Source a wide range of voltages and currents with the 360W Model 2260B-30-36 or the Model 2260B-80-13 Programmable DC Power Supplies. For higher power requirements, output up to 720W with either the Model 2260B-30-72 or the Model 2260B-80-27 DC power supplies. All four instruments have constant power outputs to provide a flexible range of voltage and current output combinations. The 360W supplies can output as much as 30V or 80V and as much as 13.5A or 36A, while the 720W supplies can output twice as much current, 72A and 27A, with the same maximum voltage outputs. The wide range of output voltages and currents of the Series 2260B power supplies along with multiple interfaces, enable their use in numerous applications including research and design, quality control, and production test.

Use Series and Parallel Combinations to Extend the Voltage Output to 160V and the Current to 216A

When more than 80V is needed, two Model 2260B power supplies can be connected in series to double the maximum output voltage to 160V. Similarly, up to three Model 2260Bs can be connected in parallel to produce as much as 216A. To combine the supplies in either series or parallel, they are controlled using a master-slave configuration. The power supply defined as the master unit will show the total voltage and current. Thus, multiple units used in combination can deliver up to 2160W to address numerous high power applications.

Control the Voltage or Current Rise Time to Reduce Inrush Current and Prevent Device Damage

To prevent potentially dangerous inrush currents from flowing into loads that have low resistance when power is initially supplied, the Series 2260B power supplies have programmable rise time (or slew rate) control. Either the voltage rise time or the current rise time can be controlled. With voltage slew rate control, the voltage rise time can range from a slow 0.1V/s to a high speed of 160V/s for the 80V models. When operating under constant current control, the output current rise time can be programmed from a low slew rate of 0.01A/s to a maximum value of 144A/s for the 2260B-30-72. The programming of a current rise time puts the Series 2260B supplies in a constant current control priority mode in which the current slew rate limits the rate at which the voltage rises across the device under test (DUT). In addition to controlling the rise time, the fall time can also be programmed; and the fall time values can be different from the rise time values. Thus, the delivery of power to a load can be precisely controlled to prevent overshoot spikes and excessive amounts of inrush current. This capability prevents damage to components, modules, or devices and will generate more precise characteristic I-V curves for components such as LEDs.
Series 2260B

360W and 720W Programmable DC Power Supplies

Precisely control voltage rise time with the variable slew rate control.

Emulate the Response of a Battery

Test a circuit or device under the most realistic conditions by applying a test source with the output resistance that is equivalent to the output resistance of the actual source that will be used to power the circuit or device. For example, a battery has a varying internal resistance, and a device powered by a battery will have a voltage applied to the device that is reduced by the voltage drop across the battery’s internal resistance. Versions of the Series 2260B supplies can have an internal resistance up to 5.9\,\Omega to simulate devices such as a lead-acid battery.

Use the programmable internal resistance to simulate a battery’s output. In this example, a Model 2260B-80-13 power supply is simulating a 10V battery whose internal resistance is 0\,\Omega, 0.9\,\Omega, 1.8\,\Omega, and 2.7\,\Omega. The resulting voltage at the output terminals drops from 10V to 5.98V due to the voltage drop across the internal resistance of the battery.

Create Custom Voltage Source Waveforms

An internal test sequence mode allows the Series 2260B supplies to output a set of voltage levels for varying time intervals at each level. The test sequence can be stored and used repeatedly to determine DUT performance at number of voltage levels. In addition, the analog input control can be used to create voltage profiles that simulate how a battery responds to a fast changing load current requirement such as a large inrush current. Also, generate a combined DC output level with an AC signal superimposed on it to test how a circuit responds to noise on its DC power source. The analog input control parameter can be either a voltage input or a resistance input. With this analog control capability, numerous types of DC supply signals can be generated to test circuits and devices under a wide range of circumstances.
Series 2260B

360W and 720W Programmable DC Power Supplies

A signal generator (top plot) controls the 2260B to create a complex DC supply waveform (bottom plot) that simulates both a voltage drop due to a large inrush current and noise on the DC supply line.

Flexible and Fast for Automated Test Systems

The Series 2260B power supplies will work in any automated system because they can interface to a controller with either a USB, LAN, or optional GPIB interface. Furthermore, the Series 2260B supplies have fast discharge capability to dissipate the voltage on the output quickly. These supplies also have a fast (1ms) transient recovery time to load changes. The combination of the fast discharge time and the fast transient response helps minimize critical test time in automated test systems.
# Series 2260B

## Specifications (23°C ±5°C)

<table>
<thead>
<tr>
<th></th>
<th>2260B-30-36</th>
<th>2260B-30-72</th>
<th>2260B-80-13</th>
<th>2260B-80-27</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>OUTPUT RATING</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Voltage</td>
<td>0–30 V</td>
<td>0–30 V</td>
<td>0–80 V</td>
<td>0–80 V</td>
</tr>
<tr>
<td>Current</td>
<td>0–36 A</td>
<td>0–72 A</td>
<td>0–13.5 A</td>
<td>0–27 A</td>
</tr>
<tr>
<td>Power</td>
<td>360 W</td>
<td>720 W</td>
<td>360 W</td>
<td>720 W</td>
</tr>
</tbody>
</table>

## Ripple and Noise (Noise bandwidth 20 MHz, ripple bandwidth 1 MHz)

<table>
<thead>
<tr>
<th></th>
<th>CV p-p</th>
<th>CV rms</th>
<th>CC rms</th>
</tr>
</thead>
<tbody>
<tr>
<td>Voltage</td>
<td>60 mV</td>
<td>7 mV</td>
<td>72 mA</td>
</tr>
<tr>
<td>Current</td>
<td>80 mV</td>
<td>11 mV</td>
<td>27 mA</td>
</tr>
</tbody>
</table>

## Programming Accuracy

<table>
<thead>
<tr>
<th></th>
<th>Voltage</th>
<th>Current</th>
<th>Voltage</th>
<th>Current</th>
</tr>
</thead>
<tbody>
<tr>
<td>Voltage</td>
<td>0.1% + 10 mV</td>
<td>0.1% + 10 mV</td>
<td>0.1% + 10 mV</td>
<td>0.1% + 10 mV</td>
</tr>
<tr>
<td>Current</td>
<td>0.1% + 30 mA</td>
<td>0.1% + 60 mA</td>
<td>0.1% + 10 mA</td>
<td>0.1% + 50 mA</td>
</tr>
</tbody>
</table>

## Readback Accuracy

<table>
<thead>
<tr>
<th></th>
<th>Voltage</th>
<th>Current</th>
<th>Voltage</th>
<th>Current</th>
</tr>
</thead>
<tbody>
<tr>
<td>Voltage</td>
<td>0.1% + 10 mV</td>
<td>0.1% + 10 mV</td>
<td>0.1% + 10 mV</td>
<td>0.1% + 10 mV</td>
</tr>
<tr>
<td>Current</td>
<td>0.1% + 30 mA</td>
<td>0.1% + 60 mA</td>
<td>0.1% + 10 mA</td>
<td>0.1% + 50 mA</td>
</tr>
</tbody>
</table>

## Response Time

<table>
<thead>
<tr>
<th></th>
<th>Rise Time</th>
<th>Fall Time (full load)</th>
<th>Fall Time (no load)</th>
<th>Load Transient Recovery Time (load change from 50 to 100%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Voltage</td>
<td>50 ms</td>
<td>50 ms</td>
<td>500 ms</td>
<td>1 ms</td>
</tr>
<tr>
<td>Current</td>
<td>50 ms</td>
<td>50 ms</td>
<td>500 ms</td>
<td>1 ms</td>
</tr>
</tbody>
</table>

## Programming Resolution (by PC Remote Control Mode)

<table>
<thead>
<tr>
<th></th>
<th>Voltage</th>
<th>Current</th>
<th>Voltage</th>
<th>Current</th>
</tr>
</thead>
<tbody>
<tr>
<td>Voltage</td>
<td>1 mV</td>
<td>1 mV</td>
<td>2 mV</td>
<td>2 mV</td>
</tr>
<tr>
<td>Current</td>
<td>1 mA</td>
<td>2 mA</td>
<td>1 mA</td>
<td>2 mA</td>
</tr>
</tbody>
</table>

## Measurement Resolution (by PC Remote Control Mode)

<table>
<thead>
<tr>
<th></th>
<th>Voltage</th>
<th>Current</th>
<th>Voltage</th>
<th>Current</th>
</tr>
</thead>
<tbody>
<tr>
<td>Voltage</td>
<td>1 mV</td>
<td>1 mV</td>
<td>2 mV</td>
<td>2 mV</td>
</tr>
<tr>
<td>Current</td>
<td>1 mA</td>
<td>2 mA</td>
<td>1 mA</td>
<td>2 mA</td>
</tr>
</tbody>
</table>

## Front Panel Display Accuracy

<table>
<thead>
<tr>
<th></th>
<th>Voltage</th>
<th>Current</th>
<th>Voltage</th>
<th>Current</th>
</tr>
</thead>
<tbody>
<tr>
<td>Voltage</td>
<td>0.1% + 2 counts</td>
<td>0.1% + 2 counts</td>
<td>0.1% + 2 counts</td>
<td>0.1% + 2 counts</td>
</tr>
<tr>
<td>Current</td>
<td>0.1% + 4 counts</td>
<td>0.1% + 7 counts</td>
<td>0.1% + 2 counts</td>
<td>0.1% + 4 counts</td>
</tr>
</tbody>
</table>

## Regulation (CV): Load: 0.05% of setting + 5mV. Line: 0.05% of setting + 3mV.

## Regulation (CC): Load: 0.1% of setting + 5mA. Line: 0.1% of setting + 5mA.

## Voltage Slew Rate Range: Rising and Falling:

- 0.1V/s to 60V/s (2260B-30-36, 2260B-30-72)
- 0.1V/s to 160V/s (2260B-80-13, 2260B-80-27)

## Current Slew Rate Range: Rising and Falling:

- 0.01A/s to 72A/s (2260B-30-36)
- 0.01A/s to 144A/s (2260B-30-72)
- 0.01A/s to 27A/s (2260B-80-13)
- 0.01A/s to 54A/s (2260B-80-27)

## Remote Sense: 0.6V total voltage drop in load wires.

## Output Delay Time Range:

- On Delay and Off Delay: 0s to 9999s.

## Internal Resistance Range:

- 0.000Ω to 0.8Ω (2260B-30-36)
- 0.000Ω to 0.4Ω (2260B-30-72)
- 0.000Ω to 5.92Ω (2260B-80-13)
- 0.000Ω to 2.96Ω (2260B-80-27)

## Safety:

- Complies with European Union Low Voltage Directive.
- Complies with European Union EMC Directive.

## Dimensions, Weight:

- 2260B-30-36 and 2260B-80-13: 71mm wide × 124mm high × 350mm deep (2.80 in. × 4.88 in. × 13.78 in.).
- Net Weight: Approx. 3kg (6.6 lb.).
- Shipping Weight: 4.3kg (9.5 lb.).
- 2260B-30-72 and 2260B-80-27: 142.5mm wide × 124mm high × 350mm deep (5.61 in. × 4.88 in. × 13.78 in.).
- Net Weight: Approx. 5kg (11 lb.).
- Shipping Weight: 6.8kg (15 lb.).

## Warranty:

- 3 years.

## Analog Voltage Control:

- Voltage Setting Accuracy: ±0.5% of rated output voltage.
- Current Setting Accuracy: ±1% of rated output current.

## Analog Resistance Control:

- Voltage Setting Accuracy: ±1% of rated output voltage.
- Current Setting Accuracy: ±1.5% of rated output current.

## Series and Parallel Capability:

- Parallel Operation: Up to 3 units including the master unit.
- Series Operation: Up to 2 units including the master unit.

## Protection Function:

- OVP: 10% to 110% of rated output voltage range. Accuracy: ±0.2% of rated output voltage.
- OTP: 10% to 110% of rated output current range. Accuracy: ±0.2% of rated output current.
- OTP: Activated by elevated internal temperatures.

## Isolation Voltage:

- 500VDC, output to chassis.

## Analog Voltage Control:

- Voltage Setting Accuracy: ±0.5% of rated output voltage.
- Current Setting Accuracy: ±1% of rated output current.

## Analog Resistance Control:

- Voltage Setting Accuracy: ±1% of rated output voltage.
- Current Setting Accuracy: ±1.5% of rated output current.

## Series 2260B Specifications

- Voltage Slew Rate Range: Rising and Falling:
  - 0.1V/s to 60V/s (2260B-30-36, 2260B-30-72)
  - 0.1V/s to 160V/s (2260B-80-13, 2260B-80-27)

- Current Slew Rate Range: Rising and Falling:
  - 0.01A/s to 72A/s (2260B-30-36)
  - 0.01A/s to 144A/s (2260B-30-72)
  - 0.01A/s to 27A/s (2260B-80-13)
  - 0.01A/s to 54A/s (2260B-80-27)

- Remote Sense: 0.6V total voltage drop in load wires.

- Output Delay Time Range:
  - On Delay and Off Delay: 0s to 9999s.

- Internal Resistance Range:
  - 0.000Ω to 0.8Ω (2260B-30-36)
  - 0.000Ω to 0.4Ω (2260B-30-72)
  - 0.000Ω to 5.92Ω (2260B-80-13)
  - 0.000Ω to 2.96Ω (2260B-80-27)
Series 2260B

Series 2260B Accessories

Model 2260-001: Accessory Kit: Analog control mating connector, pins, cover, and ground wire.

Model 2260-002: Simple IDC tool.

Model 2260-003: Contact removal tool.

Model 2260-004: Accessory Kit: Air filter, analog connector cover, analog control lock lever, M8-size output terminal bolts, washers and screws, and M4-size output terminal screws with washers.

Model 2260-005: Cable, 0.5m (1.6 ft.), to connect two series 2600B power supplies in series.

Model 2260-006: Cable, 0.5m (1.6 ft.), to connect two series 2600B power supplies in parallel.

Model 2260-007: Cable, 0.5m (1.6 ft.), to connect three series 2600B power supplies in parallel.

Model 2260B-GPIB-USB Adapter: Provides a GPIB interface for the Series 2260B power supplies.

Model 2260B-EXTERM: Extended terminal; Test Leads, 0.7m (28 in.), and terminal box to bring outputs to the front of the instrument or another location. Magnetic base attaches to side of instrument.

Model 2260B-RMK-EIA: Rack mount kit (EIA racks).

Model 2260B-RMK-JIS: Rack mount kit (JIS racks).

360W and 720W Programmable DC Power Supplies
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Keithley Instruments, Inc.:

2260B-30-72  2260B-EXTERM  2260B-30-36  2260B-80-13  2260B-RMK-EIA  2260B-80-27  2260B-RMK-JIS  2260B-GPIB-USB  2260-002  2260-007  2260-006  2260-005  2260-001  2260-004  2260-003