

Data Sheet

UPStealth® 2 Nickel-Zinc Batteries



ZincFive

Introduction

We now live in an Always-On ITS world and Departments of Transportation throughout the U.S. and Canada have made a commitment to smarter, safer, greener Intelligent Transportation System (ITS) operation with the Nickel-Zinc battery-based UPStealth Uninterruptible Power Supply (UPS). UPStealth is an intelligent UPS designed by transportation experts for ITS requirements and utilizes transformational Nickel-Zinc (NiZn) battery chemistry to energize intersections and ITS equipment when utility power is lost.

As the fastest growing UPS for ITS, UPStealth offers transportation departments the opportunity to upgrade to an easy-to-install, self-maintained solution with superior performance, environmental and safety advantages over traditional battery backup solutions.

UPStealth 2 Benefits

Nickel-Zinc Battery Chemistry

- Superior electrical performance compared to lead-acid batteries
- Half the size and weight of lead-acid batteries
- Self-maintaining; No periodic maintenance
- Faster recharge time than lead-acid batteries
- Longer storage and operational life than lead-acid batteries
- No hazardous materials; No sulfation
- No trickle charging required
- Physically safe operation
- Recyclable and environmentally friendly

Compact Form Factors

- Ingenious flexible battery design inserts in dead space between rack and cabinet wall
- Shelf mount & rack mount
- Quick connect/disconnect battery string and AC cables

Innovative Electronics Design

- Built-in chargers and controllers
- Integrated temperature compensated charging
- Digital battery bus
- Parallel battery strings; Redundant performance



UPStealth® 2 Battery Panel 500W



UPStealth® 2 Battery Module 500W

Battery Specifications

| Output | |
|---------------------------------|---|
| Power Output | 500W Battery Panel: 500 Watts 500W Battery Module: 500 Watts |
| Voltage Output | 48VDC Nominal with Redundancy |
| Battery Type & Panel Design | |
| Chemistry | Nickel-Zinc, Sealed |
| Electrolyte | Starved, KOH, Aqueous (no acid) |
| Configuration | Digital Battery Bus Compartmentalized Battery Strings Redundant Isolated Battery Strings Managed in Parallel Upon Discharge Integrated Temperature Compensated Charging Redundant Performance |
| Battery Communications | Digital Battery Bus via Single Connector |
| Maximum Battery Configuration | 6 Panels or Modules |
| Cold Start | Simple push-button activation of cold start on battery power |
| Mechanical | |
| Size | 500W Battery Panel: 1.1"H X 19.0"W X 24.4"D 500W Battery Module: 2.3"H X 17.0"W X 12.1"D |
| Weight | 500W Battery Panel: 27.5lbs 500W Battery Module: 25.0lbs |
| Battery Connection System | Single Quick Connect/Disconnect 7W2 Dsub Connector IEC320 C20 Connector for AC Power |
| Form Factors and Mounting | Battery Panels - Flexible Battery Panel Inserted in Dead Space Between Rack and Cabinet Wall Battery Module - Shelf Mount, Rack Mount |
| Maintenance | |
| Maintenance | Self-Maintaining, No Periodic Maintenance |
| Environmental | |
| Operating Temperature Range | Discharge: (-37°C ¹ to 74°C) (-34.6°F ¹ to 165°F) Charge: (-37°C ¹ to 50°C ²) (-34.6°F ¹ to 122°F ²) |
| Charge/Discharge | |
| Battery Charging | Built-In Chargers and Controllers Integrated Temperature Compensated Charging Typical 4.5 Hour Charge Time from 0% to 100% State of Charge |
| Self-Discharge | Shelf Self-Discharge Time (From 100% to 0% State of Charge): 1. At 25C or below, >1,000 days; 2. At 60C, >240 days Capacity can be fully recovered to 100% after self-discharging |
| Battery Storage | Batteries Do Not Sulfate When Stored No Trickle Charging Required |
| Certifications | |
| Battery Cells | Recognized UL-2054, CSA 22.2 No. 60950-1 |
| UPStealth 2 Battery Module 500W | UL 1778 and CSA C22.2 No. 107.3 compliant |
| Indicators & Alarms | |
| Visual | Multi-Color LED Providing Battery Panel Status and Alarms Green - Battery Discharging / UPS Battery Backup Mode Blue - Battery Charging Blinking White - Battery Fully Charged and Available |
| Warranty | |
| Warranty | 2 Years on Battery Panel/Module, 5 Years on Battery Cells |

*All Specifications Valid at 25°C *All Specifications Subject to Change

¹ Charge and discharge operations below a -5°C (23°F) ambient temperature require a heating element

² Charge operations discontinued above a 50°C (122°F) ambient temperature to protect system