

HP 6653A

500 Watt Single-Output DC Power Supply



\$2495.00

In Stock

Qty Available: 5

Used and in Excellent Condition

Open Web Page

<https://www.artisanng.com/70022-1>

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Single-Output 500 W GPIB



6651A-6655A

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 500 W linear-regulated DC power supplies is designed to maximize the throughput of DUTs through the manufacturing test process with fast up and down programming time.

Valuable assemblies can be destroyed by a minor component failure that causes a surge of current to flow into the DUT. Fast protection features, including fast crowbar, mode crossover protection, and the ability to connect the protection circuitry of multiple power supplies can increase production yield.

Programming of the DC output and the 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 helps to minimize the acoustic noise.

Specifications

(at 0° to 55°C unless otherwise specified)

	6651A	6652A	6653A	6654A	6655A	6651A-J01 Special Order Option
Number of outputs	1	1	1	1	1	1
GPIB	Yes	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	10 V
Output current (40°C)	0 to 50 A	0 to 25 A	0 to 15 A	0 to 9 A	0 to 4 A	50 A
Maximum current (50°C/55°C)	45 A/42.5 A	22.5 A/21.3 A	13.5 A/12.8 A	8.1 A/7.7 A	3.6 A/3.4 A	45 A/42.5 A
Programming accuracy at 25°C ±5°C						
Voltage 0.06% +	5 mV	10 mV	15 mV	26 mV	51 mV	6 mV
Current 0.15% +	60 mA	25 mA	13 mA	8 mA	4 mA	60 mA
Ripple and noise						
from 20 Hz to 20 MHz						
Voltage rms	300 µV	300 µV	400 µV	500 µV	700 µV	300 µV
peak-peak	3 mV	3 mV	4 mV	5 mV	7 mV	3 mV
Current rms	25 mA	10 mA	5 mA	3 mA	2 mA	25 mA
Readback accuracy at 25°C ±5°C (percent of reading plus fixed) System models only						
Voltage 0.07% +	6 mV	15 mV	25 mV	40 mV	80 mV	7.5 mV
+Current 0.15% +	67 mA	26 mA	15 mA	7 mA	3 mA	67 mA
-Current 0.35% +	100 mA	44 mA	24 mA	15 mA	7 mA	100 mA
Load regulation						
Voltage	1 mV	2 mV	3 mV	4 mV	5 mV	1 mV
Current	2 mA	1 mA	0.5 mA	0.5 mA	0.5 mA	2 mA
Line regulation						
Voltage	0.5 mV	0.5 mV	1 mV	1 mV	2 mV	0.5 mV
Current	2 mA	1 mA	0.75 mA	0.5 mA	0.5 mA	2 mA
Transient response time	Less than 100 µs for the output voltage to recover to its previous level (within 0.1% of the voltage rating of the supply or 20 mV, whichever is greater) following any step change in load current of up to 50% of rated current					

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	2.5 mV
Current	15 mA	7 mA	4 mA	2.5 mA	1.25 mA	15 mA
OVP	12 mV	30 mV	54 mV	93 mV	190 mV	16 mV
OVP accuracy	160 mV	400 mV	700 mV	1.2 V	2.4 V	200 mV

More detailed specifications at www.agilent.com/find/6650

Single-Output: 500 W GPIB (Continued)

Application Notes:

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

10 Hints for Using Your Power Supply to Decrease Test Time
5968-6359E

Understanding Linear Power Supply Operation
(AN1554)
5989-2291EN

Modern Connectivity - Using USB and LAN I/O Converters
(AN 1475-1)
5989-0123EN

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

Specifications

(at 0° to 55°C unless otherwise specified)

6651A-J03

Special Order Option

6651A-J09

Special Order Option

6652A-J03

Special Order Option

6653A-J04

Special Order Option

6653A-J17

Special Order Option

Number of outputs

1

1

1

1

1

GPIB

Yes

Yes

Yes

Yes

Yes

Output ratings

Output voltage

6 V

17V/20 V

27 V

40 V

30 V

Output current (40°C)

60 A

30 A/15 A

18.5 A

12.5 A

17.5 A

Maximum current (50°C/55°C)

54 A/5 1A

27 A/25.5 A
13.5 A/12.75 A

16.65 A/15.72 A

11.25 A/10.6 A

15.75 A/14.87 A

Programming accuracy at 25°C ±5°C

Voltage

0.06% +

5 mV

10 mV

13.5 mV

17.5 mV

15 mV

Current

0.15% +

75 mA

36 mA

25 mA

13 mA

16 mA

Ripple and noise

from 20 Hz to 20 MHz

Voltage rms

300 µV

300 µV

450 µV

1.6 mV

400 µV

peak-peak

3 mV

4 mV

4.5 mV

5 mV

4 mV

Current rms

30 mA

13 mA

10 mA

5 mA

6 mA

Readback accuracy at 25°C ±5°C
(percent of reading plus fixed)
System models only

Voltage

0.07% +

6 mV

15 mV

20.5 mV

30 mV

25 mV

+Current

0.15% +

80 mA

40 mA

26 mA

15 mA

18 mA

-Current

0.35% +

150 mA

55 mA

44 mA

24 mA

28 mA

Load regulation

Voltage

1 mV

2 mV

2 mV

3.5 mV

3 mV

Current

6.5 mA

2 mA

1 mA

1 mA

0.5 mA

Line regulation

Voltage

0.5 mV

0.5 mV

0.5 mV

1 mV

1 mV

Current

2 mA

2 mA

2 mA

0.75 mA

0.75 mA

Transient response time

Less than 100 µs for the output voltage to recover to its previous level (within 0.1% of the voltage rating of the supply or 20 mV, whichever is greater) following any step change in load current of up to 50% of rated current

Supplemental Characteristics

(Non-warranted characteristics determined by design and useful in applying the product)

Average resolution

Voltage

2 mV

5 mV

6.75 mV

12mV

10 mV

Current

18 mA

9 mA

7 mA

4 mA

5 mA

OVP

12 mV

30 mV

30 mV

65 mV

54 mV

OVP accuracy

160 mV

500 mV

400 mV

750 mV

700 mV

Single-Output: 500 W GPIB (Continued)

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 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

Output Programming Response Time: The rise and fall time (10/90% and 90/10%) of the output voltage is less than 15 ms. The output voltage change settles within 1 LSB (0.025% x rated voltage) of final value in less than 60 ms.

Down Programming: An active down programmer sinks approximately 20% of the rated output current

Modulation: (Analog programming of output voltage and current)

Input signal: 0 to -5 V

Input impedance: 10 k Ohm nominal

AC Input: (AC input frequency 47 to 63 Hz)

Voltage 100 Vac 120 Vac 220 Vac 240 Vac

Current 12 A 10 A 5.7 A 5.3 A

Input Power: 1,380 VA, 1,100 W at full load; 120 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 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: Net, 25 kg (54 lb); shipping, 28 kg (61 lb)

Warranty Period: One year

Specifications

(at 0° to 55°C unless otherwise specified)

	6654A-J04 Special Order Option	6654A-J05 Special Order Option	6654A-J12 Special Order Option	6655A-J05 Special Order Option	6655A-J10 Special Order Option
Number of outputs	1	1	1	1	1
GPIB	Yes	Yes	Yes	Yes	Yes
Output ratings					
Output voltage	70 V	50 V	80 V	150 V	156 V
Output current (40°C)	7.5 A	10 A	6 A	3.2 A	3 A
Maximum current (50°C/55°C)	6.75 A/6.37 A	9 A/8.5 A	5.4 A/5.1 A	2.88 A/2.72 A	2.7 A/2.55 A
Programming accuracy at 25°C $\pm 5^\circ\text{C}$					
Voltage 0.06% +	30 mV	26 mV	35 mV	64 mV	71 mV
Current 0.15% +	7 mA	9 mA	7 mA	3.5 mA	4 mA
Ripple and noise from 20 Hz to 20 MHz					
Voltage rms	600 μV	500 μV	700 μV	800 μV	900 μV
peak-peak	6 mV	5 mV	7 mV	8 mV	8 mV
Current rms	5 mA	4 mA	3 mA	2 mA	3 mA
Readback accuracy at 25°C $\pm 5^\circ\text{C}$ (percent of reading plus fixed) System models only					
Voltage 0.07% +	50 mV	40 mV	58 mV	100 mV	110 mV
+Current 0.15% +	6 mA	8 mA	6 mA	2.5 mA	3 mA
–Current 0.35% +	13 mA	17 mA	16 mA	6.5 mA	7.5 mA
Load regulation					
Voltage	4 mV	4 mV	4 mV	6 mV	7 mV
Current	0.5 mA	0.5 mA	0.5 mA	0.5 mA	1 mA
Line regulation					
Voltage	1 mV	1 mV	4.5 mV	2 mV	2 mV
Current	0.5 mA	0.5 mA	0.5 mA	0.5 mA	1 mA
Transient response time	Less than 100 μs for the output voltage to recover to its previous level (within 0.1% of the voltage rating of the supply or 20 mV, whichever is greater) following any step change in load current of up to 50% of rated current				

Supplemental Characteristics

(Non-warranted characteristics determined by design and useful in applying the product)

Average resolution

Voltage	17.5 mV	15 mV	20 mV	37.5 mV	39.5 mV
Current	1.9 mA	2.75 mA	1.7 mA	8 mA	8 mA
OVP	110 mV	93 mV	130 mV	240 mV	250 mV
OVP accuracy	1.4 V	1.2 V	1.6 V	3 V	3.3 V

More detailed specifications at www.agilent.com/find/6650

Single-Output: 500 W GPIB (Continued)

Ordering Information

Opt 100 87 to 106 Vac, 47 to 63 Hz

Opt 120 104 to 127 Vac, 47 to 63 Hz

Opt 220 191 to 233 Vac, 47 to 63 Hz

Opt 240 209 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

*Support rails required

Accessories

p/n 1494-0059 Accessory Slide Kit

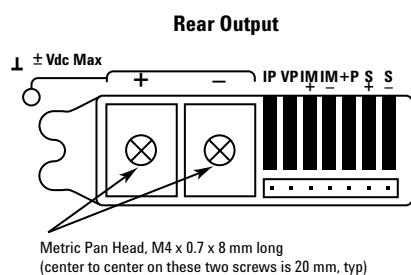
p/n 1252-3698 7-pin Analog Plug

p/n 1252-1488 4-pin Digital Plug

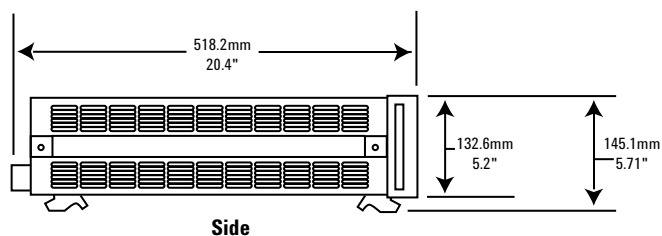
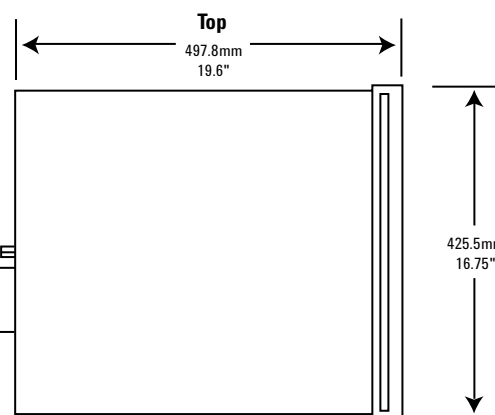
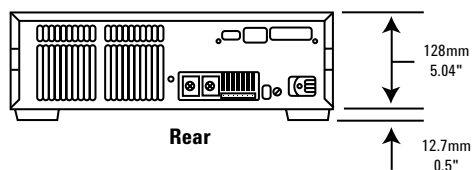
p/n 5080-2148 Serial Link
Cable 2 m (6.6 ft)

E3663AC Support rails for
Agilent rack cabinets

Agilent Models: 6651A, 6652A, 6653A, 6654A, 6655A



Terminal Screw Size: 6-32 x 5/16in



More detailed specifications at www.agilent.com/find/6650

**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.

Please give us a call at your local Agilent Technologies sales office, or call a regional office listed, for assistance in choosing or using Agilent power products.

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Product specifications and descriptions in this document subject to change without notice.

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Printed in the USA, February 8, 2006



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