



LiFePO4 Deep Cycle Battery ALS-1250



ENERGY STORAGE SOLUTIONS

LiFePO4 chemistry battery with safe performance and longer cycle life, offers you various capacities options to meet different requirements. Lighter weight than lead acid batteries but with higher power. It delivers twice the power of lead acid battery, even at high discharge rate, while maintaining high energy capacity.

Wide Temperature Range • High Safety • IP65 Protection • Flexible Expansion

Features and Advantages



Wide Temperature Range
Range of -20 to 60 °C



IP65
High protection level



Expandable
Higher capacity available



High Safety
LFP & smart BMS



Longer Cycle Life
≥6000 cycles ⁽¹⁾



Easy to Install
Save time and effort

Technical Parameters

Model	LiFePO4 Deep Cycle Battery ALS-1250 (640Wh)
ELECTRICAL SPECIFICATIONS	
Nominal Voltage	12.8V
Nominal Capacity	50Ah
Capacity @ 40A	75 min
Resistance	≤10 mΩ @ 50% SOC
Efficiency	100%@0.5C
Self Discharge	<3% per Month
Maximum Modules in Series	4S4P
CHARGE SPECIFICATIONS	
Recommended Charge Current	20 A
Maximum Charge Current	50 A
Recommended Charge Voltage	14.2 V – 14.6 V
BMS Charge Voltage Cut-Off	15.0 V (3.75 ±0.025 vpc) (2s)
Reconnect Voltage	14.0 V (3.5 ±0.05 v)
Balancing Voltage	13.6 V (3.4 ±0.025 v)
DISCHARGE SPECIFICATIONS	
Maximum Continuous Discharge Current	50 A
Peak Discharge Current	175A (7.5s-2.5 s)
BMS Discharge Current Cut-Off	200A ±50 A (9 ±4 ms)
Recommended Low Voltage Disconnect	11 V
BMS Discharge Voltage Cut-Off	8.8(2.2V±0.08vpc)(140 ±60 ms)
Reconnect Voltage	10.8 V (2.7 ±0.1 vpc)
Short Circuit Protection	50-150 μs
TEMPERATURE SPECIFICATIONS	
Discharge Temperature	-4 to 140 °F (-20 to 60 °C)
Charge Temperature	32 to 131 °F (0 to 55 °C)
Storage Temperature	32 to 113 °F (0 to 45°C)
BMS High Temperature Cut-Off	167 °F (75 °C)
Reconnect Temperature	122°F (50 °C)
MECHANICAL SPECIFICATIONS	
Dimensions (L x W x H)	7.80 x 6.53 x 6.7 inch 198 x 166 x 170 mm
Weight	14.33lbs (6.5kg)
Terminal Type	M6 x 1.25
Terminal Torque	80 - 100 in-lbs (9 - 11 N-m)
Case Material	ABS
Enclosure Protection	IP65
Cell Type - Chemistry	LiFePO4
COMPLIANCE SPECIFICATIONS	
Certifications	UN38.3 (battery) CE (battery) UL1973 & IEC62133 (cells)
Shipping Classification	UN 3480, CLASS 9
(1) Cycle Test Conditions:0.2C Charging/Discharging, @25°C,80% DOD.	