

JLS-LFP48100 48V100Ah

(5U-48100LFP)



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version number	Modified By	Modified date	Change brief
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Overview

The JLS-LFP 48V100Ah back-up lithium iron phosphate battery system is developed for backup of Telecom equipment. Under normal condition, grid AC power supply to rectifier module and the Telecom loads and charge battery pack. When the AC power is off, rectifier module stop power supply and the battery serve for Telecom equipment. To ensure the Telecom equipment runs normally, when the AC power is switched on again. Power rectifier module Work for Telecom equipment while charge the battery pack.

Features

- 485/232 communication output for monitoring
- Built-in BMS with Charging current limitation
- Built-in automatic protection for over-charge, over-discharge and over-temperature conditions
- State of charge (SOC) and state of health (SOH) indication
- Built-in battery control for efficient operation
- Internal cell balancing Integrated Smart IC
- 3-5 years Maintenance free

Specification

Specifications		JLS-LFP48100
Voltage		48 V
Nominal Capacity (40°C , 0.5C)		100 Ah
Weight (Approximate)		About 50Kg
Energy	Normal energy (40°C , 0.5C)	4800 Wh
	Volumetric energy density	95Wh/L
	Gravimetric energy density	96Wh/kg
Dimensions (W*D*H)	Width*Depth* Height	442mm*440mm*222.5mm
Standard Discharge 25°C	Max. constant current	50A
	Cut-off voltage	42V
Standard charge 25°C	Charge Voltage	53.5V~54V
	Max. constant current	50A
	Recommended charging current and time	40A(0.4C) for 3 hours
Round trip efficiency(%)		>98%
Calendar life	25°C	>5 years
Cycle life (0.5C, 25°C)		80% DOD 4000 cycles
Operating temperature	Charging: 0°C~55°C	
	Discharging: -20°C~65°C	
Storage temperature		Recommended range: -20°C~55°C

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BMS Parameters

NO.	Type	Function	Criterion	Remarks	
1	Voltage	Charge	Cell Voltage Protection	3.90V Protection	Recover at 3.6V
2			Total Voltage Protection	56.0V Warning/ 57.0V Protection	Recover at 54.0V
3		Discharge	Cell Voltage Protection	2.0V Protection	Recover at 3.1V
4			Total Voltage Protection	43.2V Warning / 42V Protection	Recover at 46.5V
5	Current	Charge	Normal charge current	≤50A	
6		Discharge	Normal discharge current	≤50A	
7			Over Current Protection 1	> 50A and < 100A	Delay 30s ,recovery in every 1min
8			Over Current Protection 2	> 100A and < 200A	Delay 3s ,recovery in every 1min
9			Short Circuit Protection	≥200A	Delay 1mS
10	Temp	Cell Temp 1	Low temp protection	Charging < 0°C Discharging < - 20°C	Delay 1~2S
11			Cell Temp 2	High temp protection	Charging ≥70°C Discharging ≥75°C
12		PCB		Range	≥95°C
13	Cell Balance	Balance	Make all cells be balance during charging process. Current: 150mA	V _{Max.} ≥3.40V V _{Max.} - V _{Min} ≥40mV, Start balance	All cell voltages ≤3.65V and V _{Max.} - V _{Min} ≤ 40mV, Stop balance

Battery Status.

- 1. Stop/Transport Mode** - In working mode, press Start/Stop button, battery will go to STOP mode with low self-discharge. At STOP mode, charging MOS and discharging MOS are open. Battery cannot charge, discharge and communicate.
- 2. Working Mode** - At STOP mode, connect the battery to SMPS and press Start/Stop button. Battery will go to working mode. At working mode, BMS will monitor battery voltage, current, temp, and communication and function is available. Charging MOS and discharging MOS are closed, Battery will operate as the settings.
- 3. Sleep Mode** - If the battery voltage below lower than voltage protection after turn on the battery, BMS will go to SLEEP mode in 1 minute. In SLEEP mode, the charging MOS and discharging MOS are closed, BMS will detect the current in every 1 min. If there is charging current connecting, battery will turn to working mode.
- 4. Error Mode** - At working mode, if there is: ①.Battery cells, $\Delta U > 2.5V$, or ②.Any cell voltage $> 4.1V$ or $< 0.5V$, or ③. Battery temp is $< -30^{\circ}C$ or $+100^{\circ}C$. BMS will go to error mode. ALM will be bright and other LED will shut down. And go to STOP mode, charging MOS and discharging MOS are open. Need to make troubleshoot.

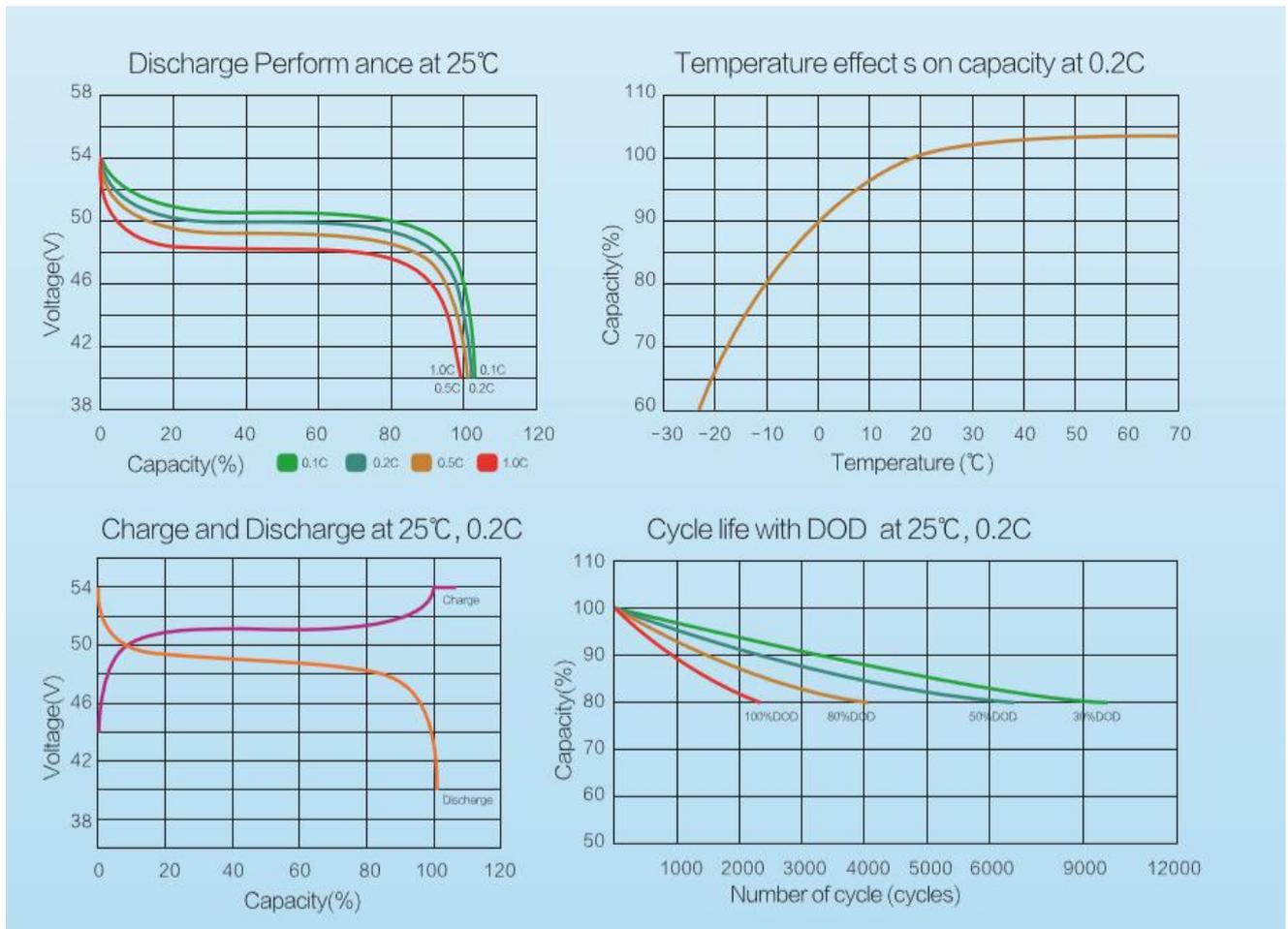
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Performance Curve.



Performance may vary depending on, but not limited to cell usage and application. If cell is used outside specifications, performance will diminish. All specifications are subject to change without notice. All information provided herein is believed, but not guaranteed, to be current and accurate.

Battery after-sales warning:

To prevent accidents such as leakage, heat, etc., please observe the following precautions:

▲It is forbidden to immerse the battery in sea or water. When it is not in use, it should be placed in a cool and dry environment;

▲It is strictly forbidden to use or place the battery at high temperature, such as fire, heater, etc., otherwise it may cause the battery to overheat, fire or function failure, and shorten the life;

▲It is strictly forbidden to directly insert the positive and negative terminals of the battery into the power socket.

▲It is strictly forbidden to use the battery in reverse polarity.

▲ Do not short-circuit the battery, it will cause serious damage to the battery.

▲It is strictly forbidden to transport or store the battery together with metal, such as hair clips and necklaces.

▲It is strictly forbidden to knock, throw, trample, fall, impact battery, etc.

▲It is strictly forbidden to directly solder the battery and pierce the battery with nails or other sharp objects.

▲It is strictly forbidden to use in places with strong static electricity and strong magnetic field, otherwise it will easily damage the battery safety protection device and bring hidden dangers.

▲Please use the special charging device for lithium ion battery when charging.

▲If the battery leaks, the electrolyte enters the eyes, please don't rub it, rinse your eyes with clean water, and immediately send medical treatment, otherwise it will hurt your eyes.

▲If the battery emits odor, heat, discoloration, deformation, or any abnormality during use, storage, or charging, stop charging or stop using it immediately, and remove or isolate it from the device.

▲If the electrode is dirty, use a dry cloth before use, otherwise it may cause the contact failure function to fail.

▲ Discarded batteries use insulating paper to wrap the electrodes.