

ONE: FEATURES AND SPECIFICATION

INTRODUCTION

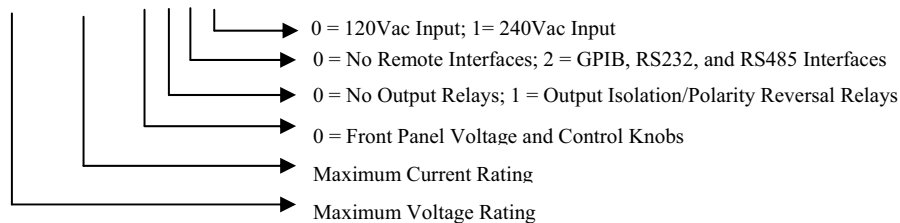
This SPS Series Switching Power Supply from American Reliance Inc. offers a complete solution to power supply system requirements. This instrument assists in the development and testing of new products, as well as being a recommended standard instrument for automatic test systems. The wide range of output selection combined with excellent load line regulation provides are essential instrument to a lab environment. This instrument provides low-noise, precisely regulated variable DC output at 1200 Watts of output power. Over Voltage Protection (OVP) and Over Current Protection (OCP) are standard. Front panel controls and indicators are extensive. It comes with Standard Commands for Programmable Instrument (SCPI) commands. Remote monitoring of output voltage and current is a standard feature. The power supply can be used either on your bench or in a standard 19 in. (483 mm) rack: The power supply occupies 1.75 in. (1 U) of vertical rack space. Designed for continuous use in standalone or systems applications, this power supply is typically used to power DC equipment, control circuits, or burn-in applications components.

TABLE 1.1 AVAILABLE VOLTAGE AND CURRENT RANGES

Model	Voltage Output Range	Current Output Range
SPS 8-150	0-8 Vdc	0-150 A
SPS 20-60	0-20 Vdc	0-60 A
SPS 35-35	0-35 Vdc	0-35 A
SPS 40-30	0-40 Vdc	0-30 A
SPS 60-20	0-60 Vdc	0-20 A
SPS 80-15	0-80 Vdc	0-15 A
SPS 120-10	0-120 Vdc	0-10 A
SPS 150-8	0-150 Vdc	0-8 A
SPS 200-6	0-200 Vdc	0-6 A
SPS 300-4	0-300 Vdc	0-4 A
SPS 450-2.5	0-450 Vdc	0-2.5 A
SPS 600-2	0-600 Vdc	0-2 A

MODEL NUMBER NOMENCLATURE

SPSXXX-XXX-0XXX



FEATURES AND OPTIONS

- Simultaneous digital display of both constant voltage and constant current.
- Ten-turn front panel constant voltage and constant current controls for high resolution setting of the output constant voltage and constant current from zero to the rated output.
- Automatic mode crossover to constant current or constant voltage mode.
- Front panel light emitting diode (LED) indicators for constant voltage and constant current mode operation, OVP, thermal, and TTL shutdown (S/D). Front panel control of OVP.
- Remote voltage and current limit programming with selectable programming ranges.
- Remote voltage and current monitor.
- Optional SCPI GPIB and RS232 control for remote digital programming and read back from a computer.
- Multiple units can be connected in parallel or in series to provide increased voltage or current.
- Optional Master/Slave capability up to 31 channels.

FRONT PANEL CONTROLS

Use this Figure 1.1 to familiarize your self with this instrument.

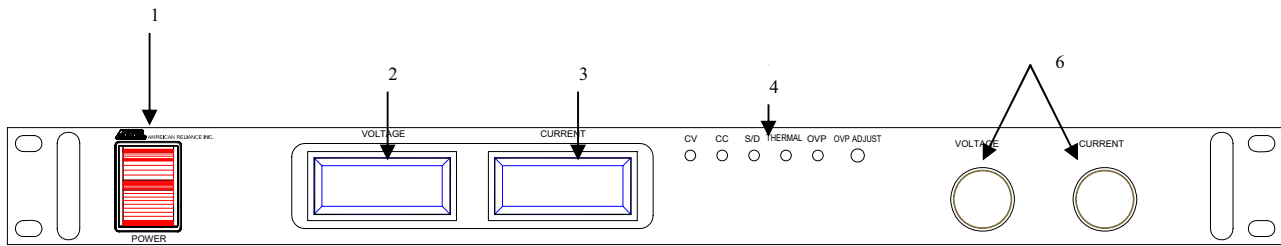


FIGURE 1.1 FRONT PANEL OF SPS Power Supply

FRONT PANEL FEATURES

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|-----|--|---|
| 1. | Power On/Off Switch | Power On/Off for the unit. |
| 2. | Voltage LED Display | Digital Voltmeter. |
| 3. | Current LED Display | Digital Ammeter. |
| 4.1 | LED Indicators | Status Indicators: (CV) Constant, (CC) Constant Current, (S/D) Shutdown Output, Thermal, (OVP) Over Voltage Protection, and OVP Adjust (Optional) |
| 5. | Voltage & Current Adjust Control Knobs | Output control (10 Turn Potentiometer) used to change the voltage or current settings in local mode. |

<NOTE>: When turn on the AC Power of the unit, the S/D LED Indicator is set in ON position as a default. You must disable S/D function first in order to begin the operation. Also when the power supply is in Remote Operation Mode, (SW1-2 at On position, and SW1-5 at Off position), and when turn ON the AC power, both S/D and OVP LED are ON. Users must send a “*RST” command to clear it. Without the reset command, the power supply won’t be able to provide any output. The “*RST” command clears both LED.

REAR PANEL CONNECTORS AND SWITCHS

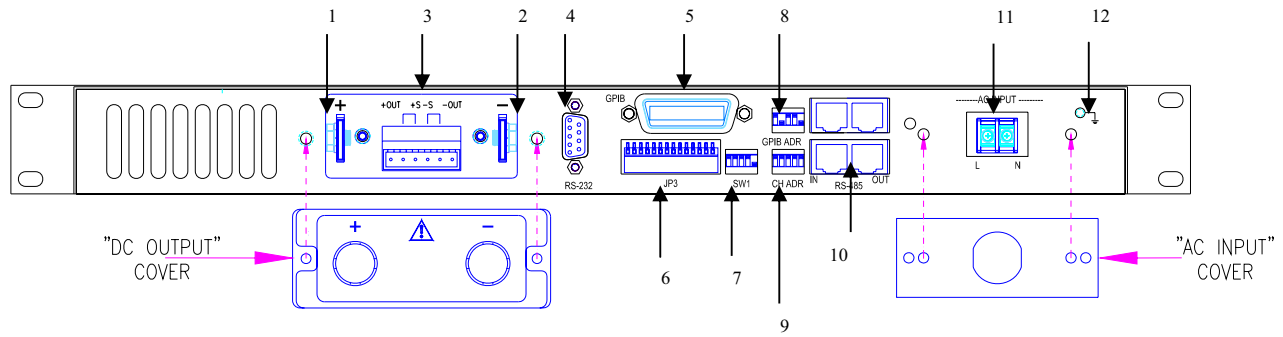


FIGURE 1.2 REAR PANEL OF SPS POWER SUPPLY.

REAR PANEL FEATURES

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|-----|--------------------------|--|
| 1. | Positive Output | Positive Output Terminal. (Screw: M6X12) |
| 2. | Negative Output | Negative Output Terminal. (Screw: M6X12) |
| 3. | Sense Connections | Output and Sense Connections. |
| 4. | RS232 | 9 pin D-sub male connector for RS232 Interface. |
| 5. | GPIB | Standard IEEE 488 GPIB Interface Connector. |
| 6. | JP3 Connector | I/O Connector for Programming, Sensing, and Monitoring.
Default configuration is set for local operation. |
| 7. | Programming Switch (SW1) | Sets local operation, remote operation, external analog control, and enable/disable parallel capability. |
| 8. | GPIB Address Switch | Sets the GPIB Interface address. (Only applies to GPIB option) |
| 9. | Channel Address Switch | Sets the channel number for each power supply. |
| 10. | RS485 | Two RS485 housings for master/slave configuration. |
| 11. | AC Input | AC input terminal strip. |
| 12. | Chassis GND | Chassis/line Ground lug screw. |