



500VA~90kVA

KEY FEATURES

- Built-in PFC, provide input power factor over 0.98 (full load)
- AC+DC output mode for voltage DC offset simulation
- Programmable voltage and current limit setting
- Comprehensive measurement capability, V, Hz, Irms, Ipk, linrush, P, VAR, VA, PF, CF of current and etc.
- High output current crest factor, ideal for inrush current testing
- Turn on, turn off phase angle control
- One-key recall for 9 different voltage and frequency
- Programmable slew rate setting for changing voltage and frequency
- Analog input for power amplifier
- Optional Analog programming interface
- Optional GPIB and RS-232 interface (Model 61601~61605)
- Full protection: OP, OC, OV and OT protection
- Easy use graphic user interface: softpanel (option)
- Capable of delivering power output up to 90KVA by implementing Master-Slave operation

The Chroma Model 61600 series Programmable AC Power Source delivers pure, instrument grade AC and DC power at very low cost. The 61600 AC power source offers output voltage



from 0 to 300VAC, and frequency from 15 to 1.5kHz. A easy-use software can let users edit an auto-run profile and record the measuring data during the test. It is suitable for commercial, avionics, marine, and military applications from bench-top testing to mass productions.

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

Using the state-of-the-art PWM technology, the Chroma 61600 AC source is capable of delivering up to 6 times of peak current versus to its maximum rated current which makes it ideal for inrush current testing.

By using advanced DSP technology, 61600 AC power source offers precision and high speed measurements such as RMS voltage, RMS current, true power, power factor, and current crest factor.

The AC+DC and DC mode extend the applications when users need DC voltage component. The 61600 AC power source also provides an external analog input, to amplify the analog signal from arbitrary signal generator. Thus, it is capable to simulate the unique waveform which observed in the field.

With the LCD display and rotary knob, the Chroma 61600 AC power source offers versatile front panel operation. Users may also control the 61600 remotely via GPIB, RS-232 or APG (Analog Programming) interface.

The self-diagnosis routine and the full protections against OPP, OCP, OVP and OTP ensure the quality and reliability for even the most demanding engineering testing and ATE application.

ORDERING INFORMATION

- 61601** : Programmable AC Source 0~300V, 15~1kHz / 500VA, 1Ø
 - 61602** : Programmable AC Source 0~300V, 15~1kHz / 1kVA, 1Ø
 - 61603** : Programmable AC Source 0~300V, 15~1kHz / 1.5kVA, 1Ø
 - 61604** : Programmable AC Source 0~300V, 15~1kHz / 2kVA, 1Ø
 - 61605** : Programmable AC Source 0~300V, 15~1kHz / 4kVA, 1Ø
 - * **61609** : Programmable AC Source 0~350V, 15~1kHz / 4kVA, 1 or 3Ø
 - 61611** : Programmable AC Source 0~300V, 15~1.5kHz / 12kVA, 1 or 3Ø
 - 61612** : Programmable AC Source 0~300V, 15~1.5kHz / 18kVA, 1 or 3Ø
 - A615001** : Remote Interface for 61501~61505 and 61601~61605 (External V Input, RS-232 Interface, GPIB Interface)
 - A615002** : Remote interface board (LAN and USB) for Model 61500/61600/61700 Series
 - A615003** : AC voltage transform unit for Model 61500/61600 Series
 - A615007** : Softpanel for Model 61500/61600 Series
 - A615008** : DC Noise Filter (Max. 16A)
 - A615103** : Parallelable power stage unit 18kVA, 1 or 3Ø, for 61511/61512/61611/61612
 - A615104** : Input/Output terminals for parallel connecting 2 units of 61511/61512/61611/61612/ A615103
 - A615105** : Input/Output terminals for parallel connecting 3 units of 61511/61512/61611/61612/ A615103
 - A615106** : Reverse Current Protection unit for 61511/61512/61611/61612
- * Call for availability

Support higher than 300V output voltage capability, please contact Chroma sales representative for detailed information.



Model 61605~61604

Model 61605

Model 61609

Model 61611, 61612

A615103 Parallelable Power stage Unit 18KVA

SPECIFICATIONS-1			
Model	61601	61602	61603
Output phase	1	1	1
Output Rating - AC			
Power/Phase	500VA	1000VA	1500VA
Voltage			
Range/Phase	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.
Resolution	0.1V	0.1V	0.1V
Distortion *1	0.3% @ 50/60Hz 1% @ 15~1kHz	0.3% @ 50/60Hz 1% @ 15~1kHz	0.3% @ 50/60Hz 1% @ 15~1kHz
Line Regulation	0.1%	0.1%	0.1%
Load Regulation *2	0.2%	0.2%	0.2%
Max. Current/Phase			
RMS	4A/2A (150V/300V)	8A/4A (150V/300V)	12A/6A (150V/300V)
peak	24A/12A (150V/300V)	48A/24A (150V/300V)	72A/36A (150V/300V)
Frequency			
Range	DC, 15~1kHz	DC, 15~1kHz	DC, 15~1kHz
Accuracy	0.15%	0.15%	0.15%
Resolution	0.01 Hz	0.01 Hz	0.01 Hz
Output Rating - DC			
Power	250W	500W	750W
Voltage	212V/424V	212V/424V	212V/424V
Current	2A/1A (212V/424V)	4A/2A (212V/424V)	6A/3A (212V/424V)
Input Rating			
Voltage Operating Range	1Ø 100~240V ± 10%V _{LN}	1Ø 100~240V ± 10%V _{LN}	1Ø 100~240V ± 10%V _{LN}
Frequency Range	47~63Hz	47~63Hz	47~63Hz
Current	10A Max. @ 90V	18A Max. @ 90V	22A Max. @ 90V
Power Factor *4	0.97 Min.	0.97 Min.	0.98 Min.
Measurement			
Voltage			
Range/Phase	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.
Resolution	0.1V	0.1V	0.1V
Current			
Range (peak)	24A	48A	72A
Accuracy (RMS)	0.4%+0.3%F.S.	0.4%+0.3%F.S.	0.4%+0.3%F.S.
Accuracy (peak)	0.4%+0.6%F.S.	0.4%+0.6%F.S.	0.4%+0.6%F.S.
Power			
Accuracy	0.4%+0.4%F.S.	0.4%+0.4%F.S.	0.4%+0.4%F.S.
Resolution	0.1W	0.1W	0.1W
Others			
Interface	GPIB, RS-232 (Optional)		
Temperature			
Operating	0~40°C	0~40°C	0~40°C
Storage	-40 ~ +85°C	-40 ~ +85°C	-40 ~ +85°C
Safety & EMC			
CE (include EMC & LVD)			
Dimension (H x W x D)	133.35 x 482.6 x 569.5 mm / 5.25 x 19 x 22.42 inch	133.35 x 482.6 x 569.5 mm / 5.25 x 19 x 22.42 inch	133.35 x 482.6 x 569.5 mm / 5.25 x 19 x 22.42 inch
Weight	20 kg / 44.05 lbs	20 kg / 44.05 lbs	20 kg / 44.05 lbs

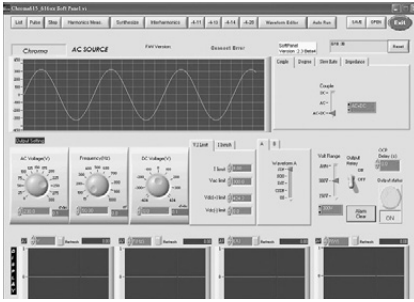
Note*1 : Maximum distortion is tested on output 125VAC (150V RANGE) and 250VAC (300V RANGE) with maximum current to linear load.

Note*2 : Load regulation is tested with sinewave and remote sense.

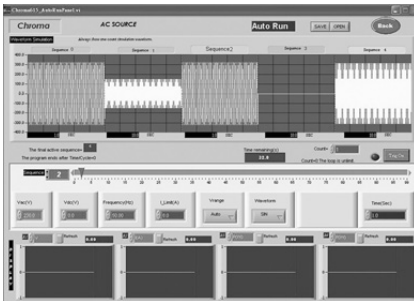
Note*3 : Model 61605 can also use single-phase connecting method of input AC power, the maximum input current is 28A @ 190V.

Note*4 : Input power factor is tested on input 220V, full load condition.

Softpanel



Main Operation Menu



Auto Run (for ON/OFF Burn in test)

SPECIFICATIONS-2

Model	61604	61605
Output phase	1	1
Output Rating - AC		
Power/Phase	2000VA	4000VA
Voltage		
Range/Phase	150V/300V/Auto	150V/300V/Auto
Accuracy	0.2%+0.2%F.S.	0.2%+0.2%F.S.
Resolution	0.1V	0.1V
Distortion *1	0.3% @ 50/60Hz 1% @ 15~1kHz	0.3% @ 50/60Hz 1% @ 15~1kHz
Line Regulation	0.1%	0.1%
Load Regulation *2	0.2%	0.2%
Max. Current/Phase		
RMS	16A/8A (150V/300V)	32A/20A (150V/300V)
peak	96A/48A (150V/300V)	192A/96A (150V/300V)
Frequency		
Range	DC, 15~1kHz	DC, 15~1kHz
Accuracy	0.15%	0.15%
Resolution	0.01 Hz	0.01 Hz
Output Rating - DC		
Power	1000W	2000W
Voltage	212V/424V	212V/424V
Current	8A/4A (212V/424V)	16A/8A (212V/424V)
Input Rating		
Voltage Operating Range	1Ø 100~240V ± 10%V _{LN}	3Ø 200~240V ± 10%V _{LN} *3
Frequency Range	47~63Hz	47~63Hz
Current	28A Max. @ 90V	14A Max. @ 190V
Power Factor *4	0.98 Min.	0.98 Min.
Measurement		
Voltage		
Range/Phase	150V/300V	150V/300V
Accuracy	0.2%+0.2%F.S.	0.2%+0.2%F.S.
Resolution	0.1V	0.1V
Current		
Range (peak)	96A	192A
Accuracy (RMS)	0.4%+0.3%F.S.	0.4%+0.3%F.S.
Accuracy (peak)	0.4%+0.6%F.S.	0.4%+0.6%F.S.
Power		
Accuracy	0.4%+0.4%F.S.	0.4%+0.4%F.S.
Resolution	0.1W	0.1W
Others		
Interface	GPIB, RS-232 (Optional)	
Temperature		
Operating	0~40°C	0~40°C
Storage	-40 ~ +85°C	-40 ~ +85°C
Safety & EMC		
CE (include EMC & LVD)		
Dimension (H x W x D)	133.35 x 482.6 x 569.5 mm / 5.25 x 19 x 22.42 inch	266.7 x 482.6 x 569.5 mm / 10.5 x 19 x 22.42 inch
Weight	20 kg / 44.05 lbs	41 kg / 90.31 lbs

Note*1 : Maximum distortion is tested on output 125VAC (150V RANGE) and 250VAC (300V RANGE) with maximum current to linear load.

Note*2 : Load regulation is tested with sinewave and remote sense.

Note*3 : Model 61605 can also use single-phase connecting method of input AC power, the maximum input current is 28A @ 190V.

Note*4 : Input power factor is tested on input 220V, full load condition.

SPECIFICATIONS-3					
Model	61609*7	61611	61612	61611+A615103	61612+A615103
Output Phase	1 or 3 selectable				
Output Rating-AC					
Power	6kVA	12kVA	18kVA	30kVA	36kVA
Each phase	2kVA	4kVA	6kVA	10kVA	12kVA
Voltage					
Range	0~175V/0~350V/Auto		0~150V/0~300V		
Accuracy	0.1%+0.2%F.S. *1		0.1%+0.2%F.S.		
Resolution	0.1 V				
Distortion *2	0.3% @50/60Hz, 1% @15Hz~1kHz, above 1 kHz, add 0.2%/kHz to 1%		0.3% @50/60Hz, 1%@15~1kHz, 1.5%>1kHz		
Line regulation	0.1%				
Load regulation *3	0.2%				
Temp. coefficient	0.02% per degree from 25°C				
Max. Current (1-phase mode)					
RMS	60A/30A	96A / 48A	144A / 72A	240A / 120A	288A / 144A
Peak (CF=4)	240A / 120A	384A / 192A	576A / 288A	960A / 480A	1152A / 576A
Max. Current (each phase in 3-phase mode)					
RMS	20A/10A	32A / 16A	48A / 24A	80A / 40A	96A / 48A
Peak (CF=4)	80A/40A	128A / 64A	192A / 96A	320A / 160A	384A / 192A
Frequency					
Range	15Hz ~ 2000Hz, 15Hz ~ 5kHz (HF option)		DC, 15-1.5kHz		
Accuracy	0.005%				
Resolution	0.01Hz (15Hz ~ 999Hz), 0.1Hz (1000Hz ~ 5000Hz)		0.01 Hz		
Phase					
Range	0 ~ 360°				
Resolution	0.1°		0.3°		
Accuracy	± 1°, 15Hz ~1kHz plus ± 1°/ kHz above 1 kHz		<0.8°@50/60Hz		
DC Output (1-phase mode)					
Power	4.5kW	6kW	9kW	15kW	18kW
Voltage	247.5V/495V	212V / 424V	212V / 424V	212V / 424V	212V / 424V
Current	45A/22.5A	48A / 24A	72A / 36A	120A / 60A	144A / 72A
DC Output (3-phase mode)					
Power	4.5kW	2kW	3kW	5kW	6kW
Voltage	247.5V/495V	212V / 424V	212V / 424V	212V / 424V	212V / 424V
Current	15A/7.5A	16A / 8A	24A / 12A	40A / 20A	48A / 24A
Input AC Power (each phase)					
AC type	3-phase, Delta or Y connecting				
Voltage Operating Range *4	3Ø, 200~240V ± 10%V _{LN} (Delta: L-L, Y: L-N)				
Frequency Range	47-63 Hz				
Max. Current	23A Max./Phase	Delta: 80A Y: 70A	Delta: 120A Y: 90A	Delta: 200A Y: 160A	Delta: 240A Y: 180A
Measurement					
Voltage					
Range	0~175V/0~350V/Auto		150V / 300V		
Accuracy	0.1%RD+0.2%F.S. *1		0.1%+0.2%F.S.		
Resolution	0.1 V				
Current					
Range	120A/60A	128/32/8 A peak	192/48/12 A peak	320/80/20 A peak	384/96/24 A peak
Accuracy (RMS)	0.2% + 0.2% F.S *1		0.4%+0.3%F.S.		
Accuracy (peak)	0.2% + 0.4% F.S *1		0.4%+0.6%F.S.		
Resolution	0.1 A				
Power					
Accuracy	0.2%+0.4%F.S *1		0.4%+0.4% F.S		
Resolution	0.1 W				
Efficiency *5	>80%(Typical)		0.75 (Typical)		
Protect	UVP, OCP, OPP, OTP, FAN				
Interface	GPIB, RS-232, USB host, USB, Ethernet (standard)		GPIB, RS-232, USB, Ethernet (Standard)		
Temperature					
Operating	0°C~40°C				
Storage	-40°C~85°C				
Humidity	30%~90%				
Safety & EMC					
CE (include EMC & LVD)					
Dimension (H x W x D)	221.5 x 425 x 680 mm / 8.72 x 16.73 x 26.77 inch	1163 x 546 x 700 mm / 45.78 x 21.5 x 27.56 inch*5		1163 x 546 x 700 mm / 45.78 x 21.5 x 27.56 inch x 2 units*6	
Weight	60kg / 132 lbs	229.4 kg / 505.29 lbs	242.4 kg / 533.92 lbs	480 kg / 1057.27 lbs	495 kg / 1090.31 lbs

Note*1 : Add 0.2%/kHz to FS when above 1 kHz

Note*2 : Maximum distortion is tested on output 125VAC (150V RANGE) and 250VAC (300V RANGE) with maximum current to linear load.

Note*3 : Load regulation is tested with sine wave and remote sense.

Note*4 : Models with 277V_{LN}/480V_{LL}(5 Wires) AC input voltage are available upon request.

Note*5 : Efficiency is tested on input voltage 230V.

Note*6 : Dimensions (HxWxD) with wheel sets : 1246 x 546 x 700mm / 49.05 x 21.5 x 27.56 inch.

Note*7 : Preliminary specifications