



# RB12

Voltage: 12.8V | Capacity: 12 Ah | Energy: 154 Wh

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

ELECTRICAL SPECIFICATIONS	
Nominal Voltage	12.8 V
Nominal Capacity	12 Ah
Resistance	≤90 mΩ @ 50% SOC
Efficiency	99%
Self Discharge	<3% per Month
Maximum Batteries Connected in Series	1

DISCHARGE SPECIFICATIONS	
Maximum Continuous Discharge Current	10 A
Peak Discharge Current	20 A (7.5 s ±2.5 s)
Discharge Over-Current Protection	30 A ±5 A (10 ±5 ms)
Recommended Low Voltage Disconnect	11.0 V
Discharge Under-Voltage Protection	8.0 V (2.0 ±0.08 vpc) (100 ±50 ms)
Reconnect Voltage	10.0 V (2.5 ±0.1 vpc)
Short Circuit Protection Response Time	200-500 μs

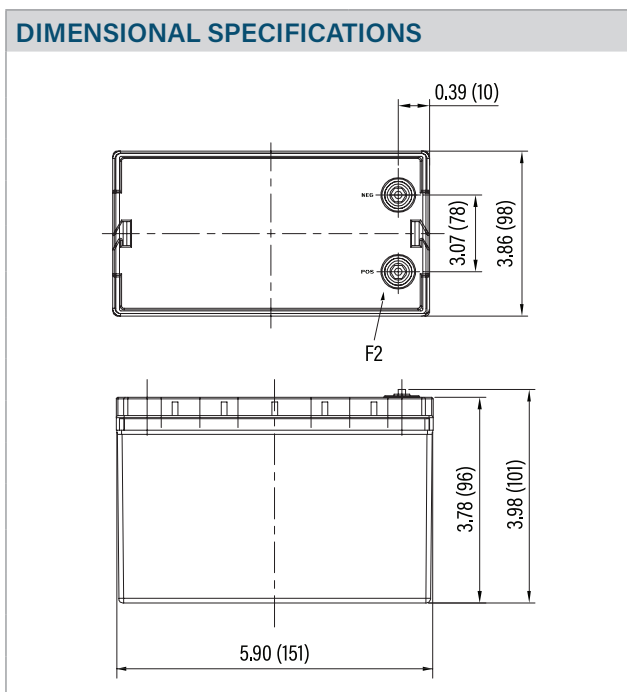
TEMPERATURE SPECIFICATIONS	
Discharge Temperature	-4 to 140 °F (-20 to 60 °C)
Charge Temperature*	-4 to 113 °F (-20 to 45 °C)
Recommended Storage Temperature	23 to 95 °F (-5 to 35°C)

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

MECHANICAL SPECIFICATIONS	
Dimensions (L x W x H)	5.9 x 3.9 x 4.0" 151 x 98 x 101 mm
Weight	3.6 lbs (1.65 kg)
Terminal Type	F2 terminal
Case Material	ABS
Enclosure Protection	IP66
Cell Type - Chemistry	Cylindrical - LiFePO <sub>4</sub>

CHARGE SPECIFICATIONS	
Recommended Charge Current	0.5 A - 5 A
Maximum Continuous Charge Current	10 A
Charge Current 14 to 32 °F (-10 to 0 °C)	≤0.1 C (10 A)
Charge Current -4 to 14 °F (-20 to -10 °C)	≤0.05 C (5 A)
Recommended Charge Voltage	14.2 V - 14.6 V
BMS Charge Voltage Cut-Off	15.6 V (3.9 ±0.025 vpc) (1.0 ±0.5 s)
Reconnect Voltage	15.2 V (3.8 ±0.05 vpc)

COMPLIANCE SPECIFICATIONS	
Certifications	UN38.3, UKCA & CE (battery) UL1642 (cells) (File# MH64523) IEC62133 (cells)
Shipping Classification	UN 3480, CLASS 9





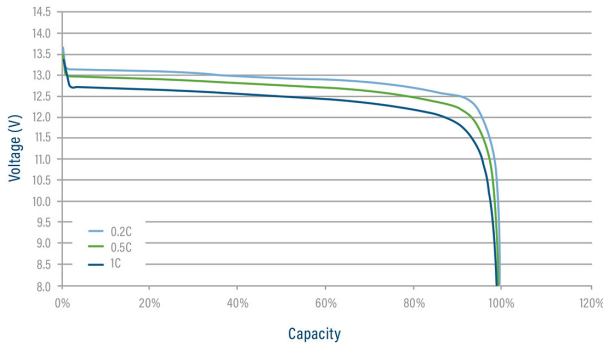
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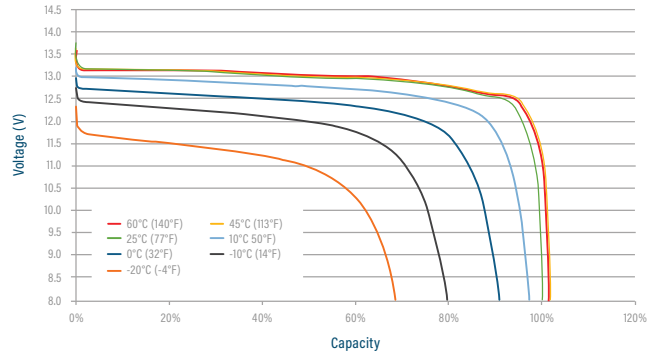
LITHIUM IRON PHOSPHATE BATTERY **LiFePO4**

## TYPICAL LITHIUM IRON PHOSPHATE CHARACTERISTICS\*

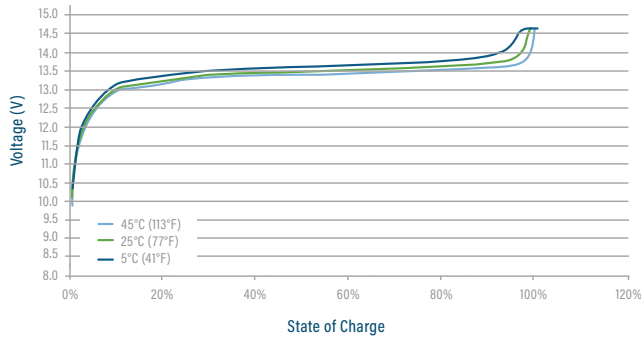
DISCHARGE VOLTAGE CHARACTERISTICS AT VARIOUS RATES  
25°C (77°F)



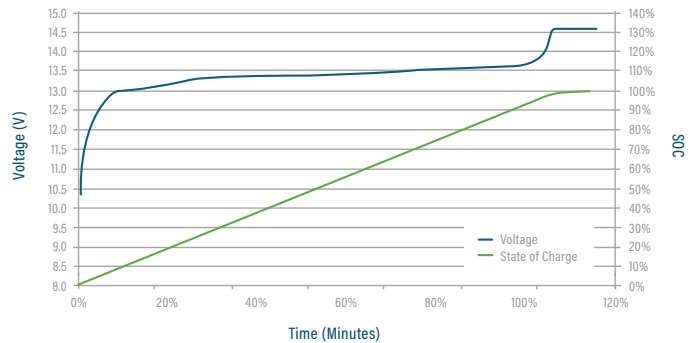
DISCHARGE VOLTAGE CHARACTERISTICS AT VARIOUS TEMPERATURES  
DISCHARGE 1C



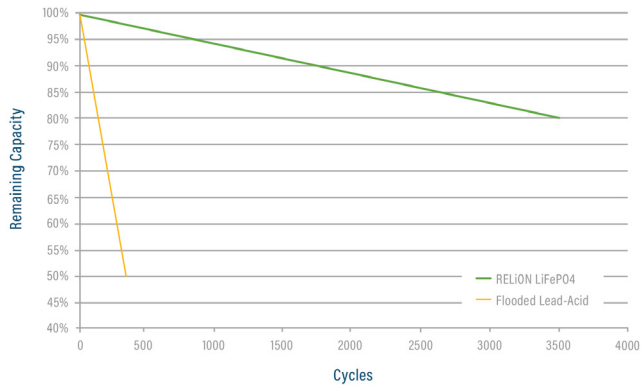
CHARGE VOLTAGE CHARACTERISTICS AT VARIOUS RATES  
CHARGE 0.2C



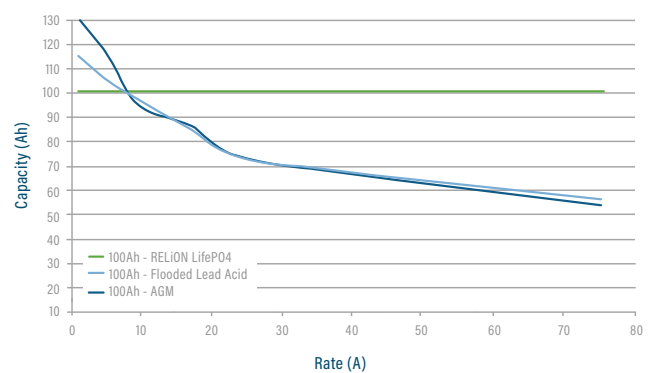
CHARGE VOLTAGE AND STATE OF CHARGE (SOC)  
CHARGE 0.2C @ 25°C (77°F)



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.

