

CHROMA

61504

The Chroma 61504 is a high-performance programmable AC/DC power source capable of delivering up to 2000 VA of AC power and 1000 W of DC power. Featuring advanced power line disturbance (PLD) simulation, harmonic synthesis, and high-accuracy measurements, it is widely utilized for R&D, production testing, and QA validation of electronic products.

SPECIFICATIONS

General

Interfaces	GPIB, RS-232, Analog Programming (APG)
Display	Graphic LCD Display

Physical

Power Supply	90 to 250 V AC, single-phase, 47 to 63 Hz
Operating Temperature	0 to 40 °C °C
Dimensions (W×H×D)	425 x 177.4 x 567 mm mm
Weight	30 kg kg

AC Output Specifications

Maximum AC Power Rating	2000 VA
Output Phase Configuration	Single-Phase (1φ)
AC Voltage Ranges	150 V / 300 V / Auto
AC Voltage Resolution	0.1 V
AC Voltage Accuracy	±(0.2% of reading + 0.2% of range)
Maximum RMS Current (Low Range)	16 A (at 150 V range)
Maximum RMS Current (High Range)	8 A (at 300 V range)
Maximum Peak Current (Low Range)	96 A
Maximum Peak Current (High Range)	48 A
Frequency Range	DC, 15 Hz to 1000 Hz
Frequency Resolution	0.01 Hz (15 to 99.99 Hz), 0.1 Hz (100.0 to 999.9 Hz)
Frequency Accuracy	±0.1%
Total Harmonic Distortion (THD)	< 0.3% (at 50/60 Hz, resistive load), < 0.5% (at 15 to 400 Hz)
Phase Angle Range	0 to 360°
Phase Angle Resolution	0.1°
Voltage Line Regulation	0.1%
Voltage Load Regulation	0.2%

DC Output Specifications

Maximum DC Power Rating	1000 W
DC Voltage Ranges	212 V / 424 V
DC Voltage Resolution	0.1 V
Maximum DC Current (Low Range)	8 A (at 212 V range)
Maximum DC Current (High Range)	4 A (at 424 V range)
DC Voltage Line Regulation	0.1%
DC Voltage Load Regulation	0.2%

Measurement & Readback

Voltage Measurement Range (RMS)	0 - 150 V / 0 - 300 V
Voltage Measurement Accuracy (RMS)	±(0.1% of reading + 0.1% of range)
Active Power (W) Measurement Accuracy	±(0.4% of reading + 0.4% of range)
Measurement Parameters	Voltage (RMS, Peak, DC), Current (RMS, Peak, DC), Active Power, Apparent Power, Reactive Power, Power Factor, Crest Factor
Harmonic Analysis Capabilities	Voltage and current harmonic measurement up to 50th order

Transient & Waveform Generation

Output Waveform Types	Sine, Square, Clipped Sine, Arbitrary
Harmonic Synthesis & Inter-Harmonics	Synthesizes up to 40 orders of harmonic components
List/Step/Pulse Mode Programming Parameters	Simulates power line disturbance (PLD) transients such as sags, swells, dropouts, and spikes

Protection Features

Overvoltage Protection (OVP) Range	Programmable, limits maximum output voltage
Overcurrent Protection (OCP) Range	Programmable, limits maximum output current
Overpower Protection (OPP) Range	Programmable, limits maximum output power
Overtemperature Protection (OTP)	Standard shutdown on critical temperature
Remote Sense Maximum Cable Drop	5 V

Input Power Requirements

Input Phase Configuration	Single-Phase (1φ)
Input Voltage Range	190 V to 250 V AC
Input Frequency Range	47 Hz to 63 Hz

Physical & Environmental Specifications

Rack Height Units (U)	4 U
Storage Temperature Range	-40 to 85 °C

Compliance & Certifications

CE Mark Compliance	Compliant
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Output

Crest Factor	6
Output Voltage Distortion (15Hz - 100Hz)	< 0.5%
Output Voltage Distortion (100Hz - 500Hz)	< 1%
Output Voltage Distortion (500Hz - 1000Hz)	< 2%

Performance

Output Voltage Temperature Coefficient	0.02% of F.S. per °C
Transient Response Time	< 150 µs (for a 100% load step)
Efficiency	75% typical

Programming Accuracy

Programming Voltage Accuracy (AC)	0.15% of setting + 0.15% of F.S.
Programming Voltage Accuracy (DC)	0.15% of setting + 0.15% of F.S.
Programming Frequency Accuracy	0.1%

Measurement

Measurement Current Accuracy (RMS)	0.2% of reading + 0.2% of F.S.
Measurement Power Accuracy (W)	0.3% of reading + 0.3% of F.S.
Current RMS Measurement Ranges	0 - 2 A / 0 - 16 A
Current RMS Measurement Resolution	1 mA (on 2A range) / 10 mA (on 16A range)
Power Measurement Resolution	0.1 W (for < 1500 W) / 1 W (for ≥ 1500 W)

Input Power

Maximum Input Power	3200 VA
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Programming Specifications

List Mode Maximum Steps	100
Step Mode Maximum Steps	100
List Mode Time Setting Resolution	0.1 ms

Measurement Specifications

Peak Current Measurement Accuracy (15Hz - 100Hz)	0.4% of reading + 0.4% of F.S.
Peak Current Measurement Accuracy (100Hz - 1kHz)	0.8% of reading + 0.8% of F.S.
Power Factor Measurement Range	0.000 to 1.000
Crest Factor Measurement Range	1.00 to 5.00
Harmonic Voltage Measurement Range	1st to 50th order
Harmonic Current Measurement Range	1st to 50th order

Synthesized Waveforms

Arbitrary Waveform Memory Depth	1024 points
Inter-Harmonic Frequency Range	0.01 Hz to 2400 Hz

Analog Programming Interface

Analog Programming Input Range	0 to 5 V (external AC or DC signal)
Analog Programming Input Impedance	10 kΩ

Safety & Isolation

Isolation Resistance (Output to Chassis)	10 MΩ (at 500 VDC)
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TECHNOLOGY

Switching AC Power Source

APPLICATIONS

Power Supply, Grid Simulation, and Harmonic Immunity Testing

Generated by SpecAtlasHub (specatlashub.com). Specifications are compiled from available sources and are subject to change — verify critical values against the manufacturer before purchase.