

# Traffic Cabinet Components and Accessories

## ZincBlue2 Battery

### *ZincBlue2: The Safer, Smarter, Greener UPS*

ZincBlue2 is the next-generation intelligent nickel-zinc battery-based uninterruptible power supply (UPS) solution. The ZincBlue2 nickel-zinc battery panel and battery module feature a more compact and lightweight nickel-zinc battery design. The built-in intelligent digital charge and discharge control, along with the updated connectors, make for a very simple-to-connect, no-maintenance system with a unique hot-swappable battery replacement capability.

### *The Benefits to Agencies*

ZincBlue2's compact design leverages more of the unused space in a traffic cabinet. The unique battery panels can fit in normally unused space on the sides of 33x-type cabinets. The design allows for multiple slide-in installations, requiring no additional mounting, while the shelf/rackmount battery module design has a lower profile to allow more batteries to be stacked. The nickel-zinc battery technology is free from hazardous materials, requires no maintenance, is half the weight of lead acid batteries, and is fully recyclable, giving agencies peace of mind regarding the system's safety, longevity, and reliability. ZincBlue2 is fully UL-certified to ensure compatibility with most agency requirements. As such, ZincBlue2 fully supports an agency's green and Smart City initiatives.





## The Benefits to the Driving Public

Uninterruptable power systems help ensure signalized intersections continue to function during a utility power disruption. ZincBlue2 ensures safety for the driving public and emergency responders, even during the hazardous conditions of power outages. ZincBlue2 provides an environmentally-conscious alternative to traditional lead-acid Battery Backup System (BBS), for a more sustainable solution.

### Why ZincBlue2

#### **Nickel-Zinc Battery Chemistry**

- 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
- Recyclable and environmentally friendly

#### **Innovative Electronics Design**

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

#### **Compact Form Factors**

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





<b>Output</b>	
Power Output	500W Battery Panel: 500 Watts 500W Battery Module: 500 Watts
Voltage Output	48VDC Nominal with Redundancy
<b>Battery Type &amp; Panel Design</b>	
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
<b>Mechanical</b>	
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
<b>Maintenance</b>	
Maintenance	Self-Maintaining, No Periodic Maintenance
<b>Environmental</b>	
Operating Temperature Range	Discharge: (-37°C <sup>1</sup> to 74°C) (-34.6°F <sup>1</sup> to 165°F) Charge: (-37°C <sup>1</sup> to 50°C <sup>2</sup> ) (-34.6°F <sup>1</sup> to 122°F <sup>2</sup> )
<b>Charge/Discharge</b>	
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
<b>Certifications</b>	
UL/CSA	Battery cells: Recognized UL-2054, CSA 22.2 No. 60950-1
<b>Indicators &amp; Alarms</b>	
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
<b>Warranty</b>	
Warranty	2 Years on Battery Panel/Module, 5 Years on Battery Cells

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

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

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

