

66000A (mainframe)  
66001A (keyboard)

## Modular Power System: 1,200 W per mainframe

- High density: eight slots in 7 inches of rack space
- Output sequencing
- Low ripple and noise
- High-accuracy read-back of voltage and current over GPIB
- Standard Commands for Programmable Instruments (SCPI)
- Optional keyboard and display unit
- Serial link to connect two mainframes at one GPIB address
- Optional isolation and polarity-reversal relays
- Built-in self-test
- VXI plug&play drivers

E

System  
dc Power  
Supplies

### 66000 Modular Power System

The Agilent 66000 modular power system simplifies test-system assembly, cabling, programming, debugging and operation. It is ideal for ATE and production test environments, where it can supply bias power and stimulus to subassemblies and final products. The modular power system saves rack space, the 7-inch-high (4-EIA units) mainframe can accommodate up to eight dc power modules.

### Key Features

- GPIB-programmable voltage and current
- Programmable over-voltage and over-current protection
- Self-test initiated at power-up or from GPIB command
- Electronic calibration over GPIB or from keyboard
- Over-temperature protection
- Discrete fault indicator/remote inhibit (DFI/RI)
- Five nonvolatile store-recall states per output
- User-definable power-on state

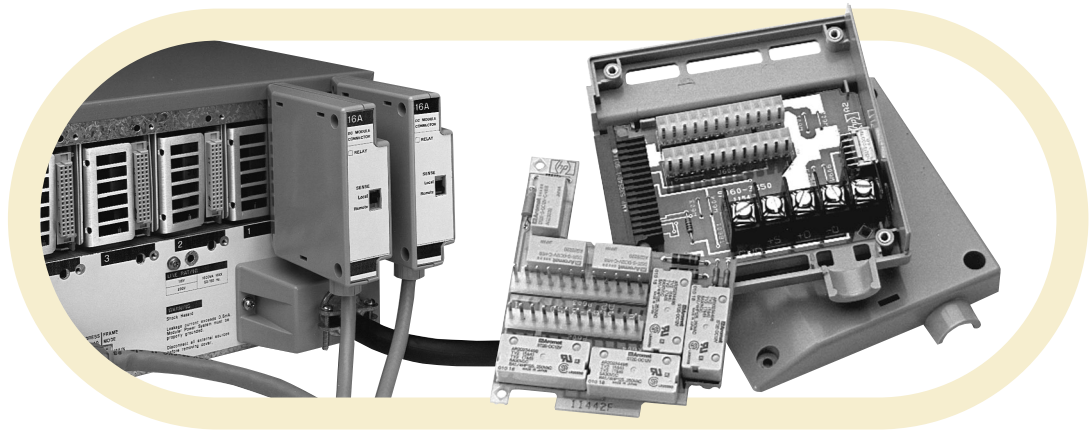
## SPECIFICATIONS

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

		66101A	66102A	66103A	66104A	66105A	66106A	
<b>Output ratings</b> (at 40°C)	Output Voltage	0 to 8 V	0 to 20 V	0 to 35 V	0 to 60 V	0 to 120 V	0 to 200 V	
	Output Current	0 to 16 A	0 to 7.5 A	0 to 4.5 A	0 to 2.5 A	0 to 1.25 A	0 to 0.75 A	
	Output Power	128 W	150 W	150 W	150 W	150 W	150 W	
<b>Programming accuracy</b> (at 25°C ±5°C)	Voltage	0.03%+	3 mV	8 mV	13 mV	27 mV	90 mV	
	Current	0.03%+	6 mA	3 mA	2 mA	1.2 mA	0.6 mA	
<b>Readback accuracy</b> (via GPIB or keyboard display at 25°C ±5°C)	Voltage	0.02%+	2 mV	5 mV	8 mV	16 mV	54 mV	
	Current	0.02%+	6 mA	3 mA	2 mA	1 mA	0.6 mA	
<b>Ripple and noise</b> (20 Hz to 20 MHz)	Constant voltage	rms	2 mV	3 mV	5 mV	9 mV	18 mV	30 mV
		peak to peak	5 mV	7 mV	10 mV	15 mV	25 mV	50 mV
	Constant current	rms	8 mA	4 mA	2 mA	1 mA	1 mA	1 mA
<b>Line regulation</b>	Voltage	0.5 mV	0.5 mV	1 mV	2 mV	3 mV	5 mV	
	Current	0.75 mA	0.5 mA	0.3 mA	0.1 mA	50 µA	30 µA	
<b>Load regulation</b>	Voltage	1 mV	1 mV	1 mV	2 mV	4 mV	7 mV	
	Current	0.5 mA	0.2 mA	0.2 mA	0.1 mA	50 µA	30 µA	
<b>Transient response time</b>	Less than 1 ms for the output voltage to recover within 100 mV of its previous level following any step change in load current up to 10 percent of rated current							
<b>Supplemental Characteristics</b> (Non-warranted characteristics determined by design that are useful in applying the product)								
<b>Average resolution</b>	Voltage	2.4 mV	5.9 mV	10.4 mV	18.0 mV	36.0 mV	60.0 mV	
	Current	4.6 mA	2.3 mA	1.4 mA	0.75 mA	0.39 mA	0.23 mA	
	Output voltage programming (OVP)	50 mV	120 mV	200 mV	375 mV	750 mV	1.25 mV	
<b>OVP accuracy</b>		250 mV	500 mV	800 mV	1 V	1.5 V	2.5 V	

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For more information in the U.S.A. call  
1-800-452-4844



## E

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**dc Floating Voltage:** Output terminals can be floated up to  $\pm 240$  Vdc from chassis ground

**Remote Sensing:** Up to half the rated output voltage can be dropped across each load lead. Add 2 mV to the voltage load regulation specification for each 1-V change in the negative output lead caused by a load current change.

**Command Processing Time:** The average time for the output voltage to change after getting a GPIB command is 20 ms

**Output Programming Response Time (with full resistive load):** The rise and fall time (10% to 90% and 90% to 10%) of the output voltage is less than 20 ms. The output voltage change settles within 0.1% of the final value in less than 120 ms.

**Down Programming:** An active down-programmer sinks approximately 10% of the rated output current

**Calibration Interval:** One year

**ac Input of System Mainframe**

Voltage	100 Vac	120 Vac	200 Vac	220 Vac	230 Vac	240 Vac
Max. Current	29 A	25 A	16 A	16 A	15 A	15 A

**Input Power of System Mainframe:** 3200 VA (max.), 1800 W (max.), 1600 W (typ.)

**GPIB Capabilities:** SH1, AH1, TE6, LE4, SR1, RL1, PPO, DC1, DT1, E1, and C0, and a command set compatible with IEEE-488.2 and SCPI

**Regulatory Compliance:** Listed to UL 1244; certified to CSA 22.2 No. 231; conforms to IEC 61010-1. See page 73 for more information

**Weight:** Net, 66000A, 15 kg (33 lb); 66001A, 1.05 kg (2.3 lb); 66101-66106A, 2.8 kg (6 lb). Shipping, 66000A, 19 kg (42 lb); 66001A, 1.34 kg (2.95 lb); 66101-66106A, 4.1 kg (9 lb).

**Size:** 66000A: 425.7 mm W x 192 mm H x 677.93 mm D (16.76 in x 7.28 in x 26.69 in), including feet and rear connectors (See Page 56 for more details.)

**Warranty Period:** Three years

**Multiple Mainframes at One GPIB Address**

The Agilent serial link feature will allow you to control up to 16 outputs at one GPIB address by connecting an auxiliary mainframe. The serial link cable comes standard with the 66000 MPS mainframe. For applications with a broader range of power requirements, one 66000 mainframe can be connected with up to eight of the 6640, 6650, 6670, 6680, or 6030 series of system power supplies. This solution provides power ranges from 150 watts to 5,000 watts at one primary GPIB address.

**Output Connections**

System assembly is simplified thanks to a quick-disconnect connector assembly on each module. Once your wires are connected to the load, the connector design permits the modules to be removed from the front of the mainframe without disconnecting cabling or removing the mainframe from the rack. One connector assembly is shipped with each module.

**Output Sequencing**

Increase test throughput by using the output sequencing feature of the 66000 MPS. This powerful feature allows you to download up to 20 voltage, current, and dwell-time parameter sets per output. This sequence can be paced by the programmed

dwell times. As an alternative, triggers can be used to step through the output list. The output sequences can be executed without controller intervention, thereby increasing overall test system throughput. More detailed information on the triggering and output sequencing capabilities can be obtained by ordering the 66000 Modular Power System Product Note (p/n 5091-2497E) described below.

**Key Literature**

66000 Modular Power System Product Note  
p/n 5091-2497E

**Ordering Information**

**66000A** MPS Mainframe

\***Opt 908** Rack-mount Kit (p/n 5063-9215)

\***Opt 909** Rack-mount Kit with Handles  
(p/n 5063-9222)

\***Note:** Options 908 and 909 require cabinet rails (E3663AC) or a slide kit (p/n 1494-0059) to support the loaded mainframe's weight.

**Opt 910** Extra Manual Set (Standard unit is shipped with Installation Guide only.)

**A line cord option must be specified. See pages 48-51.**

**66001A** MPS Keyboard includes 2m (6 ft) cables

**66002A** Rack kit for 66001A keyboard

**Module Options**

**66101A** dc Power Module 8 V, 16 A

**66102A** dc Power Module 20 V, 7.5 A

**66103A** dc Power Module 35 V, 4.5 A

**66104A** dc Power Module 60 V, 2.5 A

**66105A** dc Power Module 120 V, 1.25 A

**66106A** dc Power Module 200 V, 0.75 A

**Opt 760** Open/Close and Polarity Reversal Relays

**Opt 910** Service Manual, Extra Programming Guide and Operating Guide

**Accessories**

p/n **5060-3351** Field-Installable Relay Kit

p/n **5060-3386** Standard Connector Assembly

p/n **5060-3387** Standard Connector Assembly with installed relays (Option 760)

p/n **66000-90001** Mainframe Installation Guide

p/n **5959-3360** dc Power Module User's Guide

p/n **5959-3362** dc Power Module Programming Guide

p/n **66000-90003** Mainframe Service Manual

p/n **5959-3364** dc Power Module Service Manual

p/n **1252-1488** 4-Pin FLT/Inhibit Connector

**E3663AC** Support rails for Agilent rack cabinets

### Your Requested Excerpt from the Agilent Power Products Catalog

The preceding page(s) are an excerpt from the *2001-2002 Power Products 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, ac sources, and dc electronic loads, please visit [www.agilent.com/find/power](http://www.agilent.com/find/power) to print a copy of the complete Power Products 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 Power Products Catalog, you will find that Agilent offers much more than basic power generation. If you need basic, clean, power for your lab bench, it's there. But in each product category, we've also integrated the capabilities that 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 below, for assistance in choosing or using Agilent power products.

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To see a copy of the user's guide, please visit our Web site at [www.agilent.com/find/manuals](http://www.agilent.com/find/manuals)

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