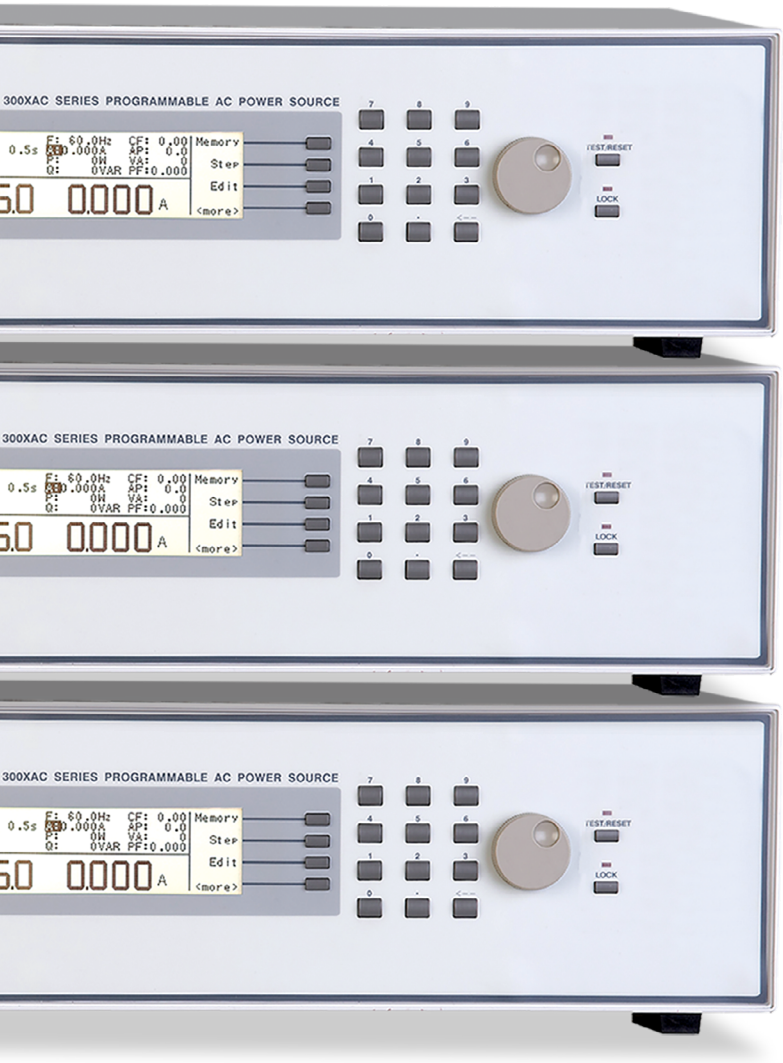
300XAC Series

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

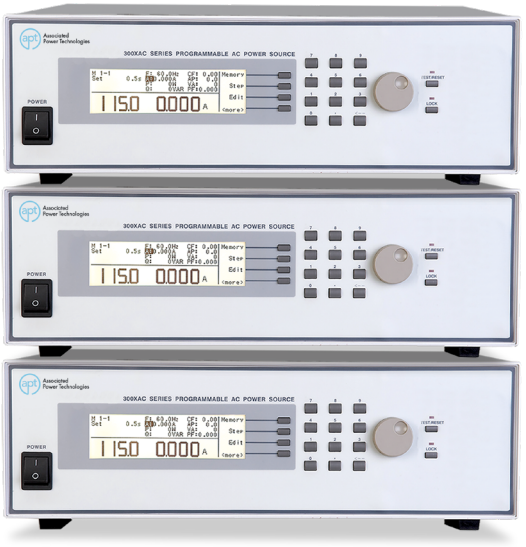
WARRANTY 3 YEAR WARRANTY

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