

Single-Output 80-100 W GPIB



6631B - 6634B

Fast, low-noise outputs

Programmable active down-programmer sinks the full rated current

Dual-range, precision low current measurement

Optional isolation and polarity reversal relays

Built-in measurements and advanced programmable features

Protection features to ensure DUT safety

This series of linear-regulated 80-100 W DC power supplies is designed to maximize the throughput of DUTs through the manufacturing test process. Both programming and measurement are optimized for speed. The active downprogrammer can sink up to the full rated current of the power supply, which quickly brings the power supply output to zero volts. The 6630B Series 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 optional front panel binding posts make the 6630B Series convenient on 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

Specifications

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

	6631B	6632B	6633B	6634B
Number of outputs	1	1	1	1
GPIB	Yes	Yes	Yes	Yes
Output ratings				
Voltage	0 to 8 V	0 to 20 V	0 to 50 V	0 to 100 V
Current	0 to 10 A	0 to 5 A	0 to 2 A	0 to 1 A
Programming accuracy at 25°C ±5°C				
Voltage	5 mV	10 mV	20 mV	50 mV
+ Current	0.05% + 4 mA	2 mA	1 mA	0.5 mA
Ripple and noise (20 Hz to 20 MHz, with outputs ungrounded or with either terminal grounded)				
Voltage Normal mode	rms 0.3 mV peak-to-peak 3 mV	rms 0.3 mV peak-to-peak 3 mV	rms 0.5 mV peak-to-peak 3 mV	rms 0.5 mV peak-to-peak 3 mV
Fast mode	rms 1 mV peak-to-peak 10 mV	rms 1 mV peak-to-peak 10 mV	rms 1 mV peak-to-peak 15 mV	rms 2 mV peak-to-peak 25 mV
Current	rms 3 mA	2 mA	2 mA	2 mA
DC measurement accuracy 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 I 0.2% + -20 mA to -rated I 0.2% + 1.6 mA	0.5 mA 1.1 mA	0.25 mA 0.85 mA	0.25 mA 0.85 mA
Load regulation				
Voltage	2 mV	2 mV	4 mV	5 mV
Current	2 mA	1 mA	1 mA	1 mA
Line regulation				
Voltage	0.5 mV	0.5 mV	1 mV	1 mV
Current	1 mA	0.5 mA	0.25 mA	0.25 mA
Transient response time	Less than 100 µs (50 µs in the fast mode) for the output voltage to recover to its previous level (within 0.1% of the voltage rating of the supply or 20 mV) following any step change in load current of up to 50% of the output current rating of the supply.			

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

USED4TEST

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Single-Output: 80-100 W GPIB (Continued)

Specifications

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

6631B

6632B

6633B

6634B

Supplemental Characteristics for all model numbers

DC Floating Voltage: Output terminals can be floated up to ± 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. (Display disabled).

Output-Programming Response Time: The rise and fall time (10/90% and 90/10%) of the output voltage is less than 2 ms (400 μ s in fast mode). The output voltage change settles within 1 LSB (0.025% x rated voltage) of final value in less than 6 ms (2 ms in the fast mode).

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

Software Driver:
VXIPlug&Play

Measurement Time: Average time to make a voltage or current measurement is 50 ms.

Input Power (full load): 3.5 A, 250 W

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

Warranty Period: One year

Size: 425.5 mm W x 88.1 mm H x 364.4 mm D (16.8 in x 3.5 in x 14.3 in).

Weight: Net, 12.7 kg (28 lb) net; 15.0 kg (33 lb) shipping

Supplemental Characteristics

(Non-warranted characteristics determined by design and useful in applying the product)

Average programming resolution				
Voltage	2 mV	5 mV	12.5 mV	25 mV
Current	2.5 mA	1.25 mA	0.5 mA	0.25 mA
Sink current	10 A	5 A	2 A	1 A
Sink current tracking				
SCPI mode	0.4% + 4 mA	0.4% + 2 mA	0.4% + 1 mA	0.4% + 0.5 mA
Compatibility mode	-500 mA	-250 mA	-100 mA	-50 mA
Minimum current in constant current mode*	40 mA	20 mA	8 mA	4 mA

*When programming in the 6630A Series language compatibility mode.

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 020 Front-panel Binding Posts (N/A on 6631B)

Opt 760 Isolation and Reversal Relays, only available at time of order (N/A on 6631B)

* **Opt 1CM** Rack-mount Kit, p/n 5063-9212

* **Opt 1CP** Rack-mount Kit with Handles, p/n 5063-9219

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

p/n 1494-0060 Rack Slide Kit

E3663AC Support rails for Agilent rack cabinets

Agilent Models: 6631B, 6632B, 6633B, 6634B

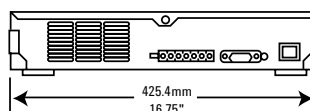
Terminal Strip Detail

Output 2 & 3

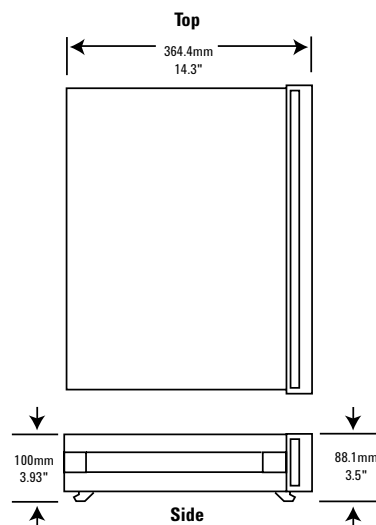
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Screw Size:
M35 x 0.6



Rear



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