

# High Performance DC Power Supplies...

speed and accuracy for test optimization

Agilent Performance DC Power Supplies provide the features and performance necessary to satisfy the most demanding requirements. For system designers who are striving to shorten test time and maximize production throughput, the Agilent High Performance DC power supplies will help them achieve their goals.

Multiple output power supplies reduce rack space. The advanced programmable capabilities allow for efficient system design and maintenance. Also their programming and measurement accuracy, and their DUT protection features, make them an excellent value for the R&D lab.

<b>Comparison Summary</b>	<b>Agilent Basic DC Power Supplies</b>	<b>Agilent High Performance DC Power Supplies</b>
<b>Output Power</b>	30 W-1500 W	40 W-6600 W
<b>Number of outputs</b>	1-3	1-8
<b>GPIO programming and measurement speed</b>	Moderate	Fast
<b>Output rise/fall time</b>	Moderate	Fast
<b>Convenient 1/2 rack-size for bench-top use</b>	Yes	No
<b>Active Downprogrammer for enhanced test throughput</b>	No	Yes
<b>Stored wake-up state</b>	No	Yes
<b>Programmable Capabilities</b>	Moderate	Extensive
<b>Protection for the DUT</b>	Moderate	Extensive

More detailed specifications at [www.agilent.com/find/power](http://www.agilent.com/find/power)



6611C - 6614C

## Single-Output 40-50 W GPIB

- Small, compact size for bench and system use
- Fast, low-noise outputs
- Dual-range, precision low current measurement
- Built-in measurements and advanced programmable features
- Protection features to ensure DUT safety

This series of linear-regulated 40-50 W DC power supplies is designed to maximize the throughput of DUTs through the manufacturing test process with fast programming and measurement, and also active downprogramming. It offers many advanced programmable features including stored states and status reporting. Programming is done using industry standard SCPI commands via the GPIB or RS-232. Test system integration is further simplified by using the VXIPlug&Play drivers. The optional relays simplify system design and troubleshooting.

The half-rack size of the 6610A series makes it a convenient DC power supply for the R&D lab bench. The built-in microamp measurement system helps the engineer to easily and accurately monitor the output voltage and current without a complicated test setup.

### Application Notes:

**10 Practical Tips You Need to Know About Your Power Products**  
5965-8239E

**10 Hints for Using Your Power Supply to Decrease Test Time**  
5968-6359E

**Understanding Linear Power Supply Operation (AN1554)**  
5989-2291EN

### Specifications

(at 0° to 55°C unless otherwise specified)

	6611C	6612C	6613C	6614C	6611C-J05 Special Order Option
<b>Number of outputs</b>	1	1	1	1	1
<b>GPIB</b>	Yes	Yes	Yes	Yes	Yes
<b>Output Ratings</b>					
Voltage	0 to 8 V	0 to 20 V	0 to 50 V	0 to 100 V	0 to 10 V
Current	0 to 5 A	0 to 2 A	0 to 1 A	0 to 0.5 A	0 to 5 A
<b>Programming accuracy (at 25°C ±5°C)</b>					
Voltage	5 mV	10 mV	20 mV	50 mV	5 mV
+Current	0.05% +	2 mA	1 mA	0.75 mA	0.5 mA
<b>Ripple and noise</b> 20 Hz to 20 MHz, with outputs ungrounded or with either terminal grounded					
Voltage	rms 0.5 mV peak-to-peak 3 mV	0.5 mV 3 mV	0.5 mV 4 mV	0.5 mV 5 mV	0.5 mV 3 mV
Normal mode	rms 2 mA	1 mA	1 mA	1 mA	2 mA
<b>DC measurement accuracy</b> via GPIB or front-panel meters with respect to actual output at 25°C ±5°C					
Voltage	0.03% +	2 mV	3 mV	6 mV	12 mV
Low current range -20 mA to +20 mA	0.1% +	2.5 µA	2.5 µA	2.5 µA	2.5 µA
High current range +20 mA to + rated 1	0.2% +	0.5 mA	0.25 mA	0.2 mA	0.1 mA
-20 mA to - rated 1	0.2% +	1.1 mA	0.85 mA	0.8 mA	0.7 mA
<b>Load regulation</b>					
Voltage	2 mV	2 mV	4 mV	5 mV	2 mV
Current	1 mA	0.5 mA	0.5 mA	0.5 mA	1 mA
<b>Line regulation</b>					
Voltage	0.5 mV	0.5 mV	1 mV	1 mV	0.5 mV
Current	0.5 mA	0.5 mA	0.25 mA	0.25 mA	0.5 mA
<b>Transient response time</b> Less than 100 µs for the output to recover to its previous level (within 0.1% of the voltage rating of the supply or 20 mV, whichever is greater) following any step change in load current of up to 50% of the output current rating of the supply					
<b>Supplemental Characteristics</b> (Non-warranted characteristics determined by design and useful in applying the product)					
<b>Average programming resolution</b>					
Voltage	2 mV	5 mV	12.5 mV	25 mV	3 mV
Current	1.25 mA	0.5 mA	0.25 mA	0.125 mA	1.25 mA
<b>Sink current</b>	3 A	1.2 A	0.6 A	0.3 A	3 A

## Single-Output: 40-50 W GPIB (Continued)

### Supplemental Characteristics for all model numbers

**DC Floating Voltage:** Output terminals can be floated up to  $\pm 240$  Vdc maximum from chassis ground

**Remote Sensing:** Up to two volts dropped in each load lead. Add 2 mV to the voltage load regulation specification for each one volt change in the positive output lead due to load current change.

**Command Processing Time:** Average time required for the output voltage to begin to change following receipt of digital data is 4 ms for the power supplies connected directly to the GPIB.

**Output Programming Response Time:** The rise and fall time (10/90% and 90/10%) of the output voltage is less than 2 ms. The output voltage change settles within 1 LSB (0.025% x rated voltage) of final value in less than 6 ms.

**GPIB Interface Capabilities:** IEEE-488.2, SCPI command set, and 6630A Series programming compatibility

**Input Power:** (full load): 1.6 A, 100 W (6611C: 2.2 A, 120 W)

**Regulatory Compliance:** Complies with EMC directive 89/336/EEC (ISM 1B).

**Software Driver:**  
VXIPlug&Play

**Warranty Period:** One year

**Size:** 212.8 mm W x 88.1 mm H x 368.3 mm D (8.4 in x 3.5 in x 14.5 in)

**Weight:** 8.2 kg (18.16 lb) net;  
10.6 kg (23.5 lb) shipping

### Ordering Information

**Opt 100** 87 to 106 Vac, 47 to 63 Hz

**Opt 120** 104 to 127 Vac, 47 to 63 Hz

**Opt 220** 191 to 233 Vac, 47 to 63 Hz

**Opt 230** 207 to 253 Vac, 47 to 63 Hz

**Opt 760** Isolation and Reversal relays

\* **Opt ICM** Rack-mount Kit (p/n 5063-9240)

\* **Opt AXS** Rack-mount Kit side-by-side mounting of two units, Lock-link Kit p/n 5061-9694; Flange Kit p/n 5062-3974

**Opt 0L1** Full documentation on CD-ROM, and printed standard documentation package

**Opt 0L2** Extra copy of standard printed documentation package

**Opt 0B0** Full documentation on CD-ROM only

**Opt 0B3** Service Manual

\*Support rails required

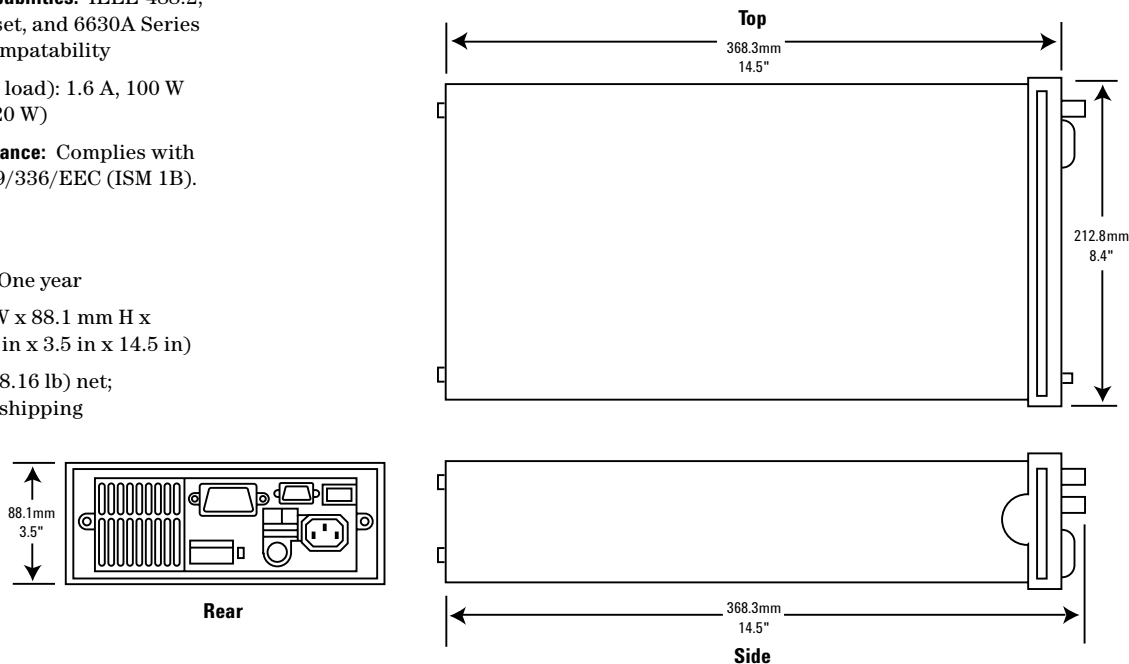
### Accessories

Rack-mount and slide for two side-by-side units of different lengths p/n 1494-0015, 5063-9255 and filler panel 5002-3999

Rack-mount slide and support for one instrument p/n 1494-0015, 5063-9255 and filler panel 5002-3999

**E3663AC** Support rails for Agilent rack cabinets

**Agilent Models: 6611C, 6612C, 6613C, 6614C**



**Your Requested Excerpt from the  
Agilent System and Bench Instruments Catalog 2006**

The preceding page(s) are an excerpt from the 2006 System and Bench Instruments Catalog. We hope that these pages supply the information that you currently need. If you would like to have further information about the extensive selection of Agilent DC power supplies, please visit [www.agilent.com/find/power](http://www.agilent.com/find/power) to print a copy of the complete catalog, or to request that a copy be sent to you. You will also find a lot of other useful information on this Web site.

In the full System and Bench Instruments Catalog, you will find that Agilent offers much more than DC power supplies. This catalog contains detailed technical and application information on digital multimeters, DC power supplies, arbitrary waveform generators, and many more instruments. If you need basic, clean, power for your lab bench, it's there. In each power product category we have also integrated the capabilities you need for a complete power solution, including extensive measurement and analysis capabilities.

Please give us a call at your local Agilent Technologies sales office, or call a regional office listed, for assistance in choosing or using Agilent power products.

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