

## CHROMA

# 61603

The Chroma 61603 is a highly reliable, programmable AC power source designed for high-precision testing and simulation applications. Rated at 1500 VA for AC output and 750 W for DC output, this single-phase power source provides clean, low-distortion power across a frequency range of 15 Hz to 1000 Hz. Standard interfaces include RS-232 and analog programming, making it highly suitable for commercial, defense, and aerospace test systems.

## SPECIFICATIONS

### General

|                     |                                                                                                                                        |
|---------------------|----------------------------------------------------------------------------------------------------------------------------------------|
| Interfaces          | RS-232, Analog Programming (standard); GPIB, USB, LAN (optional)                                                                       |
| Display             | LCD Display                                                                                                                            |
| Protection Features | Over Voltage Protection (OVP), Over Current Protection (OCP), Over Power Protection (OPP), Over Temperature Protection (OTP), Fan Fail |
| Cooling System      | Forced air cooling by temperature-controlled fans                                                                                      |

### Physical

|                       |                                        |
|-----------------------|----------------------------------------|
| Power Supply          | 90 - 250 VAC, single-phase, 47 - 63 Hz |
| Operating Temperature | 0 to 40 °C °C                          |
| Dimensions (W×H×D)    | 425 x 177 x 567 mm mm                  |
| Weight                | 25 kg                                  |

## AC Output Specifications

|                                   |                                                           |
|-----------------------------------|-----------------------------------------------------------|
| Maximum AC Power Rating           | 1500 VA                                                   |
| Output Phase Configuration        | 1 Phase (Single Phase)                                    |
| AC Voltage Ranges                 | 150 V / 300 V                                             |
| AC Voltage Resolution             | 0.1 V                                                     |
| AC Voltage Accuracy               | 0.2% of reading + 0.2% F.S.                               |
| Maximum RMS Current (Low Range)   | 12 A (0 - 150 V)                                          |
| Maximum RMS Current (High Range)  | 6 A (0 - 300 V)                                           |
| Maximum Peak Current (Low Range)  | 72 A                                                      |
| Maximum Peak Current (High Range) | 36 A                                                      |
| Crest Factor                      | 6                                                         |
| Frequency Range                   | 15 Hz - 1000 Hz, DC                                       |
| Frequency Resolution              | 0.01 Hz (15.00 - 99.99 Hz), 0.1 Hz (100.0 - 999.9 Hz)     |
| Frequency Accuracy                | 0.15%                                                     |
| Total Harmonic Distortion (THD)   | < 0.3% (50/60 Hz, resistive load), < 1% (15 Hz - 1000 Hz) |
| Voltage Line Regulation           | 0.1%                                                      |
| Voltage Load Regulation           | 0.2%                                                      |

## DC Output Specifications

|                                 |                             |
|---------------------------------|-----------------------------|
| Maximum DC Power Rating         | 750 W                       |
| DC Voltage Ranges               | 212 V / 424 V               |
| DC Voltage Resolution           | 0.1 V                       |
| DC Voltage Accuracy             | 0.2% of reading + 0.2% F.S. |
| Maximum DC Current (Low Range)  | 6 A (0 - 212 V)             |
| Maximum DC Current (High Range) | 3 A (0 - 424 V)             |
| 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          | 0.1% of reading + 0.1% F.S. |
| Current Measurement Accuracy (RMS)    | 0.2% of reading + 0.2% F.S. |
| Active Power (W) Measurement Accuracy | 0.4% of reading + 0.4% F.S. |
| Frequency Measurement Accuracy        | 0.1 Hz                      |
| Power Factor Measurement Range        | 0.000 - 1.000               |

## Input Power Requirements

|                           |                                                                  |
|---------------------------|------------------------------------------------------------------|
| Input Phase Configuration | Single Phase                                                     |
| Input Voltage Range       | 90 - 250 VAC                                                     |
| Input Frequency Range     | 47 - 63 Hz                                                       |
| Input Power Factor        | 0.97 (min) @ 110 VAC, full load; 0.95 (min) @ 220 VAC, full load |

## Physical & Environmental Specifications

|                           |                              |
|---------------------------|------------------------------|
| Rack Height Units         | 4U                           |
| Storage Temperature Range | -40 to 85 °C                 |
| Operating Humidity Range  | 0 to 90% RH (non-condensing) |

## Measurements

|                                         |                                                                                               |
|-----------------------------------------|-----------------------------------------------------------------------------------------------|
| Current Measurement Ranges              | 0 - 2 A / 0 - 20 A                                                                            |
| Current Measurement Resolution          | 1 mA (Low Range) / 10 mA (High Range)                                                         |
| Active Power (W) Measurement Ranges     | 0 - 150 W / 0 - 1500 W                                                                        |
| Active Power (W) Measurement Resolution | 0.1 W (Low Range) / 1 W (High Range)                                                          |
| Peak Current Measurement Range          | 0 - 6 A / 0 - 60 A                                                                            |
| Crest Factor Measurement Range          | 1.00 to 9.99                                                                                  |
| Crest Factor Measurement Resolution     | 0.01                                                                                          |
| Power Factor Measurement Resolution     | 0.001                                                                                         |
| Peak Current Measurement Accuracy       | ±(1.5% of rdg + 0.5% of range) for < 100 Hz; ±(3% of rdg + 1% of range) for 100 Hz to 1000 Hz |

## Performance

|                                 |               |
|---------------------------------|---------------|
| Voltage Temperature Coefficient | ±0.02% per °C |
| Remote Sense Compensation       | 5 V           |

## Output Phase & Control

|                                |              |
|--------------------------------|--------------|
| Phase Angle Setting Range      | 0° to 359.9° |
| Phase Angle Setting Resolution | 0.1°         |

## Output Characteristics

|                         |                                                                                      |
|-------------------------|--------------------------------------------------------------------------------------|
| Transient Recovery Time | < 150 µs (for output voltage to recover within 10% of rating under 100% load change) |
|-------------------------|--------------------------------------------------------------------------------------|

## System Features

|                               |                                            |
|-------------------------------|--------------------------------------------|
| Parallel Operation Capability | Up to 5 units (master-slave configuration) |
| Setup Memory Locations        | 9 user-defined setups                      |

## Inputs & Outputs

|                                  |                                                                        |
|----------------------------------|------------------------------------------------------------------------|
| Analog Programming Input Voltage | 0 to 5 V or 0 to 10 V (user-selectable for external amplitude control) |
|----------------------------------|------------------------------------------------------------------------|

**Compliance & Safety**

|                  |                                        |
|------------------|----------------------------------------|
| Safety Standards | EN 61010-1                             |
| EMC Standards    | EN 61326-1, EN 61000-3-2, EN 61000-3-3 |

**TECHNOLOGY**

---

Linear / Switching Hybrid

**APPLICATIONS**

---

AC/DC Power Simulation and 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.