



# 105 Amp Hour LiFePO4 Battery



Built-in BMS with Voltage, Temperature, Charge, Current and Short Circuit Protection

Light weight and High Power Density—Half the weight of acid battery with twice the power density

Up to 2000 cycles at 100% Depth of Discharge — Up to 4000 at 80% Depth of Discharge

6 Year Warranty    Genuine Physical UK Company in Nottingham    Guaranteed Quality

We only use Genuine “Grade A” LiFePO4 Cells in this battery

## Voltage

Nominal Voltage \_\_\_\_\_ 12.8 V (Used for power calculations)

Charge Voltage \_\_\_\_\_ 14.2 V—14.7 V (GEL, AGM/SLA and Lithium Chargers work in this voltage range)

Low Voltage Cut-Off \_\_\_\_\_ 10.0 V (The battery will activate over-discharge protection at 10.5 V)

High Voltage Protection \_\_\_\_\_ 15.0 V (The battery will activate over-charge protection at 15.0 V)

## Current

Maximum Discharge                      Current \_\_\_\_\_ 100 Amps  
Power \_\_\_\_\_ 1280 Watts (12.8 V x 100 Amps)  
Pulse \_\_\_\_\_ 250 Amps (<3 Seconds) (essential to allow some devices to start up)

Maximum Charge                         Current \_\_\_\_\_ 52.5 Amps  
Power \_\_\_\_\_ 672 Watts (12.8 V x 52.5 Amps)

## Temperature

ALL Eco Tree batteries have temperature protection which will restrict charge and discharge when the cells are outside the optimal operating temperature. The further out of temperature range the battery goes the more aggressive the protection is.

For best performance, keep the battery within the ranges below.

Charge Temperature \_\_\_\_\_ 0°C—45°C    (The temperature protection starts restricting charge at 3°C and 40°C)

Built – In Heater \_\_\_\_\_ NO                      (for regular use in cold conditions, consider our heated batteries)

Discharge Temperature \_\_\_\_\_ -20°C—60°C    (The temperature protection starts restricting discharge at 3°C low and 40°C high)

Storage Temperature \_\_\_\_\_ 0°C—45°C    (storing too cold will cause faster self discharge and storing too hot over long periods will cause cell degradation)

## Physical Characteristics

Weight \_\_\_\_\_ 11.5KG

Dimensions \_\_\_\_\_ Length 330mm Width 172mm Height 215mm

Cells \_\_\_\_\_ LFP105000mAh @ 3.2 v

Pack Format \_\_\_\_\_ 4 cells in Series

Cell Type \_\_\_\_\_ Lightweight, High Power Density, Compact - Prismatic Packs

Outer Case \_\_\_\_\_ Impact resistant ABS plastic, UL94-Vo Flame Resistant

Terminal \_\_\_\_\_ M8 Threaded Insert

Water / Dust Resistance \_\_\_\_\_ IP67 (protection against dust particles and immersion up to 1 metre)

## Miscellaneous

Internal Resistance \_\_\_\_\_ 20  $\leq$  m $\Omega$

Self Discharge \_\_\_\_\_ Up to 3.5% per month

Series Connection \_\_\_\_\_ 4 in Series (up to 51.2v)

Automatic Cell Balancer \_\_\_\_\_ YES

Safe Transport \_\_\_\_\_ UN38.3 PASSED

European Conformity \_\_\_\_\_ 93/66/EEC