



12.8V

54Ah

LiFePO4

691Wh

Self Contained Lithium Battery in Ruggedised Case

FEATURES

The LFBM-IIB12854 is a self-contained 12.8V Lithium Iron Phosphate battery pack mounted in a high quality and environmentally resistant case, which provides a reliable and consistent power output of up to 54Ah (691.2Wh).

It is equipped with a WY24 connector capable of supplying 20A continuous to the load. Furthermore, the battery possesses a build-in Battery Management System (BMS) which provides all the safety features a lithium pack requires such as over-voltage, under-voltage, over-temperature, over-current and short-circuit protections.

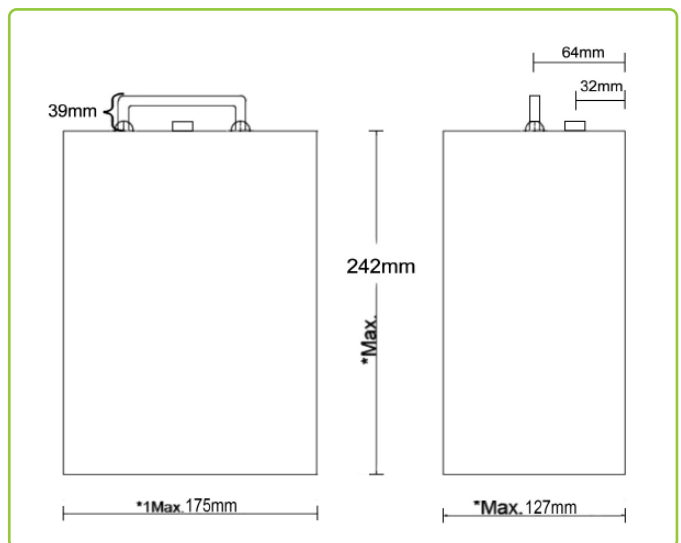
Finally, the unit is constructed with a precision temperature sensor (LM35) for external monitoring.

SPECIFICATIONS

Model Number	LFBM-IIB12854	
Battery Pack	Chemistry	Lithium Iron Phosphate (LiFePO4)
	Cell Configuration	4S15P (4-series and 15-parallel)
	Nominal Capacity [Ah]	54Ah
	Power [Wh]	691.2Wh
Voltage	Nominal	12.8VDC
	Maximum Charge	14.6VDC
	Cut-off Voltage	8.4VDC
Current	Std Charge/Discharge	5A
	Max Continuous Charge	10A
	Max Continuous Discharge	20A
Protections	Over-charging	15±0.4V
	Under-discharging	8.4±0.4V
	Over Temperature	65±5°C
	Over Current	90±30A
	Short circuit delay time	<600uS
Impedance	<60mΩ	
Connector	WY24 - male 9 pins	
Temperature	Charging	0°C to 45°C
	Discharging	-20°C to 60°C
	Storage	-20°C to 45°C
Cell Used	IFR26650-36A	
Cycle Life	≥2000 cycles (100% DoD)	
	≥4000 cycles (80% DoD)	
Connection	No series or parallel connection allowed	
Case Material	SPCC	
IP Rating	IP55	



DIMENSIONS

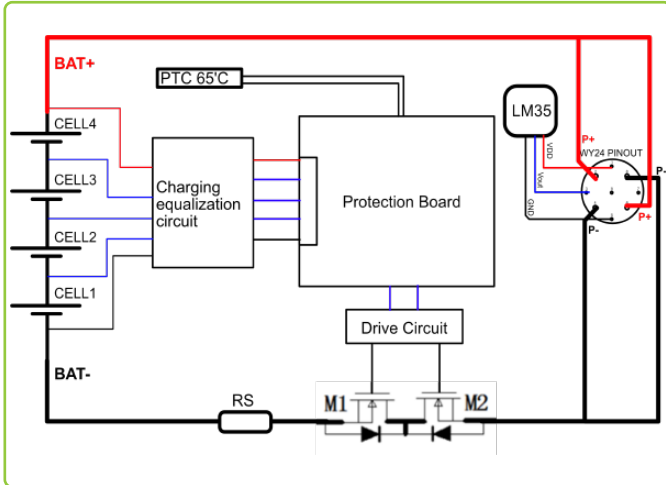


Dimensions	127mm (W) x 175mm (H) x 242mm (L)
Weight	9kgs

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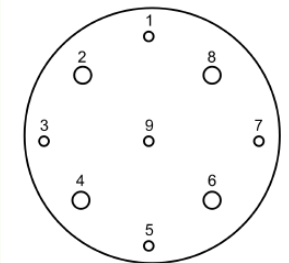
BLOCK DIAGRAM



CONNECTOR SPECIFICATIONS

WY24-1	V+ (Internal LM35 VDD)
WY24-2	P+ (Charge/Discharge positive)
WY24-3	Vout (Internal LM35 output)
WY24-4	P- (Charge/Discharge negative)
WY24-5	GND (Internal LM35 GND)
WY24-6	P+ (Charge/Discharge positive)
WY24-7	N/C
WY24-8	P- (Charge/Discharge negative)
WY24-9	N/C

WY24 PINOUT



FEATURES & BENEFITS



Long Service Life

>2000 cycles @100% DoD (25°C) to 80% of original capacity - longer service life than SLA to reduce maintenance costs.



High Energy Density - More Power p/kg

Higher total system capacity and superior utilisation (full 100% DoD) to reduce overall system size and footprint.



Robust Enclosure

Enclosed in IP5x (dust resistant) or IP6x (dust tight) case with closed loop terminals - suitable for harsh environments.



Stable Chemistry & Built-in Circuit Protection

IEC & UN38.3 Safety Certified at cell level and integrated BMS protection to ensure safety and prevent damage.



Lightweight

Approx. 1/2 the weight (or less) of equivalent in SLA means lower logistics costs and minimal OH&S concerns.



Superior Charge & Discharge Efficiency

Faster charge/discharge rates (C/2 LiFePO4 vs C/20 SLA) for higher power usage and less downtime when charging.



Wide Operating Temperature Tolerance

Suitable for use in a wider range of applications where ambient temperature is atypical: from -20°C up to +60°C.



Fully Recyclable Battery

An environmentally friendly battery option, with no lead or calcium that can leak into the environment.

BUILT-IN PROTECTION

All our batteries adhere to strict safety guidelines by incorporating Battery Management Systems (BMS) that include protection components such as:

- Integrated Circuit (IC)
- MOSFET
- Fuse
- Thermistor
- Protection Circuit Module (PCM)

The BMS in each battery helps to:

- Maintain safety for users.
- Prevent damage to equipment and property.
- Eliminate concerns about use of the wrong type of charger.
- Minimise the risk of overdischarge causing damage.
- Provide short circuit and overcharge protection.

CAUTION

- Do NOT short circuit, crush or disassemble.
- Do NOT heat or incinerate.
- Do NOT immerse in any liquid.
- Do NOT allow the battery to become overdischarged. If possible, isolate the battery when not in use.
- Do NOT leave the battery in a discharged state. Always recharge after use with a suitable LiFePO4 charger.
- Store at 50% capacity. Recharge every 3 months. The storage area should be clean, cool, dry and ventilated.
- No series or parallel connection allowed.

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