

## **Model BB8D**

270AH 12V LiFePO4 Deep Cycle Battery

Data sheet

| Electrical Specification |                    |  |
|--------------------------|--------------------|--|
| Voltage                  | 12V                |  |
| Capacity                 | 270AH              |  |
| 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                |  |
| Cycles                   | 3K-5K              |  |
| Built-in BMS             | Internal           |  |
| Resistance               | $5~\text{m}\Omega$ |  |
| Usable DoD               | 100%               |  |

| Discharging Specification     |                     |  |
|-------------------------------|---------------------|--|
| Max Discharge Current         | 300A                |  |
| Peak Discharge Current        | 500A for 30 Seconds |  |
| Surge for Loads over 500A     | .5 Seconds          |  |
| Recommended LVD               | 10.5V               |  |
| BMS Discharge Voltage Cut-Off | 10V                 |  |
| Reconnect Voltage             | 10V                 |  |
| Short Circuit Protection      | Yes                 |  |

| Recognized Specification |                 |  |
|--------------------------|-----------------|--|
| Certifications           | Pending         |  |
| Shipping Class           | UN3480, Class 9 |  |

| Drawing Specification |                        |
|-----------------------|------------------------|
| Negative Term         | Postive Terminal 5.0in |
| 8.6in                 | 3.64in                 |

| Charging Specification               |                 |  |
|--------------------------------------|-----------------|--|
| Recommended Charge Current           | .5c             |  |
| Max Charge Current                   | 135A            |  |
| Absorption Voltage                   | 14.2V-14.6V     |  |
| Float Voltage                        | 13.2V-13.8V     |  |
| Equalization Voltage (if applicable) | 14.4V           |  |
|                                      | 100 Minutes     |  |
| Absorption Time                      | per 270AH       |  |
|                                      | battery bank    |  |
| BMS Charge Current Cut-Off           | .5C Recommended |  |
| Recharge/Rebulk Voltage              | 13.3V           |  |
| BMS Cell Balancing Voltage Range     | 14.2V-14.6V     |  |
| High BMS Voltage Protection          | 14.7VDC         |  |
| Temperature Compensation             | No/Disable      |  |

| Mechanical Specification |                    |  |
|--------------------------|--------------------|--|
| Dimensions               | 21.29"L X1 1.59"W  |  |
|                          | X 10.01"H          |  |
| Weight                   | 81.4 lbs.          |  |
| Terminal Type            | .25" Brass         |  |
| Terminal Hole            | 3/8" hole and 3/8" |  |
|                          | or 5/16" hardware  |  |
|                          | is suggested       |  |
| Terminal Torque          | 9-11 Ft-lb.        |  |
| Case Material            | ABS Fire Rated     |  |
| Cell Type - Electrolyte  | LiFeP04            |  |
| Sealed and Water         | Non-Submersible    |  |
| Resistant Case           | Non-Submersible    |  |

| Temperature Specification    |                   |  |
|------------------------------|-------------------|--|
| Discharge Temperature        | -4°F to 135°F     |  |
|                              | (-20°C to 57.2°C) |  |
| Charge Temperature           | 25°F -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            |  |

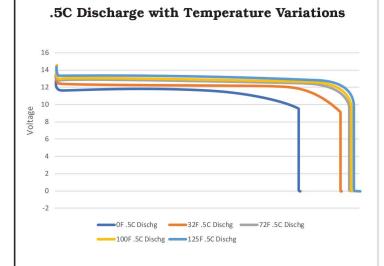




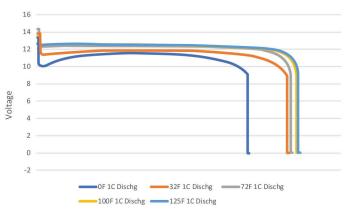
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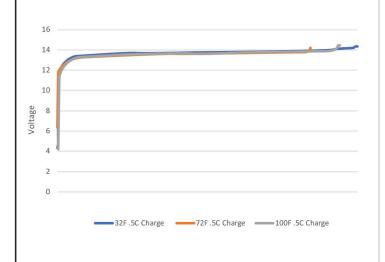
# **Performed Operation Data**



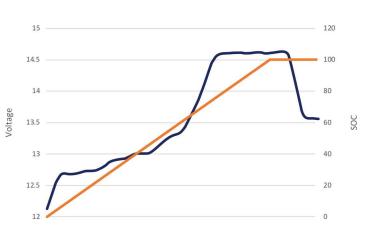
### 1C Discharge Voltage with Temperature Variations



#### .5C State of Charge with Temperature Variations



#### Standard Charge Curve with 3 Stage Charger



\*Note: The storage temperature range is  $-10^{\circ}$ F to  $140^{\circ}$ F ( $-23^{\circ}$ C to  $60^{\circ}$ C). We recommend bringing the Battle Born Batteries to a 100% charge and then disconnecting them completely for storage. After six months in storage, your batteries will remain 75-80% 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 – 4% per month loss.