APC AP7900

APC AP7900 Switched Rack PDU User Manual
Model: AP7900

1. INTRODUCTION

The APC AP7900 is a 1U switched rack-mountable Power Distribution Unit (PDU) designed to provide advanced power management capabilities for IT equipment. This unit features 8 NEMA 5-15R switched output receptacles, allowing for remote control of individual outlets. It operates with a 120V nominal input and output voltage and supports a 15A input current, with a total load capacity of 1440VA. The AP7900 is ideal for managing power to servers, network devices, and other rack-mounted equipment, offering features such as current monitoring and remote power cycling.

2. SAFETY INFORMATION

Please read and understand all safety instructions before installing or operating the APC AP7900 Switched Rack PDU. Failure to follow these instructions may result in electric shock, fire, or serious injury.

- **Electrical Safety:** Connect the PDU only to a properly grounded power source. Do not open the PDU enclosure; there are no user-serviceable parts inside. Disconnect all power before performing any maintenance or installation.
- **Overload Protection:** Do not exceed the maximum load capacity of 1440VA or 15A. Overloading the PDU can cause damage to the unit and connected equipment, and may pose a fire hazard.
- **Environment:** Operate the PDU in a dry, indoor environment. Avoid exposure to moisture, extreme temperatures, or corrosive substances.
- **Rack Mounting:** Ensure the rack is stable and properly secured before mounting the PDU. Use appropriate mounting hardware and follow rack manufacturer guidelines.

3. PACKAGE CONTENTS

Verify that all components are present in the package:

- APC AP7900 Switched Rack PDU Unit
- Mounting Brackets
- 12-foot Power Cord

- User Manual (this document)

4. Setup

4.1 Rack Mounting

1. Attach the provided mounting brackets to the sides of the PDU using the included screws.
2. Secure the PDU into a standard 19-inch rack enclosure using appropriate rack screws. Ensure the PDU is firmly seated and level.

4.2 Power Connection

1. Connect the 12-foot power cord to the input receptacle on the PDU.
2. Plug the other end of the power cord into a grounded 120V AC power source.
3. Connect your IT equipment power cords to the NEMA 5-15R output receptacles on the PDU.

4.3 Network and Serial Configuration

The AP7900 supports network management via an Ethernet port and local configuration via a serial port.

Figure 1: Front panel of the APC AP7900 Switched Rack PDU. Visible features include a digital display showing '0 Amps', status indicator LEDs for 'OK', 'Warning', and 'Overload', an Ethernet port for network connectivity, and a serial port (RJ11/12) with a cable connected. A button labeled 'Press and hold to insert display' is also present.

Ethernet Connection:

- Connect a standard Ethernet cable to the RJ45 port on the front panel of the PDU.
- Connect the other end to your network switch or router.
- **Initial Network Configuration:** The PDU can obtain an IP address via DHCP. If DHCP is not available or for static IP configuration, you may need to use the ARP command method. This involves sending an ARP request to the PDU's MAC address to assign a temporary IP, then accessing the web interface for full configuration. Refer to APC's official documentation for detailed ARP command procedures, as timing can be critical during boot-up.

Serial Port Connection:

- The PDU features an RJ11/12 serial port for direct console access.
- A specialized serial cable (RJ11/12 to DB9) is required for this connection. Ensure you have the correct pinout for the adapter.
- Use a terminal emulator (e.g., PuTTY) with appropriate serial port settings (typically 9600 baud, 8 data bits, no parity, 1 stop bit).
- Default login credentials are often 'apc' for both username and password. If these do not work, a factory reset might be necessary, which typically involves pressing the reset button twice during boot-up to enable default login.

5. OPERATING INSTRUCTIONS

5.1 Front Panel Display and Indicators

The front panel provides visual feedback on the PDU's status and current draw.

- **Amperage Display:** A digital LED display shows the total current (Amps) being drawn by connected equipment.
- **Status LEDs:**

  - **OK (Green):** Indicates normal operation.
  - **Warning (Yellow):** Indicates a potential issue or approaching overload threshold.
  - **Overload (Red):** Indicates that the PDU is overloaded. Immediate action is required to reduce the load.

- **Network Link/Activity LEDs:** Located near the Ethernet port, these indicate network connectivity and data transmission.

5.2 Remote Management

The AP7900 is a switched PDU, allowing for remote control of individual outlets via its web interface or network management protocols (e.g., SNMP).

- **Web Interface:** Access the PDU's IP address through a web browser. The interface allows you to monitor current, configure thresholds, and remotely switch individual outlets on or off.
- **Outlet Control:** Use the web interface to power cycle, turn on, or turn off specific outlets. This is useful for remotely rebooting locked-up equipment.

6. MAINTENANCE

Regular maintenance helps ensure the longevity and reliable operation of your APC AP7900 PDU.

- **Cleaning:** Periodically clean the exterior of the PDU with a soft, dry cloth. Do not use liquid cleaners or solvents. Ensure all vents are clear of dust and debris to maintain proper airflow.
- **Firmware Updates:** Check the APC website periodically for firmware updates. Keeping the firmware up-to-date can provide new features, security enhancements, and bug fixes. Follow APC's instructions carefully when performing firmware updates.
- **Cable Management:** Ensure all power and network cables are neatly routed and secured to prevent accidental disconnections or damage.

7. TROUBLESHOOTING

This section addresses common issues you might encounter with the AP7900 PDU.

7.1 Power Issues

- **PDU Not Powering On:** Verify the input power cord is securely connected to both the PDU and the power source. Check the circuit breaker for the power source.
- **Overload Indicator (Red LED):** The PDU is drawing more current than its rated capacity. Immediately disconnect non-essential equipment to reduce the load. If the issue persists, redistribute equipment across multiple PDUs or circuits.
- **No Power to Outlets:** Check the PDU's status LEDs. If an overload occurred, the PDU might have tripped an internal breaker. Reduce the load and attempt to reset the PDU via its management interface or by briefly disconnecting and reconnecting input power.

7.2 Network Connectivity Issues

- **Cannot Access Web Interface:**
    - Verify the Ethernet cable is properly connected and the network link LEDs are active.
    - Confirm the PDU has a valid IP address. If using DHCP, check your DHCP server logs. If using a static IP, ensure your computer is on the same subnet or has a proper route.
    - If initial configuration via ARP command failed, ensure the command was executed during the PDU's boot-up phase when the Ethernet link light is flashing amber.
    - Try accessing via the serial console to check network settings.
- **DHCP Issues:** If the PDU fails to obtain a DHCP address, it might retain an incorrect gateway setting from a previous static configuration. A factory reset or careful serial console configuration may be required to resolve this.

7.3 Serial Port Issues

- **No Console Access:** Ensure you are using the correct RJ11/12 to DB9 serial cable with the proper pinout. Verify terminal emulator settings (baud rate, data bits, parity, stop bits).
- **Login Failed:** If default credentials ('apc'/'apc') do not work, perform a factory reset procedure (e.g., double-press the reset button during boot) to restore default settings.

8. SPECIFICATIONS

Model Number	AP7900
Form Factor	1U Rack-mountable
Input Voltage	120V AC
Input Current	15A
Output Voltage	120V AC
Load Capacity	1440VA
Output Receptacles	8 x NEMA 5-15R (Switched)
Power Cord Length	12 feet
Dimensions (H x W x D)	1.73" x 17.50" x 4.25" (4.4 cm x 44.5 cm x 10.8 cm)

Weight	5 lbs (2.27 kg)
Connectivity	Ethernet (RJ45), Serial (RJ11/12)

9. WARRANTY AND SUPPORT

For information regarding the product warranty, please refer to the warranty card included with your purchase or visit the official APC by Schneider Electric website. For technical support, troubleshooting assistance, or to inquire about replacement parts, please contact APC customer support through their official channels. Ensure you have your product model number (AP7900) and serial number available when contacting support.

APC by Schneider Electric Official Website: www.apc.com