

# LITHIUM FERRO PHOSPHATE BATTERY MODULES

## SCALABLE ENERGY STORAGE



Proven track record in Australia across residential, commercial and government applications



Self Managed LFP Battery - no comms required to integrate with most inverter/charger controllers



Parallel connection for optimum energy storage and future upgrade



Safe and mature LFP (Lithium Ferro Phosphate)



10 Year Warranty for peace of mind



## Pre-wired 19" Rack Cabinet by MPower:

- ☒ Engineered for safety
- ☒ Quality bus work to deliver high current
- ☒ Wide range of cabinets available to suit up to 20x battery arrangements
- ☒ Available for both indoor and outdoor applications
- ☒ Pre-wired for fast, easy and convenient installation

Stainless steel casing

Anderson connector

Adjustable slide

Battery management system built-in

Circuit breaker

Support tray



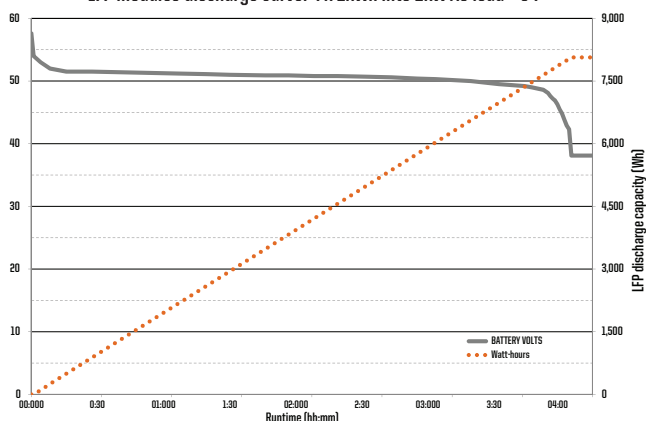
## Lithium Ferro Phosphate (LiFePO<sub>4</sub>) Technology:

- ☒ Significantly reduced size and one third of the weight of equivalent lead acid batteries.
- ☒ Battery Management System built in - safe charging and more cycles for long term performance
- ☒ Industrial coated stainless steel casing
- ☒ Standard 19" rack unit mounts with adjustable depth
- ☒ Zero emissions and rated to 55°C operating temperature
- ☒ Simple Anderson quick release connector system
- ☒ 24V or 48V versions

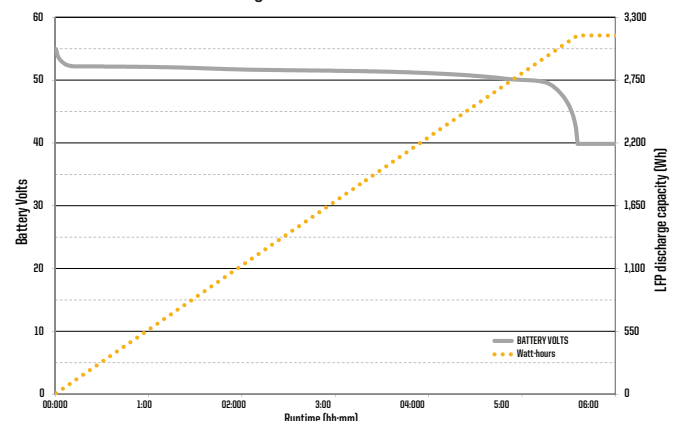
## Battery Specifications:

|                                     | 24V - 3kWh - 2RU  | 48V - 3kWh - 2RU  |
|-------------------------------------|---|---|
| Nominal Voltage DC                  | 25.6V (24V)   | 51.2V (48V)   |
| Nominal Capacity                    | 115.2Ah/3kWh  | 57.8AH/3KWH   |
| Maximum Current                     | 60A (Limited by circuit breaker)                        | 60A (Limited by circuit breaker)                        |
| Charge/Discharge cycles             | 5000 @ 75% DoD, 25°C                                    | 5000 @ 75% DoD, 25°C                                    |
| Operating Temperature               | Charge 0° to 55°C<br>Discharge -20° to 60°C             | Charge 0° to 55°C<br>Discharge -20° to 60°C             |
| Operating Humidity (non condensing) | 85%   | 85%   |
| IP Rating                           | IP50  | IP50  |
| Battery Case Dimensions (mm)        | 570DD x 420W x 88H                                      | 570D X 420W X 88H                                       |
| Battery Tray Dimensions (mm)        | 570D x 483W   | 570D X 483W   |
| Tray Slide Range (mm)               | 590 to 880  | 590 to 880  |
| Terminal Connection                 | Anderson quick release                                  | Anderson quick release                                  |
| Weight Module                       | 35kg  | 35kg  |
| Weight Tray                         | 4.2kg   | 4.2kg   |
| BMS Over Volt cut off               | 29.2V   | 58V   |
| BMS Under Volt cut off              | 20V   | 40V   |
| BMS Short Circuit cut off           | 200 ± 30A (20ms Trip)                                   | 200 ± 30A (20ms Trip)                                   |
| BMS Over Temp cut off               | 65°C  | 65°C  |
| Charge time approx.                 | 3 hour at 40A   | 3 hour at 20A   |
| Self Discharge                      | 14% per annum   | 14% per annum   |
| Circuit Breaker Compliance          | 2-pole 60A IEC 60947-2                                  | 2-pole 60A IEC 60947-2                                  |
| Lithium Composition                 | Lithium Ferro Phosphate<br>(LiFePO <sub>4</sub> or LFP) | Lithium Ferro Phosphate<br>(LiFePO <sub>4</sub> or LFP) |
| Casing                              | Stainless steel   | Stainless steel   |
| Coating                             | Satin white industrial coating                          | Satin white industrial coating                          |
| Certifications                      | ROHS, C Tick, CE  | ROHS, C Tick, CE  |

LFP modules discharge curve: 4 x 2kWh into 2kW AC load = C4

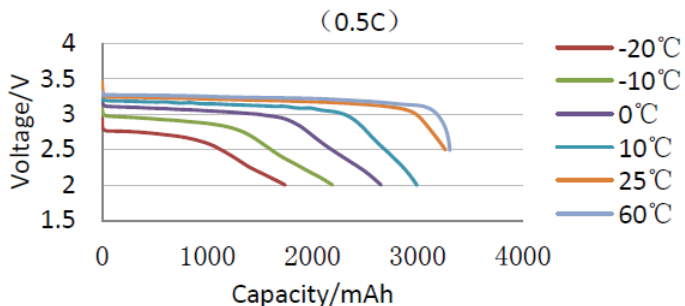


LFP modules discharge curve: 1 x 3kWh into 500W AC load = C6

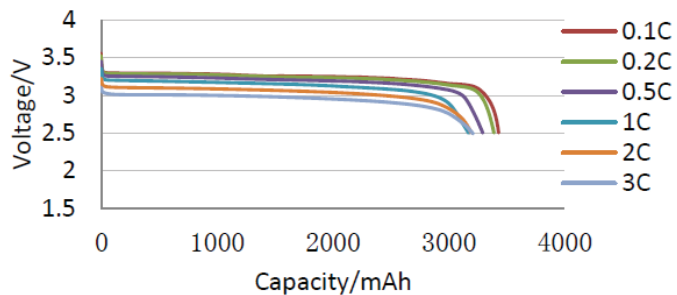


Tests reflect off grid usage. Data is based on Australian QA test programming. Results may vary with inverter efficiency and loom loss. Test load at 240V AC.

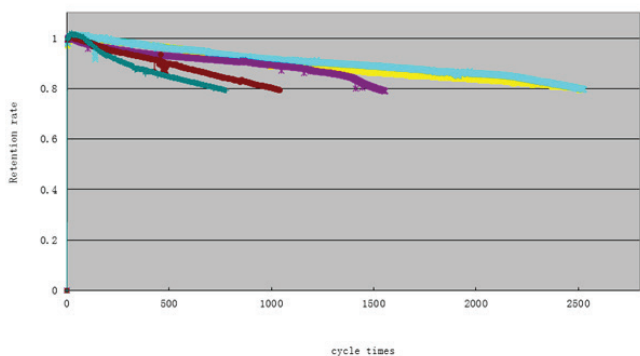
Discharge curves at different temperature (0.5C)



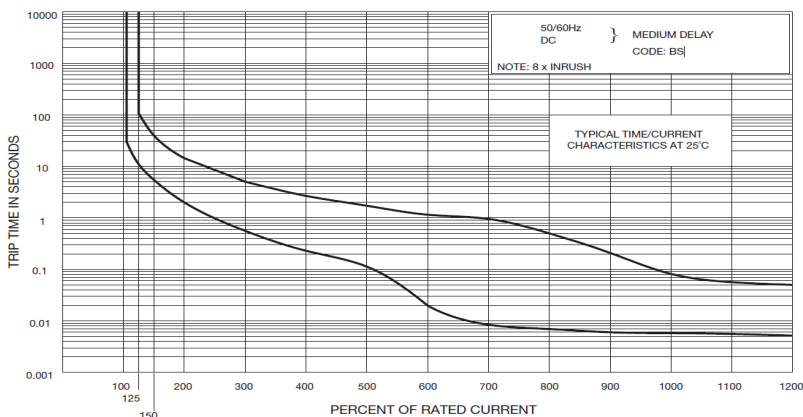
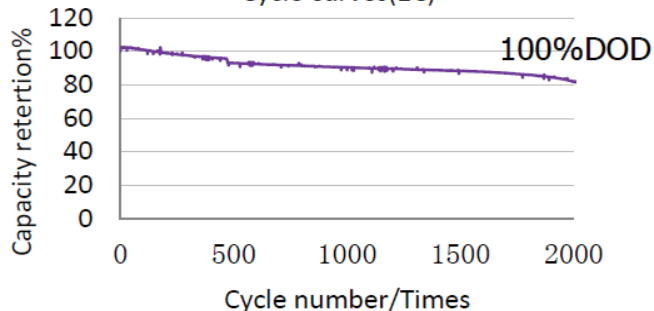
Discharge curves at different rates



Cycles / Temperature



Cycle curves(1C)



| PERCENTAGE OF RATED CURRENT  | 100%    | 125% | 150% | 200% | 300% | 400% | 500% | 600% | 700%   | 800%  | 900%  | 1000% | 1100%  | 1200% |
|------------------------------|---------|------|------|------|------|------|------|------|--------|-------|-------|-------|--------|-------|
| MINIMUM TRIP TIME IN SECONDS | NO TRIP | 12   | 5.5  | 2    | 0.55 | 0.21 | 0.12 | 0.02 | 0.0085 | 0.007 | 0.006 | 0.006 | 0.0055 | 0.005 |
| MAXIMUM TRIP TIME IN SECONDS | NO TRIP | 100  | 40   | 14   | 5    | 2.8  | 1.8  | 1.2  | 0.98   | 0.5   | 0.2   | 0.08  | 0.058  | 0.05  |