

DC Power Supplies

Tektronix PWS2000 Series Data Sheet



Features & Benefits

Key Performance Specifications

- Linear Regulation
- Up to 72 V Output Voltage
- 0.05% Basic Voltage Accuracy
- 0.2% Basic Current Accuracy
- 10 mV / 10 mA Programming Resolution
- Less than 3 mV_{p-p} Ripple and Noise

Available Functions and Features

- Bright Display
- 20 User-defined Setup Memories
- Direct Parameter Entry using Numeric Keypad
- Vary Voltage or Current in User-selectable Steps

3-year Warranty

Generate the Voltage or Current You Need

With wide current and voltage ranges, plus 10 mA and 10 mV resolution, the PWS2000 Power Supply Series satisfies a wide variety of applications. Low-noise linear regulation and 0.05% voltage accuracy provide the clean, accurate power you need at a price you can afford.

Prevent Damaged Circuits and Lost Test Time

The numeric keypad makes it easy to specify a precise current limit before you start your test. You can also specify a maximum output voltage, which will prevent accidental voltage settings above the specified maximum. A user-definable password allows you to lock the front panel to prevent unwanted adjustments during critical tests.

Designed to Make Your Work Easier

The PWS2000 Power Supply Series is designed with the ease-of-use and familiar operation you expect from Tektronix.

Intuitive Operation

The direct-entry numeric keypad makes it easy to enter precise voltage and current values. Up/Down controls, with variable step-size, allow you vary output parameters in an increment size you choose.

Bright Display

A bright vacuum fluorescent display with large digits provides excellent readability at a distance, at an angle, or under dim lighting conditions.

Setup Memories

You can save your instrument settings in one of the 20 internal memory locations by simply pressing the Save button. Each time you want to recall that setting, just push the Recall button and choose the desired preset.

Performance You Can Count On

In addition to industry-leading service and support, the PWS2000 Power Supply Series comes backed with a three-year standard warranty.

Characteristics

Electrical

| Specifications | PWS2185 | PWS2323 | PWS2721 |
|-----------------------------------|----------------|--|---|
| DC Output Rating | | | |
| Voltage | 0 to 18 V | 0 to 32 V | 0 to 72 V |
| Current | 0 to 5 A | 0 to 3 A | 0 to 1.5 A |
| Load Regulation | | | |
| Voltage | ≤0.02% + 5 mV | ≤0.02% + 5 mV | ≤0.02% + 4 mV |
| Current | | ≤0.1% + 2 mA typical | |
| Line Regulation | | | |
| Voltage | | ≤0.1% + 5 mV | |
| Current | | ≤0.1% + 2 mA typical | |
| Ripple and Noise (20 Hz to 7 MHz) | | | |
| Voltage | | ≤1 mV _{RMS} / 3 mV _{P-P} | |
| Current | | ≤5 mA _{RMS} | |
| Setting Resolution | | | |
| Voltage | | 10 mV | |
| Current | | 10 mA | |
| Setting Accuracy, (25 °C ± 5 °C) | | | |
| Voltage | | ≤0.05% + 10 mV | |
| Current | | ≤0.2% + 10 mA | |
| Readback Resolution | | | |
| Voltage | 10 mV | | <20 V: 10 mV ≥20 V: 100 mV |
| Current | | 10 mA | |
| Readback Accuracy, (25 °C ± 5 °C) | | | |
| Voltage | ≤0.05% + 15 mV | | <20 V: ≤0.05% + 15 mV ≥20 V: ≤0.05% + 120 mV |
| Current | | ≤0.1% + 15 mA | |

Display

Vacuum fluorescent display.

Memory

20 setup memories.

Power Source

| Characteristic | Description |
|-------------------|--|
| 110 V AC Setting | 99 V _{RMS} to 132 V _{RMS} |
| 220 V AC Setting | 198 V _{RMS} to 264 V _{RMS} |
| Frequency | 47 Hz to 63 Hz |
| Power Consumption | |
| PWS2185/2323/2721 | 250 VA |

Physical Characteristics

| Dimension | mm | in. |
|---------------------------------|-----------|------------|
| With Boots and Handle | | |
| Height | 105 | 4.15 |
| Width | 242 | 9.52 |
| Depth | 384 | 15.12 |
| Without Boots and Handle | | |
| Height | 91 | 3.57 |
| Width | 217 | 8.55 |
| Depth | 362 | 14.24 |
| Weight | | |
| | kg | lb. |
| PWS2185 | 5.6 | 12.3 |
| PWS2323/2721 | 6.7 | 14.8 |

Environmental and Safety

| Characteristic | Description |
|--|--|
| Temperature | |
| Operating | 0 °C to 40 °C |
| Storage | -20 °C to 70 °C |
| Warm up | 20 minutes to full uncertainty specifications |
| Relative Humidity (Noncondensing) | |
| Operating and storage | 5% to 95% relative humidity (% RH) at up to 40 °C, noncondensing |
| Storage | 5% to 95% RH at up to 40 °C, noncondensing 5% to 60% RH above 40 °C to 70 °C, noncondensing |
| Altitude | |
| Operating | 2,000 meters |
| Storage | 4,000 meters |
| Floating Voltage Rating | Up to 100 V (DC + peak AC) between earth ground and any output terminal |
| Electromagnetic Compatibility | European Union: EN 55011, Class A; IEC 61000-3-2; IEC 61000-3-3, IEC 61000-4-2, IEC 61000-4-3, IEC 61000-4-4, IEC 61000-4-5, IEC 61000-4-6, IEC 61000-4-8, IEC 61000-4-11 USA: FCC, CFR Title 47, Part 15, Subpart B, Class A Australia: EMC Framework, demonstrated per Emission Standard AS/NZS 2064 (Industrial, Scientific, and Medical Equipment) |
| Safety | European Union: Low Voltage directive 2006/95/EC; EN61010-1 2001 USA: Nationally recognized testing laboratory listing UL61010-1-2004 Canada: CAN/CSA C22.2 No. 61010-1 2004 |

Warranty

Three years.

Ordering Information**Models**

| Model | Description |
|---------|------------------------------|
| PWS2185 | DC Power Supply, 18 V, 5 A |
| PWS2323 | DC Power Supply, 32 V, 3 A |
| PWS2721 | DC Power Supply, 72 V, 1.5 A |

PWS2000 Includes: Power supply, line cord, user manual, Traceable Certificate of Calibration, and documentation CD (includes user manuals and technical reference).

Note: Please specify power plug and preferred language option when ordering.

Optional Accessories

| Accessory | Description |
|-------------|--------------------------------------|
| RMU2U*1 | Rackmount Shelf Kit for 1 or 2 Units |
| 386-7598-00 | Rackmount Cosmetic Filler Panel |

*1 PWS2000 Series power supplies require 3U of height in a rack. The instrument's height, without boots, is 3 mm greater than 2U and 42 mm less than 3U. Filler panel 386-7598-00 may be used to fill the 42 mm gap above power supplies.

Power Plug Options

| Option | Description |
|--------|----------------|
| A0 | North America |
| A1 | Universal Euro |
| A2 | United Kingdom |
| A3 | Australia |
| A5 | Switzerland |
| A10 | China |
| A11 | India |
| A12 | Brazil |

Language Options

| Option | Description |
|--------|---------------------|
| L0 | English |
| L1 | French |
| L2 | Italian |
| L3 | German |
| L4 | Spanish |
| L6 | Portuguese |
| L7 | Simplified Chinese |
| L8 | Traditional Chinese |
| L9 | Korean |
| L10 | Russian |

Service Options

| Option | Description |
|--------|---|
| C3 | Calibration Service 3 Years |
| C5 | Calibration Service 5 Years |
| CA1 | Provides a single calibration event, or coverage for the designated calibration interval, whichever comes first |
| D1 | Calibration Data Report |
| D3 | Calibration Data Report 3 Years (with Option C3) |
| D5 | Calibration Data Report 5 Years (with Option C5) |
| R5 | Repair Service 5 Years |

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