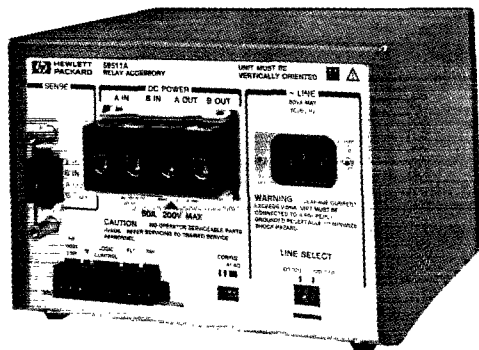


POWER SUPPLIES

Power-Supply Relay and Other HP Programmable Products

HP 59510A, 59511A, 59501B

- Relay accessories to isolate load from dc output
- Switch and sequence power and sense leads
- DC output polarity reversal (HP 59511A only)



HP 59511A

HP 59510A and HP 59511A Relay Devices

The HP 59510A and 59511A are remote-controlled relay devices. These can be configured to switch dc power in multiple test fixtures or provide extra protection when a fault condition requires an emergency shutdown. Each unit switches one power-supply output and can be used with any dc power supply within the voltage and current limits. The HP 59511A has all of the features of the HP 59510A, plus relays for reversing polarity. Using the PEM fasteners provided, both models can be mounted to a flat surface on any of three sides.

Relay-Device Specifications

Operating Ranges: 200 V at 20 A, 120 V at 30 A, or 48 V at 60 A

DC Floating Voltage: Input to output, 200 Vdc; input or output to ground, 500 Vdc; TTL control to ground, 240 Vdc

Settling Time (TTL control): Connect, 440 ms; disconnect, 160 ms; polarity reversal, 600 ms

DC Voltage Drop (at 60 A): 0.5 V maximum on each relay

AC Input: Can be set for 100, 120, 220, or 240 Vac (–13%, +6%) at 48 to 63 Hz

Weight:

HP 59510A: Net, 2.3 kg (5 lb); shipping, 3.6 kg (8 lb); shipping with Opt 850, 4.1 kg (9 lb)

HP 59511A: Net, 3.6 kg (8 lb); shipping, 5.0 kg (11 lb); shipping with Opt 850, 5.5 kg (12 lb)

Mounting Orientation: Within $\pm 10^\circ$ from vertical

Size: 185.4 mm W $\times$ 130.6 mm H $\times$ 198.6 mm D (7.26 in $\times$ 5.14 in $\times$ 7.81 in)

Key Literature

1994/95 Power Products Catalog, p/n 5091-9593.

Ordering Information

HP 59510A Output Isolation Relay Accessory

HP 59511A Output Isolation, Polarity Reversal Accessory

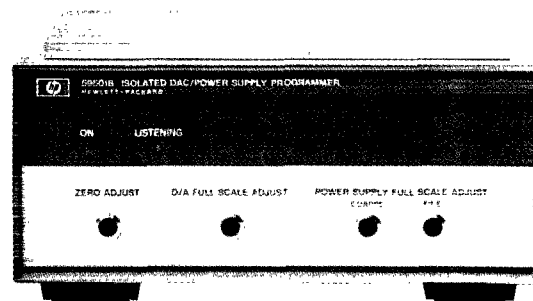
Options Descriptions

Opt 850 Rack Mount Kit (side-by-side mounting of two units requires two kits)

Opt 910 Extra Operating and Service Manual.

HP p/n 5957-6382

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



HP 59501B



HP 59501B Digital-to-Analog Converter

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 lack an HP-IB control but can be controlled by analog voltage. 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 $23^\circ\text{C} \pm 5^\circ\text{C}$

Unipolar: $0.1\% + 5\text{ mV}$ (low range, $0.1\% + 1\text{ mV}$)

Bipolar: $0.1\% + 10\text{ mV}$ (low range, $0.1\% + 2\text{ mV}$)

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 $23^\circ\text{C} \pm 5^\circ\text{C}$

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

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

DC Floating Voltage: 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: 212.9 mm W $\times$ 101.6 mm H $\times$ 294.6 mm D (8.38 in $\times$ 4 in $\times$ 11.6 in)

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 59501-90004

HP p/n 5060-0173 Rack Kit for one unit

HP p/n 5060-0174 Rack Kit for two units