

# Agilent 6620A Series Multiple-Output, 40-105 W DC Power Supplies, GPIB

Data Sheet

Speed and accuracy for test optimization



- Up to four fully isolated power supplies in a 3U package
- Dual-range outputs
- Fast, low-noise outputs
- Built-in measurements and advanced programmable features
- Protection features to ensure DUT safety

Two, three, or four isolated outputs are integrated into one package, conserving rack space and GPIB addresses. Most of the outputs also provide dual ranges, 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. Test system integration can be further simplified by using the *VXIplug&play* drivers. These power supplies help reduce test time with fast up and down programming, enhanced by an active downprogrammer which can sink the full rated current.



**Agilent Technologies**

## Specifications

<b>Specifications</b> <i>(at 0 ° to 55 °C unless otherwise specified)</i>	<b>40 W output</b>	<b>40 W output</b>	<b>80 W output</b>	<b>80 W output</b>	<b>105 W output</b>	
<b>Output power</b>						
Low-range: voltage, current	0 to 7 V 0 to 5 A	0 to 20 V 0 to 2 A	0 to 7 V 0 to 10 A	0 to 20 V 0 to 4 A	0 to 35 V 0 to 3 A	
High range: voltage, current	0 to 20 V 0 to 2 A	0 to 50 V 0 to 0.8 A	0 to 20 V 0 to 4 A	0 to 50 V 0 to 2 A	— —	
<b>Output combinations</b> for each model (total number of outputs)						
<b>6621A</b> (2)	—	—	2	—	—	
<b>6622A</b> (2)	—	—	—	2	—	
<b>6623A</b> (3)	1	1	1	—	—	
<b>6624A</b> (4)	2	2	—	—	—	
<b>6627A</b> (4)	—	4	—	—	—	
<b>6623A-J03</b> (3) Special order option	—	2	—	—	1	
<b>Programming accuracy at 25 °C ± 5 °C</b>						
Voltage	0.06% +	19 mV	50 mV	19 mV	50 mV	35 mV
Current	0.16% +	50 mA	20 mA	100 mA	40 mA	30 mA
<b>Readback accuracy at 25 °C ± 5 °C</b>						
Voltage	0.05% +	20 mV	50 mV	20 mV	50 mV	35 mV
+Current	0.1% +	10 mA	4 mA	20 mA	8 mA	6 mA
–Current	0.2% +	25 mA	8 mA	50 mA	20 mA	15 mA
<b>Ripple and noise</b> (peak-to-peak, 20 Hz to 20 MHz; rms, 20 Hz to 10 MHz)						
Constant voltage rms		500 µV	500 µV	500 µV	500 µV	500 µV
peak-to-peak		3 mV	3 mV	3 mV	3 mV	3 mV
Constant current rms		1 mA	1 mA	1 mA	1 mA	1 mA
<b>Load regulation</b>						
Voltage		2 mV	2 mV	2 mV	2 mV	2 mV
Current		1 mA	0.5 mA	2 mA	1 mA	2 mA
<b>Load cross regulation</b>						
Voltage		1 mV	2.5 mV	1 mV	2.5 mV	N/A
Current		1 mA	0.5 mA	2 mA	1 mA	N/A
<b>Line regulation</b>						
Voltage	0.1% +	1 mV	1 mV	1 mV	1 mV	1 mV
Current	0.06% +	1 mA	0.1 mA	1 mA	1 mA	1 mA
<b>Transient response time</b>	Less than 75 µs for the output to recover to within 75 mV of nominal value following a load change within specifications					
<b>Supplemental characteristics</b> <i>(Non-warranted characteristics determined by design and useful in applying the product)</i>	<b>40 W output</b>	<b>40 W output</b>	<b>80 W output</b>	<b>80 W output</b>	<b>105 W output</b>	
<b>Average programming resolution</b>						
Voltage	6 mV	15 mV	6 mV	15 mV	10.5 mV	
Current	25 mA	10 mA	50 mA	20 mA	15 mA	
OVP	100 mV	250 mV	100 mV	250 mV	175 mV	
<b>Output programming response time</b> (time to settle within 0.1% of full scale output, after Vset command has been processed)	2 ms	6 ms	2 ms	6 ms	6 ms	

**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 1 V drop per load lead. The drop in the load leads subtracts from the voltage available for the load.

**Command processing time:** 7 ms typical with front-panel display disabled

**Output programming:** Current sink limits are fixed approximately 10% higher than source limits for a given operating voltage above 2.5 V.

**Input power:** 550 W max., 720 VA max.

**GPIB interface capabilities:** SH1, AH1, T6, L4, SR1, RL1, PP1, DC1, DT0

**Software driver:** VXIplug&play

**Regulatory compliance:** Listed to UL1244; conforms to IEC 61010-1; carries the CE mark.

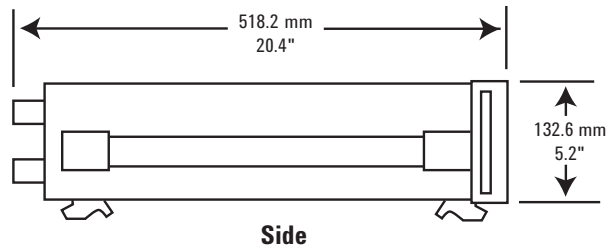
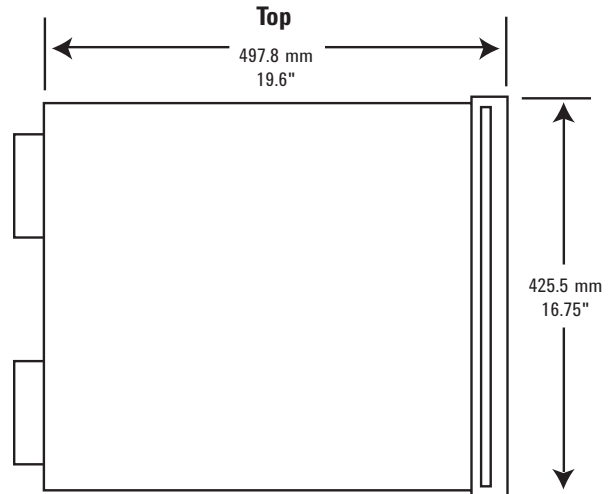
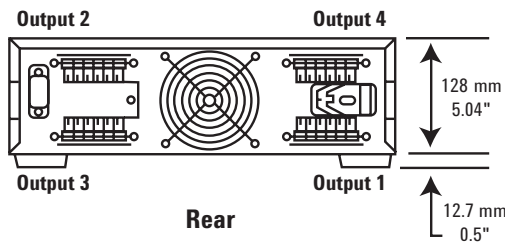
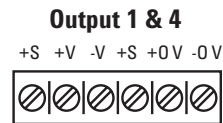
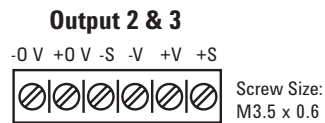
**Size:** 425.5 mm W x 132.6 mm H x 497.8 mm D (16.75 in x 5.22 in x 19.6 in)

**Weight:** Net, 17.4 kg (38 lb); shipping, 22.7 kg (50 lb)

**Warranty:** One year

**Agilent models:** 6621A, 6622A, 6623A, 6624A, 6627A

**Terminal Strip Detail**



## Ordering information

Product ships with full documentation on CD-ROM. CD-ROM includes operating manual, service manual, and application notes.

**Opt 100** 87 to 106 VAC, 47 to 66 Hz input, 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 input, 3.0 A

**Opt 240** 209 to 250 VAC, 47 to 66 Hz input, 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

**1CP002A\*** Rack mount flange and handle kit 132.6 mm H (3U) – two brackets and front handles

**E3663AC** Support rails for Agilent rack cabinets

**p/n 1494-0059** Rack slide kit

## 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

\* Support rails required



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