Horizon Electronics Ltd
Power Systems


## Description

The 9170B/9180B series programmable DC power supplies offer industry leading performance, designed to meet the most demanding applications in R&D, design verification, and production test.
All nine models deliver clean, stable and precise output power due to their exceptionally low ripple and noise, low temperature coefficient, excellent regulation, and fast transient response time characteristics.

These power supplies are well suited for both bench use and ATE applications.
For bench use, these power supplies offer an intuitive user interface with a full numerical keypad for convenient data entry.
R&D and design engineers will appreciate front panel output and remote sense terminals (available on select models). Free application software is provided for remote control without the need for any computer programming. USB and optional GPIB/LAN interfaces combined with a fast transient response and command processing time, make this series ideal for ATE applications.

Additionally, this series offers unique features not typically found in other power sources on the market, such as versatile LED test modes, modular interface card slots, automatic range selection, and an optional 8-bit bidirectional digital I/O interface.

To protect your DUT (device under test), the 9170B/9180B series provides safety options such as OVP, OCP, and a key-lock feature to prevent accidental change of parameters that might damage your DUT. Built for reliability, the supplies are also backed by a 3 year warranty.

## Features & Benefits

- Single and dual output models with up to 210W output power
- Dual range output with automatic range selection*
- Programmable voltage and current slew rates
- Front and rear panel output terminals for convenient wiring
- Rear panel remote sense terminal (additional front panel remote sense terminal on select single channel models*)
- List mode for executing up to 10 stored test sequences with a maximum of 150 steps in total
- Store and recall up to 10 power settings
- SCPI compliant USB standard interface,
- RS232, GPIB & LAN, RS485 optional (Installation through modular interface slots)
- Exceptionally fast command processing time, less than 10 ms, greatly reduces overall test time
- Remote analog programming interface (option)
- Unique LED test modes for minimizing inrush current
- Application software for remote control
- Overvoltage (OVP) and overcurrent (OCP) protection, including key-lock function
- Convenient voltage and current calibration via front panel
- LabVIEWTM drivers available for download Outstanding performance combined with unique features

* Except for high voltage models 9184B and 9185B.

## Specifications

| Model | 9172B |
|---|---|
| Output Rating | |
| Low Range | 0-35 V, 0-3 A |
| High Range | 0-70 V, 0-1.5 A |
| Number of Channels | 1 |
| Max Output Power | 105 W |
| Line Regulation | |
| Voltage | ≤ 0.01 %+1 mV |
| Current | ≤ 0.01 %+250 uA |
| Load Regulation1 | |
| Voltage | ≤ 0.01 %+1 mV |
| Current | ≤ 0.01 %+250 uA |
| Ripple and Noise (20 Hz – 20 MHz) | |
| Normal Mode Voltage | ≤ 0.5 mVrms / ≤ 5 mVpp |
| Normal Mode Current | ≤ 2 mA rms |
| Common Mode Current | ≤ 1.5 uA rms |
| Programming / Readback Resolution | |
| Voltage | 2 mV |
| Current | 0.1 mA |
| Programming / Readback Accuracy ± (% output+offset) | |
| Voltage | ≤ 0.05 % +10 mV |
| Current | ≤ 0.1 % +1 mA |
| Temperature Coefficient per °C ± (% output+offset) | |
| Voltage | ≤ 0.005 %+1 mV |
| Current | ≤ 0.01 %+3 mA |
| Transient Response Time2 | ≤ 50 µs for output to recover to within 15 mV |
| Settling Time3 | ≤ 30 ms |
| Measurement Time | ≤ 5 ms |
| OVP Accuracy | ≤ 0.5 %+0.1 V |
| OCP Accuracy | ≤ 0.5 %+0.1 A |
| OVP/OCP Response Time4 | ≤ 1 ms |
| Rising Time at Full Load / No Load | ≤ 10 ms |
| Falling Time at Full Load | ≤ 10 ms |
| Falling Time at No Load | ≤ 250 ms |
| Stability (8 hrs) ± (% output+offset) | |
| Voltage | ≤ 0.02 %+2 mV |
| Current | 0.1 %+1 mA |
| Command Processing Time5 | ≤ 10 ms (typical) |
| Supplemental Characteristics | |
| Dimensions (W x H x D) | 8.3” x 3.4” x 16.3” (210 x 87 x 415 mm) |
| Rack Mount Height | 2U |
| Weight | 17 lbs (7.7 kg) |
| Safety | EN61010-1:2001, EU Low Voltage Directive 2006/95/EC |
| Electromagnetic Compatibility | Meets EMC Directive 2004/108/EC, EN61326-1:2006 |
| Standard Interface | USB |
| AC Input | 115/230 VAC ± 10%, 47 Hz - 63 Hz |
| Environmental | |
| Operating Temperature | 0 °C - 40 °C, < 75% R.H. |
| Storage Temperature | -10 °C - 70 °C, < 85% R.H. |
| Accessories Included | User manual, AC power cord, USB cable (type A to type B), line fuse, certificate of calibration and test report |

Notes:
1 With sense terminal connected.
2 Following a change in output current from full load to half load or vice versa.
3 Maximum time required for the output voltage to change from 1% to 99% or vice versa after receiving a VOLTage or VSET command via GPIB or USB interface.
4 Average time for output to start to drop after OVP/OCP condition occurs.
5 Maximum time for output to change after receipt of commands.

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.