



# 320 Amp Hour

PART NO. EL12.8 - 320HD

## 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 3000 cycles at 100% Depth of Discharge — Up to 5000 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\_\_\_\_\_10.5 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\_\_\_\_\_200 Amps  
Power\_\_\_\_\_2560 Watts (12.8 V x 200 Amps)  
Pulse\_\_\_\_\_300 Amps (<3 Seconds) (essential to allow some devices to start up)

Maximum Charge      Current\_\_\_\_\_100 Amps  
Power\_\_\_\_\_1280 Watts (12.8 V x 100 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 230AH heated version battery)

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\_\_\_\_\_29.5KG  
Dimensions\_\_\_\_\_Length 522mm Width 238mm Height 220mm  
Cells\_\_\_\_\_LFP105000mAh @ 3.2 v  
Pack Format\_\_\_\_\_4 banks in Series, each bank contains 3 cells in Parallel  
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  $\leq$  mΩ      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