



**REGAL  
ELECTRO**

Product Specification

EN**LiFEN**

Li-Fe PO4 Battery

12V50Ah

# Power Charge ENLiFEN 12V50Ah Lithium Battery

## Product Specification

### 1 Scope

This specification is applied to the reference battery in this Specification and distributed by Regal Electro. The ENLiFEN PO4 battery is constructed utilising a number of individual 3.2V3200mA battery cells in series and parallel. Charge and discharge parameters are determined by an in built BMS (Battery Management System)

### 2 Product Specification

Table 1

No.	Item	General Parameter		Remark
1	Rated Capacity	Typical	50.0Ah	Standard discharge (0.5C5A) after standard charge
		Minimum	48.0Ah	
2	Nominal Voltage	12.0V		Mean Operation Voltage
3	Voltage at End of Discharge	8.0V		Discharge Cut-Off Voltage
4	Charging at End of Voltage	14.8V		
5	Internal Impedance			Internal resistance measured at AC 1KHz after 50% charge. The measurement must be taken on the new batteries within one week after shipment and cycled no more than 5 times
6	Standard Charge	Constant Current: 0.5C5A Constant Voltage: 14.8V 0.01C5A Cut-Off		Charge Time: Approx 4.0 hours
7	Standard Discharge	Constant Current: 1C5A End Voltage: 8.0V		
8	Fast Charge	Constant Current: 1C5A Constant Voltage: 14.8V 0.01C5A Cut-Off		Charge time: Approx 2.5 hours
9	Fast Discharge	Constant Current: 1C5A End Voltage: 8.0V		
10	Maximum Continuous Charge Current	1C5A		
11	Maximum Continuous Discharge Current	5C5A		
12	Operation Temperature Range	Charge: 0 to 45°C		60 ± 25% R.H Bare Cell
		Discharge: -20 to 60°C		
13	Storage Temperature Range	Less than 1 year: -20 to 25°C		60 ± 25% R.H at the Shipment State
		Less than 3 months: -20 to 40°C		
14	Weight	Approx: 7.0Kg		
15	Pack Dimension	Height (h): 212mm Length (l): 228mm Width (w): 138mm		Initial Dimension



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## 3. CAPACITIES AT VARIOUS TEMPERATURES

Discharge Temperature	-10°C	0°C	23°C	60°C
Discharge Capacity(0.5C5A)	50%	80%	100%	95%

## 4 BMS STANDARD

Symbol	Name	Maximum	Protective Action
Vdet 1	Over voltage detection	15.6V	If exceeded, BMS goes open circuit
Vdet 2	Over-discharge voltage detection	8.0V	Below this voltage BMS goes open circuit
I det	Over-current detection on discharge	200A (20ms)	In excess of this current, BMS goes open circuit
RD	Internal resistance in normal operation	30	mΩ

## 5 WARNINGS AND PRECAUTIONS

Please consult full Precautions and Safety Characteristics brochure on our website. All safety precautions taken with regular batteries should be observed, including:

1. Do not short the terminals. Whilst the BMS will shut down current delivery, this may still be sufficient to cause fire and serious burns.
2. Do not open the case
3. Do not immerse battery in water or electrical conducting fluid
4. In the event of fire, if possible, move burning apparatus to outside. If safe, douse with plenty of water

### Disclaimer:

While Regal Electro have taken every effort to represent the ENLiFEN PO4 accurately within this specification, we, Regal Electro, advise the user to ascertain their own measurements, and test the parameters and specifications to which the battery must conform. The Lithium Battery technology is rapidly being developed and research is continually carried out to ensure that our ENLiFEN PO4 battery will meet the needs of a growing market. This is a new technology product and not all the drawbacks are known. We suggest caution in the use. Regal Electro will be grateful of any recommendations to improve safety of use of this product.