



500VA~90kVA

KEY FEATURES

- Compact size and weight attributable to advance PWM technology
- AC+DC output mode for voltage DC offset simulation
- Programmable output impedance for IEC 61000-3-3
- IEC 61000-4-11, IEC 61000-4-14, IEC 61000-4-28 voltage dips and frequency variation simulation
- Harmonics, interharmonics waveform synthesizer for IEC 61000-4-13 testing
- Power line disturbance simulation capability
- Programmable voltage and current limit settings
- Comprehensive measurement capability, including current harmonics
- High output current crest factor, ideal for inrush current testing
- Turn on, turn off phase angle control
- TTL signal which indicates output transient
- Optional analog programmable interface
- 2 units combined in series for high Voltage source (Model 61501~61505)
- 3 units combined to 3-phase power output (Model 61501~61505)
- Optional GPIB and RS-232 interface (Model 61501~61505)
- Easy use graphic user interface: softpanel (Option)
- Softpanel for IEC regulation test
- Capable of delivering power output up to 90KVA by implementing Master-slave parallel operation



The 61500 series AC power source defines new standard for high performance AC power source. It equips with all the powerful features. Such as power line disturbance simulation, programmable output impedance, comprehensive measurement function, wave-shape synthesis and regulation test software. Chroma also provides software for aerospace testing, including MIL-STD-704F, RTCA DO-160D, ABD100. These features make Chroma 61500 ideal for commercial, power electronics, avionics, marine, military and regulation test applications from bench-top testing to mass productions.

The 61500 series line up range from 500VA up to 90kVA, with one or three phase output. This allows user to have maximum choices from R/D design verification, quality assurance, to production testing.

Using the state-of-the-art PWM technology, the Chroma 61500 AC source is capable of delivering up to 6 times of peak current (Model 61501~61505) versus to its maximum rated current which makes it ideal for inrush current testing.

By using advanced DSP technology, 61500 AC power source offers precision and high speed power and harmonics measurements such as RMS voltage, RMS current, true power, power factor, current crest factor and up to 40 orders of current harmonics components.

The 61500 AC power source allows users to compose different harmonic components to synthesize your own harmonic distorted wave-shapes. The AC+DC and DC mode also extend the applications to simulate the natural waveform, Chroma 61500 also provides an external analog input, to amplify the analog signal from arbitrary signal generator. Thus, it is capable to simulate the unique waveform observed in the field.

With the versatile programmable output impedance and regulation test software, the 61500 AC power source allows users to perform Pre-compliance test against IEC 61000-4-11 and compliance test against IEC 61000-4-13/-4-14/-4-28 immunity test regulations and IEC 61000-3-2/-3-3 emission test regulations by incorporating Chroma 6630 power analyzer.

ORDERING INFORMATION

- 61501** : Programmable AC Source 0~300V, 15~1kHz / 500VA, 1Ø
- 61502** : Programmable AC Source 0~300V, 15~1kHz / 1kVA, 1Ø
- 61503** : Programmable AC Source 0~300V, 15~1kHz / 1.5kVA, 1Ø
- 61504** : Programmable AC Source 0~300V, 15~1kHz / 2kVA, 1Ø
- 61505** : Programmable AC Source 0~300V, 15~1kHz / 4kVA, 1Ø
- 61511** : Programmable AC Source 0~300V, 15~1.5kHz / 12kVA, 1 or 3Ø
- 61512** : Programmable AC Source 0~300V, 15~1.5kHz / 18kVA, 1 or 3Ø
- A610004** : Universal Socket Center for Model 6512/6520/6530/6560/6415/6420/6430/61500/61600/61700 Series (<15A)
- A615001** : Remote Interface for 61501~61505 and 61601~61605 (External V Input, RS-232 Interface, GPIB Interface)
- 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

Option for 277VLN/480VLL (5Wires) AC input voltage are available with 61511/61512/ 61611/61612/ A615103 models. Please contact with local sales representative for ordering information.



A615103 Parallelable Power stage Unit 18KVA



Model 61505



Model 61511, 61512

SPECIFICATIONS-1			
Model	61501	61502	61503
Output Phase	1	1	1
Output Rating -AC			
Power	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			
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)
Programmable Output Impedance			
Range	0 Ω +200μH ~ 1 Ω +1mH		
Harmonics & Interharmonics Simulation			
Bandwidth	2400Hz	2400Hz	2400Hz
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 (per phase)	10A Max. @ 90V	18A Max. @ 90V	22A Max. @ 90V
Power Factor*4	0.97 Min.	0.97 Min.	0.98 Min.
Measurement			
Voltage			
Range	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
Harmonics			
Range	2~40 orders	2~40 orders	2~40 orders
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 (HxWxD)	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.

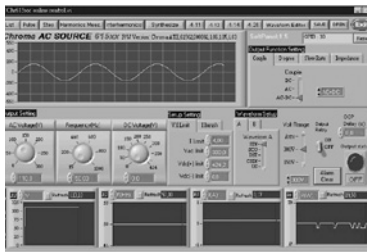
Note*2 : Load regulation is tested with sine wave and remote sense.

Note*3 : Model 61505 can also use single-phase connecting method of input AC power, the maximum input current is 28A @ 190V.

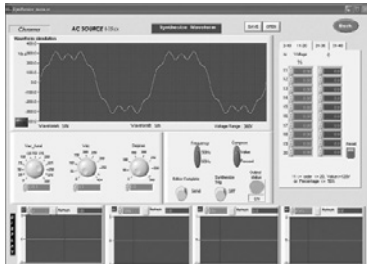
Note*4 : Input power factor is tested on input 220V, full load condition.



Softpanel



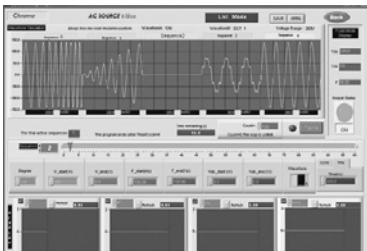
Main Operation Menu



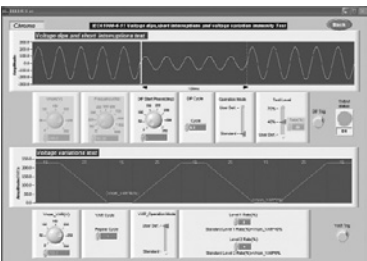
Distorted Waveform Editor



Aerospace Testing : MIL-STD-704F



Transient Voltage Programming



Voltage Dip, Short, Variation Regulation Test



Aerospace Testing : RTCA DO-160D

SPECIFICATIONS-2		
Model	61504	61505
Output Phase	1	1
Output Rating -AC		
Power	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		
RMS	16A/8A (150V/300V)	32A/16A (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)
Programmable Output Impedance		
Range	0 Ω +200μH ~ 1 Ω +1mH	
Harmonics & Interharmonics Simulation		
Bandwidth	2400Hz	2400Hz
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 (per phase)	28A Max. @ 90V	14A Max. @ 190V
Power Factor*4	0.98 Min.	0.98 Min.
Measurement		
Voltage		
Range	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
Harmonics		
Range	2~40 orders	2~40 orders
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		
(HxWxD)	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 sine wave and remote sense.

Note*3 : Model 61505 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	61511	61512	61511+A615103	61512+A615103
Output Phase	1 or 3 selectable			
Output Rating-AC				
Power	12kVA	18kVA	30kVA	36kVA
Each phase	4kVA	6 kVA	10kVA	12kVA
Voltage				
Range	0~150V/0~300V			
Accuracy	0.2%+0.2%F.S.			
Resolution	0.1 V			
Distortion *1	0.3% @50/60Hz, 1%@15~1kHz, 1.5%>1kHz			
Line regulation	0.1%			
Load regulation *2	0.2%			
Temp. coefficient	0.02% per degree from 25°C			
Max Current (1-phase mode)				
RMS	96A / 48A	144A / 72A	240A / 120A	288A / 144A
Peak (CF=4)	384A / 192A	576A / 288A	960A / 480A	1152A / 576A
Max Current (each phase in 3-phase mode)				
RMS	32A / 16A	48A / 24A	80A / 40A	96A / 48A
Peak (CF=4)	128A / 64A	192A / 96A	320A / 160A	384A / 192A
Frequency				
Range	DC, 15-1.5kHz			
Accuracy	0.15%			
Resolution	0.01 Hz			
Phase				
Range	0 ~ 360°			
Resolution	0.3°			
Accuracy	<0.8°@50/60Hz			
DC Output (1-phase mode)				
Power	6kW	9kW	15kW	18kW
Voltage	212V / 424V	212V / 424V	212V / 424V	212V / 424V
Current	48A / 24A	72A / 36A	120A / 60A	144A / 72A
DC Output (3-phase mode)				
Power	2kW	3kW	5kW	6kW
Voltage	212V / 424V	212V / 424V	212V / 424V	212V / 424V
Current	16A / 8A	24A / 12A	40A / 20A	48A / 24A
Input AC Power (each phase)				
AC type	3-phase, Delta or Y connecting			
Voltage Operating Range*3	3Ø 200~240V ± 10%V _{LN} (Delta: L-L, Y: L-N)			
Frequency Range	47-63 Hz			
Max. Current	Delta: 80A Y: 70A	Delta: 120A Y: 90A	Delta: 200A Y: 160A	Delta: 240A Y: 180A
Measurement				
Voltage				
Range	150V / 300V			
Accuracy	0.2%+0.2%F.S.			
Resolution	0.1 V			
Current				
Range	128/32/8 A peak	192/48/12 A peak	320/80/20 A peak	384/96/24 A peak
Accuracy (RMS)	0.4%+0.3%F.S.			
Accuracy (peak)	0.4%+0.6%F.S.			
Resolution	0.1 A			
Power				
Accuracy	0.4%+0.4% F.S.			
Resolution	0.1 W			
Others				
Waveform Synthesis	40 orders @ 50/60Hz			
Harmonic Measurement	Voltage / Current 40 orders @ 50/60Hz			
Programmable Impedance	0Ω +200 μH ~ 1Ω +1mH			
Efficiency*4	0.75 (Typical)			
Protect	UVP, OCP, OPP, OTP, FAN			
Interface	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)	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*5	
Weight	229.4 kg / 505.29 lbs	242.4 kg / 533.92 lbs	480 kg / 1057.27 lbs	495 kg / 1090.31 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 sine wave and remote sense.

Note*3 : Models with 277V_{LN}/480V_{LL}(5 Wires) AC input voltage are available upon request.

Note*4 : Efficiency is tested on input voltage 230V.

Note*5 : Dimensions (HxWxD) with wheel sets : 1246 x 546 x 700mm / 49.05 x 21.5 x 27.56 inch.



All specifications are subject to change without notice.