SECTION I
GENERAL INFORMATION

1-1 DESCRIPTION

1-2 The Model 6234A Dual Output Power Supply is a compact, constant voltage/current limiting supply that delivers two isolated 0* to 25V outputs rated at 0.2A. It is an ideal power supply for design and breadboard work where single or dual voltages are required. Each output voltage is continuously variable throughout its range and separate fixed current limit circuits protect each output against overload or short circuit damage.

1-3 Connections to the outputs are made to binding post type terminals on the front panel. The outputs can be used individually or in combination to satisfy any number of output demands. The positive or negative terminal of each output can be grounded or each output can be left floating. A chassis ground terminal is located on the rear of the supply.

1-4 The front panel also contains a line switch, output voltage controls, a combination voltmeter/ammeter, and two meter select pushbutton switches. One meter pushbutton selects either voltage or current monitoring while the other selects which output is monitored. The supply is furnished with a permanently attached 5-foot, 3-wire grounding type line cord. The ac line fuse is an extractor type fuseholder on the rear heat sink.

1-5 SPECIFICATIONS

1-6 Instrument specifications are listed in Table 1-1. These specifications are the performance standards or limits against which the instrument is tested.

1-7 OPTIONS

1-8 Options are factory modifications of a standard instrument that are requested by the customer. The following options are available with this instrument.

OPTION NO.	DESCRIPTION
028	Input power: 208-250Vac, 47-63Hz, single phase.
910	One additional operating and service manual shipped with the power supply.

1-9 Before the supply is shipped from the factory, the proper internal jumpers are connected and the correct fuse installed for the line voltage specified on the order. A label on the rear heatsink identifies this line voltage option. The user can convert an instrument from one line voltage option to the other by following the instructions in paragraph 3-13.

*Each output has a minimum operating voltage of ≤ 20mV.

1-10 SAFETY CONSIDERATIONS

1-11 This product is a Safety Class I instrument (provided with a protective earth terminal). The instrument and manual should be reviewed for safety markings and instructions before operation.

1-12 ACCESSORIES

1-13 The accessory listed below may be ordered from your local Hewlett-Packard field sales office either with the power supply or separately. (Refer to the list at the rear of the manual for addresses.)

HP PART NO.	DESCRIPTION
14522A	Rack Mounting Tray for mounting one or two 6234A supplies in a standard 19" relay rack.

1-14 INSTRUMENT AND MANUAL IDENTIFICATION

1-15 Hewlett-Packard power supplies are identified by a two part serial number. The first part is the serial number prefix, a number-letter combination that denotes the date of a significant design change and the country of manufacture. The first two digits indicate the year (10 = 1970, 11 = 1971, etc.) the second two digits indicate the week, and the letter "A" designates the U.S.A. as the country of manufacture. The second part is the power supply serial number. A different sequential number is assigned to each power supply, starting with 00101.

1-16 If the serial number on your instrument does not agree with those on the title page of the manual, Change Sheets supplied with the manual or Manual Backdating Changes define the difference between your instrument and the instrument described by this manual.

1-17 ORDERING ADITIONAL MANUALS

1-18 One manual is shipped with each power supply. (Option 910 is ordered for each extra manual, see paragraph 1-9.) Additional manuals may also be purchased separately from your local Hewlett-Packard field office (see the list at the rear of this manual for addresses). Specify the model number, serial prefix, and the HP Part Number provided on the title page.

Table 1-1. Specifications

DC Output

Voltage span over which output may be varied using front panel controls.

Output V1*: 0 to 25V at 0.2A
Output V2*: 0 to 25V at 0.2A

*Minimum operating voltage for each output is ≤ 20 millivolts. Short circuit output current is 0.275A ± 10% for each output.

Load Effect (Load Regulation):

Less than 0.01% + 1mV for a load current change equal to the current rating of the supply.

Source Effect (Line Regulation):

Less than 0.01% + 1mV for any input voltage change within rating.

PARD (Ripple and Noise):

200μV rms/1mV p-p.

Load Transient Recovery Time:

Less than 50μsec for output recovery to within 15mV of nominal output voltage following a load change from a full load to half load (or vice versa).

Temperature Ratings:

Operating: 0 to +40°C ambient. From 40°C to 55°C, output current is derated linearly to 50% at 55°.

Storage: −40°C to +75°C.

Temperature Coefficient:

Less than 0.04% + 1mV voltage change per degree Celsius over the operating range from 0 to 40°C after 30 minutes warm-up.

Drift (Stability):

Less than 0.1% + 5mV (dc to 20Hz) during 8 hours at constant line, load, and ambient after an initial warm-up time of 30 minutes.

Input Power:

Standard: 104-127Vac (120Vac nominal), 47-63Hz, single phase. (240Vac line voltage option available, see paragraph 1-8).

Meter Ranges:

0 to 30V, 0 to 0.25A.

Meter Accuracy:

Voltmeter: ± 4% of full scale.
Ammeter: ± 4% of full scale.

Weight:

Net: 5 lb (2.3 kg)
Shipping: 7 lb (3.2 kg)