

Vertiv VP5N31A0

Vertiv Geist Switched Rack PDU User Manual

Model: VP5N31A0

1. INTRODUCTION

The Vertiv Geist Switched Rack PDU (Power Distribution Unit) model VP5N31A0 is designed to provide reliable power distribution and advanced power management capabilities within data centers and IT environments. This 1U horizontal PDU features input power monitoring and individual outlet switching, allowing for remote control and optimization of connected equipment. This manual provides essential information for the safe and efficient installation, operation, and maintenance of your PDU.

2. KEY FEATURES

- **Switched Outlets:** Remotely turn off individual NEMA 5-20R receptacles to prevent accidental overloads or power cycle unresponsive IT equipment.
- **Input Power Monitoring:** Monitor power consumption at the PDU level to optimize energy usage and capacity planning.
- **Next-Generation Interchangeable Monitoring Device (IMD):** Features a 128x128 high-contrast LCD for clear display of power data. The IMD includes an internal sensor that automatically adjusts screen orientation for horizontal or vertical installations.
- **Enhanced Security:** Incorporates secure boot with a hardware-based trust anchor to protect data and operations.
- **Redundant Power-Sharing Port:** Allows connection of two IMDs for backup power to the monitoring device in case of primary power loss.
- **Industry Certifications:** UL Listed, TAA-Compliant, and RoHS certified, ensuring compliance with industry standards.
- **Reliability:** Each unit undergoes individual testing for functionality and reliability.

3. SETUP AND INSTALLATION

3.1 Unpacking and Inspection

Carefully unpack the PDU and inspect it for any signs of shipping damage. Report any damage to your

supplier immediately. Ensure all components listed in the packing slip are present.

3.2 Rack Mounting

The VP5N31A0 is a 1U horizontal rack-mount unit. Install the PDU into a standard 19-inch equipment rack using the provided mounting hardware. Ensure adequate airflow around the unit for proper heat dissipation.

3.3 Power Connection

1. Connect the PDU's NEMA L5-30P input plug to a compatible 30A, 120V power source.
2. Ensure the power source is properly grounded and capable of supplying the required 2.8kW capacity.
3. Verify that the power cable is securely connected and routed to prevent accidental disconnection or damage.

3.4 Connecting Equipment

Plug your IT equipment into the (12) NEMA 5-20R receptacles on the PDU. Distribute the load evenly across the outlets to avoid overloading any single circuit or the PDU itself.

3.5 Network Connection (Optional)

For remote monitoring and control, connect the PDU's network port to your network infrastructure using a standard Ethernet cable. Refer to the IMD documentation for network configuration details.

4. OPERATING INSTRUCTIONS

4.1 Interchangeable Monitoring Device (IMD)

The IMD provides real-time power data and access to PDU settings. The 128x128 high-contrast LCD displays information such as total power consumption (W), energy usage (KWh), apparent power (VA), and power factor (PF).

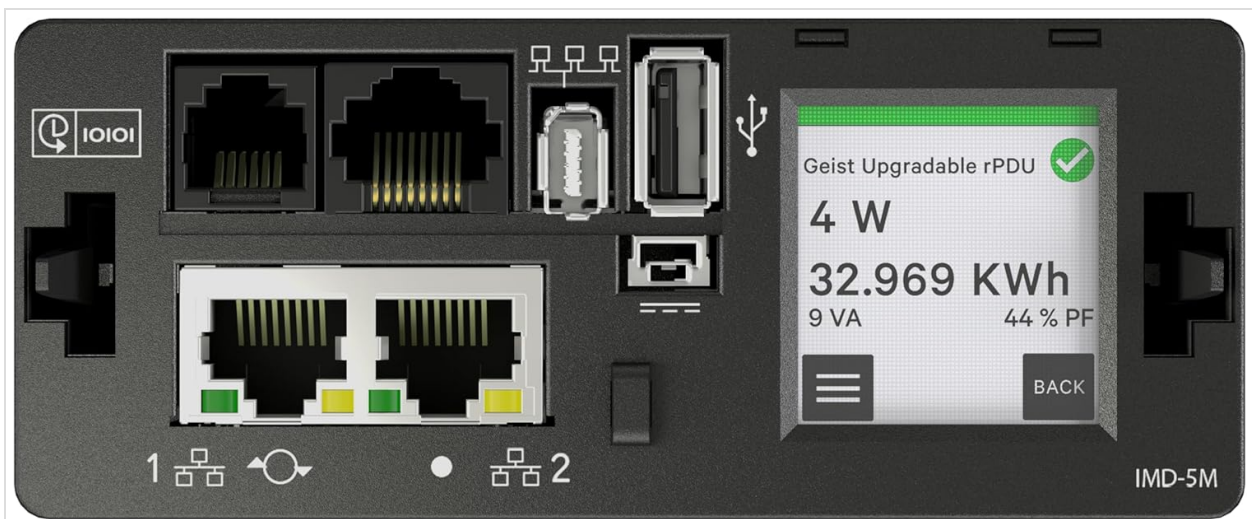


Figure 1: Close-up of the IMD display showing power metrics.

4.2 Remote Outlet Switching

The switched outlets allow for remote control of power to connected devices. This functionality is typically accessed via a web interface or network management system connected to the PDU's network port. Consult the PDU's network management guide for detailed instructions on configuring and using remote outlet control.

4.3 Power Cycling Equipment

In situations where IT equipment becomes unresponsive, the remote outlet switching feature can be used to power cycle individual devices without requiring physical access to the rack. This helps minimize downtime and streamline maintenance.

5. MAINTENANCE

5.1 General Care

Keep the PDU and its surroundings clean and free from dust. Ensure that ventilation openings are not obstructed. Do not use liquid or aerosol cleaners directly on the unit.

5.2 Firmware Updates

Periodically check the Vertiv support website for available firmware updates for your PDU's IMD. Firmware updates can provide new features, performance improvements, and security enhancements. Follow the instructions provided with the firmware update package carefully.

6. TROUBLESHOOTING

- **No Power to Outlets:** Verify the PDU's input power cable is securely connected to a live power source. Check the circuit breaker on the PDU (if applicable) and the upstream circuit breaker.
- **IMD Display Not Active:** Ensure the PDU is receiving power. If the IMD is modular, verify it is correctly seated.
- **Cannot Access PDU Remotely:** Check network cable connections. Verify network settings (IP address, subnet mask, gateway) on the PDU and your network. Ensure there are no firewall restrictions.
- **Overload Indication:** If the PDU indicates an overload, immediately reduce the connected load. Use the remote switching feature to turn off non-critical devices.
- **Unresponsive Equipment:** Utilize the remote outlet switching feature to power cycle the specific unresponsive device.

7. SPECIFICATIONS

Model Number	VP5N31A0
Form Factor	1U Horizontal Rackmount
Input Voltage	120 Volts
Input Amperage	30 Amps
Power Capacity	2.8 kW (2800 Watts)
Input Plug	NEMA L5-30P
Output Receptacles	(12) NEMA 5-20R
Item Weight	18.4 pounds
Package Dimensions	24 x 24 x 6 inches
Manufacturer	Vertiv

ASIN	B0DHMLBGHV
UPC	767041044812

8. WARRANTY AND SUPPORT

8.1 Product Warranty

The Vertiv Geist Switched Rack PDU VP5N31A0 comes with a standard three-year warranty. This warranty can be extended to five years if the unit is registered within 120 days of purchase. Refer to the official Vertiv website for complete warranty terms and conditions.

8.2 Technical Support

For technical assistance, troubleshooting, or inquiries regarding your Vertiv product, please visit the official Vertiv support website or contact their customer service. Have your product model number (VP5N31A0) and serial number ready when contacting support.