LITHIUM IRON PHOSPHATE BATTERY

ELECTRICAL SPECIFICATIONS
Nominal Voltage 12.8 V
Nominal Capacity 100 Ah
Capacity @ 25A 240 min
Energy 1280 Wh
Resistance ≤30 mΩ @ 50% SOC
Efficiency 99%
Self Discharge <3% per Month
Maximum Modules in Series 1 (Single Use)

MECHANICAL SPECIFICATIONS
Dimensions (L x W x H) 13.2 x 6.9 x 7.5” 335 x 174 x 191 mm
Weight 30.2 lbs (13.7 kg)
Terminal Type M8
Terminal Torque 80 - 100 in-lbs (9 - 11 N-m)
Case Material ABS
Enclosure Protection IP56
Cell Type - Chemistry Cylindrical - LiFePO₄

DISCHARGE SPECIFICATIONS
Maximum Continuous Discharge Current 100 A
Peak Discharge Current 800 A (2 s)
BMS Discharge Current Cut-Off 1000 A ±100 A (2.2 ±1 ms)
Recommended Low Voltage Disconnect 11 V
BMS Discharge Voltage Cut-Off 9.2 V (2.3 ±0.08 vpc) (4.2 ±0.5 s)
Reconnect Voltage 10 V (2.5 ±0.1 vpc)
Short Circuit Protection 200-600 µs

CHARGE SPECIFICATIONS
Recommended Charge Current 5 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 15.4 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)

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)

COMPLIANCE SPECIFICATIONS
Certifications CE (battery)
UL1642 & IEC62133 (cells)
Shipping Classification UN 3480, CLASS 9

DIMENSIONAL SPECIFICATIONS
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 0.1C/CHARGE 0.3C @ 23°C (77°F)

- CAPACITY of RELION LIFEPO4 vs. LEAD ACID
  at VARIOUS RATES OF DISCHARGE