



100 Amp Hour 12 Volt Smart LiFePO₄ Deep Cycle Battery

Model: BB10012i

Features

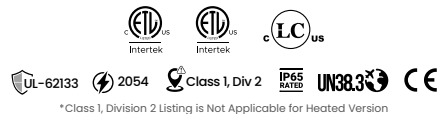
- UL-Listed Cylindrical Cells
- Safe & Non-Toxic LiFePO₄ Chemistry
- Smart Battery Communication Technology
- Optional Integrated Heating (Model: BB10012iH)

Performance & Versatility

- Series and/or Parallel Connection
- Wire in Series up to 48V
- No Limit When Wiring in Parallel
- Mount in Any Orientation
- 100% Depth of Discharge
- 3,000-5,000 Deep Discharge Cycles



Certified and Tested To Industry Safety Standards



Internal BMS

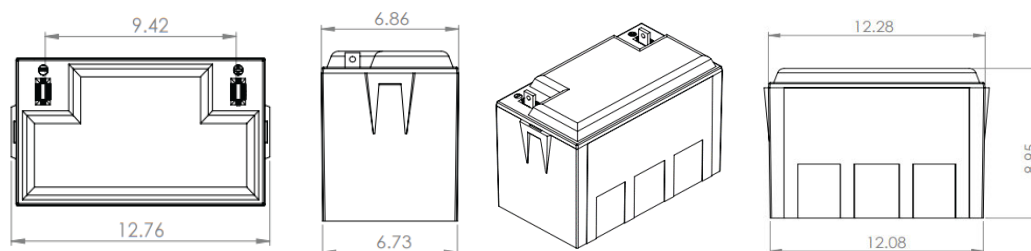
Proprietary battery management system (BMS) ensures user safety and product protection.

- High/Low Voltage Protection
- Short Circuit Protection
- High/Low Temperature Protection
- Cold Charging Protection (Low-Temp Cutoff)
- Automatic Cell Balancing at Top of Charge

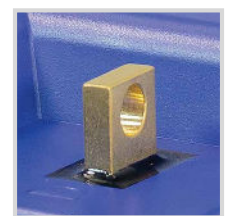
100 Amps Continuous | 200 Amps Surge for 30 Seconds | 1/2 Second Surge for Loads over 500 Amps

*Note: This built-in protection will reset after five seconds in most fault conditions. Disconnecting the battery from loads will also reset the BMS.

Drawing Specifications



Flag Terminals



Contact Information:

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✉ info@battlebornbatteries.com

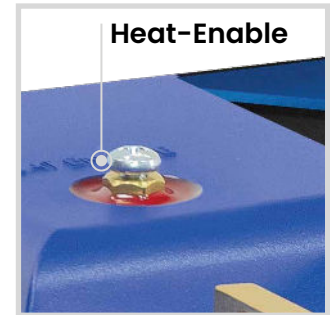
POWERED BY
dragonfly[®]
ENERGY

Optional Integrated Heating Technology

All Smart LiFePO₄ Batteries are available in models with optional Integrated Heating technology, which warms the battery pack's internal cells in cold temperatures.

- Allows for Cold Weather Charging
- Low Continuous Power Draw When Enabled
- Integrated Heating Technology Activated at Internal Temperature of ~35°F (*When Heat Function is Enabled)
- Operating Temperature Range of -4°F to 135°F

INTEGRATED
HEATING



Dragonfly Intelligence® Smart Communication Technology

Dragonfly Intelligence® is the proprietary communication technology inside Battle Born Smart LiFePO₄ Batteries.

- Robust Wireless Mesh Network & Bluetooth® Connectivity
- Quick Setup & Easy Configuration via the Battle Born® Mobile App
- Compatible with RV-C, NMEA 2000 & More (Some Protocols are Coming Soon)
- Remote Monitoring of Individual Batteries or Entire Smart Power System
- Error Detection & Warning Notifications
- Historical Reporting of SOC, Voltage, Performance, System Health & More

DRAGONFLY
Intelligence

Battle Born® Hub

- Connects All Smart Batteries in System
- Receives Wireless Signal from Smart Batteries
- Increases Accessibility to Advanced Communication Features
- Enables Full Power System Monitoring
- Powerful Intermediary Tool for Accessories

Note: A Battle Born Hub is required for Full System Monitoring and Advanced Features.



Battle Born® Mobile App
Available in the iOS App Store.



*Coming soon to Android devices.



BB10012i Technical Specifications

Electrical Specifications

| | |
|---------------------------|---------------------------------|
| Voltage | 12V |
| Capacity | 100Ah |
| Operating Temperature | -4°F to 135°F (-20°C to 57.2°C) |
| Efficiency | 99% |
| Self Discharge | 2-3% per Month |
| Maximum Series Voltage | 48V |
| Cycle | 3K-5K |
| Built-in BMS | Internal |
| Resistance | 7 mΩ |
| Usable Depth of Discharge | 100% |

Discharging Specifications

| | |
|------------------------------------|---------------------|
| Max Discharge Current | 100A |
| Peak Discharge Current | 200A for 30 Seconds |
| Surge for Loads Over 500A | .5 Seconds |
| Recommended Low Voltage Disconnect | 10.5V |
| BMS Discharge Voltage Cut-Off | 10V |
| Reconnect Voltage | 10V |
| Short Circuit Protection | Yes |

Recognized Specifications

| | |
|-----------------------------|--|
| Battery Cell Certifications | UL 1642 |
| Battery Pack Certifications | UN38.3 UL/CSA-62133-2 UL-2054 IP65 - ANSI/IEC 60529-2020, CSA 60529:16 (R2021) Class 1, Division 2, Group A, B, C & D UL 121201:2019, CSA C22.2 No.213-17 |
| Shipping Class | UN3480, Class 9 |

Temperature Specifications

| | |
|------------------------------|---------------------------------|
| Discharge Temperature | -4°F to 135°F (-20°C to 57.2°C) |
| Charge Temperature | 25°F to 135°F |
| Storage Temperature | -10°F to 140°F (-23°C to 60°C) |
| BMS High Temperature Cut-Off | >135°F |
| BMS Reconnect Temperature | <135°F |

Charging Specifications

| | |
|--------------------------------------|-----------------------------------|
| Recommended Charge Current | .5c |
| Max Charge Current | 50A |
| Absorption Voltage | 14.2V to 14.6V |
| Float Voltage | 13.4V to 13.8V |
| Equalization Voltage (if applicable) | 14.4V |
| Absorption Time | 30 Minutes per 100Ah Battery Bank |
| BMS Charge Current Cut-Off | .5C Recommended |
| Recharge/Rebulk Voltage | 13.3V |
| BMS Cell Balancing Voltage Range | 14.2V to 14.6V |
| High BMS Voltage Protection | 14.7VDC |
| Temperature Compensation | No/Disable |

Mechanical Specifications

| | |
|---------------------------------|---|
| Dimensions | 12.76"L X 6.86"W X 8.95"H |
| Weight | 31 lbs. |
| Terminal Type | .25" Brass |
| Terminal Hole | 3/8" Hole and 3/8" or 5/16" Hardware is Suggested |
| Terminal Torque | 9 to 11 Ft-lb. |
| Case Material | ABS Fire Rated |
| Cell Type | Cylindrical |
| Cell Chemistry | LiFePO4 (Lithium Iron-Phosphate) |
| Sealed and Water Resistant Case | Non-Submersible |

Integrated Heating Specifications (Model BB10012iH Only)

| | |
|--------------------------------------|-------------------------------|
| Heat | Integrated Heating Technology |
| Heat Enable Terminal | Female M4 Thread |
| Continuous Power Draw (When Enabled) | 28W |

Dragonfly Intelligence® Specifications

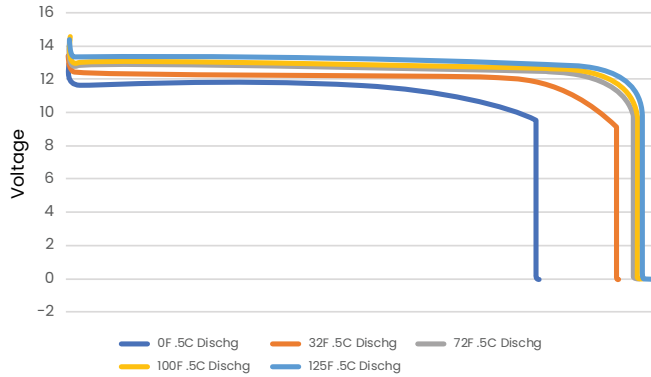
| | |
|--|--|
| Discharge Rate of Built-in Communication | 10mA Future Firmware Expected to Result in ~1-3mA |
| Bluetooth Range | ~15m/50ft |
| Wireless Mesh Network Range (To Smart Battery) | ~10m/32ft |
| Data Transmission Frequency | 5 Seconds |

*Note: The storage temperature range is -10°F to 140°F (-23°C to 60°C). We recommend bringing the batteries to a 100% charge and then disconnecting them completely for storage. After six months in storage, your batteries will remain 75 to 80% charged.

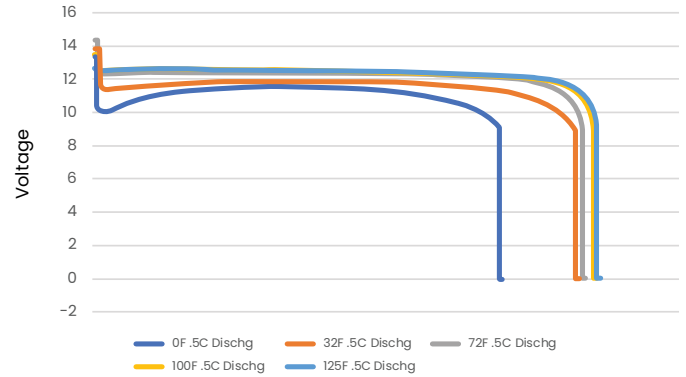
Storing batteries in subzero weather (-15°F or more) has the potential to crack the ABS plastic and more importantly could cause a faster loss of capacity, in some cases drastically more than the typical 2 to 4% per month loss.

Performed Operation Data

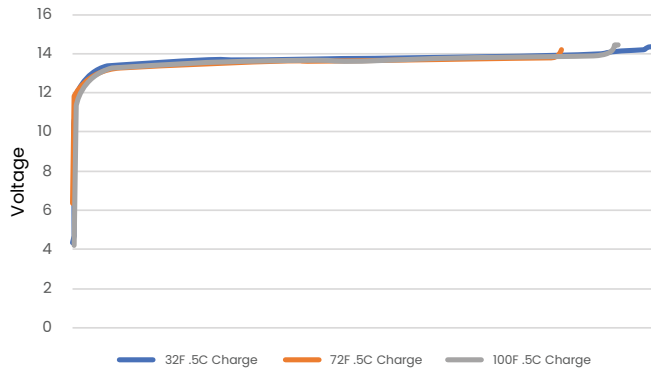
.5C Discharge with Temperature Variations



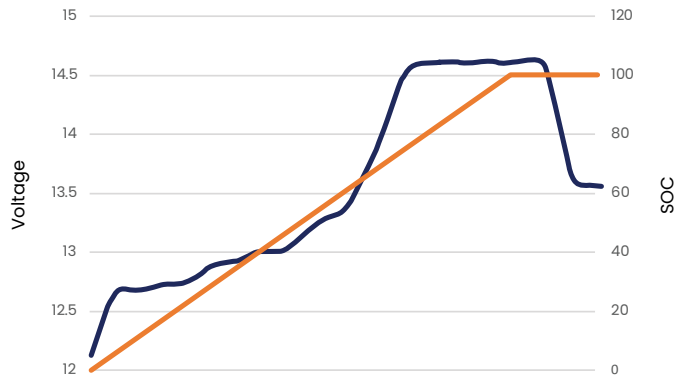
1C Discharge Voltage with Temperature Variations



.5C State of Charge with Temperature Variations



Standard Charge Curve with 3 Stage Charger



Performed Operation Data for Heated Batteries

BB10012iH Integrated Heating Draw Expected in a 24Hr Period

