

Technical Specifications 1.4

LITHIUM IRON PHOSPHATE BATTERY

24V LiFePO₄



| OPERATING CONDITIONS | |
|------------------------------|---------------|
| Nominal Voltage | 25.6 V |
| Nominal Capacity | 50 Ah |
| Total Energy | 1.4 kWh |
| Impedance | 20 mΩ |
| Self Discharge | ~3% per month |
| Cycle Life at 100% DoD@ 0.2C | 5,000 cycles |
| Series connection | 2 |
| Parallel Connection | 10 |

| MECHANICAL | |
|-----------------|-----------------------------------|
| Chemistry | Cylindrical – LiFePO ₄ |
| Case Dimensions | L330xW170xH240(mm) |
| Weight | Circa 15 kg |
| Terminal Type | M8 brass threaded insert |
| Terminal Torque | ≤5 Nm |
| Casing Type | V0 Plastic Case |
| Casing IP | TBC |
| Communication | RS485 via USB-A port |

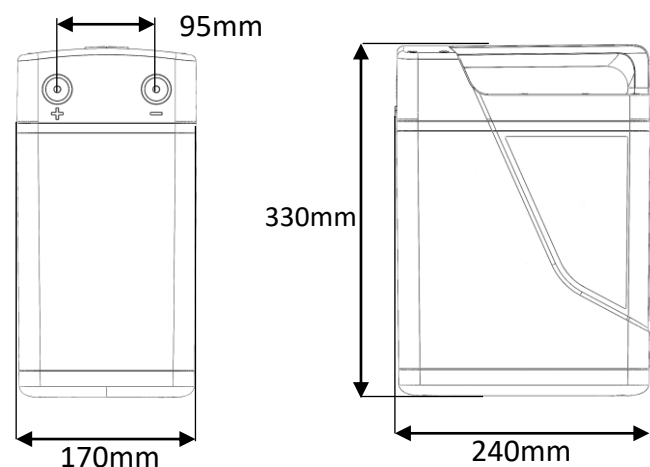
| DISCHARGE | |
|--|------------------|
| Standard Continuous discharge | 25 A (20+ min) |
| Maximum Continuous Discharge Current | 50 A (10 min) |
| Peak Discharge Current | 60 A (1 min) |
| PCM Discharge Current Cut-off | 75 A (3 seconds) |
| Max Solar Recommended Low Voltage Disconnect | 21 V |
| Short Circuit Protection | 200-500μs |

| BATTERY MANAGEMENT | |
|--------------------------------|----------|
| BMS Type | Passive |
| BMS Location | Internal |
| Balance Current per Cell | 50 mA |
| Overcharge / Discharge Current | 75 A |

| CHARGE | |
|-----------------------------|------------|
| Charge/discharge efficiency | >97% @0.5C |
| Recommended Charge Current | 20 A |
| Peak Charge Current | 50 A |
| PCM Charge Current Cut-Off | 55 A |

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

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



This information is for technical reference only and should not be used as a basis for product guarantee or warranty.

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| DISCHARGE SPECIFICATIONS | |
|--|---------------------|
| Nominal Voltage | 25.6 V |
| 1 second rate constant power to 10.5 V at 20°C | 1920 W/75 A |
| 1 min rate constant power to 10.5 V at 20°C | 1536 W/60 A |
| 10 min rate constant power to 10.5 V at 20°C | 1280 W/50 A |
| 20+ min rate constant power to 10.5 V at 20°C | 640 W/25 A |
| Short circuit current | +75 A BMS regulated |
| 10 hr rate capacity to 10.5V | 48.03 Ah |

| CHARGE SPECIFICATIONS | |
|--|------------------|
| Bulk Charge Voltage | 28.4-29.2 V |
| Float charge Voltage* | 28.4-29.2 V |
| Cyclic (or boost charge) at 20°C | N/A |
| Charge current | 20 A recommended |
| Charge current peak | 50 A max |
| Charge time at 25 A Bulk charge to 29.2V | 2.5 hours |
| Charge time at 25 A Bulk charge to 28.8V | 2.25 hours |

UK Distributor:

Merlin Equipment Limited
Clyst Court, Exeter EX5 1SA




T: 01202 697979 www.merlinequipment.com

* 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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LITHIUM IRON PHOSPHATE BATTERY

The Advantage

-  **Same Group size, New Voltage**
24V 50Ah
-  **High Performance**
50A continuous current to 75A surge
-  **Greater flexibility**
Available in 12,24 &48V, Easy maintenance,
Upgrade
-  **Improved Usability**
Easy carry handle

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