



Programmable AC Source Model 61500 Series 500VA~36KVA

KEY FEATURES

- Compact size and weight attributable to advance PWM technology
- AC+DC output mode for voltage DV 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 variation simulation
- Harmonics, inter-harmonics waveform synthesizer for IEC 61000-4-13 testing
- Power line disturbance simulation capability
- Programmable voltage, current limit
- 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 to high voltage source
- 3 units combined to 3-phase power output
- Optional GPIB and RS232 interface (Model 61501-61505)
- Easy use graphic user interface: softpanel (Option)
- Softpanel for IEC regulation test (Model 61501-61505)

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 a 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 from 500VA up to 36KVA, 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) verses 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 DC and AC+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 and compliance test against IEC 61000-4-11/-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, 1 ϕ
- 61502** : Programmable AC Source 0-300V, 15-1kHz / 1KVA, 1 ϕ
- 61503** : Programmable AC Source 0-300V, 15-1kHz / 1.5KVA, 1 ϕ
- 61504** : Programmable AC Source 0-300V, 15-1kHz / 2KVA, 1 ϕ
- 61505** : Programmable AC Source 0-300V, 15-1kHz / 4KVA, 1 ϕ
- 61511** : Programmable AC Source 0-300V, 15-1.5kHz / 12KVA, 1 or 3 ϕ
- 61512** : Programmable AC Source 0-300V, 15-1.5kHz / 18KVA, 1 or 3 ϕ
- A615001** : Remote Interface Board for 61501-61505 Series (External V Input, RS-232 Interface, GPIB Interface)
- A610004** : Universal Socket Center for Model 6512/6520/6530/6560/6415/6420/6430/61500/61600/61700 Series (<15A)
- A615007** : Softpanel for Model 61501-61505 Series
- A615008** : DC Noise Filter (Max. 16A)
- A615103** : Parallelable power stage unit 18KVA, 1 or 3 ϕ , for 61511/61512/61611/61612
- A615104** : Input/Output terminals for parallel connecting of 61511/61512/61611/61612



Model 61505

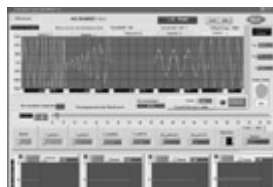


Model 61511, 61512

Softpanel



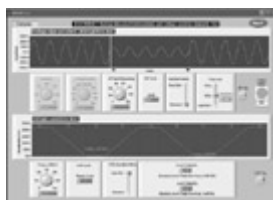
Main Operation Menu



Transient Voltage Programming



Distorted Waveform Editor



Voltage Dip, Short, Variation Regulation Test



Aerospace Testing : MIL-STD-704F



Aerospace Testing : RTCA DO-160D

SPECIFICATIONS-1					
Model	61501	61502	61503	61504	61505
Output Phase	1	1	1	1	1
Output Rating - AC					
Power/Phase	500VA	1000VA	1500VA	2000VA	4000VA
Voltage					
Range/Phase	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.
Resolution	0.1V	0.1V	0.1V	0.1V	0.1V
Distortion *1	0.3% @ 50/60Hz 1%, 15-1KHz (Typical)	0.3% @ 50/60Hz 1%, 15-1KHz (Typical)	0.3% @ 50/60Hz 1%, 15-1KHz (Typical)	0.3% @ 50/60Hz 1%, 15-1KHz (Typical)	0.3% @ 50/60Hz 1%, 15-1KHz (Typical)
Line Regulation	0.1%	0.1%	0.1%	0.1%	0.1%
Load Regulation *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/20A (150V/300V)
peak	24A/12A (150V/300V)	48A/24A (150V/300V)	72A/36A (150V/300V)	96A/48A (150V/300V)	192A/96A (150V/300V)
Frequency					
Range	DC, 15-1KHz	DC, 15-1KHz	DC, 15-1KHz	DC, 15-1KHz	DC, 15-1KHz
Accuracy	0.15%	0.15%	0.15%	0.15%	0.15%
Output Rating - DC					
Power	250W	500W	750W	1000W	2000W
Voltage	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)	16A/8A (212V/424V)
Programmable Output Impedance					
Range	0Ω +200μH-1Ω +1mH				
Harmonics & Inter-harmonics Simulation					
Bandwidth	2400Hz	2400Hz	2400Hz	2400Hz	2400Hz
Input rating					
Voltage Range	90-250V, 1ø	90-250V, 1ø	90-250V, 1ø	90-250V, 1ø	190-250V, 3ø *5
Frequency Range	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
Power Factor *3	0.97 Min.	0.97 Min.	0.98 Min.	0.98 Min.	0.98 Min.
Measurement					
Voltage					
Range/Phase	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.
Resolution	0.1V	0.1V	0.1V	0.1V	0.1V
Current					
Range (peak)	24A	48A	72A	96A	192A
Accuracy (r.m.s.)	0.4%+0.3%F.S.	0.4%+0.3%F.S.	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.	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.	0.4%+0.4%F.S.	0.4%+0.4%F.S.
Resolution	0.1W	0.1W	0.1W	0.1W	0.1W
Harmonics					
Range	2-40 orders	2-40 orders	2-40 orders	2-40 orders	2-40 orders
Others					
Temperature					
Operating	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
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	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	20 kg / 44.05 lbs	20 kg / 44.05 lbs	20 kg / 44.05 lbs	41 kg / 90.31 lbs

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SPECIFICATIONS-2				
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, 2%>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, 15-1.5K Hz			
Accuracy	0.15%			
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	2KVA	3KVA	5KVA	6KVA
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 range	190-250V (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	LVP, OCP, OPP, OTP, FAN			
Interface	GPIB, RS-232, USB, Ethernet (standard)			
Temperature				
Operation	0°C -40°C			
Storage	-40°C-85°C			
Humidity	30 %-90 %			
Safety & EMC	CE			
Dimension (H x W x D)	1163 x 546 x 700 mm / 45.78 x 21.5 x 27.56 inch		1163 x 1092 x 700 mm / 45.78 x 42.99 x 27.56 inch	
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 : Input power factor is tested on input 220V, full load condition.

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

Note*5 : Model 61505 can also use single-phase connecting method of input AC power, the maximum input current is 28A@190V.