PS 5010

GPIB IEEE-488 The PS 5010 complies with IEEE Standard 488.1-1987, and with Tektronix *Standard Codes and Formats.*

- **Dual Floating Supplies 0 to 32 V, to 0.75 A (1.6 A to 15 V)**
- **Logic Supply +4.5 to 5.5 V, to 3 A**
- **0.5% Accuracy**
- **Programmable Current Limits**
- **Three Independent Digital Displays**
- **Automatic Crossover**

The PS 5010 Programmable Power Supply provides a complete and rapid high-performance solution for many system power-supply applications. Its three supplies provide the most commonly used voltages, and the three digital displays automatically indicate all six voltage- and current-limit parameters. Automatic crossover from voltage to current limit and a powerful set of GPIB status reporting messages allow the user to be constantly aware of the PS 5010's status.

The PS 5010's dual floating supply provides 0 to +32 V and 0 to −32 V, both with respect to a common front-panel terminal. Or 0 to 64 V across the terminals of both supplies together—with current up to 0.75 A throughout the total voltage range and 1.6 A below 15 V. The logic supply provides +4.5 to +5.5 V with respect to ground, with current to 3 A. The user can program the outputs on and off, and can lock out the front-panel controls with GPIB commands.

OTHER CHARACTERISTICS

POSITIVE AND NEGATIVE FLOATING SUPPLIES

Constant Current Mode

Range—50 mA to 0.75 A (1.60 A at 15 V and below) in high-power compartment; 50 mA to 400 mA (0.750 A at 15 V and below) in two standard-power compartments.

Overall Accuracy—±(5% +20 mA) Source Effect: ±1 mA line regulation. Load Effect: ±10 mA. Output impedance is typically 5 kΩ shunted by 20 μF.

PARD (Ripple and Noise)—10 mA p-p, 20 Hz to 20 MHz.

Resolution—50 mA ±15 mA.

Change Response Time—20 ms up or down.

LOGIC SUPPLY

Constant Current Mode

Range—100 mA to 3.0 A (Foldback characteristic below 4.5 V, maximum short circuit current is <1.5 A).

Overall Accuracy—±(5% +20 mA).

Resolution—100 mA±30 mA.

Scaled Output—10 mA=1 mV ±(2% +2 mV) available at rear interface (not ground referenced).

Overvoltage Protection—SCR crowbar typically trips at 6 to 7 V.

Power Consumption—250 V A maximum in high power compartment, 200 V A in standard compartment.

IEEE Standard 488.1-1987 Interface Function Subsets Implemented—Same as PS 5004.

Power Module Compatibility—The PS 5010 is not compatible with TM 500 mainframes.

PS 5004

GPIB IEEE-488 The PS 5004 complies with IEEE Standard 488.1-1987 and with Tektronix *Standard Codes and Formats.*

- **0- to 20-V Floating Output**
- **0.01% Accuracy**
- **500 μV/0.1 mA Resolution**
- **Constant Voltage or Constant Current With Autocrossover**
- **Voltage- and/or Current-Monitoring Display**
- **Remote Sensing**

The single-width PS 5004 Precision Power Supply provides high-resolution voltages and currents necessary in the characterization of transistor, IC, and other semiconductor and hybrid circuits and in the operation of high-performance strain gauges and other transducer systems. Its 0- to 20-V output is covered with coarse and fine adjustments to provide rapid setability and ±500-μV resolution without the necessity of changing ranges. Setability resolution over the GPIB is also ±500 μV. The supply output is at the rear interface as from the front-panel terminals. Overall accuracy is ±0.01% ±2 mV.

The PS 5004 operates in either a constant-voltage or constant-current mode with autocrossover between the two. Front-panel annunciators indicate the mode at all times. The operating mode is also reported over the bus, and the PS 5004 can be programmed to assert SRQ when operating conditions cause it to change modes. The 4½-digit display shows actual output voltage, selected current limit, or actual output current. The actual output voltage is shown even when the PS 5004 is operating in the current-limited or unregulated mode. Display resolution is 1 mV or 0.1 mA.

The buffered high-impedance sense terminals allow proper regulation of the supply with up to 3 Ω of resistance in either of the sense leads.

OTHER CHARACTERISTICS

CONSTANT CURRENT MODE

Range—10 mA to 305 mA in 2.5 mA steps.

Overall Accuracy—±2% +5 mA.

Power Consumption—35 A V

IEEE Standard 488.1-1987 Interface Functions Subsets Implemented—SH1, AH1, T6, L4, SR1, RL1, PP0, DC1, DT1, C0.

Power Module Compatibility—The PS 5004 is not compatible with TM 500 mainframes.

PS 503A

- **Independent + and − Controls**
- **Dual Tracking Voltage Control**
- **0 to ±20 V at 1 A (in High-Power Compartment)**
- **Fixed Output +5 V at 1 A**
- **Remote Resistance Programming**

The PS 503A provides dual floating variable ±20-V supplies, plus a fixed 5-V, 1-A supply. The PS 503A features superior tracking, over-voltage protection, and remote resistance programming of voltage. When operated in the high-power compartment of a TM 504, TM 506, RTM 506, or TM 5006 mainframe, the PS 503A can provide up to 1 A from both of the ±20-V supplies. A 0- to 40-V variable supply with up to 1 A of current can be configured by grounding one of the two outside terminals of the variable supplies. The two variable supplies can be set individually, then varied in a tracked mode with a single control. In addition, the plus and minus floating outputs can be programmed remotely, by either voltage programming or resistance programming via the rear interface.

PS 501-1

- **Floating Output, 0 to 20 V**
- **0 to 400 mA**
- **Precise Regulation**
- **Low Ripple and Noise**
- **Fixed Output +5 V at 1 A**
- **3½-Digit Ten-Turn Dial**

The PS 501-1 supplies 0 to 20 V (floating) and adjustable current limiting to 400 mA, with constant-current operation above the limit setting. The PS 501-1 features precise regulation and better than 2-mV resolution over its voltage range. A multiturn dial with mechanical digital readout provides accurate setting of the output voltage. A fixed +5-V supply provides up to 1 A.

ORDERING INFORMATION

PS 5010 Power Supply **$3,050**
Includes: Instruction manual (070-3391-00); Instrument interfacing guide (070-4610-00); Reference guide (070-3402-00).

PS 5004 Precision Power Supply **$1,850**
Includes: Instruction manual (070-4442-00); Instrument interfacing guide (070-4789-00); Reference guide (070-4596-00).

PS 503A Power Supply **$770**
Includes: Instruction manual (070-1834-01).

PS 501-1 Power Supply **$750**
Includes: Instruction manual (070-1301-02).