TSBAT12-100L-WT

DATA SHEET

12V 100Ah Wide Temp LFP Battery

Features

- **Wide Temp Charging: -30C to +60C**
- **Wide Temp Discharge: -40C to +70C**
- **Longer Cycle Life: Up to 20X over Lead Acid**
- **Less Weight: ~40% less than Lead Acid**
- **Higher Power: 2x more Watt Hours than Lead Acid**
- **Stable and Safe Lithium Iron Phosphate (LiFePO4)**
- **On Board Battery Management (BMS)**
- **Drop in Replacement for Lead Acid Battery**
- **Integrated Carrying Handles**



TSBAT12-100L-WT
Wide Temp Lithium Battery

Applications

- **Remote Power Systems**
- **Off-Grid Systems**
- **Lighting**
- **Backup Power Systems**
- **Wheel Chairs, Golf Carts, Scooters**
- **RV and Boat**

Description

The TSBAT12-100L-WT LFP (LiFePO4) battery is a wide temperature, high reliability drop-in replacement for comparable Lead Acid batteries. It provides >4000 discharge cycles @ 80% discharge, about 20x what a Sealed Lead Acid battery typically provides. It also provides almost 2x usable energy storage over lead acid batteries with the same Ah rating.

Typically LiFePO4 batteries should not be charged below 0C and require DC heaters to be able to charge at low temperatures but with our wide temp Aluminum anode, the battery is able to charge down to -30C without adversely affecting cycle life.

The integrated battery management system (BMS) handles all charging and discharging regulation so that the battery can be charged using the same solar or grid connect chargers used for Lead Acid batteries. Along with its standard mechanical size, the integrated BMS allows the battery to be a true drop-in replacement for a similar sized Lead Acid battery.

The LiFePO4 chemistry is very stable and minimizes the risk of explosion or combustion due to impact, overcharging or short circuit. The 40% less weight and the integrated carrying handles make the battery easier to transport and install at remote sites.

Up to four batteries can be connected in series or parallel to meet different system requirements. Series connections increase the battery bank voltage, while parallel connections increase the amp-hour (Ah) capacity. Total energy storage (Wh) remains the same for either configuration when using the same number of batteries.

There are two 8mm screw terminals for connecting battery cables. M8 bolts are included.

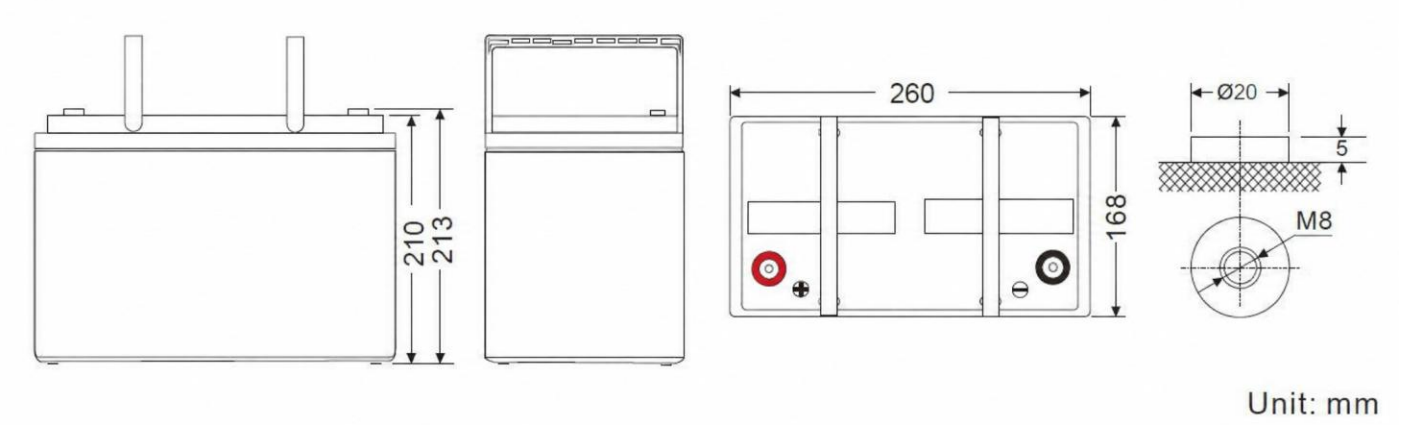
For long term storage it is recommended to charge to 60% charge every 6 months.

Specifications

Nominal Voltage	12.8V
Nominal Capacity	100Ah 1280Wh
Internal Resistance	<25mΩ
Cycle Life	>4000 Cycles @ 80% DOD
Self Discharge	<3% per month
Charge Voltage	14.6 +/-0.2V
Charge Current -30C to +60C	1 Battery 20A 2 Battery 40A 4 Battery 80A
BMS Charge Cutoff Voltage	14.8 +/- 0.2V
Typical Discharge Current	100A
Peak Discharge Current	120A for < 3 seconds
BMS Discharge Cutoff Voltage	8.8V
Charge Temperature	-30°C to +60°C (-22°F to +140°F)
Discharge Temperature	-40°C to +60°C (-40°F to +140°F)
Suggested Storage Temperature	-20°C to +35°C (-4°F to +95°F)
Weatherproofing	IP65
Case	ABS
Terminal	M8 Bolts (Included)
Dimensions (LxWxH)	10.2 x 6.6 x 8.4" (260 x 168 x 213mm)
Weight	23.1lb (10.5kg)
Parallel or Serial Connections	4 batteries maximum serial or parallel
Shipping Class	Class 9 – Hazardous Materials
Certifications	UN38.3
Warranty	3 Years

LiFePO4 Voltage versus Capacity

VOLTAGE (12V)	VOLTAGE (24V)	CAPACITY
14.6V	29.2V	100% *(charging)*
13.6V	27.2V	100% *(resting)*
13.4V	26.8V	99%
13.32V	26.64V	90%
13.2V	26.4V	70%
13.12V	26.24V	40%
13V	26V	30%
12.92V	25.84V	20%
12.8V	25.6V	17%
12.52V	25.04V	14%
12V	24V	9%
10V	20V	0%



System Ordering:

TSBAT12-100L-WT 12V 100Ah Wide Temperature LiFePO4 Lithium High Cycle Long Life Battery

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RoHS compliant

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