



ENGINEERED
IN THE USA



RB300

Voltage: 12.8V | Capacity: 300 Ah | Energy: 3840 Wh | Group: 8D

LITHIUM IRON PHOSPHATE BATTERY **LiFePO₄**

ELECTRICAL SPECIFICATIONS

| | |
|---------------------------|------------------|
| Nominal Voltage | 12.8 V |
| Nominal Capacity | 300 Ah |
| Capacity @ 25A | 720 min |
| Resistance | ≤30 mΩ @ 50% SOC |
| Efficiency | 99% |
| Self Discharge | <3% per Month |
| Maximum Modules in Series | 6 |

DISCHARGE SPECIFICATIONS

| | |
|--------------------------------------|----------------------------------|
| Maximum Continuous Discharge Current | 100 A |
| Peak Discharge Current | 200 A (7.5 s ±2.5 s) |
| BMS Discharge Current Cut-Off | 280 A ±50 A (9 ±4 ms) |
| Recommended Low Voltage Disconnect | 11 V |
| BMS Discharge Voltage Cut-Off | 8 V (2.0 ±0.08 vpc) (140 ±60 ms) |
| Reconnect Voltage | 9.2 V (2.3 ±0.1 vpc) |
| Short Circuit Protection | 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) |
| 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) | 20.6 x 10.5 x 8.7" 522 x 267 x 220 mm |
| Weight | 75.8 lbs (34.36 kg) |
| Terminal Type | M8 x 1.25 x 2mm |
| Terminal Torque | 80 - 100 in-lbs (9 - 11 N-m) |
| Case Material | ABS |
| Enclosure Protection | IP66 |
| Cell Type - Chemistry | Cylindrical - LiFePO ₄ |

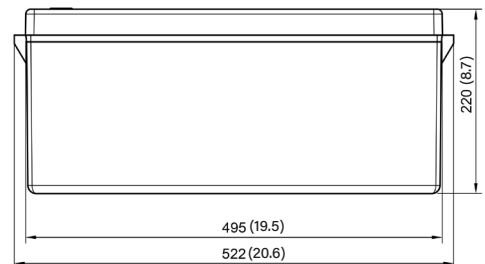
CHARGE SPECIFICATIONS

| | |
|--|--------------------------------------|
| Recommended Charge Current | 15 A - 50 A |
| Maximum Charge Current | 100 A |
| Charge Current 14 to 32 °F (-10 to 0 °C) | ≤0.1 C |
| Charge Current -4 to 14 °F (-20 to -10 °C) | ≤0.05 C |
| Recommended Charge Voltage | 14.2 V - 14.6 V |
| BMS Charge Voltage Cut-Off | 15.6 V (3.9 ±0.025 vpc) (1.1 ±0.4 s) |
| Reconnect Voltage | 15.2 V (3.8 ±0.05 vpc) |
| Balancing Voltage | 14.4 V (3.6 ±0.025 vpc) |

COMPLIANCE SPECIFICATIONS

| | |
|-------------------------|--|
| Certifications | UN 38.3 & CE (battery) UL1642 (cells) (File# MH64523) IEC62133 (cells) |
| Shipping Classification | UN 3480, CLASS 9 |

DIMENSIONAL SPECIFICATIONS





ENGINEERED
IN THE USA



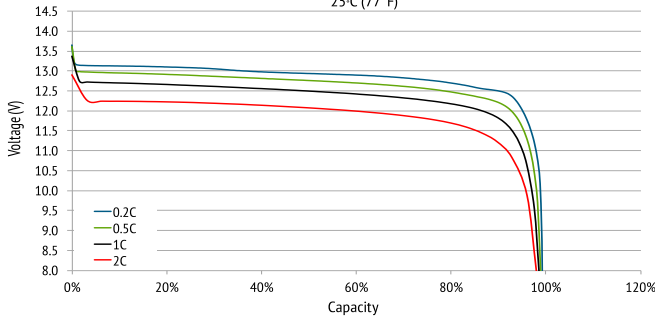
RB300

Voltage: 12.8V | Capacity: 300 Ah | Energy: 3840 Wh | Group: 8D

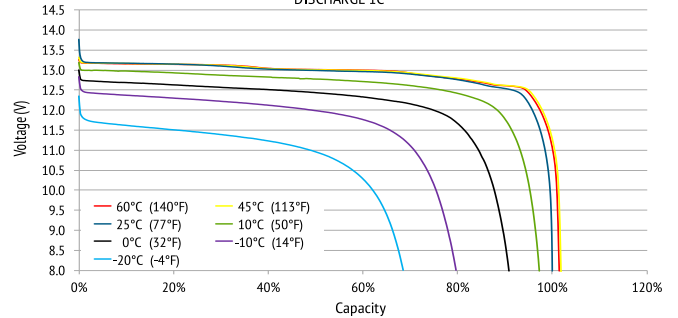
LITHIUM IRON PHOSPHATE BATTERY **LiFePO4**

PERFORMANCE CHARACTERISTICS

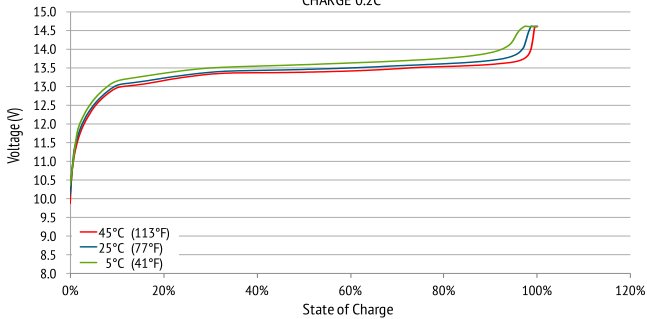
DISCHARGE VOLTAGE CHARACTERISTICS at VARIOUS RATES
25°C (77°F)



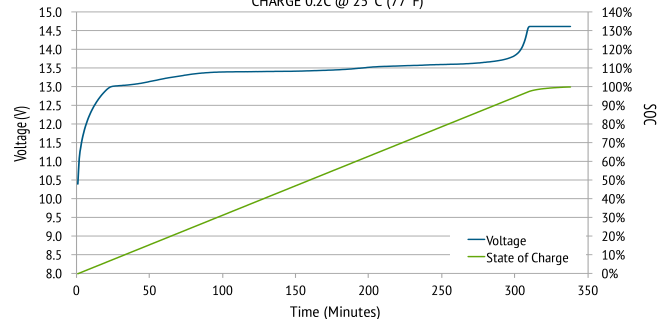
DISCHARGE VOLTAGE CHARACTERISTICS at VARIOUS TEMPERATURES
DISCHARGE 1C



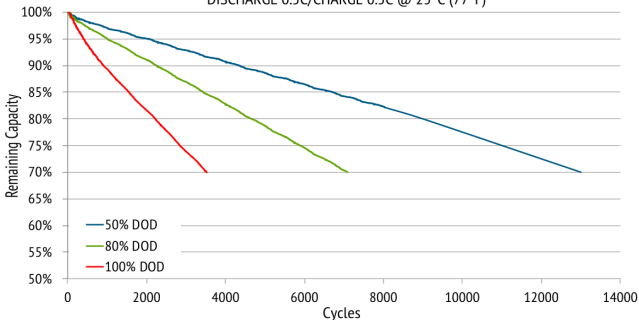
CHARGE VOLTAGE CHARACTERISTICS at VARIOUS TEMPERATURES
CHARGE 0.2C



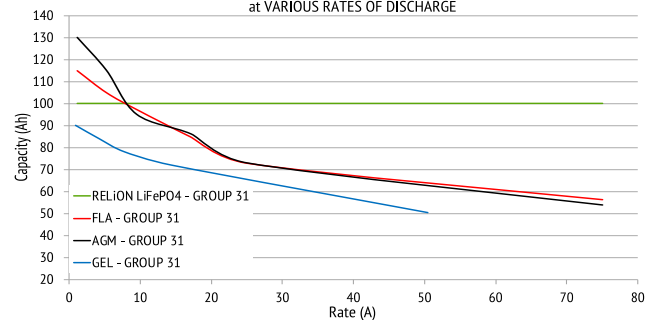
CHARGE VOLTAGE and STATE OF CHARGE (SOC)
CHARGE 0.2C @ 25°C (77°F)



CYCLE LIFE vs. DEPTH OF DISCHARGE (DOD)
DISCHARGE 0.5C/CHARGE 0.5C @ 25°C (77°F)



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



reliombattery.com

+1.803.547.7288 • TOLL FREE: (855) 931-2466 | 1433 Dave Lyle Blvd • Rock Hill, SC 29730

UN38.3

