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 be using the VXI*plug&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 16 V,
		0 to 15 mA	0 to 200 mA
High range voltage, current		0 to 50 V,	0 to 50 V, 0 to 1 A or
		0 to 500 mA	0 to 16 V, 0 to 2 A
Output combinations for each model (total r	number of outputs)		
6625A (2) precision		1	1
6626A (4) precision		2	2
6628A (2) precision		_	2
6629A (4) precision		_	4
Programming accurac	y 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 μΑ	185 μΑ
	(high) 0.04% +	100 μΑ	500 μΑ
Readback accuracy a	t 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 μΑ	250 μΑ
	(high) 0.03% +	130 μΑ	550 μΑ
Ripple and noise (peak-to-peak, 20 Hz tı rms, 20 Hz to 10 MHz) Constant voltage rm		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 μ s 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 μΑ	13 μΑ
	(high)	33 μΑ	131 μΑ
OVP		230 mV	230 mV
Output programming response time		6 ms	6 ms
(time to settle within 0.1% of full scale output, after Vset command has been processed)			

Supplemental characteristics for all model numbers

DC floating voltage: Output terminals can be floated up to \pm 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)

Warranty: One year

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

Top 497.8 mm 19.6" Terminal strip detail **Output 2 & 3** -0 V +0 V -S -V +V Screw Size: $M3.5 \times 0.6$ 425.5 mm 16.75" **Output 1 & 4** +S +V -V -S +0 V -0 V Ø|Ø|Ø|Ø|Ø 518.2 mm 20.4 Output 2 Output 4 132.6 mm 128 mm (£0|| 5.04" Output 3 Output 1 Side 12.7 mm Rear

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 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

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

^{*} Support rails required

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