

Data Sheet

Switching DC Power Supplies 1900B Series



Full-Featured DC Power Supplies to Meet Your High Power Needs

B&K Precision models 1900B, 1901B, and 1902B are laboratory grade switching DC power supplies with high current output in a small, lightweight form factor. The 1900B Series provide various configurations of high output voltage or high output current and feature rotary encoder control knobs, which make setting voltage and current fast and precise. Its dual action push button allows the user to set both coarse and fine, voltage and current levels.

In addition to constant voltage (CV) and constant current (CC) modes, these high efficiency DC power supplies offer preset and remote control modes. Save up to three different

presets of voltage and current values for quick recall. The analog remote control function allows the output power, voltage, and current to be adjusted without touching the front panel of the power supply. A remote sensing terminal (model 1900B only) is also available to compensate for voltage drop across load leads.

These features make the 1900B, 1901B, and 1902B suitable for a wide range of applications requiring high current including production testing, telecommunications, R&D, service, and university labs.

Features and Benefits

- Automatic CV (constant voltage)/CC (constant current) crossover operation
- Up to 60 A output current
- Lightweight and compact
- Rotary encoder control for precise voltage and current setting
- Save up to 3 user-defined voltage and current presets for quick recall
- Analog remote control function
- USB interface
- Remote sensing terminal (model 1900B only)
- Overvoltage, overtemperature, and overload protection
- Flexible operating modes: Front panel (normal), Preset, or Remote Control
- Front panel 5 amp auxiliary output

| Model | 1900B | 1901B | 1902B |
|-------------------------|----------|----------|----------|
| Variable Output Voltage | 1 - 16 V | 1 - 32 V | 1 - 60 V |
| Variable Output Current | 0 - 60 A | 0 - 30 A | 0 - 15 A |

Designed to Make Your Work Easier

Fully Protected

Have peace of mind knowing that these power supplies come with built-in OVP (overvoltage protection), OTP (overtemperature protection), and OLP (overload protection) circuitry. These protections help prevent serious damage to equipment in case of power supply failure.

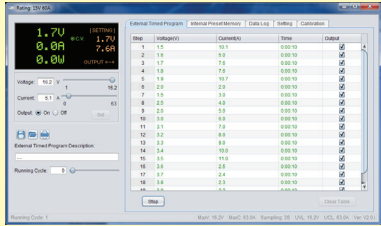
Custom Presets

Quickly use common voltage and current settings with a flip of the Recall preset switch. Up to three different presets can be set and recalled.



Analog Remote Control Capability

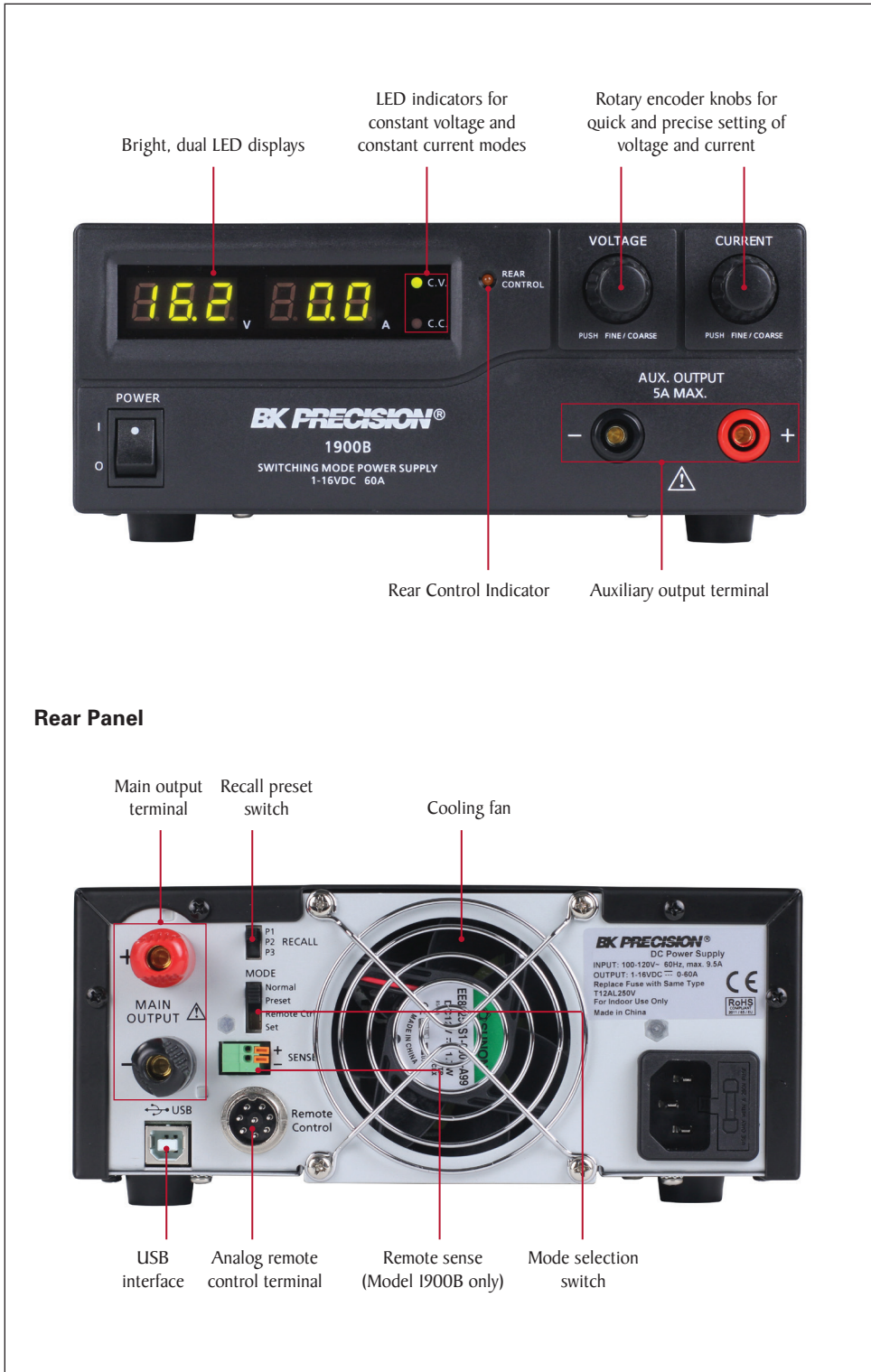
Use the included connector to wire up to an external variable DC voltage source or variable resistor to remotely control the power supply's output voltage and current or to turn the output on/off.



PC Connectivity

Control your instrument through remote control PC software or use programming commands to communicate with your instrument.

Flexibility & Performance



Front Panel Features:

- Bright, dual LED displays
- LED indicators for constant voltage and constant current modes
- Rotary encoder knobs for quick and precise setting of voltage and current
- Rear Control Indicator
- Auxiliary output terminal

Rear Panel Features:

- Main output terminal
- Recall preset switch
- Cooling fan
- USB interface
- Analog remote control terminal
- Remote sense (Model 1900B only)
- Mode selection switch

Specifications:

BK PRECISION®
1900B
SWITCHING MODE POWER SUPPLY
1-16VDC 60A

BK PRECISION®
DC Power Supply
INPUT: 100-120V ~ 50Hz, max. 9.5A
OUTPUT: 1-16VDC □ 0-60A
Replace Fuse with Same Type
T12AL250V
For Indoor Use Only
Made in China

Specifications

| Models | 1900B | 1901B | 1902B |
|--|--|--|--|
| Output | | | |
| Variable Output Voltage | 1 – 16 V | 1 – 32 V | 1 – 60 V |
| Variable Output Current | 0 – 60 A | 0 – 30 A | 0 – 15 A |
| Auxiliary Output Current | 5 A | | |
| Maximum Output Power | 960 W | 960 W | 900 W |
| Voltage Regulation | | | |
| Load (0-100% Load) | ≤ 50 mV | | |
| Line (90-132 VAC, 170-264 VAC Variation) | ≤ 20 mV | | |
| Current Regulation | | | |
| Load (10-90% Rated Voltage) | ≤ 200 mA | ≤ 150 mA | ≤ 100 mA |
| Line (90-132 VAC, 170-264 VAC Variation) | ≤ 50 mA | | |
| Ripple & Noise | | | |
| Ripple & Noise Voltage (rms) | ≤ 5 mV | | |
| Ripple & Noise Voltage (peak-peak) | ≤ 50 mV | ≤ 50 mV | ≤ 100 mV |
| Current Ripple & Noise (rms) | ≤ 100 mA | ≤ 50 mA (110 VAC) ≤ 40 mA (230 VAC) | ≤ 15 mA |
| Meter Type & Accuracy | | | |
| Voltage Meter | 3-Digit LED Display ± 0.2% + 3 counts | | |
| Current Meter | 3-Digit LED Display ± 0.2% + 3 counts | | |
| Other | | | |
| AC Input | 100 - 120 VAC 60 Hz, 220 - 240 VAC 50 Hz* | | |
| Full Load Input Current | 9.4 A (110 VAC) 4.7 A (230 VAC) | 9.0 A (110 VAC) 4.5 A (230 VAC) | 9.3 A (110 VAC) 4.5 A (230 VAC) |
| Efficiency | 84% (110 VAC) 85% (230 VAC) | 87% (110 VAC) 86% (230 VAC) | 87% (110 VAC) 88% (230 VAC) |
| Switching Frequency | 65 – 85 kHz | 75 – 95 kHz | 65 – 85 kHz |
| Tracking Overvoltage Protections | O/P 1-5 V: set voltage +2 V O/P 5-16 V: set voltage +3 V | O/P 1-5 V: set voltage +2 V O/P 5-20 V: set voltage +3 V O/P 20-32 V: set voltage +4 V | O/P 1-5 V: set voltage +2 V O/P 5-20 V: set voltage +3 V O/P 20-60 V: set voltage +4 V |
| Transient Response Time (50-100% Load) | 1.5 ms | | |
| Power Factor Correction | > 0.95 at optimal load | | |
| Cooling Method | Thermostatically controlled fan from zero to full speed | | |
| Protections | Overload, Short Circuit by Constant Current, Overvoltage, Overtemperature | | |
| Special Features | 3 User-Defined Voltage and Current Presets, Analog Remote Control, Remote Sense (model 1900B only) | | |
| Operating Temperature | 32 °F to 104 °F (0 °C to 40 °C), ≤80% R.H. | | |
| Storage Temperature | 5 °F to 158 °F (-15 °C to 70 °C), ≤85% R.H. | | |
| Dimensions (W x H x D) | 7.9" x 3.5" x 10.8" (200 x 90 x 275 mm) | | |
| Weight | 7 lbs (3.2 kg) | | |
| Two-Year Warranty | | | |
| Included Accessories | Power cord, instruction manual, USB cable, remote control connector | | |

Note: All specifications apply to the unit after a temperature stabilization time of 15 minutes over an ambient temperature range of 23 °C ± 5 °C.

*Special order instructions: For 230 V version, request model 1900B-220 V, 1901B-220 V, or 1902B-220 V.