



freedom  
won

PLUG INTO THE CURRENT FUTURE

LiFePO<sub>4</sub> Battery Range

FW 12-20

## Electrical Characteristics

Nominal Voltage	12.8V
Nominal Capacity	20AH
Energy	256Wh
Internal Resistance	≤50mΩ
Cycle Life	>2000 cycles at 0.2C 100% DOD
Months Self Discharge	<3%
Efficiency of Charge	100% at 0.5C
Efficiency of Discharge	96~99% at 1C

## Charge

Charge Volt	14V-14.6V
Charge Mode	CC at 0.2C to 14.6V, then at CV14.6V to charge current less than 0.02C
Charge Current	4A
Max. Charge Current	20A
Charge Cut-off Voltage	15.6V+/-0.2V

## Discharge

Max. Continuous Current	20A
Max. Pulse Current	40A(<3s)
Discharge Cut-off Voltage	8V

## Environment

Charge Temperature	0°C to 45°C (32F to 113F) at 60±25% Relative Humidity
Discharge Temperature	-20°C to 60°C (-4F to 140F) at 60±25% Relative Humidity
Storage Temperature	0°C to 40°C (32F to 104F) 60±25% Relative Humidity
Water Dust Resistance	IP56

## Mechanical

Cell Material	LiFePO <sub>4</sub>
Plastic Case	ABS
Dimensions(mm)	181x77x170mm
Weight (kg)	3.1kg
Terminal	M5

## BMS

Protection Function	Over charge protection, Over discharge protection, Over current protection, Short current protection, Balanced function, Temperature protection
---------------------	---

LITHIUM BATTERY SOLUTIONS SINCE 2010

FROM YOUR TRUSTED BATTERY PARTNER

[freedomwon.co.za](http://freedomwon.co.za) | +27 (0) 10 597 7794

Contact your nearest Accredited Freedom Won Distributor or Reseller Installers for further sales and technical support. Website links below.

[VIEW DISTRIBUTORS AND RESELLERS](#)