significant digit	
Frequency	Range		0.0 - 1000.0 Hz	
	Accuracy	L	± 0.1 Hz @ 0.0 - 500 Hz	
		H	± 0.2 Hz @ 501 - 1000 Hz	
Current (RMS)	Range		(A+B+C)/3	
	Accuracy		± (1% of reading + 5 counts) at 40 - 70 Hz ± (1% of reading + 5 counts) at 70.1 - 500 Hz, and output current (RMS) >0.200 A ± (1% of reading + 5 counts) at 501 - 1000 Hz, and output current (RMS) >0.300 A	
Power (W)	Range		A Power + B Power + C Power	
	Accuracy		Calculated Value	
Power Apparent (VA)	Range		A VA + B VA + C VA	
	Accuracy		Calculated Value	
Power Reactive (Q)	Range		A VAR + B VAR + C VAR	
	Accuracy		Calculated Value	
Power Factor	Range		0 - 1.000	
	Accuracy		Sum P / Sum VA, Calculated and displayed to three significant digits	

Measurement (Total) Linking Parallel DC			310XAC	320XAC
Voltage	Range		0.0 - 420.0 V	
	Accuracy		± (1% of reading + 2 counts) >5 V	
Current (RMS)	Range	2	0.05 A - 26.00 A	0.05 A - 52.00 A
		3	0.05 A - 39.00 A	0.05 A - 78.00 A
	Accuracy		± (1% of reading + 5 counts) x # of Linked Units, Current >1.00 A	
Power (W)	Range	2	0 W - 2600 W	0 W - 25200 W
		3	0 W - 3900 W	0 W - 7800 W
	Accuracy		± (2% of reading + 5 counts) x # of Linked Units	

Specifications subject to change

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.

Key

L = Low Limit Range	L (2) = Low Limit Range 2 Units Linked	H (2) = High Limit Range 2 Units Linked	2 = 2 Units Linked
H = High Limit Range	L (3) = Low Limit Range 3 Units Linked	H (3) = High Limit Range 3 Units Linked	3 = 3 Units Linked

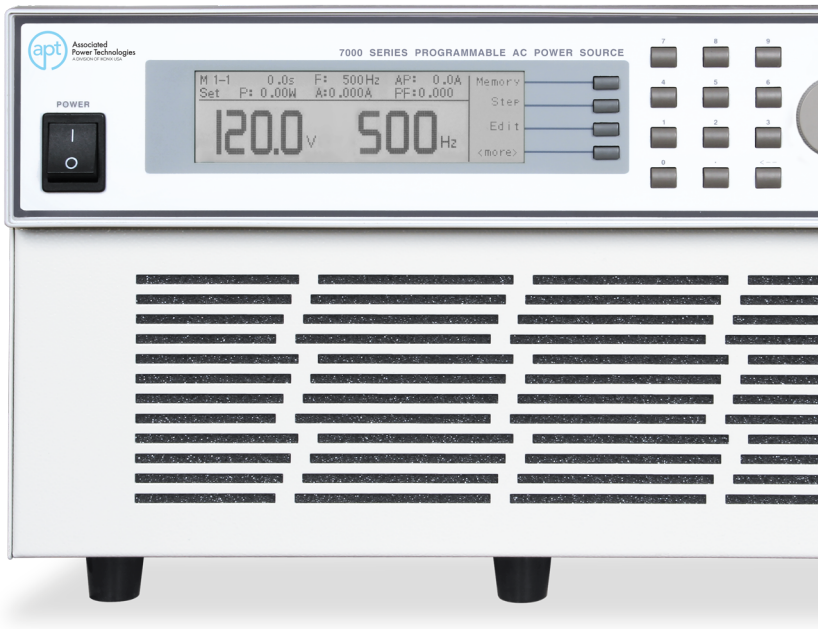
7000 Series

Automated AC Power Sources

Our 7000 Series automated AC power sources are ideal for advanced applications at a competitive price. 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 metering data on the front panel and the easy-to-use local interface allows operators to get tests up and running quickly.

Features

- 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



Options

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

NI LabVIEW DRIVER AVAILABLE

Start Output PowerTRAC™ AVAILABLE

Applicable

Aerospace | Appliance | System Integrator | Lighting | Medical

APT Benefits

3 YEAR WARRANTY

10 DAY GUARANTEED SHIPMENT

INPUT			7004	7008	7016	7040
Phase			1Ø			
Voltage			115/230 VAC ± 10%		230 VAC ± 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 1Ø	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			1Ø			
Frequency			40.0 - 500 Hz			
THD			< 1% (Resistive Load)			
Crest Factor			≥3			
Line Regulation			± 0.1 V			
Load Regulation			± (0.5% of output + 0.5 V) at Resistive Load			
MEASUREMENT						
Voltage	Range		0.0 - 400.0 V			
	Accuracy		± (1% of reading + 2 counts)		± (1% of reading + 5 counts) >5V	
Frequency	Range		0.0 - 500 Hz			
	Accuracy		± 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		± (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		± (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	± (2% of reading + 15 counts) at PF >0.2		± (2% of reading + 30 counts) at PF >0.2	± (2% of reading + 5 counts) at PF ≥0.2 Voltage >5 V Current >0.05 A
		H	± (2% of reading + 5 counts) at PF >0.2		± (2% of reading + 10 counts) at PF >0.2	
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			≥80% (at Full Load)			
Operation Environment			0 - 40ºC / 20 - 80% RH			
Dimensions (W x H x D)			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	16.92 x 8.74 x 19.69 in
			430 x 89 x 400 mm	430 x 89 x 400 mm	430 x 89 x 500 mm	430 x 222 x 500 mm
Net Weight			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:

Why We Use Counts

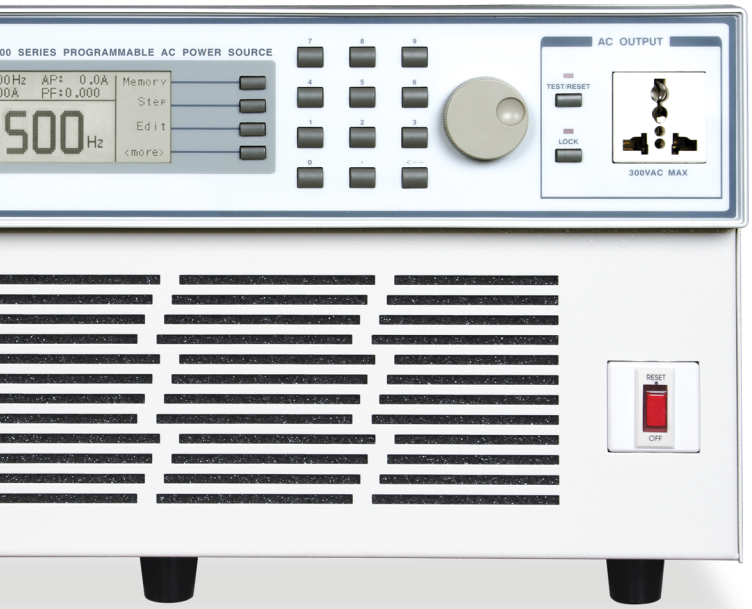
APT publishes some specifications using "counts" which allows us to provide a better indication of the tester's capabilities across measurement ranges. A count refers to the lowest resolution of the display for a given measurement range. For example, if the resolution for voltage is 1V then 2 counts = 2V.

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

6000 Series

Automated AC Power Sources

Our 6000 Series of automated AC power sources are ideal for applications where PC control is ideal to capture metering and testing results from the source. We provide LabVIEW drivers and PowerTRAC™ software free of charge, to assist you in getting your power source up and running in no time. Our simple to use front panel interface is ideal for customers that are not interested in using a PC and need the flexibility to operate the source at a moments notice for quick testing.



Start Output
PowerTRAC™ AVAILABLE

NI LabVIEW
DRIVER AVAILABLE

Features

- 50 built-in memory locations with 9 test steps
- DC output capability (optional)
- 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

Standard

- USB/RS-232 Interface

Options

- 230 VAC ± 10%
- Grounded Neutral
- GPIB Interface
- 7 Remote Memories
- Ethernet Interface
- DC Output

Applicable

Aerospace | Appliance | Laboratory | Lighting | Medical

APT Benefits

WARRANTY 3 YEAR WARRANTY

10 DAY GUARANTEED SHIPMENT

INPUT			6010	6020	6040
Phase			1Ø		
Voltage			115/230 VAC ± 10%	208 VAC ± 10%	
Frequency			47 – 500 Hz		
OUTPUT					
Voltage			0 - 300 V	5 - 300 V	
Max Power			1 kVA	2 kVA	4 kVA
Max Current 1Ø	0 - 150 V		9.2 A @ ≤110 V	18.4 A @ ≤110 V	36.8 A @ ≤110 V
	0 - 300 V		4.6 A @ ≤220 V	9.2 A @ ≤220 V	18.4 A @ ≤220 V
Phase			1Ø		
Frequency			47 - 500 Hz		
THD			<1% (Resistive Load)		
Crest Factor			≥3		
Line Regulation			± 0.1 V		
Load Regulation			± (0.5% of output + 0.5 V) at Resistive Load		
MEASUREMENT					
Voltage	Range		0.0 - 400.0 V		
	Accuracy		± (1% of reading + 2 counts)	± (1% of reading + 5 counts) >5 V	
Frequency	Range		0.0 - 500 Hz		
	Accuracy		± 0.1 Hz		
Current (RMS)	Range		0.005 A - 13.00 A	0.05 A - 26.00 A	0.05 A - 52.00 A
	Accuracy		± (1% of reading + 5 counts)		
Current Peak	Range		0.0 A - 38.0 A	0.0 A - 76.0 A	0.0 A - 152.0 A
	Accuracy		± (1% of reading + 5 counts)		
Power	Range		0.0 W - 1300 W	0.0 W - 2600 W	0.0 W - 5200 W
	Accuracy	L	± (2% of reading + 30 counts)	± (2% of reading + 5 counts)	
		H	± (2% of reading + 10 counts)		
Power Factor	Range		0.000 - 1.000		
	Accuracy		W/VA, Calculated and displayed to three significant digits		
GENERAL					
Rack Mount Kit			Standard		
USB/RS-232 Interface			Standard		
Lockout			Key lockout or password protection		
Efficiency			≥80% (at Full Load)		
Operation Environment			0 - 40°C / 20 - 80% RH		
Dimensions (W x H x D)			16.92 x 3.50 x 15.75 in	16.92 x 3.50 x 19.69 in	16.92 x 8.74 x 19.69 in
			430 x 89 x 400 mm	430 x 89 x 500 mm	430 x 222 x 500 mm
Net Weight			40 lbs (18.2 kg)	66 lbs (30 kg)	143.3 lbs (65 kg)
DC OUTPUT VOLTAGE					
Voltage			0 - 400 V		
Max Power			500 W	1000 W	2000 W
Max Current	0 - 200 V		4.6 A	9.2 A	18.4 A
	0 - 400 V		2.3 A	4.6 A	9.2 A
Ripple & Noise (RMS)			0 - 200 V <250 mV & 0 - 400 V <400 mV	0 - 200 V <350 mV & 0 - 400 V <400 mV	

Specifications subject to change

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.

5000 Series

Manual AC Power Sources

Our 5000 Series manual AC power sources are lightweight and efficient while providing a robust feature set. Ideal for bench-top applications, they feature four LED displays that monitor voltage, current, frequency, power, and power factor. The easy-to-use local push-button interface allows you to quickly set-up and change parameters with ease while built-in safety features protect the instrument, the operator, and the DUT ensuring a safe work environment.

Features

- 3 built-in memory locations to store and quickly recall test parameters
- LED displays monitor voltage, current, frequency, and power / power factor
- Independent, adjustable high and low limits for voltage, current, and frequency
- Power Up feature configures the output relay for quick and efficient testing
- Constant current output with over current fold back feature
- Front panel lockout

Options

- 230 VAC ± 10%
- Grounded Neutral

Applicable

Aerospace | Laboratory | Lighting | Medical

APT Benefits

3 YEAR WARRANTY

10 DAY GUARANTEED SHIPMENT

INPUT		5005	5010	5020	5040
Phase		1Ø			
Voltage		115/230 VAC ± 10%		208 VAC ± 10%	
Frequency		47 - 500 Hz			
OUTPUT					
Voltage		0 - 300 V		5 - 300 V	
Max Power		500 VA	1 kVA	2 kVA	4 kVA
Max Current 1Ø	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		1Ø			
Frequency		40.0 - 450 Hz			
THD		<1% (Resistive Load)			
Crest Factor		≥ 3			
Line Regulation		± 0.1 V			
Load Regulation		± (0.5% of output + 0.5 V) at Resistive Load			
MEASUREMENT					
Voltage	Range	0.0 - 400.0 V			
	Accuracy	± (1% of reading + 2 counts)		± (1% of reading + 5 counts) >5V	
Frequency	Range	0.0 - 500 Hz			
	Accuracy	± 0.1 Hz			
Current (RMS)	Range	0.00 A - 6.50 A	0.00 A - 13.00 A	0.00 A - 26.00 A	0.05 A - 52.00 A
	Accuracy	± (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	± (2% of reading + 10 counts) at PF ≥0.2			
Power Factor	Range	0.000 - 1.000			
	Accuracy	W/VA, Calculated and displayed to three significant digits			
GENERAL					
Lockout		Key lockout			
Inrush Current		4 times the max rated current			
Enhanced Over Load Protection		4 times of rating current, Over Current 110% can be held for 1000ms w/o shutdown of output			
Over Current Foldback		Constant Current Mode (Voltage output varies to maintain current output based on load)			
Memories		3 Programmable Memory Locations			
Front Output		Universal Receptacle			
Rear Output		–	–	Universal Receptacle	Terminal Block
Displays		4 LED Displays			
Operation Key Feature		Up/Down Arrow Keys			
Voltage Limits		Programmable High & Low Limits			
Frequency Limits		Programmable High & Low Limits			
Power Up Settings		Specify Output Power Condition on Power Up (On, Off, Last)			
Protection Circuits		Over Current, Over Voltage, Over Power, Over Temperature			
Efficiency		≥80% (at Full Load)			
Operation Environment		0 - 40°C / 20 - 80% RH			
Dimensions (W x H x D)		16.92 x 3.50 x 11.81 in	16.92 x 3.50 x 15.75 in	16.92 x 3.50 x 19.69 in	16.92 x 8.74 x 19.69 in
		430 x 89 x 300 mm	430 x 89 x 400 mm	430 x 89 x 500 mm	430 x 222 x 500 mm
Net Weight		36.4 lbs (16.5 kg)	40 lbs (18.2 kg)	66 lbs (30 kg)	143.3 lbs (65 kg)

Specifications subject to change

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.

VariPLUS®

Power Converter

The VariPLUS® is a power converter specifically designed for testing in the production line or laboratory environment. The VariPLUS out performs the traditional variable transformer on multiple levels that include metering, automatic voltage, and frequency adjustments to the load. Easily produce variable output voltages between 0-300 VAC with selectable frequency at 50/60 Hz to satisfy your product testing requirements. Simple adjustments are made through dedicated keys and a rotary knob. The universal receptacle provides multi-national connections while providing operator protection.

Features

- Isolated output ensures the power provided to the DUT is free from distortion, voltage spikes, and other transients
- Push-button interface for 50/60 Hz output
- SmartVOLT feature allows the operator to configure the instrument to power up at 0 volts or the previously used voltage before the instrument was turned off
- Metering circuits monitor voltage, current, frequency, and power
- Output/Reset key maximizes operator safety by enabling and disabling the output with a simple push-button
- Power Up feature configures the output relay for quick and efficient testing
- Front panel lockout

Options

- Grounded Neutral

Applicable

Laboratory | Lighting | Medical | Test & Measurement

APT Benefits

3 YEAR WARRANTY | 10 DAY GUARANTEED SHIPMENT

INPUT		105
Phase		1Ø
Voltage		115/230 VAC Selectable ± 10% Variation
Frequency		47 – 63 Hz
OUTPUT		
Voltage		0 - 300 VAC
Max Power		500 VA
Max Current (RMS)		2.3 A @ <220 V, 4.6 A @ <110 V
Phase		1Ø2W
Frequency		50, 60 Hz Selectable
THD		<1% (Resistive Load)
Crest Factor		≥ 3
Line Regulation		± 0.1 V
Load Regulation		± (0.5% of output + 0.5 V) at Resistive Load
Response Time		<400 µsec
MEASUREMENT		
Voltage	Range	0.0 - 400.0 V
	Accuracy	± (1% of reading + 2 counts)
Frequency	Range	50, 60 Hz Selectable
	Accuracy	± 0.1% Hz of setting ± .03%
Current (RMS)	Range	0.0 – 6.50 A
	Accuracy	± (1% of reading + 5 counts)
Power	Range	0 - 650 W
	Accuracy	± (2% of reading + 10 counts) at PF ≥ 0.2
GENERAL		
Inrush Current		4 times the current rating
Enhanced Over Load Capacity		4 times of rating current, Over Current 110% can hold for 1000 ms w/o Protection
Operation Key Feature		Frequency, Display, System, Lock, Output
Digital Encoder		Adjusts output voltage and system parameter values
Fan		Temp. Control Two Fan Speed
Front Output		Universal Receptacle
Rear Output		–
Displays		LED
Efficiency		≥ 80% (at full load)
Protection Circuits		Over Current, Over Voltage, Over PP, Over Temperature
Calibration		Front Panel Calibration
Dimensions (W x H x D)		14 x 5.25 x 12 in
		355 x 133 x 300 mm
Net Weight		28 lbs (13 kg)

Specifications subject to change

Why We Use Counts
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AC Power Sources for All Applications

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