

Technical Specifications

LITHIUM IRON PHOSPHATE BATTERY

12V 100Ah LiFePO₄

OPERATING CONDITIONS	
Nominal Voltage	12.8 V
Nominal Capacity	100 Ah
Total Energy	1.28 kWh
Impedance	7 mΩ
Self Discharge	~3% per month
Cycle Life at 100% DoD	2,000 cycles
Series connection	4
Parallel Connection	10

DISCHARGE	
Standard Continuous discharge	50 A (20+ min)
Maximum Continuous Discharge Current	100 A (10 min)
Peak discharge Current	140 A (1 mi)
PCM discharge Current Cut-off	160 A (3 seconds)
Max Solar Recommended Low Voltage Disconnect	10.5 V
Short Circuit Protection	200-500μs

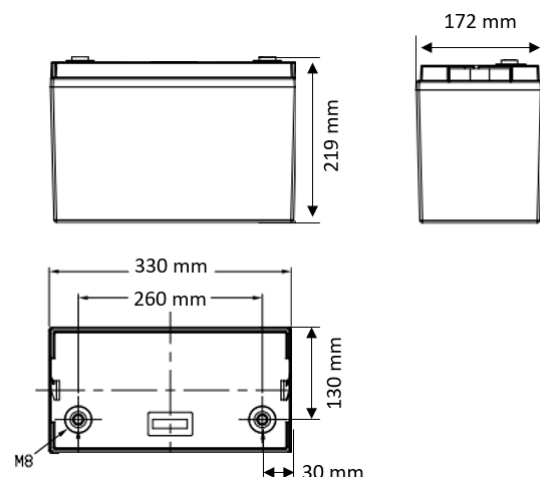
CHARGE	
Standard Charge Constant Voltage	13.6 V
Recommended Charge Current	25 A
Peak Charge Current	100 A
PCM Charge Current Cut-Off	120 A
Balancing Voltage/Fully Charged Voltage	14.4 V

TEMPERATURE	
Storage Temperature	-20 to 60°C
Discharge Temperature Range	-10 to 60°C
Charge Temperature Range	0 to 45°C

MECHANICAL	
Chemistry	Cylindrical – LiFePO ₄
Case Dimensions	L330xW172xH219 (mm)
Weight	15.5 kg
Terminal Type	M8 female thread copper
Terminal Torque	2.5 Nm
Casing Type	Hard case (ABS)
Casing	IP65 compliant

BATTERY MANAGEMENT	
BMS Type	Passive
BMS Location	Internal
Balance Current per Cell	50 mA
Overcharge / Discharge Current	160 A

SAFETY	
Transportation Classification	UN3480, Class 9
Battery Certification	CE, UN38.3, RoHS
UN Certification (Cells)	UN38.3



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DISCHARGE SPECIFICATIONS	
Nominal Voltage	12.8 V
1 second rate constant power to 10.5 V at 20°C	2048 W/160 A
1 min rate constant power to 10.5 V at 20°C	1280 W/140 A
10 min rate constant power to 10.5 V at 20°C	640 W/100 A
20+ min rate constant power to 10.5 V at 20°C	320 W/50 A
Short circuit current	120 A BMS regulated
10 hr rate capacity to 10.5V	102.03 Ah

CHARGE SPECIFICATIONS	
Bulk Charge Voltage	14.2-14.6 V
Float charge Voltage*	14.2-14.6 V
Cyclic (or boost charge) at 20°C	N/A
Charge current	25 A recommended
Charge current peak	100 A max
Charge time at 25 A Bulk charge to 14.6V	2.5 hours
Charge time at 25 A Bulk charge to 14.4V	2.25 hours

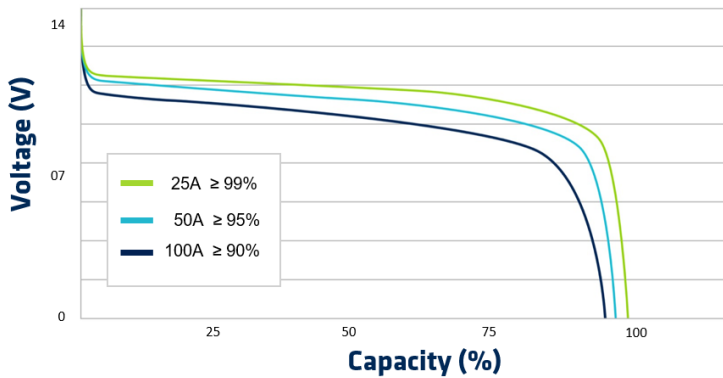
* Lithium iron phosphate batteries do not require a float charge hence the bulk charge voltage and float charge voltage are the same

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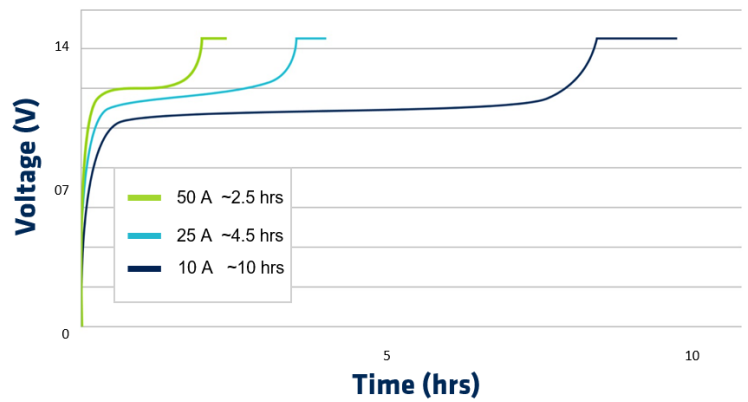
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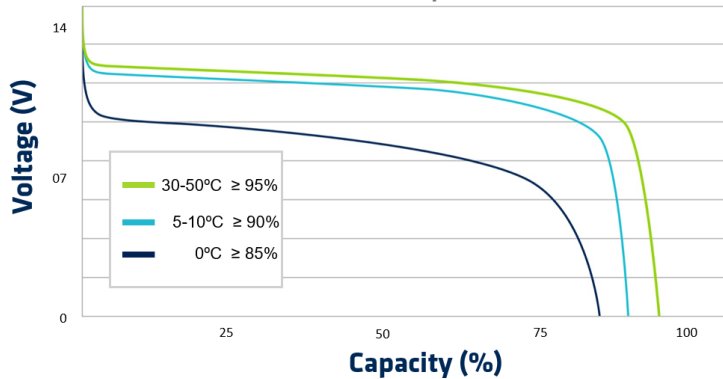
DISCHARGE CAPACITY at Various Rates



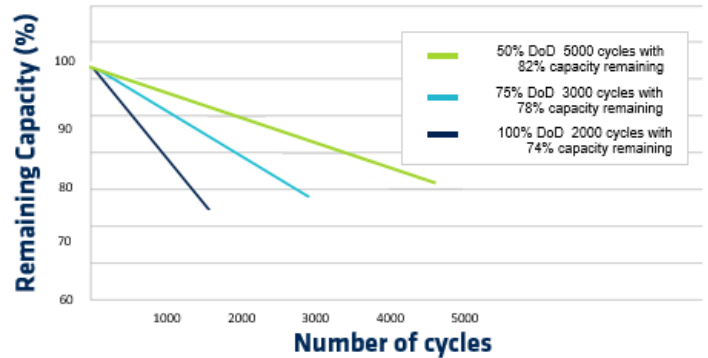
CHARGE TIME at Various current rates



DISCHARGE CAPACITY at Various temperatures



NUMBER OF CYCLES at Various Depth of Discharge (DoD)



100% DoD is characterized between 10.5V-14.6V
The graph is modelled on a 0.2C/10A charge/discharge rate

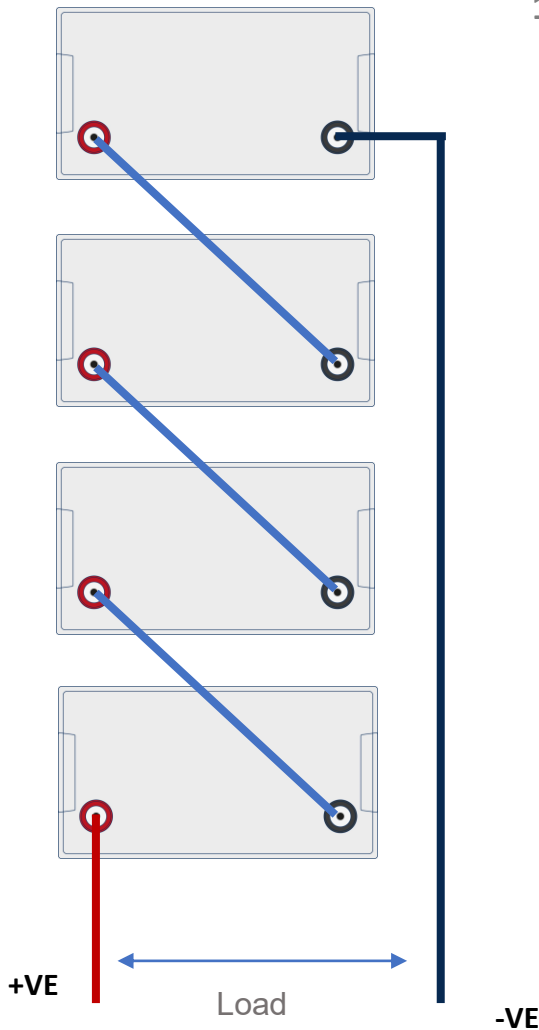
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SERIES WIRING CONFIGURATION (Up to 4 units)

Maximum discharge 100A
Maximum charge 100A



PARALLEL WIRING CONFIGURATION (Up to 10 units)

Maximum discharge 500A
Maximum charge 500A

