Eaton 5P1150IR

Eaton 5P 1150i 1150VA/770W Rack 1U UPS User Manual

Model: 5P1150IR

1. INTRODUCTION

This manual provides essential instructions for the installation, operation, and maintenance of your Eaton 5P 1150i Uninterruptible Power Supply (UPS). The Eaton 5P 1150i is a line-interactive UPS designed to protect critical equipment from power disturbances, ensuring continuous power and data integrity. It features a pure sine wave output, automatic voltage regulation (AVR) with buck and boost capabilities, and an intuitive graphical LCD for real-time diagnostics.

Key Features:

- **Line-Interactive Technology:** Regulates power fluctuations (AVR with Buck and Boost) and delivers pure sine wave output.
- **Intuitive Graphical LCD:** Provides local diagnostics at a glance, displaying critical UPS status and measurements.
- **Individually Controllable Outlets:** Maximizes backup time, enables remote restart, and sequential startup of connected equipment.
- **Rack 1U Form Factor:** Designed for efficient space utilization in server racks.
- **Communication Ports:** Includes USB, RS232, and Relay Contact for versatile connectivity and management.

2. SAFETY INFORMATION

Please read and follow all safety instructions carefully before installing, operating, or maintaining the UPS. Failure to comply with these instructions may result in electric shock, fire, or serious injury.

- **Electrical Safety:**

  - The UPS contains internal batteries that may present a shock hazard even when disconnected from the mains power.
  - Servicing of batteries should be performed or supervised by personnel knowledgeable of batteries and the required precautions.
  - Do not dispose of batteries in a fire. Batteries may explode.

- Do not open or mutilate batteries. Released electrolyte is harmful to the skin and eyes.
- Ensure proper grounding of the UPS and connected equipment.

- **Installation Environment:**

  - Install the UPS in a controlled environment, away from excessive heat, humidity, and dust.
  - Ensure adequate ventilation around the UPS. Do not block ventilation openings.
  - This UPS is designed for indoor use only.

- **General Precautions:**

  - Do not connect non-computer related equipment (e.g., medical equipment, life support systems) to the UPS unless specifically approved by Eaton.
  - Always disconnect the UPS from the mains power before performing any maintenance or service.

3. PACKAGE CONTENTS

Verify that all the following items are included in your UPS package:

- Eaton 5P 1150i UPS Unit
- Input Power Cord
- USB Communication Cable
- RS232 Serial Communication Cable
- Safety Instructions and Quick Start Guide
- Rack Mounting Kit (may be sold separately or included depending on region/bundle)

If any items are missing or damaged, please contact your dealer or Eaton customer support.

4. PRODUCT OVERVIEW

The Eaton 5P 1150i UPS is a compact 1U rack-mountable unit designed for reliable power protection. Below are images illustrating the unit and its key components.

Figure 4.1: Front view of the Eaton 5P 1150i Rack 1U UPS. This image shows the overall design of the UPS, including the front panel with its ventilation grille and integrated LCD display.

Front Panel and LCD Display

The front panel features a graphical LCD display and control buttons for monitoring and configuring the UPS.

Figure 4.2: Close-up of the Eaton 5P 1150i UPS LCD display. The screen shows "Load protected" with details on load percentage (62%), wattage (485W), and estimated runtime (7min). It also indicates the status of controllable outlet groups (GROUP1:On, GROUP2:On).

Figure 4.3: A hand interacting with the control buttons next to the LCD display on the Eaton 5P 1150i UPS. The display shows "Load" with values for voltage (485V), current (55.1A), and power factor (0.88pf). The buttons include Power, Up, Down, and ESC.

The LCD provides real-time information such as input/output voltage, load percentage, battery status, and estimated runtime. The control buttons allow navigation through menus and configuration of UPS settings.

Rear Panel (Illustrative - specific image not provided)

The rear panel typically includes:

- AC Input Connector
- Output Receptacles (individually controllable groups)
- USB Communication Port
- RS232 Serial Port
- Relay Contact Port
- Expansion Slot for optional network cards

5. SETUP

5.1 Unpacking and Inspection

1. Carefully unpack the UPS and its accessories from the packaging.
2. Inspect the unit for any shipping damage. If damage is found, do not install and contact your dealer.
3. Retain the original packaging for future use or shipping.

5.2 Rack Installation

The Eaton 5P 1150i is a 1U rack-mountable UPS. Follow the instructions provided with your rack mounting kit (sold

separately or included depending on package) for secure installation.

1. Ensure the rack is stable and capable of supporting the UPS weight (approximately 8 kg).
2. Mount the rail kit (if applicable) into the desired 1U space in your rack.
3. Carefully slide the UPS onto the rails and secure it with the provided screws.

5.3 Connecting Power and Equipment

1. **Connect to Mains Power:** Plug the UPS input power cord into a properly grounded electrical outlet.
2. **Connect Protected Equipment:** Plug your critical equipment (servers, network devices, etc.) into the output receptacles on the rear of the UPS. Distribute the load evenly across the controllable outlet groups if applicable.
3. **Connect Communication Cables:** Connect the USB, RS232, or Relay Contact cables to your computer or network management system as required.

5.4 Initial Power-Up

1. After connecting all cables, press the power button on the front panel to turn on the UPS.
2. The UPS will perform a self-test and the LCD will illuminate, displaying the current status.
3. Allow the UPS to charge its batteries for at least 8 hours before relying on it for extended backup time.

6. OPERATION

6.1 LCD Display Navigation

The graphical LCD provides access to various UPS parameters and settings. Use the navigation buttons (Up, Down, ESC, Enter/Power) to scroll through menus and confirm selections.

- **Up/Down Buttons:** Navigate through menu options or increase/decrease values.
- **ESC Button:** Exit a menu or cancel an action.
- **Power Button (often doubles as Enter):** Select an option or confirm a setting.

6.2 Monitoring UPS Status

The default display shows critical information such as:

- Input/Output Voltage and Frequency
- Load Percentage and Wattage
- Battery Charge Level and Estimated Runtime
- UPS Operating Mode (Online, Battery, AVR)

6.3 Configuring Controllable Outlets

The Eaton 5P 1150i features individually controllable outlet groups. These can be configured via the LCD or management software to:

- Turn off non-essential equipment during a power outage to extend runtime for critical devices.
- Perform remote restarts of locked-up equipment.
- Implement sequential startup/shutdown procedures.

Refer to the detailed menu structure in the full user manual for specific steps on configuring these settings.

7. MAINTENANCE

7.1 Battery Replacement

The Eaton 5P 1150i features hot-swappable batteries, allowing replacement without powering down connected equipment.

1. Regularly check the battery status via the LCD or management software. The UPS performs automatic battery tests.
2. When a battery replacement is indicated, order a genuine Eaton replacement battery pack for your model.
3. Follow the specific instructions provided with the replacement battery kit for safe and proper installation. Ensure the UPS is in bypass mode or consult the full manual for detailed hot-swap procedures.
4. Dispose of old batteries according to local regulations.

7.2 Cleaning

Keep the UPS clean and free of dust.

- Use a soft, dry cloth to wipe the exterior.
- Do not use liquid or aerosol cleaners.
- Ensure ventilation openings are clear of obstructions.

8. TROUBLESHOOTING

This section provides solutions to common issues you may encounter with your Eaton 5P 1150i UPS.

Problem	Possible Cause	Solution
UPS does not turn on.	No input power; Battery deeply discharged; UPS fault.	Check mains power connection; Allow UPS to charge for several hours; Contact support if fault persists.
UPS beeps continuously.	On battery power; Overload; Battery fault.	Check mains power; Reduce connected load; Check battery status on LCD.
Short backup time.	Batteries not fully charged; Batteries nearing end of life; Overload.	Allow batteries to fully charge; Replace batteries if indicated; Reduce connected load.
LCD shows an error code.	Internal fault or specific condition.	Refer to the full user manual for a list of error codes and their corresponding solutions.

If the problem persists after attempting the above solutions, please contact Eaton technical support.

9. SPECIFICATIONS

Detailed technical specifications for the Eaton 5P 1150i UPS.

Model Number	5P1150IR
Capacity (VA/Watts)	1150VA / 770W
Form Factor	Rack 1U
Input Voltage	240V (Nominal)
Output Voltage	240V (Nominal, Pure Sine Wave)
Runtime (700W load)	Approximately 5 minutes

Battery Type	Sealed Lead Acid, Hot-Swappable
Communication Ports	USB, RS232, Relay Contact
Dimensions (H x W x D)	4 cm x 43 cm x 50 cm (approx. 1.57 in x 16.93 in x 19.69 in)
Weight	8 Kilograms (approx. 17.6 lbs)
Operating Temperature	0 to 35 °C (32 to 95 °F)
Noise Level	40 dB
Special Features	Automatic Battery Test, Hot-Swappable Battery

10. WARRANTY AND SUPPORT

For detailed warranty information, please refer to the warranty card included with your product or visit the official Eaton website.

Technical Support: If you require technical assistance or have questions regarding your Eaton 5P 1150i UPS, please contact Eaton customer support. Contact details can typically be found on the Eaton website or in the documentation accompanying your product.

Visit Eaton's Official Website