

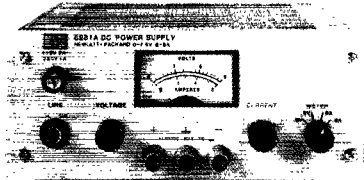
# POWER SUPPLIES

## General Purpose: 25 to 200 W Output

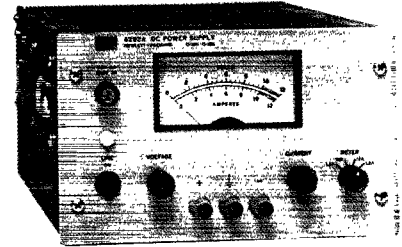
### HP 6227B-6299A

- Constant voltage/constant current operation
- Remote sensing and programming
- Auto-series, -parallel, and -tracking operation

- Front and rear output terminals
- Floating output—use as positive or negative source
- Bench or rack mounting



HP 6281A, 6284A, 6289A,  
6294A, 6299A



HP 6282A, 6286A,  
6291A, 6296A

### Description

#### HP 6281A-6299A Single Output

This series of medium-power constant voltage/constant current power supplies is available in two power ranges: 37 to 75 watts (packaged in 3½-inch high half-rack cases) and 100 to 200 watts (packaged in 5¼-inch high half-rack cases). All models except HP 6294A and 6299A have separate coarse and fine voltage and current controls that allow the voltage and current outputs to be varied from zero to the maximum rated values. The latter two models have 10-turn voltage controls. Crossover from constant voltage to constant current operation occurs automatically when the load current exceeds the value established by the current control settings. A four-position meter function switch selects either of two output voltage or output current ranges (X1, X0.1) for display on the panel meter.

The 37 to 75 watt models are of the series-regulated type. They have excellent regulation and ripple characteristics and include a special output-capacitor discharge circuit for improved programming speed. The 100 to 200 watt models employ a series-regulator/SCR-preregulator configuration to achieve the high efficiency necessary for a convection-cooled package of this size. They also have excellent regulation, low ripple and noise, and moderate programming speeds.

#### HP 6253A and 6255A Dual Output

These versatile dual-output models each contain two identical, independently adjustable 60-watt power supplies in a full-rack width case. The regulator, voltage, and current control, and the metering circuits of each section of the supply, are electrically identical to those of the individual 37 to 75 watt models described above.

By combining the versatility of a dual power supply with the flexibility of auto-series and auto-parallel operation, twice the maximum rated output voltage or current of each section can be obtained from the one supply. In addition, using the supply's auto-tracking capability, opposite-polarity voltages ( $\pm 20$  V for HP 6253A or  $\pm 40$  V for HP 6255A) are possible.

#### HP 6227B and 6228B Dual Output

These versatile lab supplies each house two identical 50-watt regulated power supplies. A convenient front-panel switch selects either independent or tracking operation. In the track mode, the right supply tracks the left within  $0.2\% \pm 2$  mV. The tracking mode is especially useful for powering operational amplifiers, push-pull stages, deflection systems, or any application where plus and minus voltages must track with insignificant error. The independent mode permits operation of the two supplies individually, in auto-parallel or in auto-series.

### Specifications

RATINGS			PERFORMANCE							
DC Output		HP Model	Load Effect		Source Effect		Ripple & Noise (PARD) (rms/p-p)		Drift (stability)	
Volts	Amperes		Voltage	Current	Voltage	Current	Voltage	Current	Voltage	Current
0 to 7.5	0 to 5	6281A	5 mV	0.01% + 250 $\mu$ A	0.01% + 2 mV	0.01% + 250 $\mu$ A	200 $\mu$ V/1 mV	4 mA rms	0.1% + 2.5 mV	0.1% + 12.5 mA
0 to 10	0 to 10	6282A	0.01% + 1 mV	0.05% + 1 mA	0.01% + 1 mV	0.05% + 1 mA	500 $\mu$ V/25 mV	5 mA rms	0.1% + 2.5 mV	0.1% + 25 mA
0 to 20	0 to 3	6253A*	0.01% + 4 mV	0.01% + 250 $\mu$ A	0.02% + 2 mV	0.01% + 250 $\mu$ A	200 $\mu$ V/1 mV	2 mA rms	0.1% + 2.5 mV	0.1% + 7.5 mA
0 to 20	0 to 3	6284A	0.01% + 4 mV	0.01% + 250 $\mu$ A	0.01% + 2 mV	0.01% + 250 $\mu$ A	200 $\mu$ V/1 mV	2 mA rms	0.1% + 2.5 mV	0.1% + 7.5 mA
0 to 20	0 to 10	6286A	0.01% + 1 mV	0.05% + 1 mA	0.01% + 1 mV	0.05% + 1 mA	500 $\mu$ V/25 mV	5 mA rms	0.1% + 2.5 mV	0.1% + 25 mA
0 to 25	0 to 2	6227B*	0.01% + 1 mV	0.01% + 250 $\mu$ A	1 mV	100 $\mu$ A	250 $\mu$ V/4 mV	250 $\mu$ A/2 mA	0.2% + 2 mV	0.2% + 3 mA
0 to 40	0 to 1.5	6255A*	0.01% + 2 mV	0.01% + 250 $\mu$ A	0.01% + 2 mV	0.01% + 250 $\mu$ A	200 $\mu$ V/1 mV	500 $\mu$ A rms	0.1% + 2.5 mV	0.1% + 4 mA
0 to 40	0 to 1.5	6289A	0.01% + 2 mV	0.01% + 250 $\mu$ A	0.01% + 2 mV	0.01% + 250 $\mu$ A	200 $\mu$ V/1 mV	500 $\mu$ A rms	0.1% + 2.5 mV	0.1% + 4 mA
0 to 40	0 to 5	6291A	0.01% + 1 mV	0.05% + 1 mA	0.01% + 1 mV	0.05% + 1 mA	500 $\mu$ V/25 mV	3 mA rms	0.1% + 2.5 mV	0.1% + 12.5 mA
0 to 50	0 to 1	6228B*	0.01% + 1 mV	0.01% + 250 $\mu$ A	1 mV	100 $\mu$ A	250 $\mu$ V/4 mV	250 $\mu$ A/2 mA	0.2% + 2 mV	0.2% + 1.5 mA
0 to 60	0 to 1	6294A	0.01% + 2 mV	0.01% + 250 $\mu$ A	0.01% + 2 mV	0.01% + 250 $\mu$ A	200 $\mu$ V/1 mV	500 $\mu$ A rms	0.1% + 2.5 mV	0.1% + 2.5 mA
0 to 60	0 to 3	6296A	0.01% + 1 mV	0.05% + 1 mA	0.01% + 1 mV	0.05% + 1 mA	500 $\mu$ V/25 mV	3 mA rms	0.1% + 2.5 mV	0.1% + 7.5 mA
0 to 100	0 to 0.75	6299A	0.01% + 2 mV	0.01% + 250 $\mu$ A	0.01% + 2 mV	0.01% + 250 $\mu$ A	200 $\mu$ V/1 mV	500 $\mu$ A rms	0.1% + 2.5 mV	0.1% + 2 mA

\*Models 6227B, 6228B, 6253A, and 6255A contain two identical, independently adjustable power supplies.