100 Amp Hour 12 Volt Smart LiFePO4 Deep Cycle Battery

Model: BB10012i

Features

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

Third-Party Tested and Certified to Comply with Applicable Industry Safety Standards

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

Internal BMS

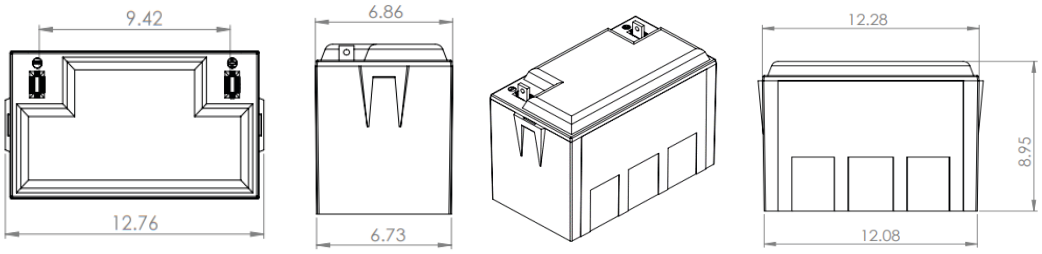
Proprietary battery management system (BMS) ensures user safety and product protection.

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

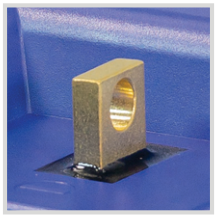
100 Amps Continuous | 200 Amps Surge for 30 Seconds | 1/2 Second Surge for Loads over 200 Amps

*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



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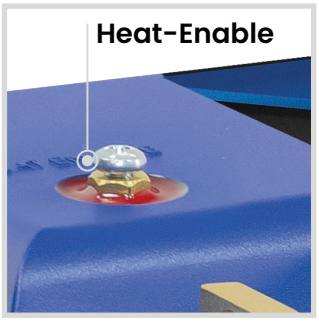
POWERED BY dragonfly® ENERGY

Optional Integrated Heating Technology

INTEGRATED HEATING

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



Dragonfly IntelLigence® Smart Communication Technology

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

DRAGONFLY IntelLigence

- 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

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 for iOS and Android.

Download on the App Store | GET IT ON Google Play

Designed exclusively for Battle Born Smart LiFePO4 Batteries, the app ensures seamless monitoring and control of your power system.

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 Recognized to UL 1642
Battery Pack Certifications	UN38.3 ETL Listed to conform to UL Standard 62133-2 ETL Listed to conform to UL Standard 2054 IP65 - ANSI/IEC 60529-2020, CSA 60529:16 (R2021) CE
Shipping Class	UN3480, Class 9

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	$LiFePO_4$ (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

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

Dragonfly IntelLigence® Specifications

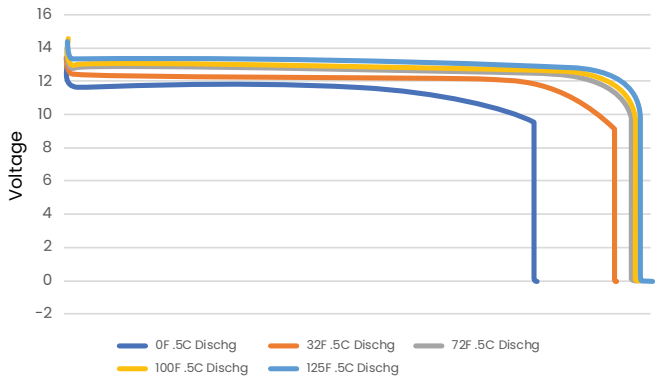
Discharge Rate of Built-in Communication	10mA Future Firmware Expected to Result in ~1-3mA
Bluetooth Range	~15m/50ft
Wireless Mesh Network Range (To Smart Battery)	~10m/32ft
Data Transmission Frequency	5 Seconds

*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.

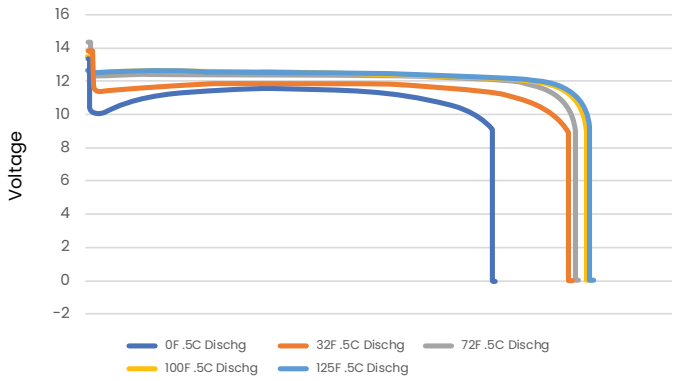
Storing batteries in subzero weather (-15°F or more) has the potential to crack the ABS plastic and more importantly could cause a faster loss of capacity, in some cases drastically more than the typical 2 to 4% per month loss.

Performed Operation Data

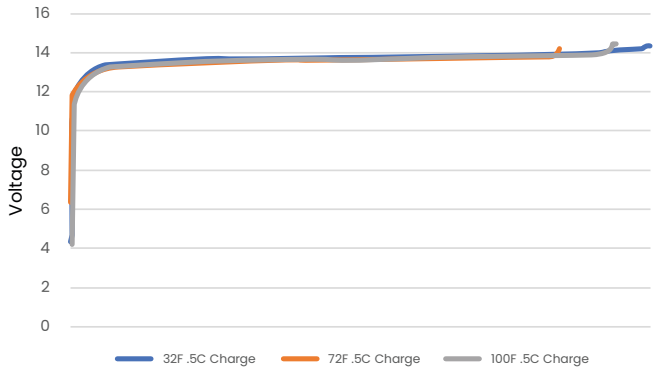
.5C Discharge with Temperature Variations



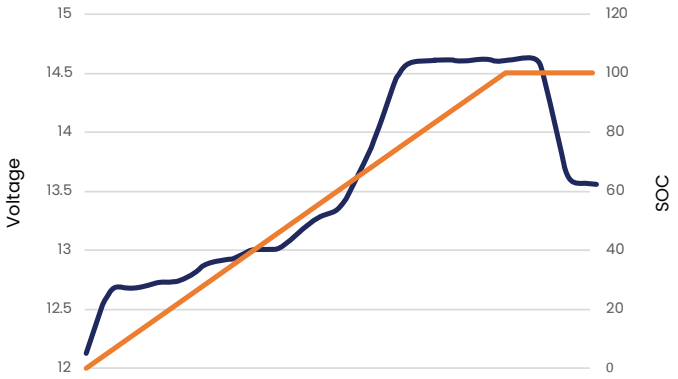
1C Discharge Voltage with Temperature Variations



.5C State of Charge with Temperature Variations

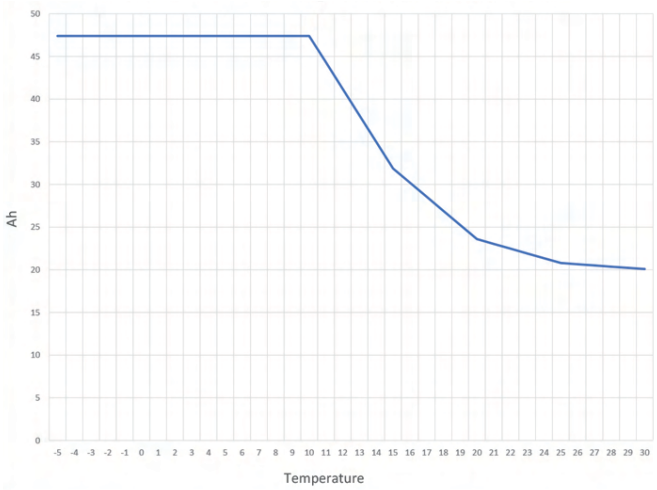


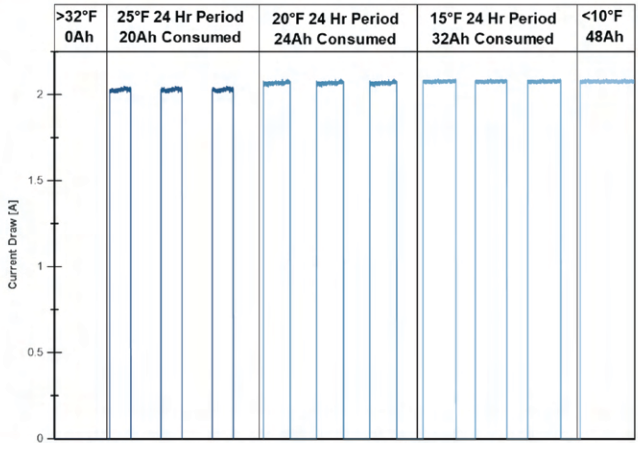
Standard Charge Curve with 3 Stage Charger



Performed Operation Data for Heated Batteries

BB10012iH Integrated Heating Draw Expected in a 24Hr Period





	ON	OFF	Total Cycle Time	Ah One Cycle	Ah Expected (24 Hr Period)
15F	5.01	2.92	7.13	10.53	31.87
20F	4.17	4.70	8.76	8.76	23.72
25F	3.19	7.75	6.71	6.71	20.79