

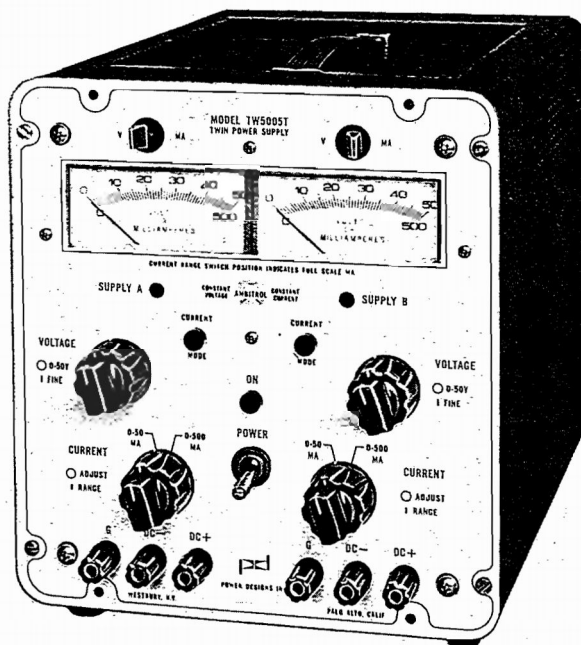
MODEL TW5005T

## TWIN DC POWER SOURCE

TWO INDEPENDENT SOURCES:

**0-50 VOLTS****0-500 MA**

MAY BE OPERATED IN SERIES  
OR PARALLEL FOR 100-VOLT  
OR 1 AMPERE OUTPUT.



## DESIGN FEATURES

- Dual (coarse and fine) voltage controls with 5 mV resolution.
- Dual range output-current adjustment with 250  $\mu$ A resolution.
- Self-restoring electronic overload and short-circuit protection.
- All silicon-semiconductor regulator system.
- Front and rear output terminals.
- Modular construction permits multiple-unit rack mounting. One or two (four power sources on a single panel) supplies may be mounted in a standard 8 $\frac{3}{4}$ " x 19" rack. See catalog sheet RPA-62 for rack-panel adapters.
- Processed under Power Designs' "Predictable-Reliability" program for a 5-year MTBF. The program features: avalanche-controlled silicon rectifiers, stress-tested transistors, pre-aged zener references with extrapolated stability criteria based on  $1/f$  noise changes, computer-grade capacitors, tin-oxide-film resistors, 5 PPM sealed divider resistors, and components operated at 50% of manufacturers' published ratings. Units pre-aged under full-load conditions for a minimum of 50 hours.

Each independent source in this general-purpose instrument can supply either a constant-voltage output with continuously adjustable current limiting or a constant-current output with continuously adjustable voltage compliance. The sources will automatically transfer from voltage regulation to current regulation or vice versa at any predetermined operating point.

Each source has two current ranges, 50 or 500 MA. When the current range is switched, the current-limit adjustment and the meter range are automatically transferred.

The output voltage and current may be remotely programmed by the connection of an external resistance to a rear-panel terminal strip. This portable instrument is ideally suited for both field and laboratory use. Its design simplicity results in a versatile unit capable of years of trouble-free service.

## POWER DESIGNS

## MODEL TW5005T

### ELECTRICAL SPECIFICATIONS

**INPUT** - 105-125 V, 57-440 Hz, 90 W\*.

**FRONT-PANEL OUTPUT TERMINALS** - Three insulated binding posts are provided for each source to handle positive output, negative output, and chassis ground. The positive or negative output of either source may be grounded, or the source may be left floating.

**REAR-PANEL OUTPUT TERMINALS** - A separate phenolic terminal strip is provided for each source. Screw terminals are included for: positive output, negative output, remote voltage programming, and remote current programming.

**OPERATING TEMPERATURE RANGE** - 0-50°C.

#### CONSTANT VOLTAGE MODE (Each Source)

**RANGE** - 0-50 VDC, 0-500 MA, continuously adjustable.

**SERIES OPERATION** - 0-100 VDC, 0-500 MA, continuously adjustable.

**PARALLEL OPERATION** - 0-50 VDC, 0-1 AMP, continuously adjustable.

**REGULATION** - Better than 0.005% + 1 mV at front and rear access terminals for 100% change in rated load or line variations within operating range.

**RIPPLE AND NOISE** - Less than 1 millivolt peak-to-peak, 350 microvolts rms.

**RESPONSE TIME** - Less than 50 microseconds for step change (1-microsecond rise time) in rated load from 10 to 100% or from 100 to 10%.

**SOURCE IMPEDANCE** - Less than 0.01 ohm at DC, 0.1 ohm at 20KHz, 0.7 ohm at 1 MHz.

\*at nominal line voltage.

**STABILITY** - Less than 0.02% + 10 mV drift per 24-hour period after warm-up, at fixed line, load, and ambient temperature, and with low TC programming resistance.

**TEMPERATURE COEFFICIENT** - Less than 0.02% per °C.

**REMOTE PROGRAMMING RESISTANCE** - 200 ohms/volt.

**VOLTAGE CONTROL** - Dual concentric fine and coarse adjustment with 5 mV resolution.

#### CONSTANT CURRENT MODE (Each Source)

**RANGE** - 0-500 MA, continuously adjustable.

**PARALLEL OPERATION** - 0-1 AMP, continuously adjustable.

**VOLTAGE COMPLIANCE** - 50 volts in single or parallel operation, 100 volts in series operation.

**REGULATION** - Output current change less than 500 microamps for line voltage change of  $\pm 10\%$  or load variations down to a short circuit across the output terminals.

**RIPPLE AND NOISE** - Less than 300 microamps, peak-to-peak.

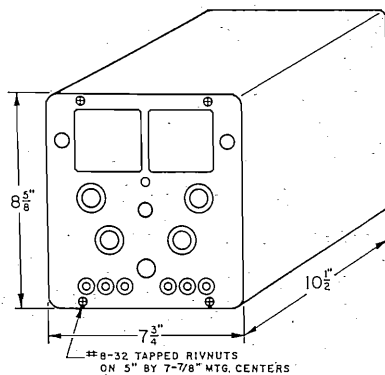
**SOURCE IMPEDANCE** - Greater than 100,000 ohms.

**STABILITY** - Less than 0.05% + 250 microamps drift per 24-hour period after warm-up, at fixed line, load, and ambient temperature, and with low TC programming resistance.

**TEMPERATURE COEFFICIENT** - 0.02% + 100  $\mu$ A per °C.

**CURRENT CONTROL** - 0-50 MA and 0-500 MA, in two ranges with 0.25 MA resolution on 50 MA range and 2.5 MA resolution on 500 MA range.

### DIMENSIONS

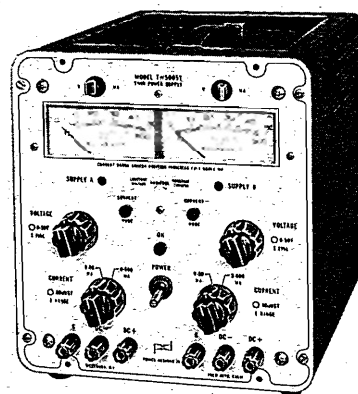


### MECHANICAL SPECIFICATIONS

**DIMENSIONS** - 7 3/4" x 8 3/4" x 10 1/2" deep behind front panel.

**WEIGHT** - 17 1/2 pounds.

**FINISH** - Panel is finished in brushed, natural aluminum with etched black lettering. Housing is finished in blue-gray vinyl enamel.



PRICE **\$297.50**

FOB Westbury, N. Y.

Prices subject to change without notice

## POWER DESIGNS

**POWER DESIGNS INC.**

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