

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 16.2 kVA of AC power in 1Ø or up to 18 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
- Ethernet Interface
- GPIB Interface
- Linking Card
- 7 Remote Memories



NI LabVIEW
DRIVER AVAILABLE

Applicable



Aerospace



Appliance



Laboratory



Networking



System
Integrator

APT Benefits



The Modular AC Source Advantage

What is a modular AC power source?

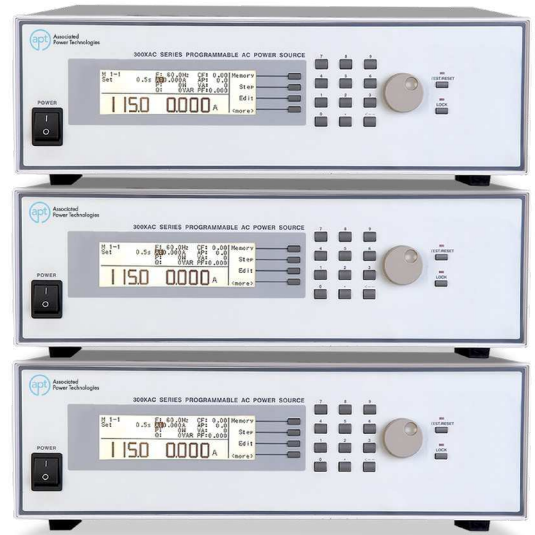
We use the term modular to define the capability of our 300XAC Series to be interconnected. The interconnection among up to three individual 300XAC Series Power Sources, allows for higher power outputs and different power configurations than an individual instrument could allow for Parallel or Polyphase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

Master/Slave Relationship

The master/slave 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	340XAC	360XAC
Phase			1Ø			1Ø or 3Ø
Voltage			100 - 240 VAC ±10%		200 - 240 VAC ±10%	1Ø: 200 - 240 VAC ±10% 3Ø3W: 200 - 240 VAC ±10% 3Ø4W: 346 - 416 VAC ±10%
Frequency			47 - 63 Hz			
OUTPUT						
Voltage			5 - 300 V			
Max Power			1 kVA	2 kVA	4 kVA	6 kVA
Max Current 1Ø	0 - 150 V		9.2 A @ ≤110 V	18.4 A @ ≤110 V	36.8 A @ ≤110 V	55.2 A @ ≤110 V
	0 - 300 V		4.6 A @ ≤220 V	9.2 A @ ≤220 V	18.4 A @ ≤220 V	27.6A @ ≤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	4000 W	6000 W
Max Current 1Ø	0 - 210 V		4.8 A	9.6 A	19.2 A	28.8 A
	0 - 420 V		2.4 A	4.8 A	9.6 A	14.4 A
Ripple & Noise (Peak to Peak)			<3.0 V		<4.0 V	
MEASUREMENT						
Voltage	Range		0.0 - 400.0 V			
	Accuracy		± (1% of reading + 2 counts) >5 V		± (1% of reading + 5 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	0.05 A - 52.00 A	0.05 A - 78.00 A
	Accuracy		± (1% of reading + 5 counts)		± (1% of reading + 5 counts) @ 40 - 100 Hz, ± (1% of reading + 5 counts) @ 101 - 500 Hz >0.1 A, ± (1% of reading + 5 counts) @ 501 - 1000 Hz >0.2 A	
Current Peak	Range		0.0 A - 38.0 A	0.0 A - 76.0 A	0.0 A - 152 A	0.0 A - 228 A
	Accuracy		± (1% of reading + 5 counts)			
Power	Range		0.0 W - 1300 W	0.0 W - 2600 W	0.0 W - 5200 W	0.0 W - 7800 W
	Accuracy	L	± (2% of reading + 15 counts) at PF ≥0.2		± (2% of reading + 5 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	0.0 VA - 5200 VA	0.0 VA - 7800 VA
	Calculated Formula		V×A, Calculated value			
Power Reactive (Q)	Range		0.0 VAR - 1300 VAR	0.0 VAR - 2600 VAR	0.0 VAR - 5200 VAR	0.0 VAR - 7800 VAR
	Calculated Formula		√(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	16.92 x 10.51 x 19.69 in	16.92 x 15.77 x 19.69 in
			430 x 133.5 x 530 mm	430 x 133.5 x 530 mm	430 x 267 x 500 mm	430 x 400.5 x 500 mm
Net Weight			47.16 lbs (21 kg)	49 lbs (22 kg)	82 lbs (37 kg)	117 lbs (53 kg)

Linking Parallel Output 1Ø2W			310XAC	320XAC	340XAC	360XAC
Linked Unit			2 - 3 Units, 1Ø2W (L1 - N)			
Voltage		Phase	5 - 300 V			
Power Max	# Units	2	1.8 kVA	3.6 kVA	7.2 kVA	10.8 kVA
		3	2.7 kVA	5.4 kVA	10.8 K 10.8 kVAA A	16.2 kVA
Max Current	0 - 150 V	L(2)	14.72 A @ 20 V -110 V	29.44 A @ 20 V -110 V	58.88 A @ 20V - 110 V	88.32 A @ 20 V - 110 V
		L(3)	22.08 A @ 20 V - 110 V	44.16 A @ 20 V - 110 V	88.32 A @ 20 V - 110 V	132.48 A @ 20 V - 110 V
Line (RMS)	0 - 300 V	H(2)	7.36 A @ 20 V - 220 V	14.72 A @ 20 V - 220 V	29.44 A @ 20 V - 220 V	44.16 A @ 20 V - 220 V
		H(3)	11.04 A @ 20 V - 220 V	22.08 A @ 20 V - 220 V	44.16 A @ 20 V - 220 V	66.24 A @ 20 V - 220 V
Linking Polyphase Output 1Ø3W			310XAC	320XAC	340XAC	360XAC
Linked Units			2 Units @ 180°, 1Ø3W (L1-L2 - N)			
Voltage	Phase		10 - 600 V			
	Line		5 - 300 V			
Power	Max		2 kVA	4 kVA	8 kVA	12 kVA
Max Current Phase	0 - 300 V	L(1)	9.2 A @ ≤110 V	18.4 A @ ≤110 V	36.8 A @ ≤110 V	55.2 A @ ≤110 V
	0 - 600 V	H(1)	4.6 A @ ≤220 V	9.2 A @ ≤220 V	18.4 A @ ≤220 V	27.6 A @ ≤220 V
Max Current Line	0 - 300 V	L(2)	9.2 A @ ≤220 V	18.4 A @ ≤220 V	36.8 A @ ≤220 V	55.2 A @ ≤220 V
	0 - 600 V	H(2)	4.6 A @ ≤440 V	9.2 A @ ≤440 V	18.4 A @ ≤440 V	27.6 A @ ≤440 V
Linking Polyphase Output 3Ø4W			310XAC	320XAC	340XAC	360XAC
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	12 kVA	18 kVA
Max Current Phase	0 - 150 V	L(1)	9.2 A @ ≤110 V	18.4 A @ ≤110 V	36.8 A @ ≤110 V	55.2 A @ ≤110 V
	0 - 300 V	H(1)	4.6 A @ ≤220 V	9.2 A @ ≤220 V	18.4 A @ ≤220 V	27.6 A @ ≤220 V
Max Current Line	0 - 150 V	L(3)	9.2 A @ ≤190.5 V	18.4 A @ ≤190.5 V	36.8 A @ ≤190.5 V	55.2 A @ ≤190.5 V
	0 - 300 V	H(3)	4.6 A @ ≤381 V	9.2 A @ ≤381 V	18.4 A @ ≤381 V	27.6 A @ ≤381 V
Max Current Phase Delta	0 - 260 V	L(3)	5.31 A @ ≤190.5 V	10.62 A @ ≤190.5 V	21.24 A @ ≤190.5 V	31.87 A @ ≤190.5 V
	0 - 520 V	H(3)	2.65 A @ ≤381 V	5.31 A @ ≤381 V	10.62 A @ ≤381 V	15.93 A @ ≤381 V
Linking Parallel DC Output 1Ø2W			310XAC	320XAC	340XAC	360XAC
Linked Units			2 - 3 Units, 1Ø2W (L1 - N)			
Voltage Power		Line	5 - 420 V			
Power Max	# Units	2	1.8 kVA	3.6 kVA	7.2 kVA	10.8 kVA
		3	2.7 kVA	5.4 kVA	10.8 kVA	16.2 kVA
Max Current Line	0 - 210 V	L(2)	7.68 A @ 50 V - 210 V	15.36 A @ 50 V - 210 V	30.72 A @ 50 V - 210 V	46.08 A @ 50 V - 210 V
		L(3)	11.52 A @ 50 V - 210 V	23.04 A @ 50 V - 210 V	46.08 A @ 50 V - 210 V	69.12 A @ 50 V - 210 V
	0 - 420 V	H(2)	3.84 A @ 50 V - 420 V	7.68 A @ 50 V - 420 V	15.36 A @ 50 V - 420 V	23.04 A @ 50 V - 420 V
		H(3)	5.76 A @ 50 V - 420 V	11.52 A @ 50 V - 420 V	23.04 A @ 50 V - 420 V	34.56 A @ 50 V - 420 V

Specifications – 300XAC Series

Measurement (Total) Linking Parallel 1Ø2W			310XAC	320XAC	340XAC	360XAC
Voltage	Range		0.0 - 400.0 V			
	Accuracy		± (1% of reading + 2 counts) >5 V		± (1% of reading + 5 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	0.00 A - 104.0 A	0.00 A - 156.0 A
		3	0.00 A - 39.00 A	0.00 A - 78.00 A	0.00 A - 156.0 A	0.00 A - 234.0 A
	Accuracy	L	± (1.5% of reading +15 counts) x # of Linked Units @ 40.0 - 70.0 Hz & Current is >1.0 A		± (1.5% of reading +15 counts) x Link Units @ 40.0 - 70.0 Hz and Current (RMS) >2.00 A, ± (1.5% of reading +15 counts) x Link Units @ 70.1 - 1000 Hz, and Current (RMS) >10.00 A	± (1.5% of reading +15 counts) x Link Units @ 40.0 - 70.0 Hz and Current (RMS) >3.00 A, ± (1.5% of reading +15 counts) x Link Units @ 70.1 - 1000 Hz, and Current (RMS) >15.00 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	0 W - 10400 W
3			0 W - 3900 W	0 W - 7800 W	0 W - 15600 W	0 W - 23400 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	0 W - 10400 VA	0 W - 15600 VA
		3	0 W - 3900 VA	0 W - 7800 VA	0 W - 15600 VA	0 W - 23400 VA
	Accuracy		V x A, Calculated Value			
Power Reactive (Q)	Range	2	0 W - 2600 VA	0 W - 5200 VA	0 W - 10400 VA	0 W - 15600 VA
		3	0 W - 3900 VA	0 W - 7800 VA	0 W - 15600 VA	0 W - 23400 VA
	Accuracy		√(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	340XAC	360XAC
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		L1 Power + L2 Power, Calculated Value			
Power Apparent (VA)	Range	2	L1 VA + L2 VA			
	Accuracy		L1 VA + L2 VA, Calculated Value			
Power Reactive (Q)	Range	2	L1 VAR + L2 VAR			
	Accuracy		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		340XAC		360XAC	
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		340XAC		360XAC	
Voltage	Range		0.0 - 420.0 V							
	Accuracy		± (1% of reading + 2 counts) >5 V				± (1% of reading + 5 counts) >5 V			
Current (RMS)	Range	2	0.05 A - 26.00 A		0.05 A - 52.00 A		0.05 A - 104.00 A		0.05 A - 156.00 A	
		3	0.05 A - 39.00 A		0.05 A - 78.00 A		0.05 A - 156.00 A		0.05 A - 234.00 A	
	Accuracy		± (1% of reading + 5 counts) x # of Linked Units, Current >1.00 A				± (1% of reading + 5 counts) x # of Linked Units, Current >2.00 A		± (1% of reading + 5 counts) x # of Linked Units, Current >3.00 A	
Power (W)	Range	2	0 W - 2600 W		0 W - 25200 W		0 W - 10400 W		0 W - 15600 W	
		3	0 W - 3900 W		0 W - 7800 W		0 W - 15600 W		0 W - 23400 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

H = High Limit Range

L (2) = Low Limit Range 2 Units Linked

L (3) = Low Limit Range 3 Units Linked

H (2) = High Limit Range 2 Units Linked

H (3) = High Limit Range 3 Units Linked

2 = 2 Units Linked

3 = 3 Units Linked