

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% + (high) 0.016% +	1.5 mV 10 mV	3 mV 10 mV
Current	(low) 0.04% + (high) 0.04% +	15 µA 100 µA	185 µA 500 µA
Readback accuracy at 25 °C ± 5 °C			
Voltage	(low) 0.016% + (high) 0.016% +	2 mV 10 mV	3.5 mV 10 mV
± Current	(low) 0.03% + (high) 0.03% +	15 µA 130 µA	250 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.

GPIO 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)

Warranty: One year

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

Terminal strip detail

Output 2 & 3

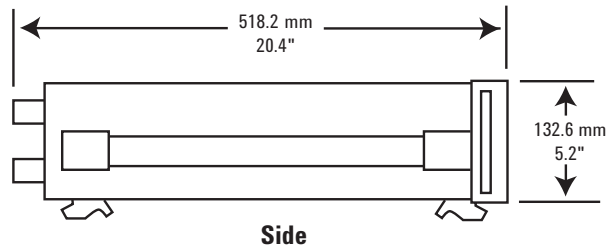
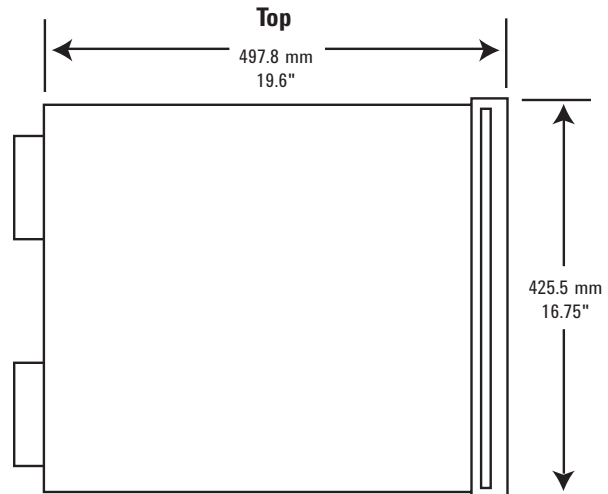
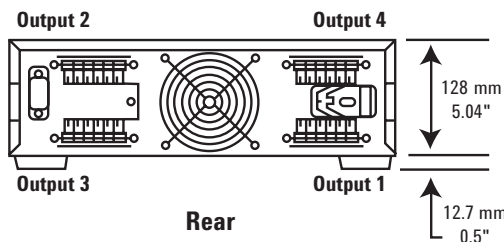
-0V +0V -S -V +V +S



Screw Size: M3.5 x 0.6

Output 1 & 4

+S +V -V -S +0V -0V



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

<i>10 Practical Tips You Need to Know About Your Power Products - AN</i>	5965-8239E
<i>10 Hints for Using Your Power Supply to Decrease Test Time - AN</i>	5968-6359E
<i>Understanding Linear Power Supply Operation - AN</i>	5989-2291EN
<i>Modern Connectivity—Using USB and LAN I/O Converters - AN</i>	5989-0123EN

myKeysight

myKeysight

www.keysight.com/find/mykeysight

A personalized view into the information most relevant to you.



Three-Year Warranty

www.keysight.com/find/ThreeYearWarranty

Keysight's commitment to superior product quality and lower total cost of ownership. The only test and measurement company with three-year warranty standard on all instruments, worldwide.



Keysight Assurance Plans

www.keysight.com/find/AssurancePlans

Up to five years of protection and no budgetary surprises to ensure your instruments are operating to specification so you can rely on accurate measurements.



www.keysight.com/quality

Keysight Technologies, Inc.
DEKRA Certified ISO 9001:2008
Quality Management System

Keysight Channel Partners

www.keysight.com/find/channelpartners

Get the best of both worlds: Keysight's measurement expertise and product breadth, combined with channel partner convenience.

www.keysight.com/find/6620

For more information on Keysight Technologies' products, applications or services, please contact your local Keysight office. The complete list is available at: www.keysight.com/find/contactus

Americas

Canada	(877) 894 4414
Brazil	55 11 3351 7010
Mexico	001 800 254 2440
United States	(800) 829 4444

Asia Pacific

Australia	1 800 629 485
China	800 810 0189
Hong Kong	800 938 693
India	1 800 112 929
Japan	0120 (421) 345
Korea	080 769 0800
Malaysia	1 800 888 848
Singapore	1 800 375 8100
Taiwan	0800 047 866
Other AP Countries	(65) 6375 8100

Europe & Middle East

Austria	0800 001122
Belgium	0800 58580
Finland	0800 523252
France	0805 980333
Germany	0800 6270999
Ireland	1800 832700
Israel	1 809 343051
Italy	800 599100
Luxembourg	+32 800 58580
Netherlands	0800 0233200
Russia	8800 5009286
Spain	0800 000154
Sweden	0200 882255
Switzerland	0800 805353
	Opt. 1 (DE)
	Opt. 2 (FR)
	Opt. 3 (IT)
United Kingdom	0800 0260637

For other unlisted countries:
www.keysight.com/find/contactus
(BP-07-10-14)