

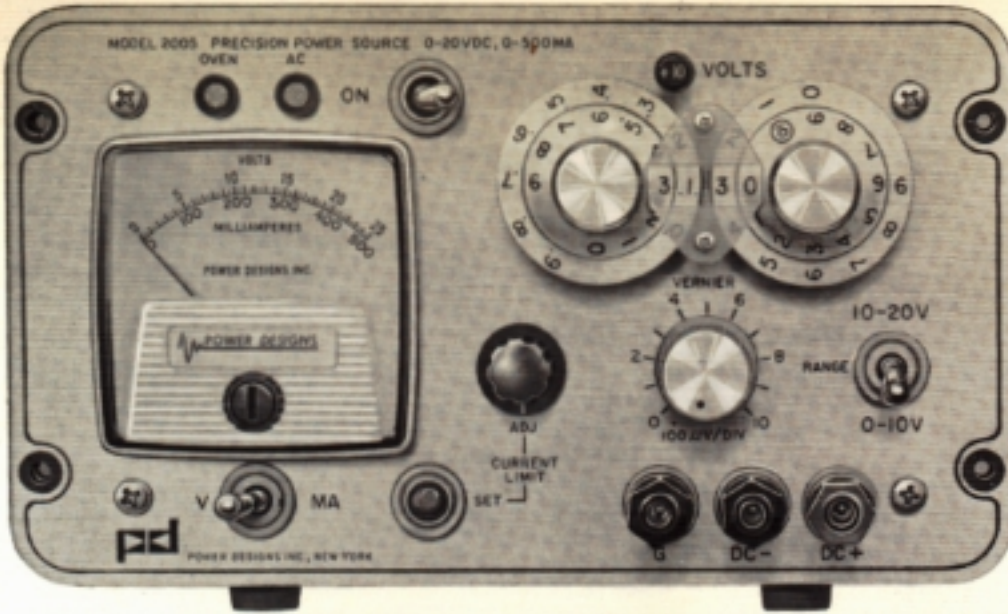
PRECISION DC POWER SOURCE

TECHNICAL DATA

MODEL 2005



POWER DESIGNS



0-20 V, 0-500 MA
A general purpose power supply with the accuracy of a precision calibrator

New high-stability, low-noise silicon semiconductor devices and advanced solid-state circuit technology are the basis for this unusually stable voltage regulator.

The improved performance of the Model 2005 permits dial readout of the output voltage to five places. Interpolation of the last place is provided by a potentiometer with a resolution of 10 microvolts.

Conventional, more complex chopper techniques for DC amplifier stabilization are avoided by maintaining critical amplifier stages and a specially processed zener diode voltage reference in a temperature-controlled oven.

The design simplicity results in a low-cost unit, half the size and weight of comparable instrumentation.

Design Features of the Model 2005P

- Calibrated decade voltage readout to four significant figures at outputs below 10 volts, to five significant figures above 10 volts. Interpolation of the last place is provided by a potentiometer with 10-microvolts resolution.
- Provisions for rear-panel zero calibration (may be used to offset lead drop during remote sensing).
- Adjustable current limiting.

- Self-restoring electronic overload and short-circuit protection.
- All silicon-semiconductor regulator system.
- Critical semiconductors and components maintained at constant ambient in temperature-controlled oven.
- Accurate remote programming at 1000 ohms-per-volt.
- Front and rear access to output terminals.
- 100 hour pre-aging of power supply before test and calibration. Individual calibration data furnished with each unit.
- Line and load circuits separately fused. Accessible at rear. Performance specifications based on anticipated ratings after 5 years service.
- "Controlled-Parameter" semiconductor program insures long life expectancy. Features "controlled avalanche" silicon rectifiers and power transistors, pre-aged zener voltage references and transistors, noise-testing techniques for establishing predictable device reliability, derating to 50% of rated voltage and current, etc.
- Modular package construction suitable for rack mounting. Single or dual mounting in 5¼" x 19" panel. See Cat. RPA-62 for rack panel adapters.