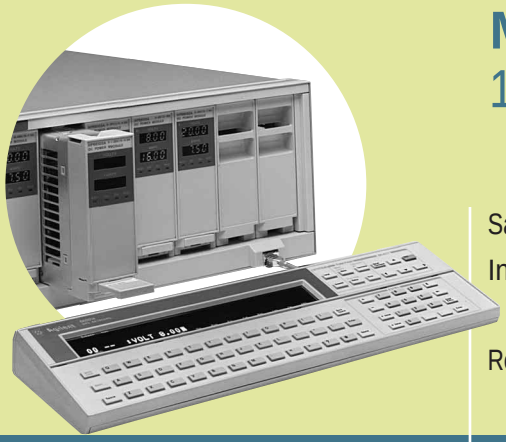

Modular Power System:
1200 W per mainframe GPIB

Save rack space with 8 power supply outputs in one mainframe

Increase test throughput with advanced triggering system and down-loadable LIST mode

Reconfigure fast with easily swappable modules

66000A (mainframe)
66001A (keyboard)

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 sub-assemblies 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

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

Specifications (at 0° to 55°C unless otherwise specified)		66101A	66102A	66103A	66104A	66105A	66106A
Output ratings 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
Maximum power		128 W	150 W	150 W	150 W	150 W	150 W
Programming accuracy at 25°C ±5°C							
Voltage	0.03% +	3 mV	8 mV	13 mV	27 mV	54 mV	90 mV
Current	0.03% +	6 mA	3 mA	2 mA	1.2 mA	0.6 mA	0.4 mA
Readback accuracy (via GPIB or keyboard display at 25°C ±5°C)							
Voltage	0.02%+	2 mV	5 mV	8 mV	16 mV	32 mV	54 mV
Current	0.02%+	6 mA	3 mA	2 mA	1 mA	0.6 mA	0.3 mA
Ripple and noise (20 Hz to 20 MHz)							
Constant Voltage rms		2 mV	3 mV	5 mV	9 mV	18 mV	30 mV
peak-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
Line regulation							
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
Load regulation							
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
Transient response time		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					
Supplemental Characteristics		(Non-warranted characteristics determined by design that are useful in applying the product)					
Average resolution							
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
OVP accuracy		250 mV	500 mV	800 mV	1 V	1.5 V	2.5 V

Modular Power System:
1200 W per mainframe GPIB (Continued)

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, 6690 or 6030 series of system power supplies. This solution provides power ranges from 150 watts to 5000 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

Specifications (at 0° to 55°C unless otherwise specified)	66101A-J03 Special Order Option	66101A-J05 Special Order Option	66102A-J05 Special Order Option	66103A-J01 Special Order Option	66103A-J02 Special Order Option
Output ratings at 40°C					
Output voltage	5.7 V	12 V	15 V	37 V	40 V
Output current	20 A	12 A	10 A	4.5 A	3.6 A
Maximum power	114 W	144 W	150 W	167 W	144 W
Programming accuracy at 25°C ±5°C					
Voltage 0.03% +	2.5 mV	5 mV	8 mV	13 mV	15 mV
Current 0.03% +	8 mA	6 mA	4 mA	2 mA	2 mA
Readback accuracy (via GPIB keyboard display at 25°C ±5°C)					
Voltage 0.02% +	2 mV	3 mV	5 mV	8 mV	9.2 mV
Current 0.02% +	8 mA	6 mA	4 mA	2 mA	2 mA
Ripple and noise (20 Hz to 20 MHz)					
Constant Voltage rms	2 mV	3 mV	3 mV	5.3 mV	6 mV
peak-peak	5 mV	7 mV	7 mV	10.6 mV	11.5 mV
Constant Current rms	10 mA	8 mA	6 mA	2 mA	2 mA
Line regulation					
Voltage	0.5 mV	0.5 mV	0.5 mV	1 mV	1 mV
Current	0.5 mA	0.75 mA	0.5 mA	0.3 mA	0.3 mA
Load regulation					
Voltage	1 mV	1 mV	1 mV	1 mV	1 mV
Current	1 mA	0.5 mA	0.3 mA	0.2 mA	0.2 mA
Transient response time	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				
Supplemental Characteristics	(Non-warranted characteristics determined by design that are useful in applying the product)				
Average resolution					
Voltage	2 mV	3.6 mV	4.5 mV	11 mV	12 mV
Current	6 mA	4.6 mA	3.1 mA	1.4 mA	1.2 mA
OVP	45 mV	75 mV	90 mV	200 mV	230 mV
OVP accuracy	250 mV	375 mV	375 mV	850 mV	920 mV

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 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 an 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.

Modular Power System:
1200 W per mainframe GPIB (Continued)

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, PP0, 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.

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 104 for more details.)

Warranty Period: Three years

Ordering Information

66000A MPS Mainframe
Opt 120 for operation at 100 Vac or 120 Vac nominal
Opt 240 for operation at 200 Vac or 220-240 Vac nominal
* **Opt 908** Rack-mount Kit (p/n 5063-9215)
* **Opt 909** Rack-mount Kit with Handles (p/n 5063-9222)
Opt 0L2 Extra Standard Documentation Package
Opt 0B3 Service Manual
Opt 0B0 No documentation package
* **Note:** Options 908 and 909 require cabinet rails (E3663AC) or a slide kit (p/n 1494-0059) to support the loaded mainframe's weight.
A line cord option must be specified.
See pages 93-98.
66001A MPS Keyboard includes 2m (6 ft) cables
66002A Rack kit for 66001A keyboard

Specifications (at 0° to 55°C unless otherwise specified)		**66103A-J09** Special Order Option	**66103A-J12** Special Order Option	**66104A-J09** Special Order Option	**66105A-J01** Special Order Option
Output ratings at 40°C					
Output voltage		28.5 V	24 V	55 V	35 V
Output current		5.5 A	6 A	3 A	1.25 A
Maximum power		157 W	144 W	165 W	44 W
Programming accuracy at 25°C ±5°C					
Voltage	0.03% +	13 mV	13 mV	25 mV	15 mV
Current	0.03% +	3 mA	3 mA	1.5 mA	0.6 mA
Readback accuracy (via GPIB or keyboard display at 25°C ±5°C)					
Voltage	0.02% +	8 mV	8 mV	15 mV	9 mV
Current	0.02% +	3 mA	3 mA	1.2 mA	0.6 mA
Ripple and noise (20 Hz to 20 MHz)					
Constant Voltage rms		5 mV	5 mV	9 mV	6 mV
peak-peak		10 mV	10 mV	15 mV	11.5 mV
Constant Current rms		4 mA	4 mA	1.2 mA	1 mA
Line regulation					
Voltage		1 mV	1 mV	2 mV	1 mV
Current		0.3 mA	0.3 mA	0.1 mA	50 µA
Load regulation					
Voltage		1 mV	1 mV	2 mV	1 mV
Current		0.2 mA	0.2 mA	0.1 mA	50 µA
Transient response time		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			
Supplemental Characteristics		(Non-warranted characteristics determined by design that are useful in applying the product)			
Average resolution					
Voltage		10.4 mV	8 mV	16.5 mV	2 mV
Current		2 mA	2 mA	0.9 mA	1.2 mA
OVP		200 mV	150 mV	350 mV	230 mV
OVP accuracy		800 mV	600 mV	950 mV	920 mV

Module Options

Opt 760 Open/Close and Polarity Reversal Relays
Opt J17 External Imon
Opt 0L2 Extra Standard Documentation Package
Opt 0B3 Service Manual
Opt 0B0 No documentation package

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 *2002-2003 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** 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.

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