



# RB48V200

Voltage: 51.2V | Capacity: 200 Ah | Energy: 10.24 kWh

LITHIUM IRON PHOSPHATE BATTERY **LiFePO<sub>4</sub>**

## ELECTRICAL SPECIFICATIONS

|                                       |                  |
|---------------------------------------|------------------|
| Nominal Voltage                       | 51.2 V           |
| Nominal Capacity                      | 200 Ah           |
| Capacity @ 25 A                       | 480 min          |
| Resistance                            | ≤10 mΩ @ 50% SOC |
| Efficiency                            | 99%              |
| Self Discharge                        | <3% per Month    |
| Maximum Batteries Connected in Series | 1 (Single Use)   |

## DISCHARGE SPECIFICATIONS

|                                      |                        |
|--------------------------------------|------------------------|
| Maximum Continuous Discharge Current | 200 A                  |
| Peak Discharge Current               | 250 A (4 s ±1 s)       |
| Discharge Over-Current Protection    | 390 A (5 s)            |
| Recommended Low Voltage Disconnect   | 44.0 V                 |
| Discharge Under-Voltage Protection   | 40.0 V (2.5 ±0.1 vpc)  |
| Reconnect Voltage                    | 40.5 V (2.53 ±0.1 vpc) |
| BMS SOC Disconnect                   | 5%                     |

## TEMPERATURE SPECIFICATIONS

|                                 |                             |
|---------------------------------|-----------------------------|
| Discharge Temperature           | -4 to 131 °F (-20 to 55 °C) |
| Charge Temperature*             | -4 to 131 °F (-20 to 55 °C) |
| Recommended Storage Temperature | 23 to 95 °F (-5 to 35 °C)   |
| BMS High Temperature Cut-Off    | 149 °F (65 °C)              |
| Reconnect Temperature           | 145 °F (63 °C)              |
| BMS Low Temperature Disconnect  | -4 °F (-20 °C)              |
| Reconnect Temperature           | -0.4 °F (-18 °C)            |

\*Refer to charge currents below 32°F (0°C)

## MECHANICAL SPECIFICATIONS

|                        |   |
|------------------------|---|
| Dimensions (L x W x H) | 34.3 x 14.2 x 15.6"<br>872 x 361 x 395 mm |
| Weight                 | 302 lbs (137 kg)                          |
| Terminal Type          | M10 x 1.5                                 |
| Terminal Torque        | 110 - 125 in-lbs (12.2 - 14 N-m)          |
| Case Material          | Steel Case                                |
| Enclosure Protection   | IP65                                      |
| Cell Type - Chemistry  | Cylindrical - LiFePO <sub>4</sub>         |

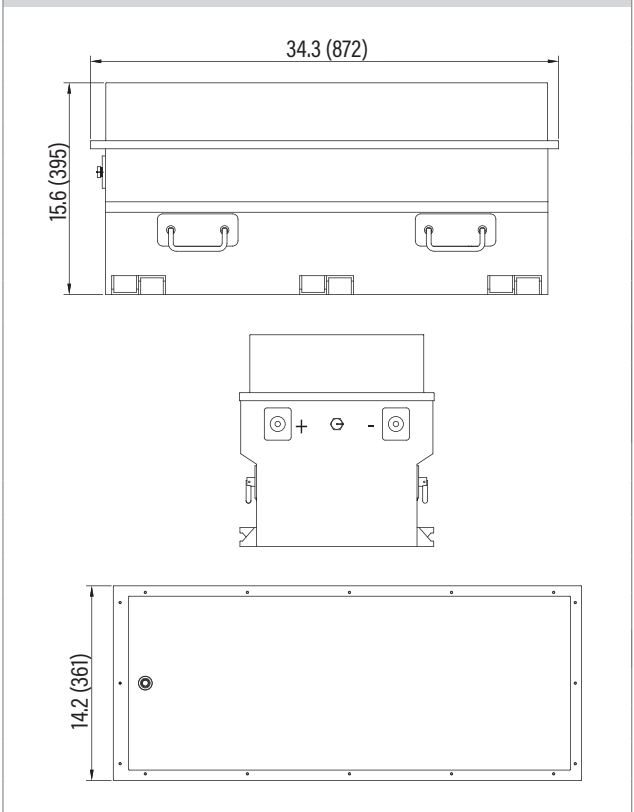
## CHARGE SPECIFICATIONS

|   |                   |
|---|-------------------|
| Recommended Charge Current                    | ≤100 A            |
| Recommended Maximum Continuous Charge Current | 200 A             |
| BMS Charge Current Disconnect                 | 300 A             |
| Charge Current 14 to 32 °F (-10 to 0 °C)      | ≤0.1 C (20 A)     |
| Charge Current -4 to 14 °F (-20 to -10 °C)    | ≤0.05 C (10 A)    |
| Recommended Charge Voltage                    | 56.0 V - 58.4 V   |
| BMS Charge Voltage Disconnect                 | 60.8 V (3.9 vpc)  |
| Reconnect Voltage                             | 60.3 V (3.87 vpc) |

## COMPLIANCE SPECIFICATIONS

|                         |   |
|-------------------------|---|
| Certifications          | UN38.3, UKCA & CE (battery)<br>UL1642 (cells) (File# MH64523)<br>IEC62133 (cells) |
| Shipping Classification | UN 3480, CLASS 9  |

## DIMENSIONAL SPECIFICATIONS





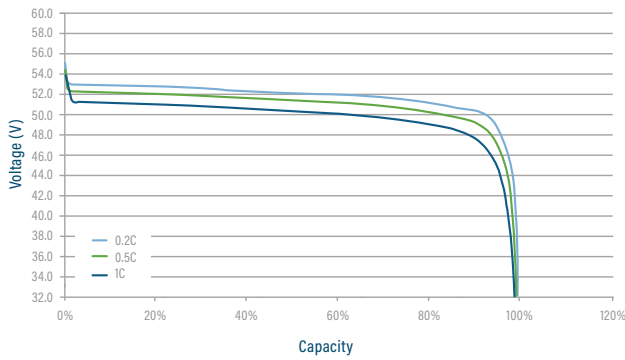
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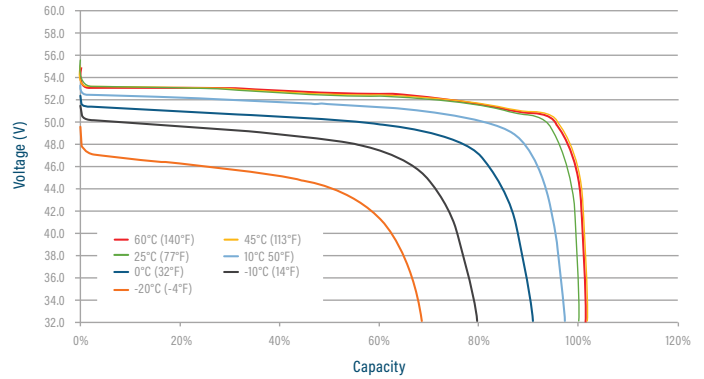
LITHIUM IRON PHOSPHATE BATTERY **LiFePO4**

## TYPICAL LITHIUM IRON PHOSPHATE CHARACTERISTICS\*

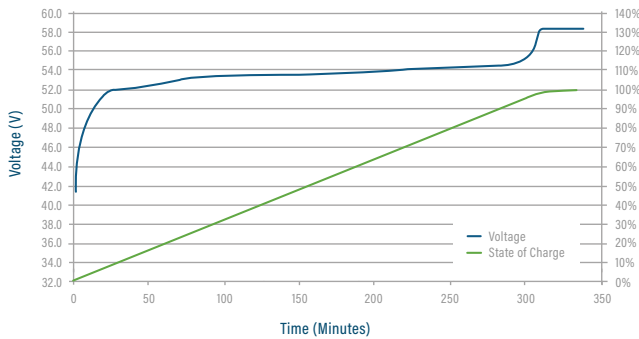
DISCHARGE VOLTAGE CHARACTERISTICS AT VARIOUS RATES  
25°C (77°F)



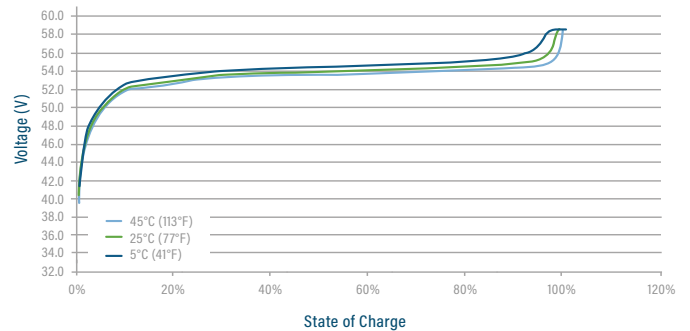
DISCHARGE VOLTAGE CHARACTERISTICS AT VARIOUS TEMPERATURES  
DISCHARGE 1C



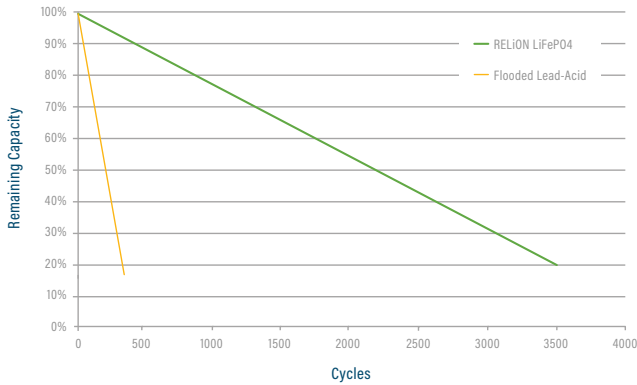
CHARGE VOLTAGE AND STATE OF CHARGE (SOC)  
CHARGE 0.2C @ 25°C (77°F)



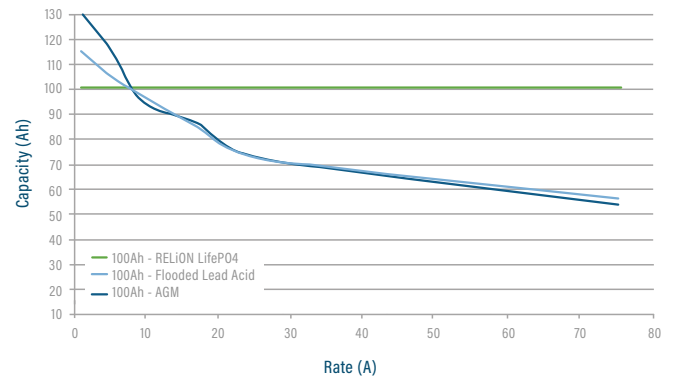
CHARGE VOLTAGE CHARACTERISTICS AT VARIOUS RATES  
CHARGE 0.2C



CYCLE LIFE VS. DEPTH OF DISCHARGE (DOD) AT 80%  
DISCHARGE 0.5C/CHARGE 0.5C @ 25°C (77°F)



CAPACITY OF RELION LiFePO4 vs. LEAD ACID  
at VARIOUS RATES OF DISCHARGE



\*Performance between applications and batteries may vary. All results should be independently verified by customer.

