

Plug into the current future with



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SPECIFICATION SHEET- Lite Marine

LiFePO4 ENERGY STORAGE for MARINE applications

The following specifications pertain to the **Lite Marine** range of lithium iron phosphate batteries manufactured by Freedom Won specifically designed for moderately corrosive and moist environments (1).

Lite Marine	5/4	10/7	20/14	30/21
Total Energy Capacity [kWh]	5	10	20	30
Nominal Voltage [V]	Available in 13V, 26V and 52V options			
Max/Cont. Discharge Current [A] (2)	300/240	300/240	480/400	480/400
Max & Cont. Charge Current [A] (2)	100	200	400	600
Daily DoD Suggested (average) [%]	70%DoD			
80% DoD Energy [kWh]	4	8	16	26
Round Trip Efficiency [%]	96-98			
Height [mm]	220	340		
Width [mm]	300	400		580
Length (including end handles or eye bolts) [mm]	978	886	1 462	1 462
Total Weight [kg]	55	110	205	305
Enclosure	Aluminium, powder coated, tamper proof, waterproof IP65, corrosion resistant, handles or eye bolts for lifting, rubber feet			
DC Connection – Fly Leads, [no. per electrode] (3)	1x 50mm ²	1x 50mm ²	2 x 50mm ²	2 x 50mm ²
External Interface	CAN Bus			
On-board Management	Full battery management system and internal trip protection			
Human Interfaces	Serial RS232 Plug for Programming and data access with PC, main breaker, error reset button, SoC display, error light			
Protection	Shunt Trip Circuit Breaker sized to suit max current, can be tripped by BMS if critical fault, manual reset. Protection for overcurrent, cell under and over voltage, temperature, weak cell detection and other critical events			
Battery Chemistry	Lithium Iron Phosphate (LiFePO ₄)			
Form Factor	Large Format ultra-heavy-duty prismatic cells of 200Ah each and 3,2V nominal voltage, fully sealed in plastic casing with bolt on electrode connections			
Battery Cooling	Natural Convection (heat generation is negligible inside the battery)			
Suitable Ambient Temp [°C] (4)	0°C to +40°C			
Extreme Operating Temp [°C]	-20°C to +60°C			
Remote Monitoring	Optional: Real time data logging and transmission via WiFi to online portal of key battery information			
Warranty (5)	10 years or 4 000 cycles for average 80% DoD, and max 90% DoD			
Service Life	>16 years (>6 000 cycles) expected life at 70% DoD (1), >20 years (>7 500 cycles) at 50% DoD			

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See Notes on next page.

Notes to Specification Sheet:

1. This range is not designed for direct exposure to saltwater such as for us above deck on a small boat. The intended use is below deck away from actual water spray. The product is also recommended for use on seaside properties where airborne sea spray is a corrosion concern. For above deck applications please contact Freedom Won.
2. Applies to both charge and discharge. Max load duration – 5 minutes per 30-minute cycle. 2 x Max overload can be handled for 2 seconds.
3. Fly Leads 1,8m long, power cable Red = Positive, Black = Negative, conductors in table refer to one electrode i.e. per positive and negative connections
4. Charging below 0°C not permitted. Extended time above 45°C not recommended for optimal battery life.
5. Warranty is 10 years or 4 000 cycles at an average of 80% DoD per cycle, 70% capacity guaranteed by end of warranty. This warranty applies to Lites sold after 1 September 2019. For Lites sold prior please contact Freedom Won for warranty information.