



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 by using the *VXIPlug&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.

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

Specifications		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.

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 μ A 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
- VXIPlug&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 $\pm 5^\circ$ 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
Voltage 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 $\pm 5^\circ$ C (percent of reading plus fixed) System models only					
Voltage 0.05%+	60 mV	90 mV	90 mV	240 mV	185 mV
$\pm$ 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 μ s 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.

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

Specifications		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
Voltage 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)

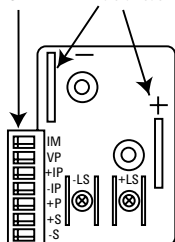
Average resolution					
Voltage		50 mV	30 mV	30 mV	37.5 mV
Current		2.75 mA	4.5 mA	4.5 mA	3.75 mA
OVP		360 mV	215 mV	215 mV	270 mV
Output Voltage programming response time*					
(excluding command programming processing time)		350 ms	195 ms	195 ms	250 ms

* 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.

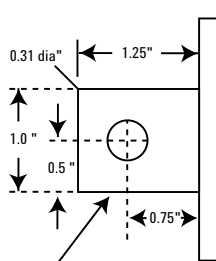
Single-Output: 2000 W GPIB (Continued)

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

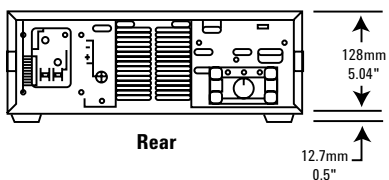
Rear Connector Detail
Accepts Wire
AWG 12-22



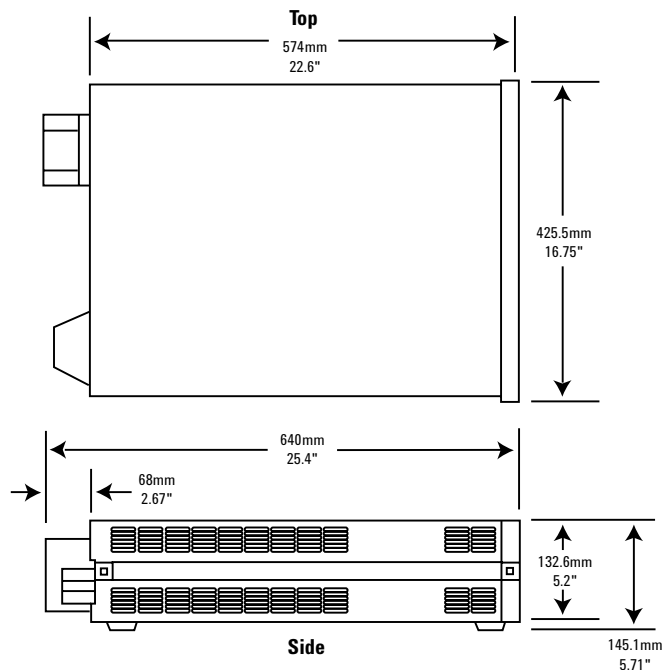
Buss Bar Detail



Note: Buss Bar is 1/8\" thick cu



Rear



Side

**Your Requested Excerpt from the
Agilent System and Bench Instruments Catalog 2006**

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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