6671A - 6675A

Single-Output
2000 W GPIB

- 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

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.

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
Voltage 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 regulation						
Voltage	0.002%+	300 µV	650 µV	1.2 mV	2 mV	4 mV
Line regulation						
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 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)				
Average 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.

More detailed specifications at **www.agilent.com/find/6670**

Single-Output: 2000 W GPIB (Continued)

Application Notes:

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

Agilent DC Power Supplies for Base Station Testing
5988-2386EN

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

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 mV
Current	0.1%+	90 mA	125 mA	250 mA	90 mA	60 mA	40 mA
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
Voltage 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) System models only							
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 regulation							
Voltage	0.002%+	600 µV	300 µV	300 µV	650 µV	650 µV	1.2 mV
Line regulation							
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 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)					
Average 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 programming 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.

More detailed specifications at **www.agilent.com/find/6670**

Single-Output: 2000 W GPIB (Continued)

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 k Ohm 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 lbs); shipping, 31.8 kg (70 lbs)

Warranty Period: One year

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
Voltge peak to peak		10.5 mV	11 mV	11 mV	20 mV	18 mV
Current rms		40 mA	28 mA	25 mA	18 mA	12 mA
Readback accuracy at 25°C ±5°C (percent of reading plus fixed) System models only						
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 regulation						
Voltage	0.002%+	1.4 mV	2 mV	2 mV	6 mV	4 mV
Line regulation						
Current	0.005%+	4 mA	2 mA	2 mA	1 mA	4 mV
Transient response time		Less than 900 µs for the output voltage to recover 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)				
Average 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 programming 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.

More detailed specifications at **www.agilent.com/find/6670**

Single-Output: 2000 W GPIB (Continued)

Ordering Information

Opt 200 174 to 220 Vac, 47 to 63 Hz (Japan only)

Opt 230 191 to 250 Vac, 47 to 63 Hz

* **Opt 908** Rack-mount Kit (p/n 5062-3977)

* **Opt 909** Rack-mount Kit w/handles (p/n 5063-9221)

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

A line cord option must be specified, see the AC line voltage and cord section.

* Support rails required

Accessories

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)

E3663AC Support rails for Agilent rack cabinets

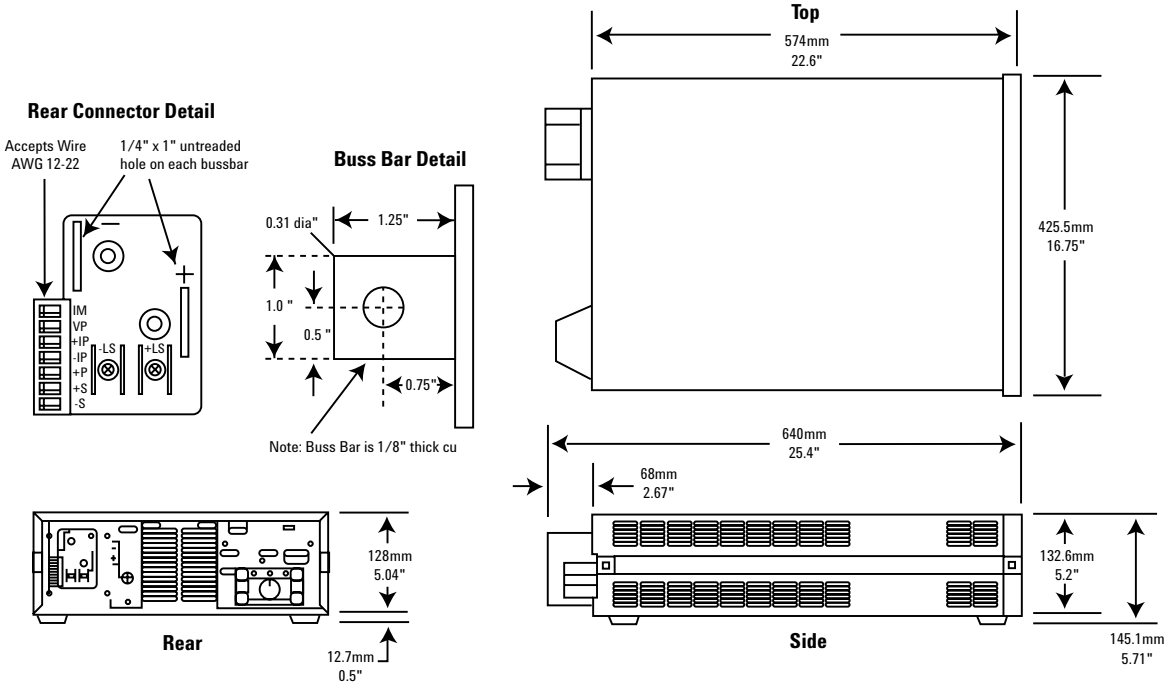
Specifications (at 0˚ to 55˚C unless otherwise specified)		**6675A-J07** Special Order Option	**6675A-J08** Special Order Option	**6675A-J09** Special Order Option	**6675A J11** Special Order Option
Number of outputs		1	1	1	1
GPIB		Yes	Yes	Yes	Yes
Output ratings					
Output voltage		200 V	100 V	110 V	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
Voltge 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) System models only					
Voltage	0.05%+	300 mV	180 mV	180 mV	225 mV
±Current	0.1%+	12 mA	22 mA	20 mA	15 mA
Load regulation					
Voltage	0.002% +	7 mV	4 mV	4 mV	6 mV
Line regulation					
Current	0.005% +	1 mA	4 mV	4 mV	1 mA
Transient response time		Less than 900 µs for the output voltage to recover 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)			
Average 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 programming 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.

More detailed specifications at **www.agilent.com/find/6670**

Single-Output: 2000 W GPIB (Continued)

Agilent Models: 6671A, 6672A, 6673A, 6674A, 6675A



More detailed specifications at **www.agilent.com/find/6670**

Your Requested Excerpt from the
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The preceding page(s) are an excerpt from the 2006 System and Bench Instruments Catalog. We hope that these pages supply the information that you currently need. If you would like to have further information about the extensive selection of Agilent DC power supplies, please visit **www.agilent.com/find/power** to print a copy of the complete catalog, or to request that a copy be sent to you. You will also find a lot of other useful information on this Web site.

In the full System and Bench Instruments Catalog, you will find that Agilent offers much more than DC power supplies. This catalog contains detailed technical and application information on digital multimeters, DC power supplies, arbitrary waveform generators, and many more instruments. If you need basic, clean, power for your lab bench, it's there. In each power product category we have also integrated the capabilities you need for a complete power solution, including extensive measurement and analysis capabilities.

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Printed in the USA, February 8, 2006

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