



RB24V52

IEEE/UL Battery
Sizing by
MooreU
610-952-6067
www.mooreu.com

Voltage: 25.6V | Capacity: 52 Ah | Energy: 1331 Wh | Group: 31

LITHIUM IRON PHOSPHATE BATTERY **LiFePO₄**

ELECTRICAL SPECIFICATIONS

Nominal Voltage	25.6 V
Nominal Capacity	52 Ah
Capacity @ 25 A	125 min
Resistance	≤60 mΩ @ 50% SOC
Efficiency	99%
Self Discharge	<3% per Month
Maximum Batteries Connected in Series	1 (Single Use)

DISCHARGE SPECIFICATIONS

Maximum Continuous Discharge Current	50 A
Peak Discharge Current	100 A (7.5 s ±2.5 s)
Discharge Over-Current Protection	215 A ±15 A (10 ±5 ms)
Recommended Low Voltage Disconnect	22.0 V
Discharge Under-Voltage Protection	16.0 V (2.0 ±0.08 vpc) (20 ±6 ms)
Reconnect Voltage	20.0 V (2.5 ±0.05 vpc)
Short Circuit Protection Response Time	200-600 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)
BMS High Temperature Cut-Off	176 °F (80 °C)
Reconnect Temperature	122 °F (50 °C)

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

MECHANICAL SPECIFICATIONS

Dimensions (L x W x H)	13.0 x 6.8 x 8.4" 329 x 172 x 214 mm
Weight	29.1 lbs (13.2 kg)
Terminal Type	M8 x 1.25 x 12mm
Terminal Torque	80 - 100 in-lbs (9 - 11 N-m)
Case Material	ABS & PC blend (UL94-V0 flame rating)
Enclosure Protection (Waterproof Rating)	IP67
Cell Type - Chemistry	Cylindrical - LiFePO ₄

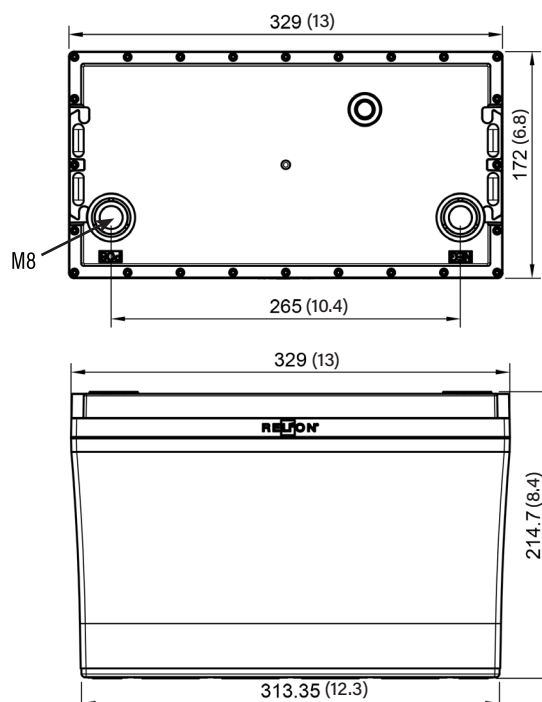
CHARGE SPECIFICATIONS

Recommended Charge Current	2.5 A - 25 A
Maximum Continuous Charge Current	50 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	28.4 V - 29.2 V
BMS Charge Voltage Cut-Off	31.2 V (3.9 ±0.025 vpc) (1.1 ±0.4 s)
Reconnect Voltage	30.4 V (3.8 ±0.05 vpc)
Balancing Voltage	28.8 V (3.6 vpc)

COMPLIANCE SPECIFICATIONS

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

DIMENSIONAL SPECIFICATIONS





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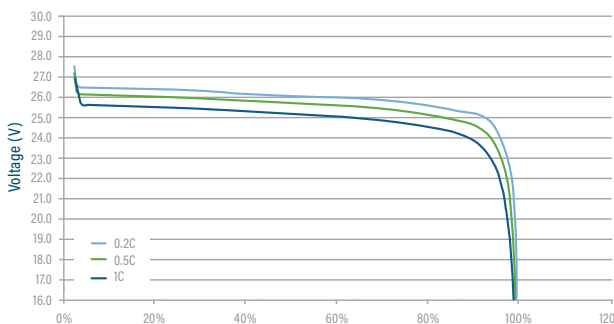
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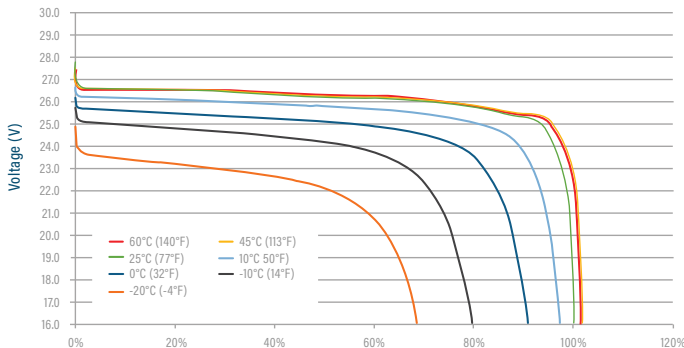
LITHIUM IRON PHOSPHATE BATTERY **LiFePO4**

TYPICAL LITHIUM IRON PHOSPHATE CHARACTERISTICS*

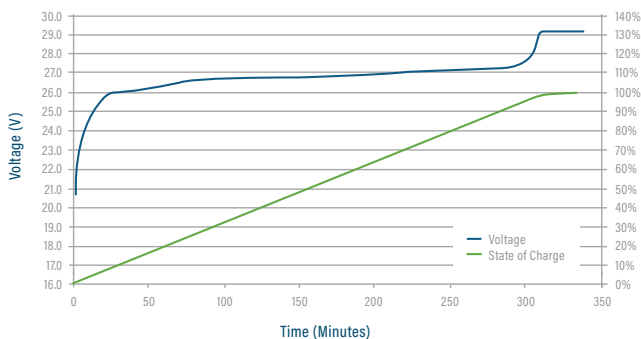
DISCHARGE VOLTAGE CHARACTERISTICS AT VARIOUS RATES
25°C (77°F)



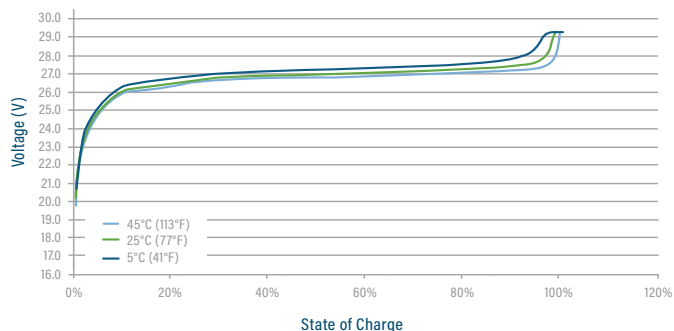
DISCHARGE VOLTAGE CHARACTERISTICS AT VARIOUS TEMPERATURES
DISCHARGE 1C



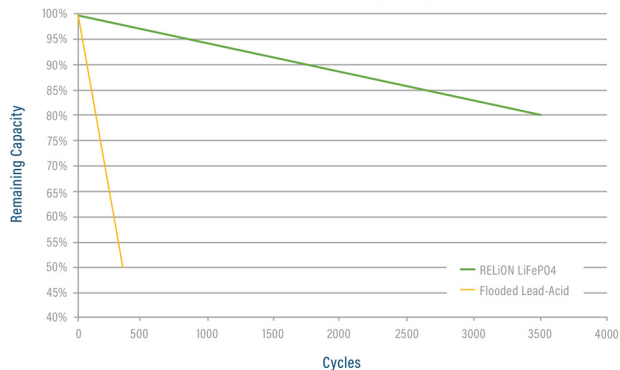
CHARGE VOLTAGE AND STATE OF CHARGE (SOC)
CHARGE 0.2C @ 25°C (77°F)



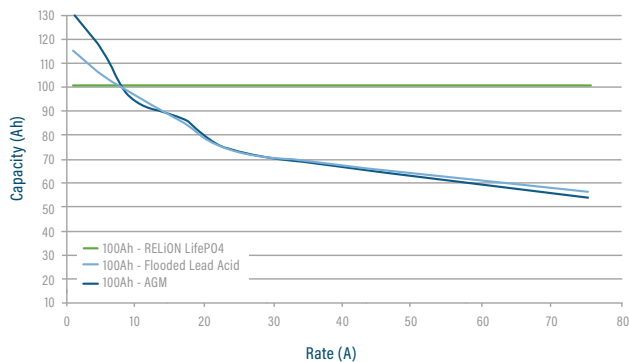
CHARGE VOLTAGE CHARACTERISTICS AT VARIOUS RATES
CHARGE 0.2C



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



CAPACITY OF RELI³ON LiFePO4 vs. LEAD ACID
at VARIOUS RATES OF DISCHARGE



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

