NXT Power HUB 2000 / 3000 installation and user manual

022-00217 | 15 AUG 2025 | Rev A

Welcome to Your New Power HUB

Thank you for purchasing the NXT Power HUB. You've chosen a state-of-the-art solution designed to provide clean, protected power to your systems. This guide will help you understand the product's functions, controls, and installation process.

About NXT Power

NXT Power is a global leader in power management systems. Headquartered in Waukegan, Illinois, we have international sales and distribution offices in Italy, Germany, and Mexico. Our main products include transformer-based power conditioners and uninterruptible power supplies (UPS). We are an ISO 9001:2015 registered company dedicated to creating higher power quality standards to support technology in various sectors.

For more information, visit our website at NXT Power **www.nxtpower.com**.

Important Safety Information

Please pay close attention to the following symbols, which are used throughout this manual to indicate potential hazards.

SYMBOL GUIDE

Symbol	Description
 DANGER	Alerts the user to a high-risk hazard that could, if not avoided, result in severe injury or death.
 WARNING	Alerts the user to a medium or low-risk hazard that if not avoided, could result in moderate or minor injury.
 CAUTION	Alerts the user to a potentially hazardous situation that if not avoided, could result in equipment damage, data loss, performance deterioration, or unanticipated results.
	Alerts the user to protect against electrostatic discharge (ESD).

Symbol	Description
	Alerts the user to a risk of electric shock.
	Protective Earth Ground
 TIP	Provides a tip that may help the user solve a problem or save time.
 NOTE	Provides additional information to emphasize or supplements essential points in the main text.

GUIDE DES SYMBOLES

Symbol	Description
 LE DANGER	Avertit l'utilisateur d'un danger à haut risque qui pourrait, s'il n'est pas évité, entraîner des blessures graves ou la mort.
 L'ALERTE	Avertit l'utilisateur d'un danger à risque moyen ou faible qui, s'il n'est pas évité, pourrait entraîner des blessures modérées ou mineures.
 PRUDENCE	Avertit l'utilisateur d'une situation potentiellement dangereuse qui, si elle n'est pas évitée, pourrait entraîner des dommages matériels, une perte de données, une détérioration des performances ou des résultats imprévus.
	Alerte l'utilisateur pour qu'il se protège contre les décharges électrostatiques (ESD).
	Alerte l'utilisateur d'un risque de choc électrique.
	Terre de protection
 L'AVIS	Fournit une astuce qui peut aider l'utilisateur à résoudre un problème ou à gagner du temps.

Symbol	Description
 LA NOTE	Fournit des informations supplémentaires pour souligner ou compléter les points essentiels du texte principal.

Technical Support and Warranty Information

Technical Support

If you run into any issues during installation or operation, please refer to the relevant sections of this manual first. If you still need help, our technical support staff is ready to assist you.

- **North America**
  - **Phone**: (877) 698-7697 (Available 8:00 a.m. to 5:00 p.m. Central Time)
  - **Email**: service@nxtpower.com
- **Latin America**
  - **Phone**: +52 55 6910 0201
  - **Email**: service@nxtpower.co

Warranty

NXT Power provides a **three-year warranty** on the Power HUB against defects in material and workmanship, starting from the shipment date. The Ares Plus UPS is also covered by a two-year warranty (including the batteries).

During this period, we will repair or replace the product at no charge. This warranty is void if the product is misused, abused, altered by unauthorized personnel, or tampered with. NXT Power is not responsible for incidental or consequential damage.

POWER HUB Benefits

The POWER HUB offers a convenient and advanced power solution, especially for small store environments.

- **Space-Saving Design**: The POWER HUB lets you provide conditioned, uninterruptible power to all critical equipment without needing multiple distributed UPS or power conditioners.

- **True Isolated Power**: All connected loads are on the same phase and circuit, providing true isolated power away from other noise sources.
- **Simplified Maintenance**: A built-in bypass/transfer switch allows you to perform maintenance on the UPS without interrupting power to your critical equipment.
- **Easy Diagnostics**: The input and output power status lights make troubleshooting simple.

Product Specifications

POWER HUB Features

- **Power Ratings**:
  - **2kVA**: 16 amps at 120V (2000VA/1850W)
  - **3kVA**: 24 amps at 120V (3000VA/2740W)
- **Technology**: On-line double conversion with a pure sine wave output.
- **Power Factor**: High input power factor (1.0) and low input THDi.
- **Battery Backup**:
  - **Full Load**: 5 minutes
  - **Half Load**: 16 minutes
- **AC Input Voltage**: A very wide range (75–150V) minimizes the need to switch to batteries.
- **High Crest Factor (3:1)**: Ideal for computer loads, eliminating the need to oversize the UPS system.

Power Interface Panel

Power HUB 2000

- Requires one 120 VAC source at 20 amps.
- Requires one NXT Power ARES PLUS 2000 VA UPS.
- Maximum load is 16 amps at 120 VAC (2000 VA).

Power HUB 3000

- Requires one 120 VAC source at 30 amps.
- Requires one NXT Power ARES PLUS 3000 VA UPS.
- Maximum load is 24 amps at 120 VAC (3000 VA).

Power HUB 2000 and 3000 (Both Models)

- Status indicator lights for input and output power.
- Bypass transfer switch.
- Internal low-impedance isolation transformer.
- Internal terminal blocks for power connections.
- digital voltage, current and power meter.

Installation Guide: Retrofits

Before you begin, gather the necessary tools and make sure you have the required space. This manual section provides step-by-step instructions for retrofitting the Power HUB into an existing setup.

CAUTION PRUDENCE

All work must be done by a qualified electrician and follow all local and national electrical codes.

WARNING L'ALERTE

All connections wired to the Power HUB terminal blocks must be copper conductors and torqued down to 10.5 - 12 in/lbs

Getting Started

1. Identify the **critical circuit breakers** that feed power to the receptacles or hard-wired loads you want to connect to the POWER HUB. These are typically for your POS network, office computer, telephone, or security system.
2. Remove the panel board covers for the critical circuit breakers. Use a current-measuring device to measure the total amp load for all the hot conductors connected to these breakers. The total amp load must be less than **16(Power HUB 2000) / 22 amps (Power HUB 3000**).
3. Choose a convenient wall location near your electrical panels. You need a space that's **23.75" H x 11.0" W x 25.0" D** for the Power Hub and UPS assembly, plus extra space for accessing switches and cords.
4. If the Power HUB and UPS are mounted separately, they must be within **three feet** of each other to connect the cables.
5. Secure the Power HUB/shelf assembly to the wall using **hex head lag screws** that are at least 1/4 inch in diameter and 1.5 inches long. The total weight of the assembly (Power Hub, shelf, and UPS) is **140 pounds**. If you can't attach it to building studs, you must use appropriate anchoring devices for your wall material.

6. Choose a 20 or 30-amp, single-pole circuit breaker in one of the panel boards to power the Power HUB. **DO NOT use a GFCI (Ground Fault Circuit Interrupter) type breaker**, as it will trip when the Power HUB is in bypass mode.
7. Using **EMT conduit, flexible conduit, or 20 / 30 -amp rated minimum MC cable**, run a single circuit (Hot – Black, Neutral – White, and Safety Ground – Green) to the Power HUB. This "dirty power" circuit connects to terminals **"L", "N", and "G"** on terminal block **TB1 Input**. The minimum conductor size should be **12 or 10 AWG**.
8. Run separate circuits from the Power HUB to the panel boards for each output. Again, use **EMT conduit, flexible conduit, or 15/20-amp minimum MC cable**. The minimum Input conductor size should be **12/10 AWG** for the hot and neutral conductors and **10 AWG** for the ground conductor. output conductor size should be **14/12 AWG.**
9. Terminate each output circuit at the Power HUB on terminals **"Output TB2-TB5", "L", "N", and "G"** on terminal block.
10. Communicate with local management that the critical circuits will be shut off temporarily. They may need to power down equipment before you proceed.
11. Turn off all the critical circuit breakers and confirm that the connected equipment turns off.
12. Remove the hot (black), neutral (white), and safety ground (green) conductors from the panel board. Use wire nuts or butt connectors to splice each set of output conductors from the POWER HUB to the existing branch circuit conductors.
13. Remove any existing surge strips, filters, or UPS devices that are plugged into the output equipment receptacles.
14. Turn the **Transfer Switch** on the Power HUB **CLOCKWISE** to the **"Bypass"** position.
15. Turn on the circuit breaker that is feeding input power to the Power Hub. The "Input" and "Output" pilot lights should illuminate, and all the connected equipment should turn back on.
16. Plug the NXT Power UPS into the receptacle on the **rear exterior of the Power HUB**. Then, plug the line cord from the Power Hub into one of the receptacles on the back of the UPS.
17. Press and hold the **ON button** for 3 seconds on the UPS until the UPS turns the output ON.
18. **IMPORTANT NOTE**: If the input circuit breaker trips during UPS startup, it's likely an issue with the breaker, not the UPS. Replace the breaker with one rated for **high magnetic inrush loads**.
19. Turn the **Transfer Switch** on the Power HUB **COUNTER-CLOCKWISE** to the **"Normal"** position.
20. Reinstall the POWER HUB front cover using the screws you removed earlier.

Installation Guide: New Installations

For new installations, follow the steps above, but you can skip **Step 6 and Step 12**. Input branch circuit can be piped directly into the POWER HUB and connected to terminal block **TB1**.

IMPORTANT NOTE

For the best performance, NXT Power recommends placing power conditioning at the point of the load. If your load has a non-standard length, please contact a NXT Power professional for assistance.

Description of Operations

System Overview

- A 120 VAC, 1-phase, 20/30A circuit supplies power to the Power HUB.
- The input power status light turns on.
- Power is routed to the Normal/Bypass transfer switch inside the Power HUB.

Normal Mode (UPS Active)

- Power is routed from the transfer switch to the NXT Power UPS.
- The UPS and Power HUB conditions the power and provides battery backup.
- The power from the UPS is routed back to the Power HUB and conditioned.
- The output power status light turns on.
- The Power HUB distributes conditioned, battery-backed power to your dedicated, hard-wired receptacles and equipment.

Bypass Mode (UPS Bypassed)

- Power is routed directly from the transfer switch to your dedicated receptacles and equipment, bypassing the UPS. (power is still conditioned even in bypass operation)
- The output power status light remains on during the transfer.

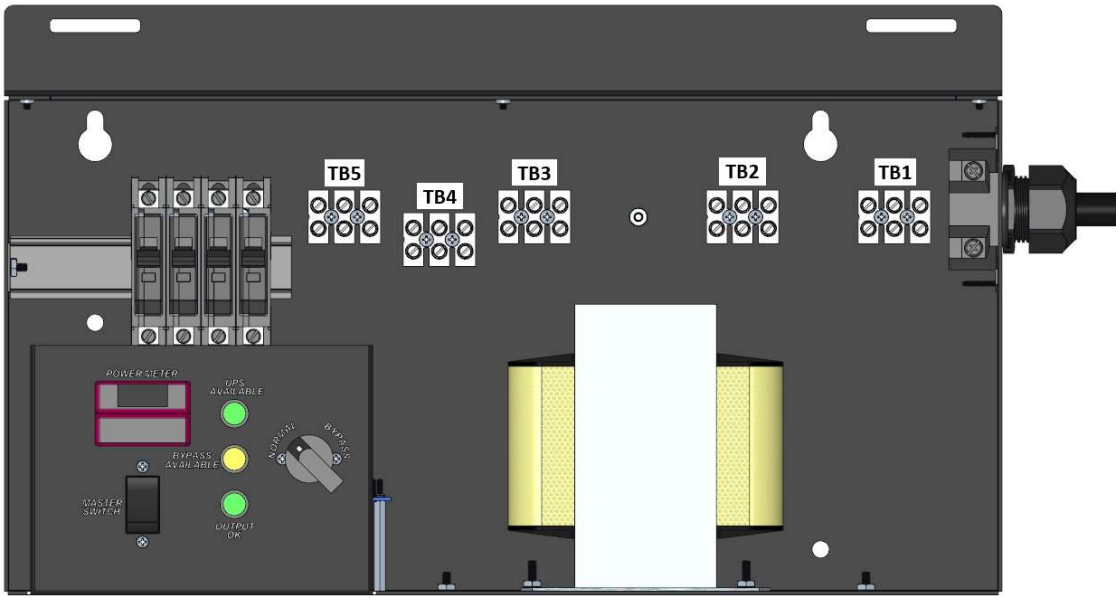

Fig 1: Power HUB interface and connection layout

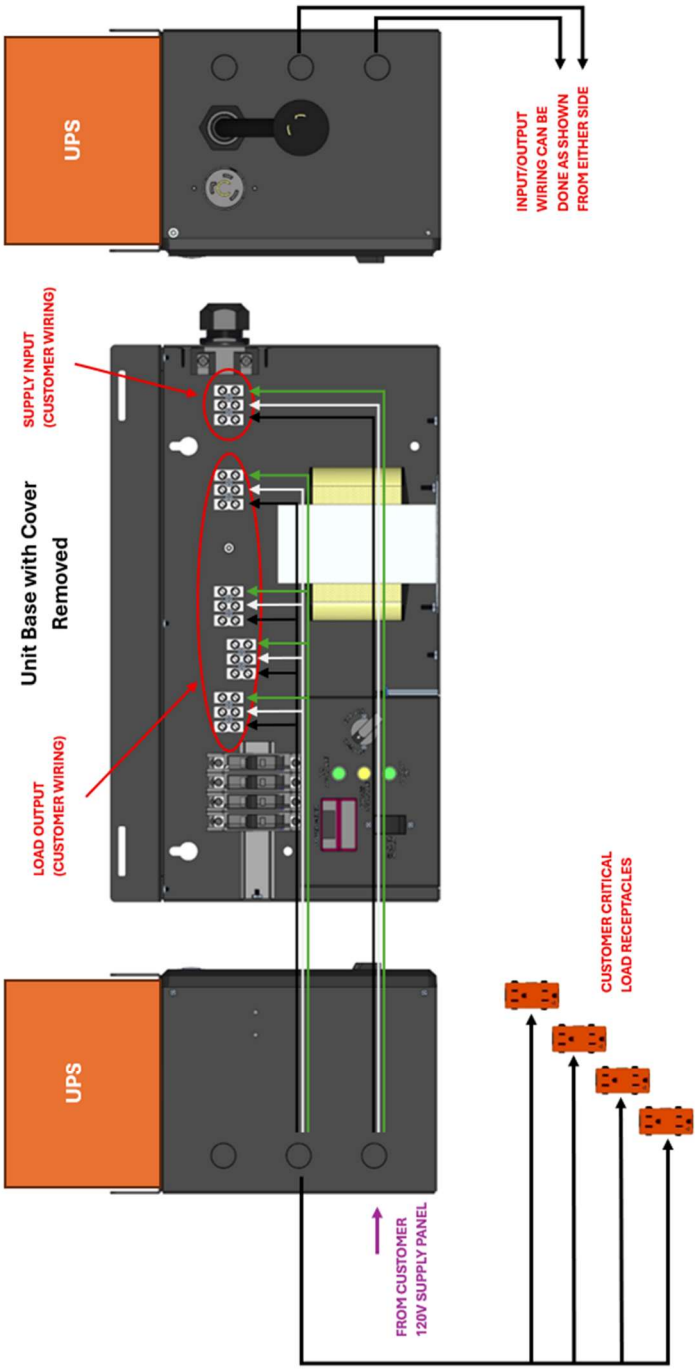

Fig 2: Ideal Power HUB wiring diagram

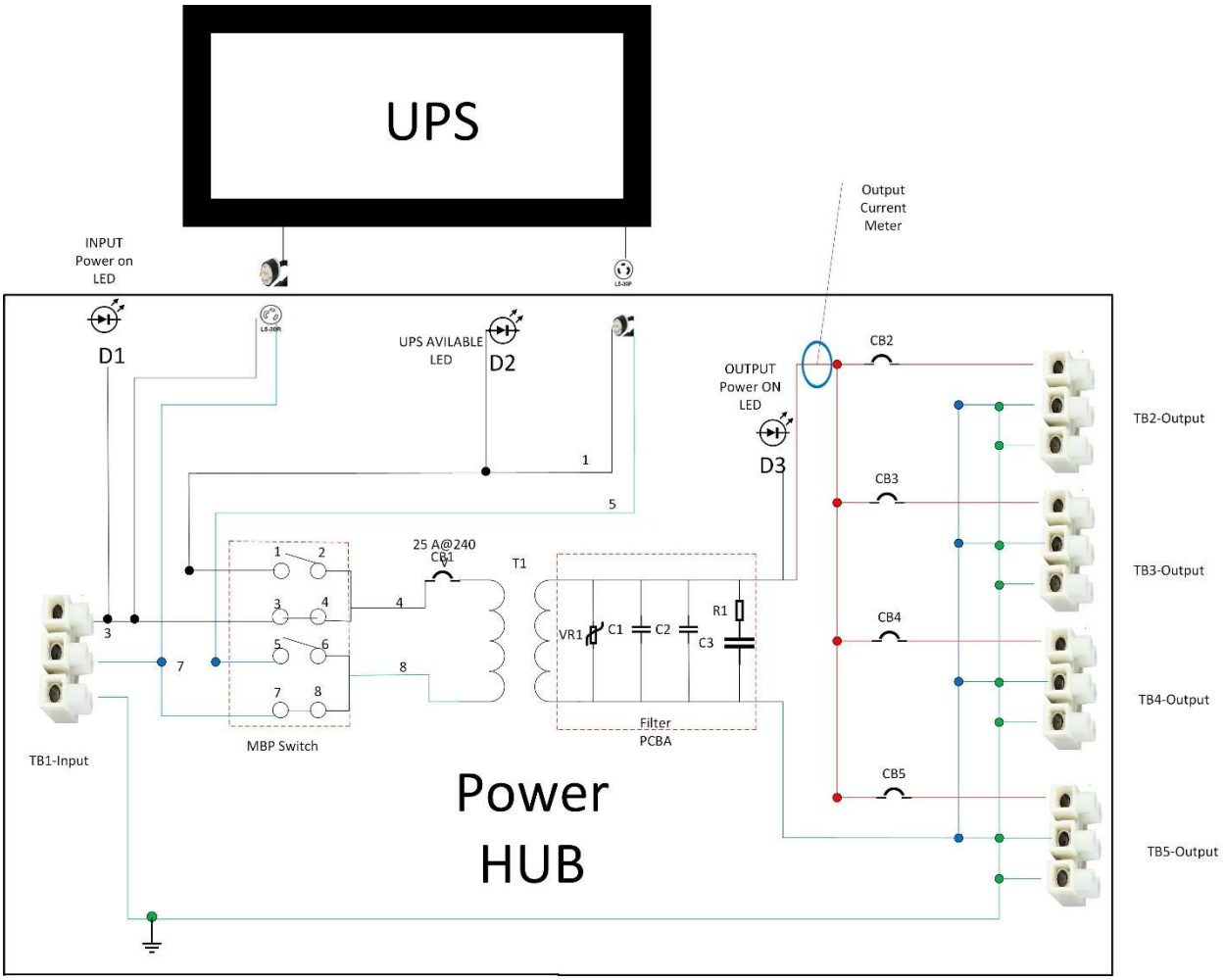

Fig 3: Power HUB system schematic

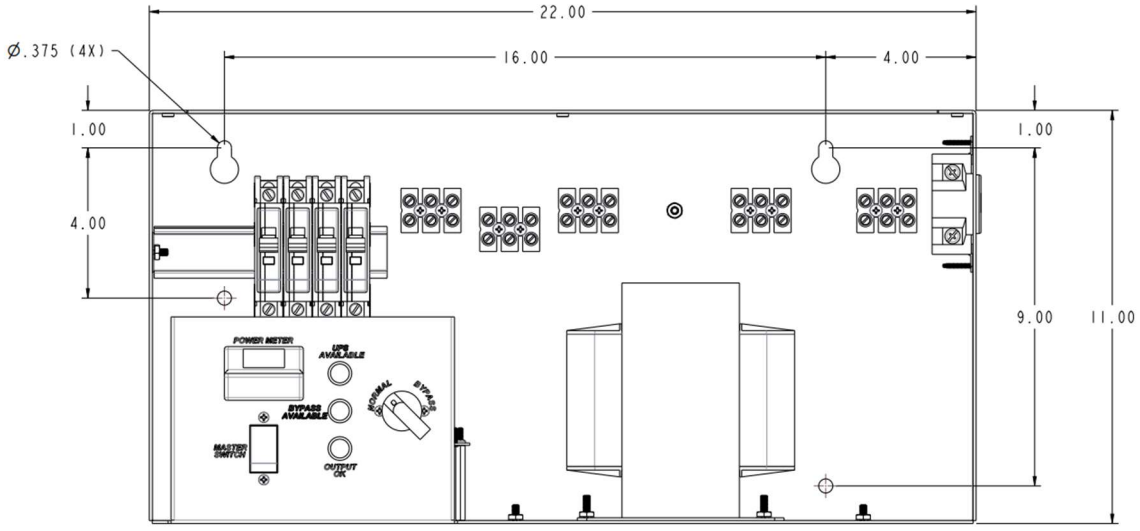

Fig 4: Mounting dimensions (Inches)

Nuisance Tripping of Input Circuit Breaker

In some cases, the 20 or 30-amp circuit breaker powering the Power HUB may trip during the initial startup of the NXT Power UPS. Our testing has confirmed that this is not a defect with the UPS.

When the Power HUB is located close to the panel board (within about 10 feet), the high inrush current during UPS startup can trip a standard branch circuit breaker. The solution is to replace the circuit breaker with one rated to handle this high magnetic inrush.

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Access additional product and support via our website

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