



RB100-HP



Voltage: 12.8V | Capacity: 100 Ah | Energy: 1280 Wh | Group: 31

LITHIUM IRON PHOSPHATE BATTERY **LiFePO4**

| ELECTRICAL SPECIFICATIONS | |
|---------------------------------------|-------------------------|
| Nominal Voltage | 12.8 V |
| Nominal Capacity | 100 Ah |
| Reserve Capacity @ 25 A | 240 min |
| Resistance | ≤30 mΩ @ 50% SOC |
| Efficiency | 99% |
| Self Discharge | <3% per Month |
| Maximum Batteries Connected in Series | 1 (Single Battery Only) |

| DISCHARGE SPECIFICATIONS | |
|--|--|
| Maximum Continuous Discharge Current | 100 A |
| Maximum Discharge Current | 800 Amps |
| Lithium Marine Cranking Amp (MCA) | Up to 800 Amps for 8 seconds @ 20°F (-6.7°C) |
| Discharge Over-Current Protection | 1000 A ±100 A (2.2 ±1 ms) |
| Recommended Low Voltage Disconnect | 11.0 V |
| Discharge Under-Voltage Protection | 9.2 V (2.3 ±0.08 vpc) (4.2 ±0.5 s) |
| Reconnect Voltage | 10.0 V (2.5 ±0.1 vpc) |
| Short Circuit Protection Response Time | 200-600 μs |

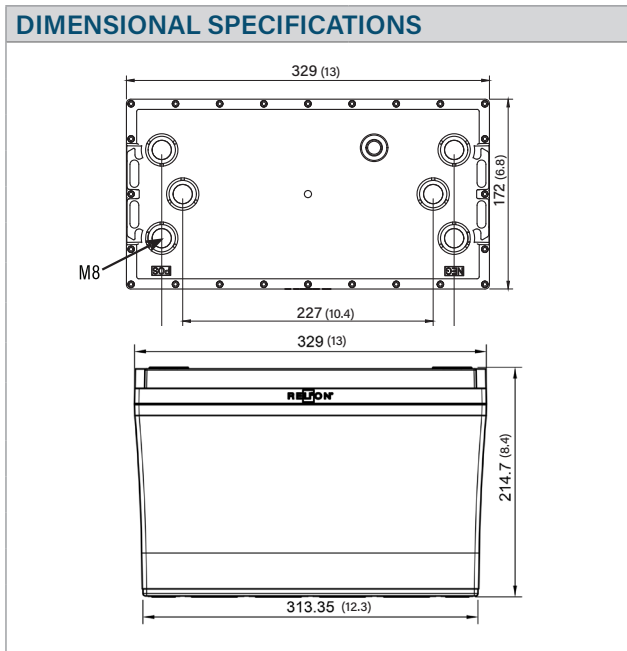
| TEMPERATURE SPECIFICATIONS | |
|---------------------------------|---------------------------|
| Discharge Temperature | -4 to 140°F (-20 to 60°C) |
| Charge Temperature* | -4 to 130°F (-20 to 55°C) |
| Recommended Storage Temperature | 23 to 95 °F (-5 to 35°C) |
| BMS High Temperature Cut-Off | 176 °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 x 6.8 x 8.4" 329 x 172 x 214.7 mm |
| Weight | 29.8 lbs (13.5 kg) |
| Terminal Type | M8 x 1.25 x 12mm |
| Terminal Torque | 80 - 100 in-lbs (9 - 11 N-m) |
| Case Material | ABS |
| Enclosure Protection | IP67 |
| Cell Type - Chemistry | Cylindrical - LiFePO ₄ |

| CHARGE SPECIFICATIONS | |
|--|-------------------------------------|
| Maximum Continuous Charge Current | 5 A - 50 A |
| Maximum Battery Charger Output | 100 Amps |
| Peak Charge Acceptance | 165 Amps for up to 1 minute |
| Maximum Engine Alternator Size | 150 Amps |
| Maximum Charge Current 14 to 32°F (-10 to 0°C) | <0.1 C (10 Amps) |
| Maximum Charge Current -4 to 14°F (-20 to -10°C) | <0.05 C (5 Amps) |
| Recommended Charge Voltage | 14.4 - 14.8 V |
| BMS Charge Voltage Cut-Off | 15.4 V (3.85 ±0.025 vpc) (1 ±0.2 s) |
| Reconnect Voltage | 14.6 V (3.65 ±0.05 vpc) |
| Balancing Voltage | 14.4 V (3.6 ±0.025 vpc) |

| COMPLIANCE SPECIFICATIONS | |
|---------------------------|--|
| Certifications | UN 38.3, CE & UKCA (battery) UL1642 (cells) (File# MH62098) IEC62133 (cells) |
| Shipping Classification | UN 3480, CLASS 9 |





RB100-HP

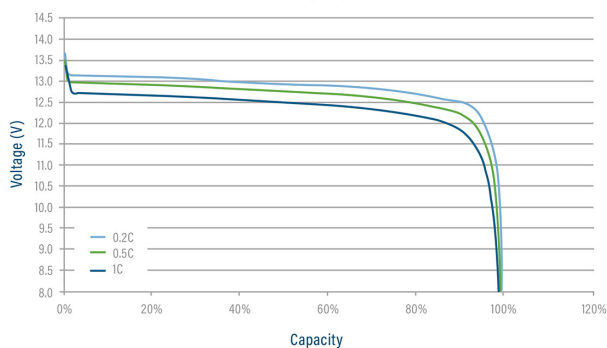
IEEE/UL Battery
Sizing by
MooreU
610-952-6067
www.mooreu.com

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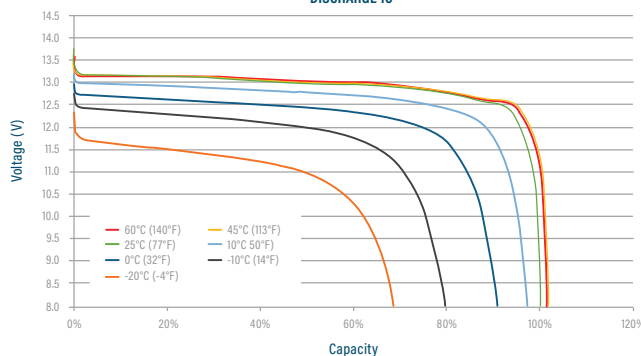
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PERFORMANCE CHARACTERISTICS

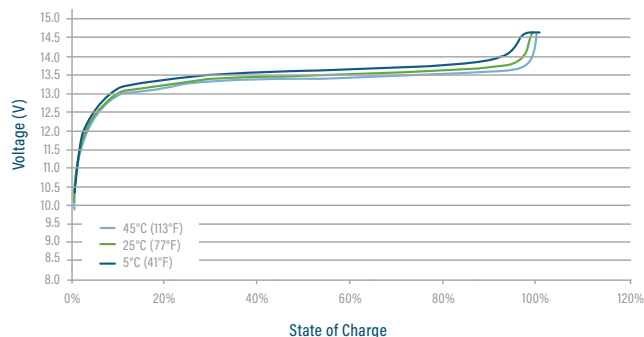
DISCHARGE VOLTAGE CHARACTERISTICS AT VARIOUS RATES
25°C (77°F)



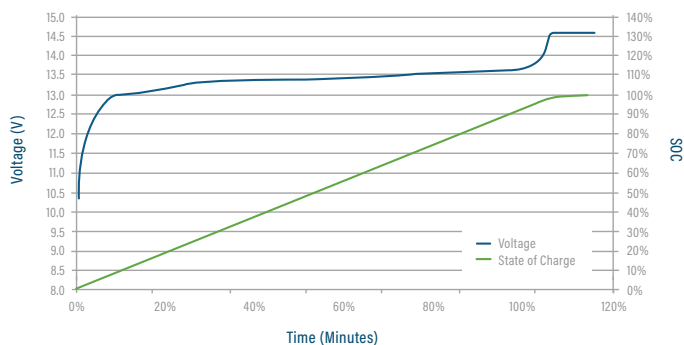
DISCHARGE VOLTAGE CHARACTERISTICS AT VARIOUS TEMPERATURES
DISCHARGE 1C



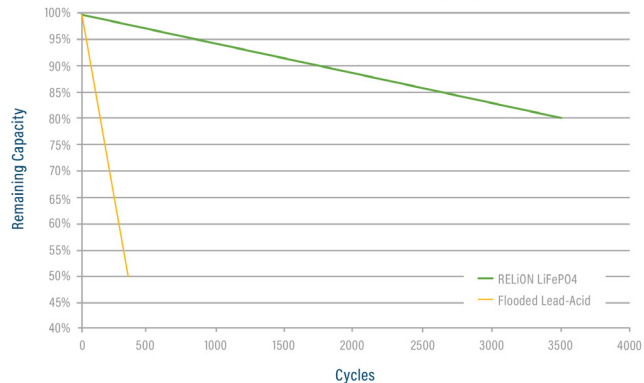
CHARGE VOLTAGE CHARACTERISTICS AT VARIOUS RATES
CHARGE 0.2C



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

