LITHIUM IRON PHOSPHATE BATTERY

ELECTRICAL SPECIFICATIONS

Nominal Voltage	12.8 V
Nominal Capacity	60 Ah
Capacity @ 25A	144 min
Energy	768 Wh
Resistance	≤20 mΩ @ 50% SOC
Efficiency	99%
Self Discharge	<3% per Month
Maximum Modules in Series	4

DISCHARGE SPECIFICATIONS

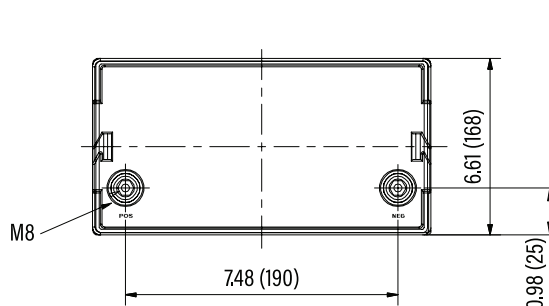|	
Maximum Continuous Discharge Current	100 A
Peak Discharge Current	200 A (7.5 s ±2.5 s)
BMS Discharge Current Cut-Off	550 A ±50 A (9 ±5 ms)
Recommended Low Voltage Disconnect	11 V
BMS Discharge Voltage Cut-Off	8 V (2.0 ±0.08 vpc) (144 ±30 ms)
Reconnect Voltage	8.64 V (2.16 ±0.24 vpc)
Short Circuit Protection	200-600 µs

TEMPERATURE SPECIFICATIONS

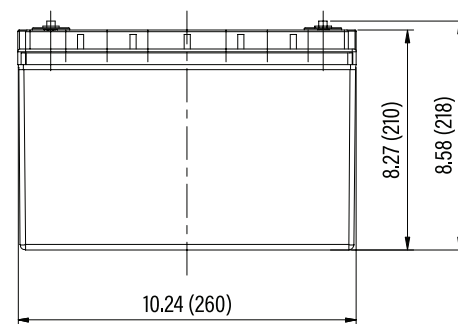|	
Discharge Temperature	-4 to 140 °F (-20 to 60 °C)
Charge Temperature	-4 to 113 °F (-20 to 45 °C)
Storage Temperature	23 to 95 °F (-5 to 35 °C)
BMS High Temperature Cut-Off	167 °F (75 °C)
Reconnect Temperature	122 °F (50 °C)

MECHANICAL SPECIFICATIONS

Dimensions (L x W x H)	10.2 x 6.6 x 8.6" 260 x 168 x 218 mm
Weight	20 lbs (8.9 kg)
Terminal Type	M8
Terminal Torque	80 - 100 in-lbs (9 - 11 N-m)
Case Material	ABS
Enclosure Protection	IP56
Cell Type - Chemistry	Cylindrical - $LiFePO_4$

CHARGE SPECIFICATIONS

Recommended Charge Current	3 A - 30 A
Maximum Charge Current	60 A
Charge Current (0 to -10 °C)	≤0.1 C
Charge Current (-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) (1.2 ±0.3 s)
Reconnect Voltage	15.2 V (3.8 ±0.05 vpc)
Balancing Voltage	14.4 V (3.6 ±0.025 vpc)

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)

- 0.2C
- 0.5C
- 1C
- 2C

DISCHARGE VOLTAGE CHARACTERISTICS at VARIOUS TEMPERATURES DISCHARGE 1C

- 60°C (140°F)
- 45°C (113°F)
- 25°C (77°F)
- 10°C (50°F)
- 0°C (32°F)
- –10°C (14°F)
- –20°C (-4°F)

CHARGE VOLTAGE CHARACTERISTICS at VARIOUS TEMPERATURES CHARGE 0.2C

- 45°C (113°F)
- 25°C (77°F)
- 5°C (41°F)

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

- Voltage
- State of Charge

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

- 50% DOD
- 80% DOD
- 100% DOD

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

- RELiON LiFePO4 - GROUP 31
- FLA - GROUP 31
- AGM - GROUP 31
- GEL - GROUP 31

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