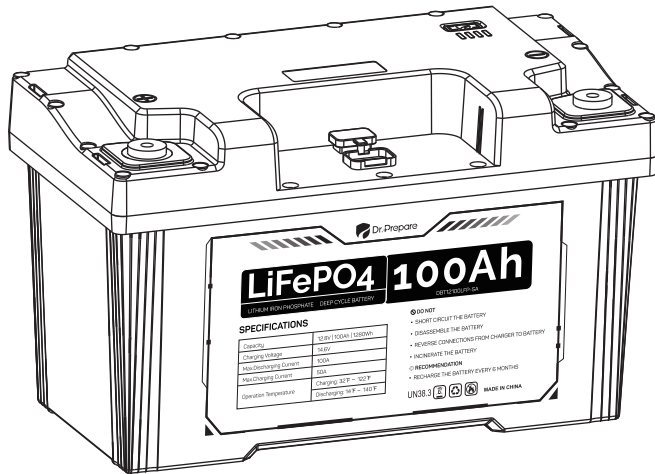




Dr. Prepare

12V 100AH LITHIUM IRON PHOSPHATE (LiFePO4)

Model: DBT12100LFP-SA



This user manual offers a brief walkthrough of the unit's features.
Please keep the user manual in hand for future reference.

Still need help? Feel free to send us an email at support@drprepare.com

➤ User Guide

IMPORTANT SAFETY INSTRUCTIONS

Please read through all the labels on the battery and this user guide before the first use.

Installation

- Do not install the battery in a location that may be flooded.
- Do not short the battery terminals.
- Do not connect batteries in series.
- Do not reverse the polarity connection.
- Do not expose the battery to fire, extreme heat conditions, or close to any heat sources.
- Secure the battery in place to avoid any violent shaking when installing it in your vehicle.
- Do not drop the battery from a high altitude.
- Do not strike fiercely or penetrate the battery.

Operation

- Use certified and compatible battery chargers to charge the battery.
- Do not disassemble the battery.

SPECIFICATIONS

General	
Battery type	Lithium iron phosphate (LiFePO4)
Rated capacity	100Ah (1280Wh)
Rated voltage	12.8V
Max. charging voltage	14.6V
Max. discharging current	100A
Charging current	Optimal: 20A; Maximum: 50A
Cycle lifespan	3,000 cycles at 80% DOD
Charging temperature range	32°F~131°F / 0°C~55°C
Discharging temperature range	14°F~140°F / -10~60°C
Low temperature protection	Charging: 32°F~41°F / 0°C~5°C
	Discharging: 14°F~21.2°F / -10°C~-6°C
High temperature protection	Charging: 122°F~131°F / 50°C~55°C
	Discharging: 131°F~140°F / 55°C~60°C
Storage temperature range	32°F~95°F / 0°C~35°C (Recommended storage temperature)
Size (L x H x W)	13.74 x 8.37 x 6.95 inches 349 x 212.7 x 176.5 mm
Net weight	27.56 lbs / 12.5 kg

CONNECTING THE BATTERIES IN PARALLEL

1. Please make sure all batteries that are connected meet the following criteria:

- Batteries have the same capacity (Ah) and are the same type (LiFePO4).
- As the built-in battery management system (BMS) may vary between brands, we advise you to choose batteries from the same brand for connection.

2. For optimal performance, we kindly advise you to follow the requirements listed below:

- Fully charge all ready-to connect batteries.
- All battery interconnect cables should be the same wire gauge (AWG) and length, and come from the same brand. Otherwise, the impedance will be inconsistent, resulting in unbalanced charge and discharge performance.
- Connect your batteries one by one in parallel. Secure all cable connections between the cable lugs and terminals. Please do not connect batteries in series.

3. When determining the cable size (AWG) for your system, there are two factors to consider:

- The size of the electrical load you want to power.
- The distance between the electrical load and your batteries.

For reference, see the following chart:

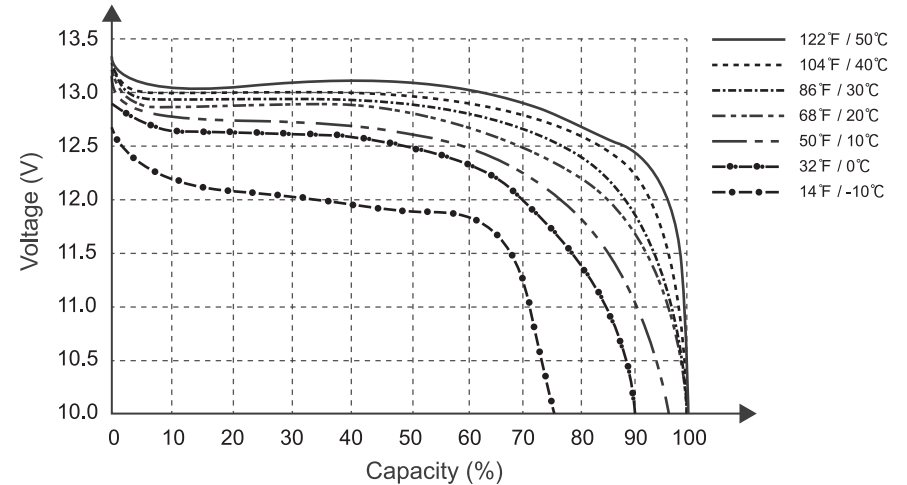
— Cables for Controller to Battery

Solar Input Current	5A	10A	20A	30A	40A	60A
Wire Cross Section Area (mm ²)	1.5	2.5	5	8	10	12
Wire AWG	15	13	10	8	7	6

— Cables for Inverter to Battery

Cable Size	Copper Conductor Diameter (inches)	Maximum Amperage
6 AWG	0.20	115
4 AWG	0.23	150
2 AWG	0.30	205
1/0 AWG	0.37	285
2/0 AWG	0.43	325
4/0 AWG	0.56	440

DISCHARGE CURVE AT DIFFERENT TEMPERATURES (0.5C)



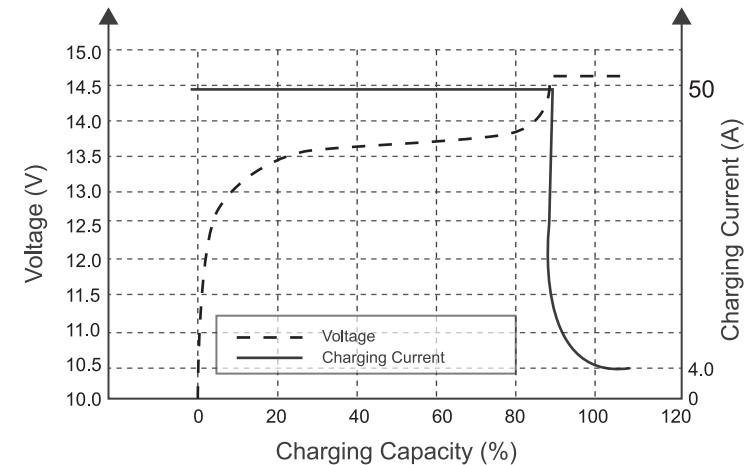
HOW TO PROPERLY STORE BATTERIES

We recommend bringing our battery to a 100% state of charge, or at least a 30%-50% state of charge. Then disconnect the battery from any load by removing the terminal cables. Highly recommended charging the battery every 6 months when not in use to prevent over-discharge.

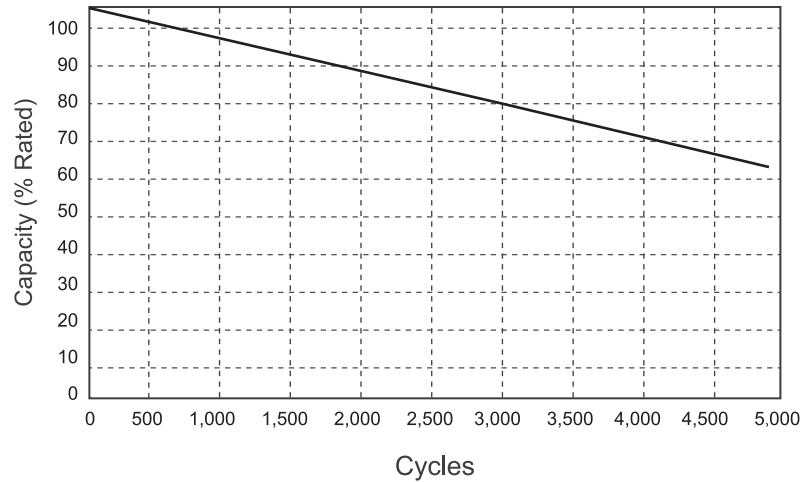
HOW TO CHARGE THE BATTERY

- The optimal charging current for a single lithium battery is around 20 amps, while the maximum charging current is 50 amps. The amount of charging current is determined by your DC-DC charger, charge controller, or other compatible lithium battery charger you use.
- When the battery is fully discharged at a continuous 100A, we do NOT recommend re-charging it at 50A immediately, which will trigger high-temperature charging protection.

CHARGING PERFORMANCE (0.5C, 77°F/25°C)



CYCLE LIFE VERSUS DEPTH OF DISCHARGE (0.5C, 77°F/25°C)



WARRANTY

- Dr.Prepare LiFePO4 batteries are covered by a 5-year limited warranty from the original purchase date. Any damage caused by human error, including improper installation, operation, or storage is not covered by our warranty. If you encounter any issues during usage, feel free to contact us at support@drprepare.com
- We only provide after-sales service for products sold by Dr.Prepare or retailers and distributors authorized by Dr.Prepare. If you have purchased your unit through other channels, please contact your seller for more information about the return and warranty.

SUPPORT INFORMATION

- Need help? Feel free to send us an email at support@drprepare.com
Want to see more products? Visit the website drprepare.com