

Data Sheet

UPStealth® 2 Nickel-Zinc Batteries



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	
UL/CSA	Battery cells: Recognized UL-2054, CSA 22.2 No. 60950-1
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