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Find the *Keysight / Agilent 6674A* at our website: ***Click HERE***

DATA SHEET

6670A Series Single-Output, 2000 W DC Power Supplies, GBIP

Speed and accuracy for test optimization

- Fast, low-noise outputs
- Analog control of output voltage and current
- Fan-speed control to minimize acoustic noise
- Built-in measurements and advanced programmable features
- Protection features to ensure DUT safety



KEYSIGHT TECHNOLOGIES

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Introduction

This series of 2000 watt DC power supplies has the exceptional, proven reliability that test system engineers look for. It also has the unusual combination of high efficiency and low noise operation.

Programming of the DC output and the extensive protection features can be done either from the front panel or using industry standard SCPI commands, via the GPIB. Using the serial link, up to 16 power supplies can be connected through one GPIB address. Test system integration can be further simplified be using the VXI*plug&play* drivers.

The output voltage and current can also be controlled with analog signals. This is helpful for certain types of noisy environments, and also immediate reactions to process changes.

Lab-bench use is enhanced by the fan-speed control, which minimizes acoustic noise. The extremely low ripple and noise helps the built-in measurement system make extremely accurate current and voltage measurements.

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Specifications

Specifications (at 0 ° to 55 °C unless otherwise specified)		**6671A**	**6672A**	**6673A**	**6674A**	**6675A**
Number of outputs		1	1	1	1	1
GPIB		Yes	Yes	Yes	Yes	Yes
Output ratings						
Output voltage		0 to 8 V	0 to 20 V	0 to 35 V	0 to 60 V	0 to 120 V
Output current		0 to 220 A	0 to 100 A	0 to 60 A	0 to 35 A	0 to 18 A
Programming accuracy (at 25 °C ± 5 °C)						
Voltage	0.04% +	8 mV	20 mV	35 mV	60 mV	120 mV
Current	0.1% +	125 mA	60 mA	40 mA	25 mA	12 mA
Ripple and noise from 20 Hz to 20 MHz						
Voltage	rms	650 µV	750 µV	800 µV	1.25 mV	1.9 mV
	peak-to-peak	7 mV	9 mV	9 mV	11 mV	16 mV
Current	rms	200 mA	100 mA	40 mA	25 mA	12 mA
Readback accuracy at 25 °C ± 5 °C (percent of reading plus fixed)						
Voltage	0.05% +	12 mV	30 mV	50 mV	90 mV	180 mV
± Current	0.1% +	150 mA	100 mA	60 mA	35 mA	18 mA
Load and line regulation						
Voltage	0.002% +	300 µV	650 µV	1.2 mV	2 mV	4 mV
Current	0.005% +	10 mA	7 mA	4 mA	2 mA	1 mA
Transient response time		Less than 900 µs for the output voltage to recover to within 100 mV following a change in load from 100% to 50% or 50% to 100% of the output current rating of the supply				

Supplemental characteristics (Non-warranted characteristics determined by design and useful in applying the product)	**6671A**	**6672A**	**6673A**	**6674A**	**6675A**
Average programming resolution					
Voltage	2 mV	5 mV	10 mV	15 mV	30 mV
Current	55 mA	25 mA	15 mA	8.75 mA	4.5 mA
OVP	15 mV	35 mV	65 mV	100 mV	215 mV
Output voltage programming response time* (excluding command processing time)	30 ms	60 ms	130 ms	130 ms	195 ms

* Full load programming rise/fall time (10% to 90% or 90% to 10%) with full resistive load equal to rated output voltage/rated output current.

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Specifications (Continued)

Specifications (at 0 ° to 55 °C unless otherwise specified)		**6671A-J03** Special order option	**6671A-J04** Special order option	**6671A-J08** Special order option	**6671A-J17** Special order option	**6672A-J04** Special order option	**6673A-J03** Special order option
Number of outputs		1	1	1	1	1	1
GPIB		Yes	Yes	Yes	Yes	Yes	Yes
Output ratings							
Output voltage		14 V	10 V	3 V	15 V	24 V	37.5 V
Output current		150 A	200 A	300 A	120 A	85 A	45 A
Programming accuracy (at 25 °C ± 5 °C)							
Voltage	0.04% +	14 mV	10 mV	4 mV	15 mV	25 mV	37.5 V
Current	0.1% +	90 mA	125 mA	250 mA	90 mA	60 mA	40 A
Ripple and noise from 20 Hz to 20 MHz							
Voltage	rms	1.5 mV	750 µV	1 mV	1.5 mV	1 mV	800 µV
	peak-to-peak	15 mV	9 mV	25 mV	15 mV	11 mV	9 mV
Current	rms	150 mA	200 mA	275 mA	150 mA	100 mA	40 mA
Readback accuracy at 25 °C ± 5 °C (percent of reading plus fixed)							
Voltage	0.05% +	25 mV	15 mV	6 mV	27 mV	40 mV	53.5 mV
± Current	0.1% +	110 mA	150 mA	250 mA	110 mA	100 mA	60 mA
Load and line regulation							
Voltage	0.002% +	600 µV	300 µV	300 µV	650 µV	650 µV	1.2 mV
Current	0.005% +	7 mA	10 mA	15 mA	7 mA	7 mA	4 mA
Transient response time		Less than 900 µs for the output voltage to recover to within 100 mV following a change in load from 100% to 50% or 50% to 100% of the output current rating of the supply					

Supplemental characteristics (Non-warranted characteristics determined by design and useful in applying the product)	**6671A-J03** Special order option	**6671A-J04** Special order option	**6671A-J08** Special order option	**6671A-J17** Special order option	**6672A-J04** Special order option	**6673A-J03** Special order option
Average programming resolution						
Voltage	4 mV	2.5 mV	1 mV	4 mV	6 mV	10 mV
Current	40 mA	55 mA	75 mA	35 mA	22 mA	15 mA
OVP	28 mV	20 mV	8 mV	30 mV	42 mV	65 mV
Output voltage programming response time* (excluding command processing time)	30 ms	35 ms	30 ms	35 ms	70 ms	130 ms

* Full load programming rise/fall time (10% to 90% or 90% to 10%) with full resistive load equal to rated output voltage/rated output current.

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Specifications (Continued)

Specifications (at 0 ° to 55 °C unless otherwise specified)		**6673A-J08** Special order option	**6674A-J03** Special order option	**6674A-J07** Special order option	**6675A-J04** Special order option	**6675A-J06** Special order option
Number of outputs		1	1	1	1	1
GPIB		Yes	Yes	Yes	Yes	Yes
Output ratings						
Output voltage		40 V	56 V	50 V	160 V	135 V
Output current		50 A	38 A	42 A	13 A	16 A
Programming accuracy (at 25 °C ± 5 °C)						
Voltage	0.04% +	40 mV	60 mV	60 mV	160 mV	125 mV
Current	0.1% +	35 mA	28 mA	30 mA	10 mA	12 mA
Ripple and noise from 20 Hz to 20 MHz						
Voltage	rms	1 mV	1.25 mV	1.25 mV	2.8 mV	2 mV
	peak-to-peak	10.5 mV	11 mV	11 mV	20 mV	18 mV
Current	rms	40 mA	280 mA	25 mA	18 mA	12 mA
Readback accuracy at 25 °C ± 5 °C (percent of reading plus fixed)						
Voltage	0.05% +	60 mV	90 mV	90 mV	240 mV	185 mV
± Current	0.1% +	60 mA	38 mA	42 mA	14 mA	18 mA
Load and line regulation						
Voltage	0.002% +	1.4 mV	2 mV	2 mV	6 mV	4 mV
Current	0.005% +	4 mA	2 mA	2 mA	1 mA	4 mA
Transient response time		Less than 900 µs for the output voltage to recover to within 100 mV following a change in load from 100% to 50% or 50% to 100% of the output current rating of the supply				

Supplemental characteristics (Non-warranted characteristics determined by design and useful in applying the product)	**6673A-J08** Special order option	**6674A-J03** Special order option	**6674A-J07** Special order option	**6675A-J04** Special order option	**6675A-J06** Special order option
Average programming resolution					
Voltage	10.5 mV	14 mV	12 mV	40 mV	34 mV
Current	12.5 mA	9.5 mA	11 mA	3.25 mA	4 mA
OVP	75 mV	100 mV	85 mV	300 mV	242 mV
Output voltage programming response time* (excluding command processing time)	130 ms	130 ms	130 ms	280 ms	250 ms

* Full load programming rise/fall time (10% to 90% or 90% to 10%) with full resistive load equal to rated output voltage/rated output current.

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Specifications (Continued)

Specifications (at 0 ° to 55 °C unless otherwise specified)		**6675A-J07** Special order option	**6675A-J08** Special order option	**6675A-J09** Special order option	**6675A-J11** Special order option
Number of outputs		1	1	1	1
GPIB		Yes	Yes	Yes	Yes
Output ratings					
Output voltage		200 V	100 V	110 V	150 V
Output current		11 A	22 A	20 A	15 A
Programming accuracy (at 25 °C ± 5 °C)					
Voltage	0.04% +	200 mV	120 mV	120 mV	150 mV
Current	0.1% +	8 mA	15 mA	13,5 mA	11 mA
Ripple and noise from 20 Hz to 20 MHz					
Voltage	rms	3.5 mV	1.9 mV	1.9 mV	2.5 mV
	peak-to-peak	25 mV	16 mV	16 mV	18 mV
Current	rms	15 mA	15 mA	13.5 mA	12 mA
Readback accuracy at 25 °C ± 5 °C (percent of reading plus fixed)					
Voltage	0.05% +	300 mV	180 mV	180 mV	225 mV
± Current	0.1% +	12 mA	22 mA	20 mA	15 mA
Load and line regulation					
Voltage	0.002% +	7 mV	4 mV	4 mV	6 mV
Current	0.005% +	1 mA	4 mA	4 mA	1 mA
Transient response time		Less than 900 µs for the output voltage to recover to within 100 mV following a change in load from 100% to 50% or 50% to 100% of the output current rating of the supply			

Supplemental characteristics (Non-warranted characteristics determined by design and useful in applying the product)	**6675A-J07** Special order option	**6675A-J08** Special order option	**6675A-J09** Special order option	**6675A-J11** Special order option
Average programming resolution				
Voltage	50 mV	30 mV	30 mV	37.5 mV
Current	2.75 mA	4.5 mA	4.5 mA	3.75 mA
OVP	360 mV	215 mV	215 mV	270 mV
Output voltage programming response time* (excluding command processing time)	350 ms	195 ms	195 ms	250 ms

* Full load programming rise/fall time (10% to 90% or 90% to 10%) with full resistive load equal to rated output voltage/rated output current.

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Supplemental Characteristics for All Model Numbers

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

Output common-mode noise current: (to signal ground binding post) 500 µA rms, 4 mA peak-to-peak

Remote sensing: Up to half the rated output voltage can be dropped in each load lead. The drop in the load leads subtracts from the voltage available for the load.

Command processing time: Average time required for the output voltage to begin to change following receipt of digital data is 20 ms for the power supplies connected directly to the GPIB

Modulation: (Analog programming of output voltage and current)
Input signal: 0 to –4 V for voltage, 0 to 7 V for current
Input impedance: 60 kΩ or greater

Input power: 3,800 VA, 2,600 W at full load; 170 W at no load

GPIB interface capabilities: SH1, AH1, T6, L4, SR1, RL1, PP0, DC1, DT1, E1, and C0. IEEE-488.2 and SCPI-compatible command set

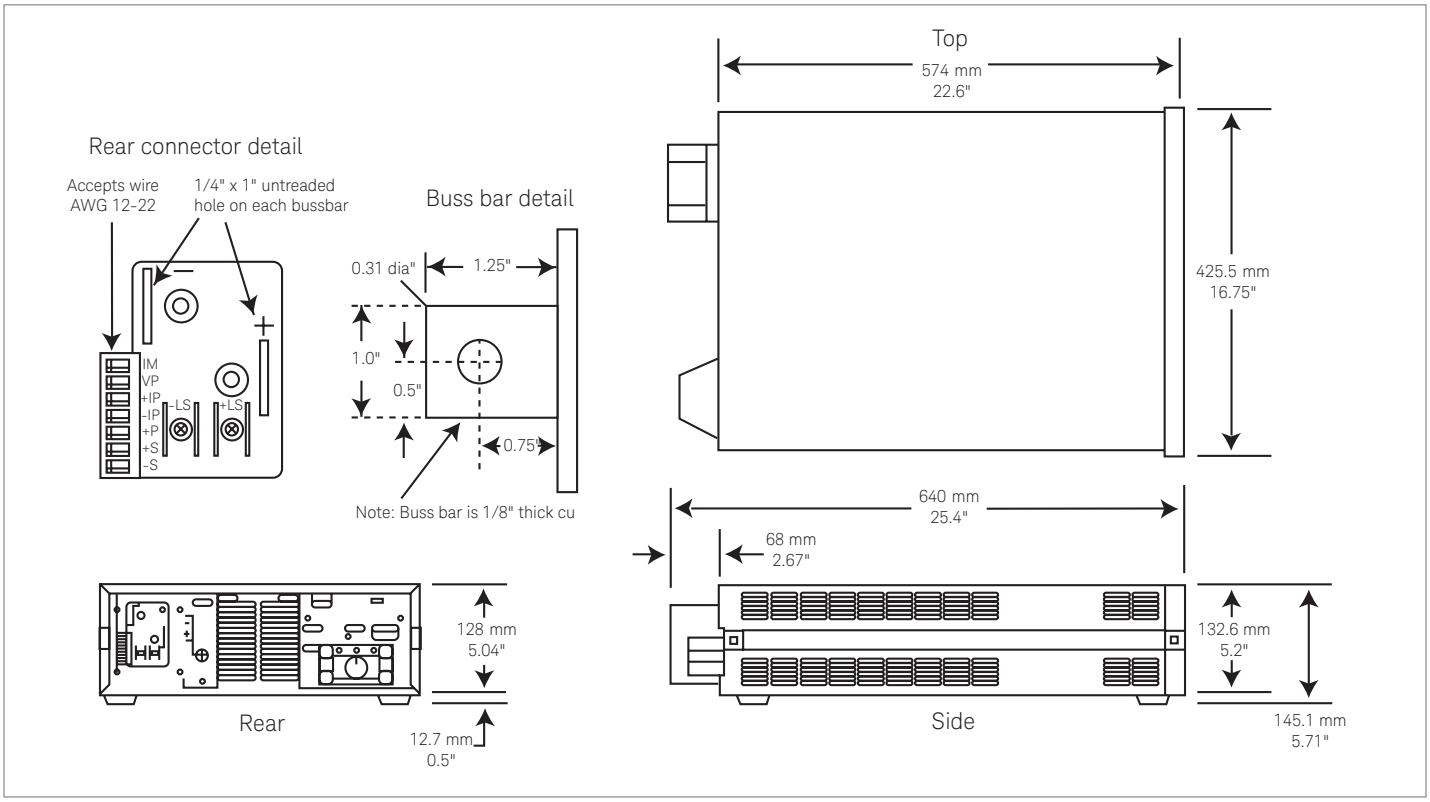
Software driver:
- IVI-COM
- VXI*plug&play*

Regulatory compliance: Listed to UL1244; certified to CSA556B; conforms to IEC 61010-1

Size: 425.5 mm W x 132.6 mm H x 640 mm D
(16.75 in x 5.22 in x 25.2 in)

Weight: Net, 28.2 kg (62 lb); shipping, 31.8 kg (70 lb)

Keysight Technologies, Inc. Models: 6671A, 6672A, 6673A, 6674A, 6675A



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Ordering Information

The 6670 Series power supplies come with full documentation on CD-ROM. The CD-ROM includes user's guide, programming guide, service manual, quick start guide, and application notes.

Voltage options

Opt 200	174 to 220 VAC, 47 to 63 Hz (Japan only)
Opt 230	191 to 250 VAC, 47 to 63 Hz

Documentation options

Opt 0L1	Printed user's and programming guides
Opt 0B3	Printed service manual
Opt S50	Non-latching remote inhibit

Power cord options

Opt 831	Power cord, NO PLUG, 12AWG, 3-wire, 8.2 ft
Opt 832	Power cord, Europe, NO PLUG, 4 mm, 3-wire, 2.5 m length
Opt 834	Power cord, Japan, 250V, NO PLUG
Opt 842	Power cord, Europe, IEC309, 32A, 220V/240V PLUG, 4 mm, 3 wire, 2.5 m length
Opt 844	Power cord, Americas, Japan, NEMA L6-30P, 30A, 250V, PLUG, 10AWG, 8 ft

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	
	p/n 1494-0059	Accessory slide kit
	p/n 1252-3698	7-pin analog plug
	p/n 1252-1488	4-pin digital plug
	p/n 5080-2148	Serial link cable 2 m (6.6 ft)

Application Notes

6671A/72A/81A/82A/90A System DC Power Supplies Product Overview, 5988-3050EN

Keysight DC Power Supplies for Base Station Testing, 5988-2386EN

10 Practical Tips You Need to Know About Your Power Products, 5965-8239E

* Support rails required

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KEYSIGHT TECHNOLOGIES

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