



# Single-Output: 40-50 W GPIB



6611C - 6614C

- Increase production throughput with fast programming speed and fast downprogramming time
- Protect valuable prototypes with fast protection features
- Accurate and fast built-in measurement system

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.

| Specifications<br>(at 0° to 55° C unless otherwise specified)  | 6611C                           | 6612C            | 6613C              | 6614C            | 6611C-J05<br>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 20 Hz to 20 MHz, with outputs ungrounded or with either terminal grounded</b>  |                                 |                  |                    |                  |                                   |
| Voltage  | rms 0.5 mV<br>peak-to-peak 3 mV | 0.5 mV<br>3 mV   | 0.5 mV<br>4 mV     | 0.5 mV<br>5 mV   | 0.5 mV<br>3 mV                    |
| Normal mode  | rms 2 mA                        | 1 mA             | 1 mA               | 1 mA             | 2 mA                              |
| <b>dc measurement accuracy via GPIB or front-panel meters respect to actual output at 25°C ±5°C</b>  |                                 |                  |                    |                  |                                   |
| 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<br>-20 mA to -rated 1  | 0.2% +<br>0.2% +                | 0.5 mA<br>1.1 mA | 0.25 mA<br>0.85 mA | 0.2 mA<br>0.8 mA | 0.1 mA<br>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).

**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)  
See page 102 for more details

**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 0L2** Additional standard  
documentation package

**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