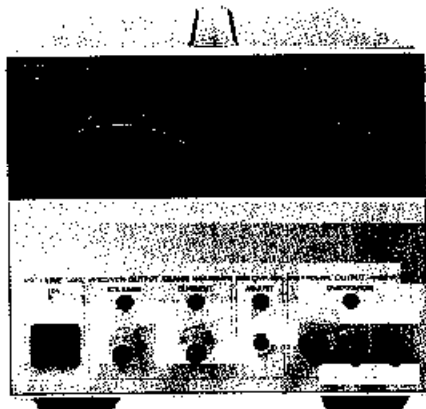


# POWER SUPPLIES

## Other HP-IB Programmable Products

### HP 6002A, 59501B

- 200-watt autoranging dc output
- HP-IB option for either voltage or current control
- Built-in overvoltage protection



HP 6002A

#### Description

The HP 6002A 200-watt autoranging power supply is recommended only for use in existing systems. For new systems, the HP Model 6653A or 6654A 500-watt supplies, or the HP Model 6642A, 6643A, or 6644A 200-watt supplies offer significant advantages in price and performance. The HP Models 6033A and 6038A 200-watt autorangers are also excellent alternatives to the HP Model 6002A.

#### HP-IB Option

Option 001 is required for HP-IB control of either voltage or current. Selection of the controlled parameter is made via rear-panel manual switches. A 59501B digital-to-analog converter may be used to program current limit, while the internal HP-IB option programs the voltage.

#### Specifications

**DC output:** Voltage and current output can be adjusted from 0 to 50 V, 0 to 10 A, 200 W maximum, by front-panel controls, analog programming, or an optional HP-IB interface

**Load regulation:** Voltage, 0.01% + 1 mV; current, 0.01% + 1 mA

**Line regulation:** voltage, 0.01% + 1 mV; current, 0.01% + 1 mA

**Ripple and noise:** 20 Hz to 20 MHz; voltage, 1 mV rms, 10 mV p-p; current, 5 mA rms

**Load transient recovery time:** 100  $\mu$ s for output voltage to recover within 15 mV of nominal voltage setting following a load current change of 50% to 100% or 100% to 50% of full load current

**Programming response time:** Maximum time for output voltage to change between 0 to 99.9% or 100% to 0.1% of maximum rated output voltage. Up-programming: 100 ms. Down-programming: 400 ms at no load, 200 ms at full load.

**DC output isolation:** 150 Vdc

**AC power:** 100, 120, 220, or 240 Vac (-13%, +6%), 48 to 63 Hz

**Temperature rating:** 0° C to 55° C operating, 40° C to 75° C storage. Supply is fan cooled.

**Size:** 180 mm H  $\times$  212 mm W  $\times$  422 mm D (6.97 in  $\times$  8.36  $\times$  16.6 in)

**Weight:** Net, 14.5 kg (32 lb); shipping, 15.9 kg (35 lb)

#### HP-IB Option Specifications

Output	Range	Voltage	Current
Output ranges	hi	0 to 50 V	0 to 10 A
	lo	0 to 10 V	0 to 2 A
Accuracy	hi	0.2% - 25 mV	0.2% + 25 mA
	lo	0.2% + 10 mV	0.2% + 25 mA
Resolution	hi	50 mV	10 mA
	lo	10 mV	2 mA

#### Ordering Information

**HP 6002A** Autoranging dc Power Supply

**Opt 001:** HP-IB interface

**Opt 800:** Rack flange kit for two units

**Opt 908:** Rack mounting kit for one unit

**Opt 910** Extra operating and service manual

**Price**

\$3,450

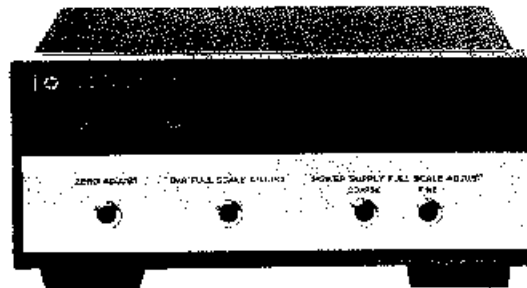
\$585

\$79

\$84

\$10

- HP-IB control for analog-programmable power supplies
- Unipolar/Bipolar HP-IB digital to analog converter
- Programmable 10-volt dc output



HP 59501B

#### Description

The HP 59501B is an isolated digital-to-analog converter designed to provide a convenient interface between the Hewlett-Packard Interface Bus and those HP power supplies that are not equipped with built-in HP-IB control but are capable of being analog voltage controlled. With proper wiring, the built-in isolation devices protect other instrumentation on the HP-IB from damage that could be caused by power supply outputs. A programmable high/low range control improves resolution by ten to one.

The HP 59501B also can be used directly as a low power dc signal source.

#### Digital to Analog Converter Specifications

**DC output voltage:** Programmable in high or low ranges within the voltage limits shown below. Output mode is unipolar or bipolar and is selected by a rear-panel switch.

Unipolar: 0 to 9.99 V (low range, 0 to 0.999 V)

Bipolar: -10 to +9.98 V (low range, -1 to +0.998 V)

**DC output current:** 10 mA maximum

**Ripple and noise:** 2 mV rms/10 mV p-p

**Resolution:** unipolar: 10 mV (low range, 1 mV)

bipolar: 20 mV (low range, 2 mV)

**Accuracy:** Specified at 23° C  $\pm$  5° C

unipolar: 0.1% + 5 mV (low range, 0.1% + 1 mV)

bipolar: 0.1% + 10 mV (low range, 0.1% + 2 mV)

#### Power Supply Programmer Specifications

In the following specifications, M represents the calibrated full-scale value of the supply being programmed, and P is the actual programmed output. The full-scale value M can be any value within the supply's output range and is calibrated with the HP 59501B programmed to its maximum high-range output.

**Accuracy:** Specified at 23° C  $\pm$  5° C

Unipolar: 0.05% M + 0.25% P (low range, 0.01% M + 0.25% P)

Bipolar: 0.1% M + 0.25% P (low range, 0.02% M + 0.25% P)

**Isolation:** 600 Vdc between HP-IB data lines and output terminals

**Power:** 100, 120, 220, or 240 Vac (-13%, +6%), 47 to 63 Hz, 10 VA (selectable on rear panel)

**Size:** 101.6 mm H  $\times$  212.9 mm W  $\times$  294.6 mm D (4 in  $\times$  8.38 in W  $\times$  11.6 in D)

**Weight:** Net, 1.82 kg (4 lb); shipping, 2.27 kg (5 lb)

#### Ordering Information

**HP 59501B** HP-IB Isolated D/A Power Supply

Programmer

**Opt 910** Extra operating and service manual

**HP p/n 5060-0173** rack kit for one unit

**HP p/n 5060-0174** rack kit for two units

☎ For off-the-shelf shipment, call 800-452-4844.

**Price**

\$1,100

\$5.35

\$85

\$75