

Keysight Technologies

6620A Series Precision Multiple-Output,
25-50 W DC Power Supplies, GPIB

Data Sheet



Introduction

- Up to four fully isolated power supplies in a 3U package
- Fast, low noise outputs
- Dual range, precision low current measurement
- Built-in measurements and advanced programmable features
- Protection features to ensure DUT safety

Two or four isolated outputs are integrated into one package, conserving rack space and GPIB addresses. Dual ranges allow for more current at lower voltage levels. The outputs can be connected in parallel or series to further increase the flexibility that these products offer the system designer. Programming is done using industry standard SCPI commands and test system integration can be further simplified by using the *VXIplug&play* drivers. These power supplies help reduce test time with fast up and down programming, enhanced by the active down-programmer which can sink the full rated current.

These power supplies are very useful on the R&D bench. The accuracy of both the programming and the measurement systems allow precise control and monitoring of prototype bias power. The extensive protection features protect valuable prototypes, including very fast CV/CC crossover. The power supply can be controlled from either the front panel keypad or, for automated testing, from the GPIB.

Specifications

Specifications (at 0 ° to 55 °C unless otherwise specified)	25 W output	50 W output
Output power		
Low-range voltage, current	0 to 7 V, 0 to 15 mA	0 to 16 V, 0 to 200 mA
High range voltage, current	0 to 50 V, 0 to 500 mA	0 to 50 V, 0 to 1 A or 0 to 16 V, 0 to 2 A
Output combinations for each model (total number of outputs)		
6625A (2) precision	1	1
6626A (4) precision	2	2
6628A (2) precision	–	2
6629A (4) precision	–	4
Programming accuracy at 25 °C ± 5 °C		
Voltage (low) 0.016% +	1.5 mV	3 mV
(high) 0.016% +	10 mV	10 mV
Current (low) 0.04% +	15 µA	185 µA
(high) 0.04% +	100 µA	500 µA
Readback accuracy at 25 °C ± 5 °C		
Voltage (low) 0.016% +	2 mV	3.5 mV
(high) 0.016% +	10 mV	10 mV
± Current (low) 0.03% +	15 µA	250 µA
(high) 0.03% +	130 µA	550 µA
Ripple and noise (peak-to-peak, 20 Hz to 20 MHz; rms, 20 Hz to 10 MHz)		
Constant voltage rms	500 µV	500 µV
peak-to-peak	3 mV	3 mV
Constant current rms	0.1 mA	0.1 mA
Load regulation		
Voltage	0.5 mV	0.5 mV
Current	0.005 mA	0.01 mA
Load cross regulation		
Voltage	0.25 mV	0.25 mV
Current	0.005 mA	0.01 mA
Line regulation		
Voltage	0.5 mV	0.5 mV
Current	0.005 mA	0.01 mA

Transient response time

Less than 75 µs for the output voltage to recover to within 75 mV of nominal value following a load change within specifications

Supplemental characteristics (Non-warranted characteristics determined by design and useful in applying the product)	25 W output	50 W output
Average programming resolution		
Voltage (low)	460 µV	1 mV
(high)	3.2 mV	3.2 mV
Current (low)	1 µA	13 µA
(high)	33 µA	131 µA
OVP	230 mV	230 mV
Output programming response time (time to settle within 0.1% of full scale output, after Vset command has been processed)	6 ms	6 ms

Supplemental characteristics for all model numbers

DC floating voltage: Output terminals can be floated up to ± 240 VDC from chassis ground

Remote sensing: Up to 10 V drop per load lead. The drop in the load leads is subtracted from the voltage available for the load.

Command processing time: 7 ms typical with front-panel display disabled

Input power: 550 W max., 720 VA max.

GPIB interface capabilities: SH1, AH1, T6, L4, SR1, RL1, PP1, DC1, DT0, C0, E1.

Software driver: *VXIplug&play*

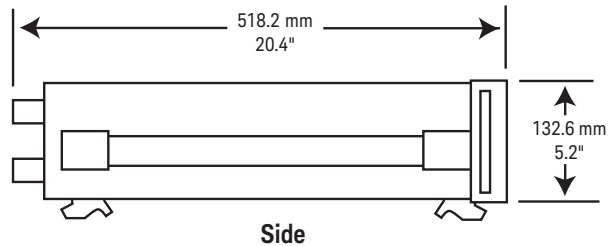
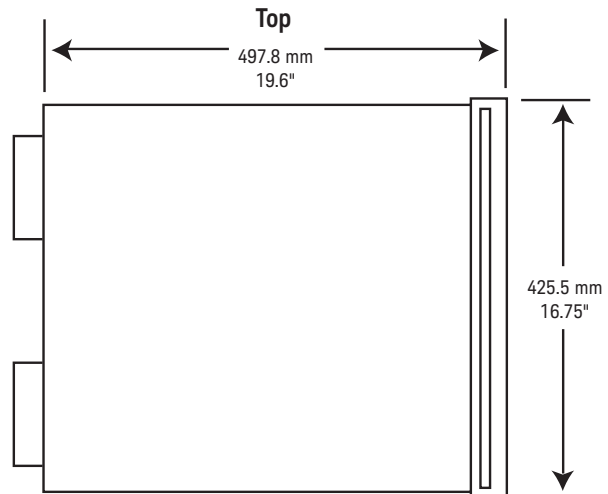
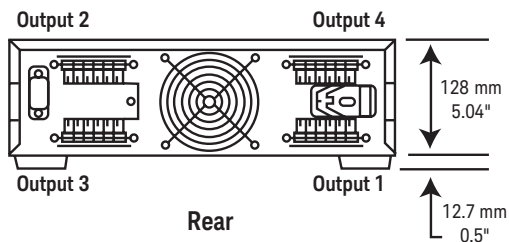
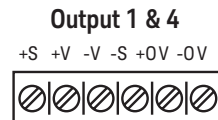
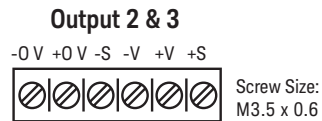
Regulatory compliance: Listed to UL 1244; conforms to IEC 61010-1

Size: 425.5 mm W x 132.6 mm H x 497.8 mm D (16.75 in x 5.22 in x 19.6 in)

Weight: 6626A, 6629A: Net, 17.4 kg (38 lb); shipping, 22.7 kg (50 lb)
6625A, 6628A: Net, 15.5 kg (34 lb); shipping, 20.8 kg (46 lb)

Keysight Technologies, Inc. models: 6625A, 6626A, 6628A, 6629A

Terminal strip detail



Ordering information

The 6620A precision power supplies come with full documentation on CD-ROM. The CD-ROM includes operating manual, service manual, and application notes.

Opt 100	87 to 106 VAC, 47 to 66 Hz, 6.3 A (Japan only)
Opt 120	104 to 127 VAC, 47 to 63 Hz
Opt 220	191 to 233 VAC, 47 to 66 Hz, 3.0 A
Opt 240	209 to 250 VAC, 47 to 66 Hz, 3.0 A
Opt 750	Relay control and DFI/RI
Opt S50	Similar to Option 750, however the remote inhibit does not latch

Opt 0L1 Printed operating manual

Opt 0B3 Printed service manual

Accessories

1CM003A* Rack mount flange kit 132.6 mm H (3U) – two flange brackets

1CP002A* Rack mount flange and handle kit 132.6 mm H (3U) – two brackets and front handles

E3663AC Support rails for Keysight rack cabinets

1494-0059 Rack slide kit

* *Support rails required*

Application notes

10 Practical Tips You Need to Know About Your Power Products - AN

5965-8239E

10 Hints for Using Your Power Supply to Decrease Test Time - AN

5968-6359E

Understanding Linear Power Supply Operation - AN

5989-2291EN

Modern Connectivity—Using USB and LAN I/O Converters - AN

5989-0123EN

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