



## LITHIUM IRON PHOSPHATE BATTERY

### ELECTRICAL SPECIFICATIONS

Nominal Voltage	12.8 V
Nominal Capacity	20 Ah
Capacity @ 25A	48 min
Energy	256 Wh
Resistance	≤60 mΩ @ 50% SOC
Efficiency	99%
Self Discharge	<3% per Month
Maximum Modules in Series	3

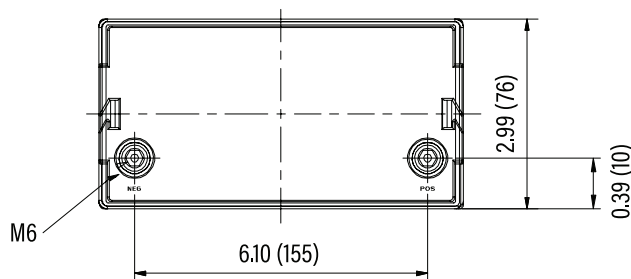
### DISCHARGE SPECIFICATIONS

Maximum Continuous Discharge Current	50 A
Peak Discharge Current	90 A (4 s ±1 s)
BMS Discharge Current Cut-Off	140 A ±20 A (12 ±5 ms)
Recommended Low Voltage Disconnect	11 V
BMS Discharge Voltage Cut-Off	8 V (2.0 ±0.08 vpc) (20 ±5 ms)
Reconnect Voltage	9 V ±1.32 V (2.25 ±0.33 vpc)
Short Circuit Protection	200-600 μs

### TEMPERATURE SPECIFICATIONS

Discharge Temperature	-4 to 140 °F (-20 to 60 °C)
Charge Temperature	32 to 113 °F (0 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)

### DIMENSIONAL SPECIFICATIONS



### MECHANICAL SPECIFICATIONS

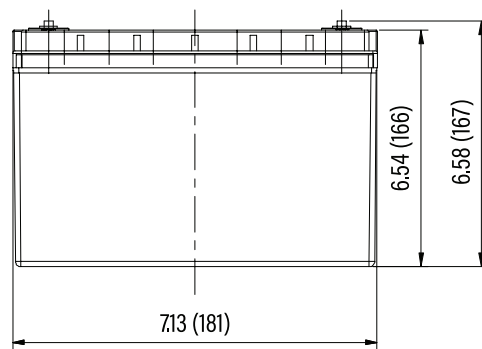
Dimensions (L x W x H)	7.1 x 3.0 x 6.6"
	181 x 76 x 166.5 mm
Weight	6.1 lbs (2.75 kg)
Terminal Type	Flag Terminal
Terminal Torque	35 - 44 in-lbs (4 - 5 N-m)
Case Material	ABS
Enclosure Protection	IP56
Cell Type - Chemistry	Cylindrical - LiFePO <sub>4</sub>

### CHARGE SPECIFICATIONS

Recommended Charge Current	10 A
Maximum Charge Current	50 A
Recommended Charge Voltage	14.2 V - 14.6 V
BMS Charge Voltage Cut-Off	15.6 V (3.9 ±0.025 vpc) (1.0 ±0.5 s)
Reconnect Voltage	15.2 V (3.8 ±0.050 vpc)
Balancing Voltage	14.4 V (3.6 ±0.025 vpc)

### COMPLIANCE SPECIFICATIONS

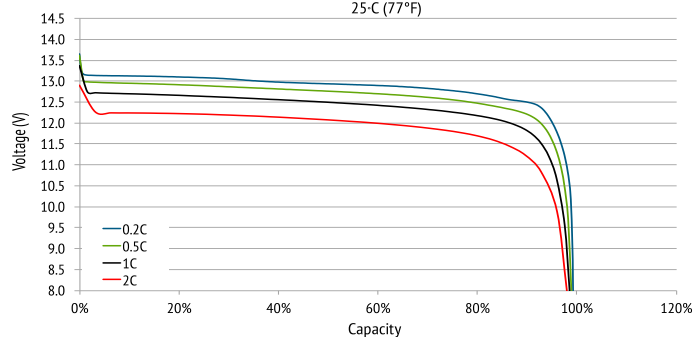
Certifications	CE (battery) UN38.3 (battery) UL1642 & IEC62133 (cells)
Shipping Classification	UN 3480, CLASS 9



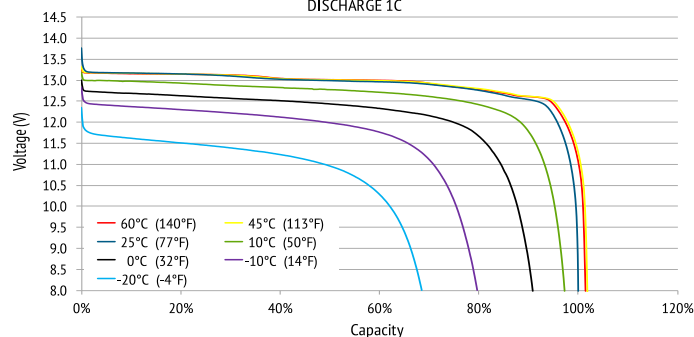


### PERFORMANCE CHARACTERISTICS

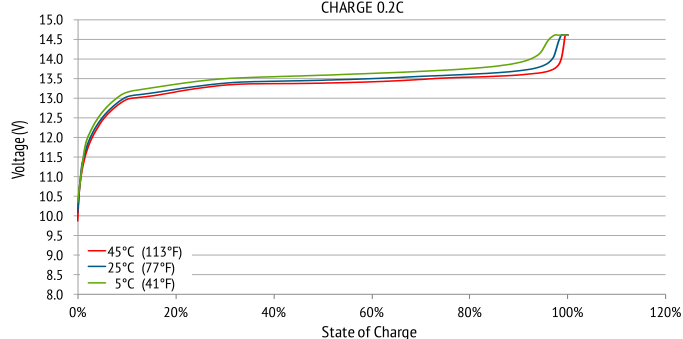
DISCHARGE VOLTAGE CHARACTERISTICS at VARIOUS RATES  
25°C (77°F)



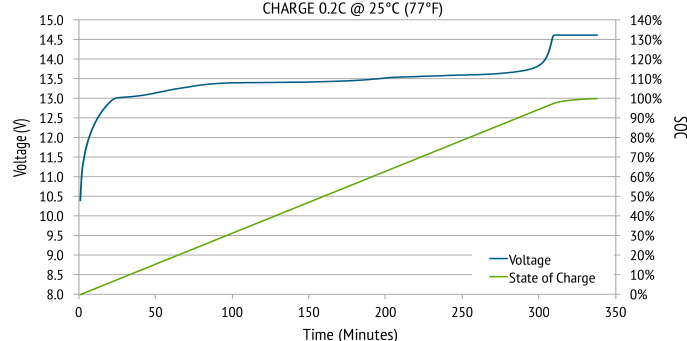
DISCHARGE VOLTAGE CHARACTERISTICS at VARIOUS TEMPERATURES  
DISCHARGE 1C



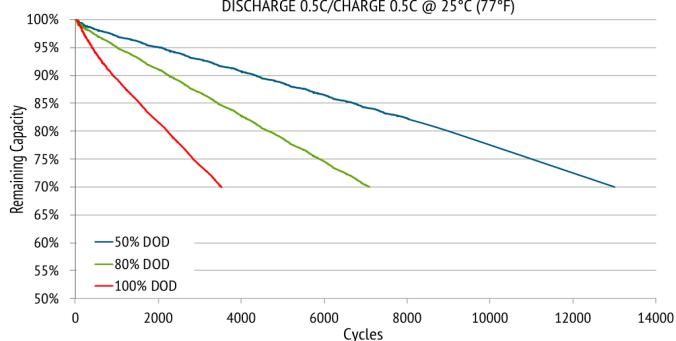
CHARGE VOLTAGE CHARACTERISTICS at VARIOUS TEMPERATURES  
CHARGE 0.2C



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

