Data Sheet

Programmable DC Power Supplies
Models 1696B, 1697B & 1698B

The 1696B Series of compact 200 W DC power supplies are equipped with programming and protection features commonly found in more expensive performance instruments. Programming features include list mode for repetitive operation and 10 user-configurable voltage/current presets for quick recall. These benchtop power supplies also support adjustable voltage and current limits to protect the device under test.

The front panel incorporates a numeric keypad, rotary control knob, and a dedicated V-set/I-set button for convenient control. The back-lit LCD simultaneously displays voltage, current, and power meter measurements with 4-digit resolution.

This series features USB and RS485 interfaces for remote communication. Operating software is included for list mode set up and logging measurement data. Any of the three models in this series can be combined for multi-unit control of up to 31 power supplies.

Applications
Suitable for many applications including repetitive test routines in R&D, production testing, product evaluation, or in education environments.

Model	1696B	1697B	1698B
Voltage	1 to 20 V	1 to 40 V	1 to 60 V
Current	0 to 10 A	0 to 5 A	0 to 3.3 A
Max Output Power	200 W		

Features
- Built-in voltage, current, and power meter
- List mode (timed programming): program up to 20 steps
- Automatic CV/CC crossover operation
- Protection features: overvoltage (OVP), overcurrent (OCP), overtemperature (OTP) and key-lock function
- Control up to 31 power supplies from one PC through RS485
- Store up to 10 voltage and current combinations for quick output
- Lightweight and compact
- Large back-lit LCD display
- Thermostatically-controlled fan with linear-speed control to minimize fan noise
- USB and RS485 interfaces, supports basic SCPI commands

Front Panel

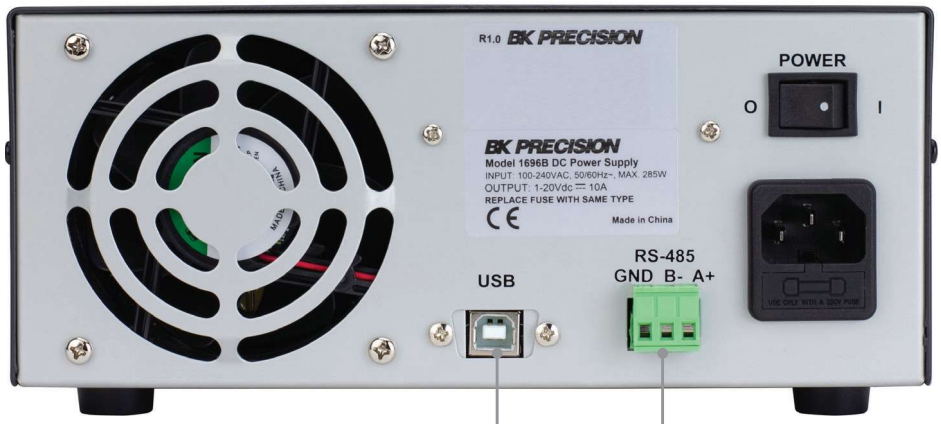
Back-lit LCD
Adjustable brightness

Rotary knob
Quick and precise V & I control

Keypad entry
Input values directly and set up test sequences

Output terminal block
Isolated output supports banana plug or spade type connectors

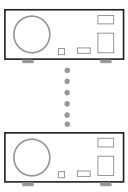
Rear Panel



PC connectivity

- List mode (timed programming): Quickly set voltage, current, and duration for up to 20 steps
- Data logging function records voltage, current, and power measurements which can be exported in spreadsheet format

RS485
Multi-unit control for up to 31 power supplies



Specifications

Note: All specifications apply to the unit after a temperature stabilization time of 30 minutes over an ambient temperature range of 23 °C ± 5 °C.

Model	1696B	1697B	1698B
Output Rating			
Voltage	1 to 20 V	1 to 40 V	1 to 60 V
Current	0 to 10 A	0 to 5 A	0 to 3.3 A
Max Output Power	200 W		
Load Regulation			
Voltage	≤ 200 mV	≤ 200 mV	≤ 100 mV
Current	≤ 25 mA	≤ 15 mA	≤ 10 mA
Line Regulation			
Voltage	≤ 10 mV		
Programming/Readback Resolution			
Voltage	10 mV		
Current	1 mA		
Power	1 mW		
Meter Accuracy			
Voltage Meter	± (1% + 2 counts for V > 5 V)		
Current Meter	± (1% + 2 counts for I > 0.5 A)		
Ripple & Noise			
Voltage	≤ 30 mVp-p / ≤ 6 mVrms		
Current	≤ 10 mArms		
General			
Efficiency	≥ 70%		
AC Input	100 to 240 VAC ±10%, 50/60 Hz		
Display Meter	4-digit voltage, current and power meter		
I/O Interface	USB (type B), RS485		
Operating Temperature	32 °F to 104 °F (0 °C to 40 °C), ≤ 80% R.H		
Safety	LVD: EN61010-1:2010		
Electromagnetic Compatibility	EN55011, EN61000-3-2, EN61000-3-3, EN61000-6-1		
Dimensions	7.6" x 3.85" x 8.46" (193 mm x 98 mm x 215 mm)		
Weight	6.6 lbs. (3 kg)		
Warranty	2 years		
Included Accessories	PC software, RS485 adapter, USB cable, and test report		
Optional Accessories	RS232 to RS485 adapter (ATR-2485)		