

# Data Sheet

## High Power Switching DC Power Supplies Models 1900, 1901 & 1902



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

B&K Precision models 1900, 1901, and 1902 are laboratory grade switching DC power supplies with high current output in a small, lightweight form factor. The 1900 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, the high efficiency DC power supply offers a unique solution with

its 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 1900 only) is also available to compensate for voltage drop across load leads.

These features make the 1900, 1901, and 1902 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
- Remote sensing terminal (model 1900 only)
- Overvoltage, overtemperature, and overload protection
- Flexible operating modes: Front panel (normal), Preset, or Remote Control
- Front panel 5 amp auxiliary output

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



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## Specifications

Models	1900	1901	1902
<b>Output</b>			
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		
<b>Voltage Regulation</b>			
Load (0-100% Load)	≤ 50 mV		
Line (90-132 VAC, 170-264 VAC Variation)	≤ 20 mV		
<b>Current Regulation</b>			
Load (10-90% Rated Voltage)	≤ 200 mA	≤ 150 mA	≤ 100 mA
Line (90-132 VAC, 170-264 VAC Variation)	≤ 50 mA		
<b>Ripple &amp; Noise</b>			
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 (120 VAC) ≤ 40 mA (230 VAC)	≤ 15 mA
<b>Meter Type &amp; Accuracy</b>			
Voltage Meter	3-Digit LED Display ± 0.2% + 3 counts		
Current Meter	3-Digit LED Display ± 0.2% + 3 counts		
<b>Other</b>			
Input Voltage	120 VAC 50 Hz, 230 VAC 60 Hz (request on order*)		
Full Load Input Current	9.4 A (120 VAC) 4.7 A (230 VAC)	9.0 A (120 VAC) 4.5 A (230 VAC)	9.3 A (120 VAC) 4.5 A (230 VAC)
Efficiency	84% (120 VAC) 85% (230 VAC)	87% (120 VAC) 86% (230 VAC)	87% (120 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 1900 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 (WxHxD)	7.9" x 3.5" x 10.8" (200 x 90 x 275 mm)		
Weight	7 lbs (3.2 kg)		
<b>Two Year Warranty</b>			
Included accessories: Power cord, instruction manual, remote control connector			
*Special order instructions: For 230 V version, order model 1900EXD, 1901EXD, or 1902EXD.			

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.