

Key Features:

- Output Rating:
 - Power: 500VA, 1ø (61601)
 - 1000VA, 1ø (61602)
 - 1500VA, 1ø (61603)
 - 2000VA, 1ø (61604)
 - 4000VA, 1ø (61605)
 - 1500VA, 1ø or 3ø (61606)
 - 3000VA, 1ø or 3ø (61607)
 - 4500VA, 1ø or 3ø (61608)
 - 6000VA, 1ø or 3ø (61609)
 - 9000VA, 1ø or 3ø (61610)
 - 12000VA, 1ø or 3ø (61611)
 - 18000VA, 1ø or 3ø (61612)
- Voltage: 0-150V/0-300V/Auto
- Built-in PFC, provide input power factor over 0.98
- AC, DC, AC+DC output mode
- Programmable voltage, current limit
- Comprehensive measurement capability: V, Irms, Ipk, Inrush, P, Q, S, PF, CF of current and etc.
- High output current crest factor, ideal for inrush current testing
- Turn on, turn off phase angle control
- Analog input for power amplifier
- Analog programming interface
- Optional GPIB and RS-232C interface
- Full protection: OP, OC, OV and OT protection



PROGRAMMABLE AC POWER SOURCE

Chroma Programmable AC Power Source 61600 Series delivers pure, instrument grade AC and DC power at very low cost. The 61600 series AC power source supplies the output voltage from 0 to 300VAC, and frequency from 15 to 1000Hz. It is suitable for commercial, avionics, marine, and military applications from bench-top testing to mass production.

The 61600 series AC power source generates very clean AC output with distortion less than 0.3-0.5%. With the power factor correction circuit, the 61600 AC power source yields higher efficiency and delivers more output power.

Using the state-of-the-art PWM technology, Chroma Programmable AC Power Source 61600 Series is capable of delivering up to 6 times of peak current compared to its maximum rated current that makes it ideal for inrush current test.

The DC and AC+DC modes extend the applications and save the precious space for additional DC source in test laboratory.

Applying the advanced DSP technology, the 61600 series AC power source is able to provide precision and high speed measurements such as RMS voltage, RMS current, true power, frequency, power factor, and current crest factor

The 61600 series AC power source also provides an external analog input to amplify the analog signal from arbitrary signal generator. Thus, it is capable of simulating the unique waveform which observed in the field.

For convenience sake, Chroma Programmable AC Power Source 61600 Series offers versatile front panel operations with LCD display and rotary knob. Users may also control the 61600 series AC source remotely via GPIB, RS232C or APG (Analog Programming) interface.

The self-diagnosis routine along with the full protections against OPP, OCP, OVP and OTP ensure the quality and reliability for the most demanding engineering tests and ATS applications



Chroma

1. Advanced PWN technology

Chroma Programmable AC Power Source 61600 Series uses PWM technology to reduce the size and increase the power density by incorporating PFC circuit. It's universal line input range provides maximum adaptability to different mains supply systems all over the world for 500VA - 2000VA models.



2. AC/ DC/ AC+DC output capability

Chroma Programmable AC Power Source 61600 Series combines a DC source and an AC source in one box. It makes your choice most cost effective and occupies smallest bench-top space in the test setup. AC power source and DC power source are widely used as standart test instrument.

3. Comprehensive measurements

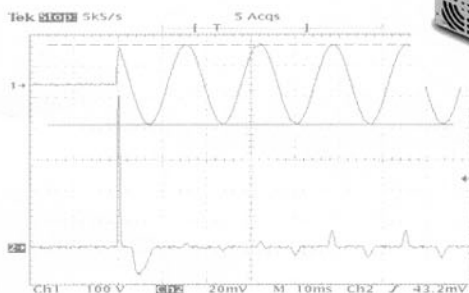
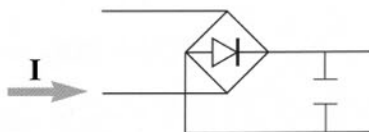
Chroma Programmable AC Power Source 61600 Series has built in a 16-bit precision measurement circuit and firmware utilities to measure the RMS voltage, RMS current, true power, power factor, peak repetitive current, inrush current, current crest factor, VA (apparent power), and VAR (reactive power).

These comprehensive measurements make t Chroma Programmable AC Power Source 61600 Series not only a power source but also a power meter.

Vac = 110.0	F = 60.00	Vdc = 0.0
V = 110.0	F = 60.00	I = 0.74
P = 34.2	P F = 0.42	CF = 5.14

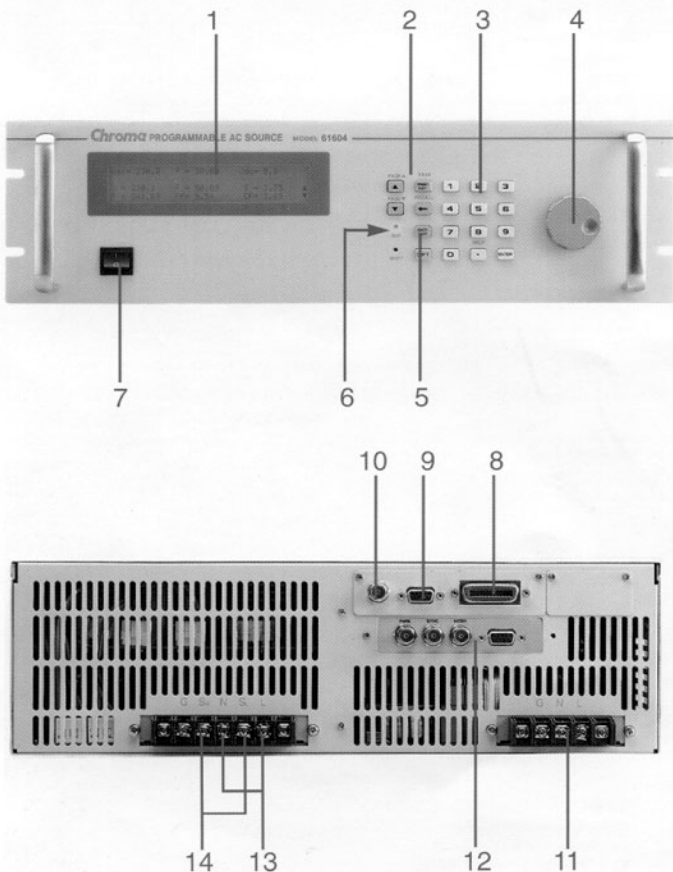
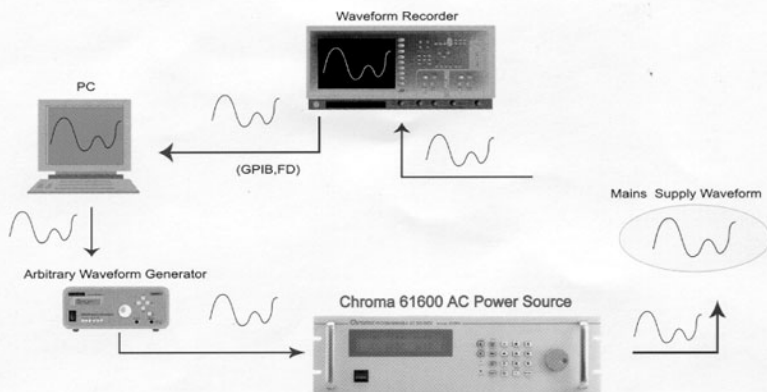
4. High output current crest factor and turn On / Off phase angle control

Chroma Programmable AC Power Source 61600 Series is capable of provide high output current crest factor (Max. 6). It delivers sufficient transient power required for testing most of switching made power circuits. The additive programmable turn on (off) phase angle control makes the 61600 series AC source ideal for inrush current test.



5.Arbitrary power amplifier

The external voltage programming input of Chroma AC power source 61600 series allows users to feed any AC/ DC waveform from an arbitrary signal generator. And amplify the signal accordingly. It can used to the real mains supply waveforms observed in the field.



1. LCD Display :

Show the test setup, operating status and readings.

2. Page up/ down key :

Facilitate parameter data editing.

3. Numeric key :

Data entry for test parameters.

4. Rotary knob :

Program for Analog voltage, frequency and parameter setting.

5. Output enable key :

Enable or disable output.

6. Output indicator:

Lighten when output is enable.

7. Power switch

8. GPIB interface

9. RS-232C interface

10. External V reference :

External programming voltage input.

11. Input terminal

12. System interface :

For parallel operation and transient signal.

13. Output terminal :

Connect output cable to the UUT.

14. Remote sense terminal :

Use to compensate the line drop between source and testing point.



Power line disturbance simulation testing



PC and monitor testing



Servo motor, synchro motor testing



Avionics testing of military and aircraft



TRIACs, SCRs and passive components testing



Lamp circuit testing



Air-conditioner testing



UPS function & environmental testing



AC ballast testing



Transformers testing



Product safety testing



Relays, switches testing



Breakers, fuses testing



IEC standard compliance testing

Selection Guide:

Model Phase	Power	500VA	1000VA	1500VA	1500VA	2000VA	3000VA	4000VA	4500VA	6000VA	9000VA	12000VA	18000VA
1		61601	61602	61603	61606	61604	61607	61605	61608	61609	61610	61611	61612
3													

Order Information :

61601: AC Power Source 0-300V/DC, 15-1KHz/ 500VA

61602: AC Power Source 0-300V/DC, 15-1KHz/ 1KVA

61603: AC Power Source 0-300V/DC, 15-1KHz/ 1.5KVA

61604: AC Power Source 0-300V/DC, 15-1KHz/ 2KVA

61605: AC Power Source 0-300V/DC, 15-800Hz/ 4KVA
(available by December, 2000)

***61606:** AC Power Source 0-300V/DC, 15-1KHz/ 1.5.3a/500VA per phase

***61607:** AC Power Source 0-300V/DC, 15-1KHz/ 1.5.3a/1KVA per phase

***61608:** AC Power Source 0-300V/DC, 15-500Hz/ 1.5.3a/1.5KVA per phase

***61609:** AC Power Source 0-300V, 15-500Hz/ 1.5.3a/2KVA per phase

***61610:** AC Power Source 0-300V, 15-500Hz/ 1.5.3a/3KVA per phase

***61611:** AC Power Source 0-300V, 15-500Hz/ 1.5.3a/4KVA per phase

***61612:** AC Power Source 0-300V, 15-500Hz/ 1.5.3a/6KVA per phase

A615001: Remote Interface Board for 61500/61600 Series

(External V Reference, RS-232C Interface, GPIB Interface)

A610004: Universal Socket Center for Model

6512/6520/6530/6415/6420/6430/61500/61600 Series

A600009: GPIB Cable (200cm)

A600010: GPIB Cable (60cm)

Programmable AC Power Source.....

PECIFICATIONS

Model	61601	61602	61603	61604	61605	61606*
Output phase	1	1	1	1	1	1 or 3 selectable
Output rating -AC						
Power/Phase	500VA	1000VA	1500VA	2000VA	4000VA	500VA
Voltage						
Range/Phase	150V/300V/Auto	150V/300V/Auto	150V/300V/Auto	150V/300V/Auto	150V/300V/Auto	150V/300V/Auto
Accuracy	0.2%+0.2%F.S.	0.2%+0.2%F.S.	0.2%+0.2%F.S.	0.2%+0.2%F.S.	0.2%+0.2%F.S.	0.2%+0.2%F.S.
Resolution	0.1V	0.1V	0.1V	0.1V	0.1V	0.1V
Distortion	0.3% @ 50/60Hz 1%, 15-1KHz	0.3% @ 50/60Hz 1%, 15-1KHz	0.3% @ 50/60Hz 1%, 15-1KHz	0.3% @ 50/60Hz 1%, 15-1KHz	0.3% @ 50/60Hz 1%, 15-800Hz	0.3% @ 50/60Hz 1%, 15-1KHz
Line regulation	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%
Load regulation	0.2%	0.2%	0.2%	0.2%	0.2%	0.2%
Max. Current/Phase						
r.m.s.	4A/2A (150V/300V)	8A/4A (150V/300V)	12A/6A (150V/300V)	16A/8A (150V/300V)	32A/16A (150V/300V)	4A/2A (150V/300V)
peak	24A/12A (150V/300V)	48A/24A (150V/300V)	72A/36A (150V/300V)	96A/48A (150V/300V)	192A/96A (150V/300V)	24A/12A (150V/300V)
Frequency						
Range	DC, 15-1KHz	DC, 15-1KHz	DC, 15-1KHz	DC, 15-1KHz	DC, 15-800Hz	DC, 15-1KHz
Accuracy	0.15%	0.15%	0.15%	0.15%	0.15%	0.15%
Output rating -DC						
Power	250W	500W	750W	1000W	2000W	250W (750W total)
Voltage	212V/424V	212V/424V	212V/424V	212V/424V	212V/424V	212V/424V
Current	2A/1A (212V/424V)	4A/2A (212V/424V)	6A/3A (212V/424V)	8A/4A (212V/424V)	8A/4A (212V/424V)	2A/1A (212V/424V)
Input rating						
Voltage range	90-250V, 1ø	90-250V, 1ø	90-250V, 1ø	90-250V, 1ø	190-250V, 3ø	90-250V, 1ø
Frequency range	47-63Hz	47-63Hz	47-63Hz	47-63Hz	47-63Hz	47-63Hz
Current	10A Max. @ 90V	18A Max. @ 90V	22A Max. @ 90V	28A Max. @ 90V	14A Max. @ 190V	22A Max. @ 90V
Power factor	0.97 Min.	0.97 Min.	0.98 Min.	0.98 Min.	0.98 Min.	0.98 Min.
Measurement						
Voltage						
Range/Phase	150V/300V	150V/300V	150V/300V	150V/300V	150V/300V	150V/300V
Accuracy	0.2%+0.2%F.S.	0.2%+0.2%F.S.	0.2%+0.2%F.S.	0.2%+0.2%F.S.	0.2%+0.2%F.S.	0.2%+0.2%F.S.
Resolution	0.1V	0.1V	0.1V	0.1V	0.1V	0.1V
Current						
Range (peak)	48A	48A	96A	96A	192A	48A
Accuracy (r.m.s.)	0.2%+0.1%F.S.	0.2%+0.1%F.S.	0.2%+0.1%F.S.	0.2%+0.1%F.S.	0.2%+0.1%F.S.	0.2%+0.1%F.S.
Accuracy (peak)	0.2%+0.2%F.S.	0.2%+0.2%F.S.	0.2%+0.2%F.S.	0.2%+0.2%F.S.	0.2%+0.2%F.S.	0.2%+0.2%F.S.
Power						
Accuracy	0.4%F.S. (CF<6)	0.4%F.S. (CF<6)	0.4%F.S. (CF<6)	0.4%F.S. (CF<6)	0.4%F.S. (CF<6)	0.4%F.S. (CF<6)
Resolution	0.1W	0.1W	0.1W	0.1W	0.1W	0.1W
Interface						
GPIO	Optional	Optional	Optional	Optional	Optional	Optional
RS-232	Optional	Optional	Optional	Optional	Optional	Optional
External voltage programming	Optional	Optional	Optional	Optional	Optional	Optional
Others						
Dimensions(WxHxD)	133x482x570 mm	133x482x570 mm	133x482x570 mm	133x482x570 mm	264x482x570 mm	528x482x570 mm
Weight	20Kg	20Kg	20Kg	21Kg	40Kg	60Kg
Others						
Temperature						
Operating	0-40 °C	0-40 °C	0-40 °C	0-40 °C	0-40 °C	0-40 °C
Storage	-40 - +85 °C	-40 - +85 °C	-40 - +85 °C	-40 - +85 °C	-40 - +85 °C	-40 - +85 °C
Safety & EMC	CE (include EMC & LVD)					

500VA - 2KVA models will be available by October, 2000; 4KVA will be available by December, 2000.

* The shipment availability for these models is early 2001.

PECIFICATIONS

Model	61607*	61608*	61609*	61610*	61611*	61612*
Output phase	1or3 selectable	1or3 selectable	1or3 selectable	1 or 3 selectable	1or3 selectable	1 or 3 selectable
Output rating -AC						
Power/Phase	1000VA	1500VA	2000VA	3000VA	4000VA	6000VA
Voltage						
Range/Phase	150V/300V/Auto	150V/300V/Auto	150V/300V/Auto	150V/300V/Auto	150V/300V/Auto	150V/300V/Auto
Accuracy	0.2%+0.2%F.S.	0.2%+0.2%F.S.	0.2%+0.2%F.S.	0.2%+0.2%F.S.	0.2%+0.2%F.S.	0.2%+0.2%F.S.
Resolution	0.1V	0.1V	0.1V	0.1V	0.1V	0.1V
Distortion	0.3% @ 50/60Hz	0.3% @ 50/60Hz	0.3% @ 50/60Hz	0.3% @ 50/60Hz	0.3% @ 50/60Hz	0.3% @ 50/60Hz
Line regulation	1%, 15-1KHz	1%, 15-1KHz	1%, 15-1KHz	1%, 15-1KHz	1%, 15-1KHz	1%, 15-1KHz
Load regulation	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%
Max. Current/Phase						
r.m.s.	8A/4A (150V/300V)	12A/6A (150V/300V)	16A/8A (150V/300V)	24A/12A (150V/300V)	32A/16A (150V/300V)	48A/24A (150V/300V)
peak	48A/24A (150V/300V)	72A/36A (150V/300V)	96A/48A (150V/300V)	144A/72A (150V/300V)	192A/96A (150V/300V)	288A/144A (150V/300V)
Frequency						
Range	DC, 15-1KHz	DC, 15-500Hz	DC, 15-500Hz	DC, 15-500Hz	DC, 15-500Hz	DC, 15-500Hz
Accuracy	0.15%	0.15%	0.15%	0.15%	0.15%	0.15%
Output rating -DC						
Power	500W(1500W total)	750W(2250W total)	1000W(3000W total)	1500W(4500W total)	2000W(6000W total)	3000W(9000W total)
Voltage	212V/424V	212V/424V	212V/424V	212V/424V	212V/424V	212V/424V
Current	4A/2A (212V/424V)	6A/3A (212V/424V)	8A/4A (212V/424V)	12A/6A (212V/424V)	16A/8A (212V/424V)	24A/12A (212V/424V)
Input rating						
Voltage range	190-250V, 1ø	190-250V, 3ø	190-250V, 3ø	190-250V, 3ø	190-250V, 3ø	190-250V, 3ø
Frequency range	47-63Hz	47-63Hz	47-63Hz	47-63Hz	47-63Hz	47-63Hz
Current	21A Max. @ 190V	11A Max. @ 190V	14A Max. @ 190V	28A Max. @ 190V	36A Max. @ 190V	54A Max. @ 190V
Power factor	0.98 Min.	0.98 Min.	0.98 Min.	Non-PFC	Non-PFC	Non-PFC
Measurement						
Voltage						
Range/Phase	150V/300V	150V/300V	150V/300V	150V/300V	150V/300V	150V/300V
Accuracy	0.2%+0.2%F.S.	0.2%+0.2%F.S.	0.2%+0.2%F.S.	0.2%+0.2%F.S.	0.2%+0.2%F.S.	0.2%+0.2%F.S.
Resolution	0.1V	0.1V	0.1V	0.1V	0.1V	0.1V
Current						
Range (peak)	48A	72A	96A	144A	192A	288A
Accuracy (r.m.s.)	0.2%+0.1%F.S.	0.2%+0.1%F.S.	0.2%+0.1%F.S.	0.2%+0.1%F.S.	0.2%+0.1%F.S.	0.2%+0.1%F.S.
Accuracy (peak)	0.2%+0.2%F.S.	0.2%+0.2%F.S.	0.2%+0.2%F.S.	0.2%+0.2%F.S.	0.2%+0.2%F.S.	0.2%+0.2%F.S.
Power						
Accuracy	0.4%F.S. (CF<6)	0.4%F.S. (CF<6)	0.4%F.S. (CF<6)	0.4%F.S. (CF<6)	0.4%F.S. (CF<6)	0.4%F.S. (CF<6)
Resolution	0.1W	0.1W	0.1W	0.1W	0.1W	0.1W
Interface						
GPB	Optional	Optional	Optional	Optional	Optional	Optional
RS-232	Optional	Optional	Optional	Optional	Optional	Optional
External voltage programming	Optional	Optional	Optional	Optional	Optional	Optional
Others						
Dimensions(WxHxD)	528x482x570 mm	528x482x570 mm	528x482x570 mm	1056x520x650 mm	1056x520x650 mm	1320x520x650 mm
Weight	60Kg	65Kg	65Kg	100Kg	100Kg	150Kg
Others						
Temperature						
Operating	0-40 °C	0-40 °C	0-40 °C	0-40 °C	0-40 °C	0-40 °C
Storage	-40 - +85 °C	-40 - +85 °C	-40 - +85 °C	-40 - +85 °C	-40 - +85 °C	-40 - +85 °C
Safety & EMC	CE (include EMC & LVD)					

All specifications are subject to change without notice.

500VA - 2KVA models will be available by October, 2000; 4KVA will be available by December, 2000.

* The shipment availability for these models is early 2001.

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