



Series Smart Lithium Battery Pack

Specification

Product Model: 48100B1

Revision History :

Rev	Date	Originator	Reason for Charge
A0	2021-04-29	Changyu Gao	First Version
A1	2021-09-05	Xianping Zou	Update the part 3

1 、 Preface

This specification describes the product specifications, interfaces, features, technical parameters, and other requirements of Our TP series smart battery pack .

2 、 Product Introduction

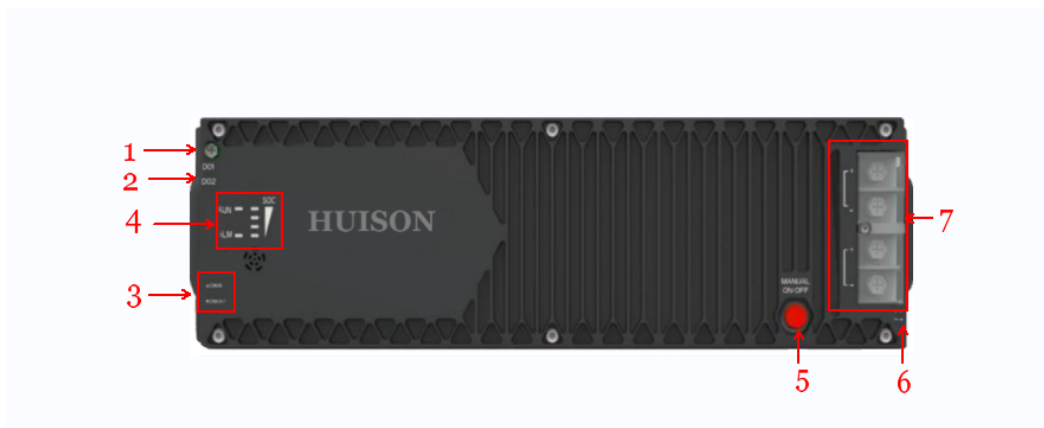
48V100 and 51.2V100 smart Lithium battery pack are specially developed for 48V application fields (such as communication energy storage, home energy storage), with high safety lithium iron phosphate cell, internal integrated intelligent BMS and battery optimizer. The product supports independent control of battery charge and discharge voltage/current, which solves the problem of bias current and circulation in parallel system of lithium battery. In addition, the product supports the mix of old and new lithium batteries and intelligent mix of lithium lead acid, which can participate in intelligent peak shifting power consumption, greatly saving the initial investment and improving the return on investment.

3 、 Product Picture and Interface Definition

3.1 Product Picture



3.2 Interface Definition



No.	Silk Screen	Item	Description
1	PE	Ground protection	M4 screw
2	DO1 DO2	Dry contact output	Alarm output dry contact (disconnect alarm by default)
3	COM_IN	Communication port	CAN / RS485 port
	COM_OUT	Communication port	
4	RUN	Run indicator	
	ALM	Alarm indicator	
	SOC	SOC indicator	
5	Manual ON/OFF	Button for manual power on/off	The external voltage of 43.2V-58V of the PWR terminal can activate the interspace digital energy TP series lithium battery.
6	PWR	Port for connecting to an external power source	The TP series Li-ion battery anode and cathode interface.
7	+	Positive terminal	Positive and negative ports are secured by M6 screws. The suitable OT terminals should be used.
	-	Negative terminal	

4、Application Scenarios

- 5G communication base station power
- 5G remote power supply scenario
- 5G base station renovation site
- Low-voltage household energy storage
- 48V other scenarios

5、Product Feature

- Standard rack-mounted installation design (3U) high energy density
- Integrated with high-efficiency BDC allowing for active charge and discharge control
- Modular & lightweight design for easy operation and maintenance
- Long cycle life
- Support for mixed use of lithium and lead-acid batteries, support for parallel connection of new and old lithium batteries
- Support high current Charge / discharge
- Support multiple working modes

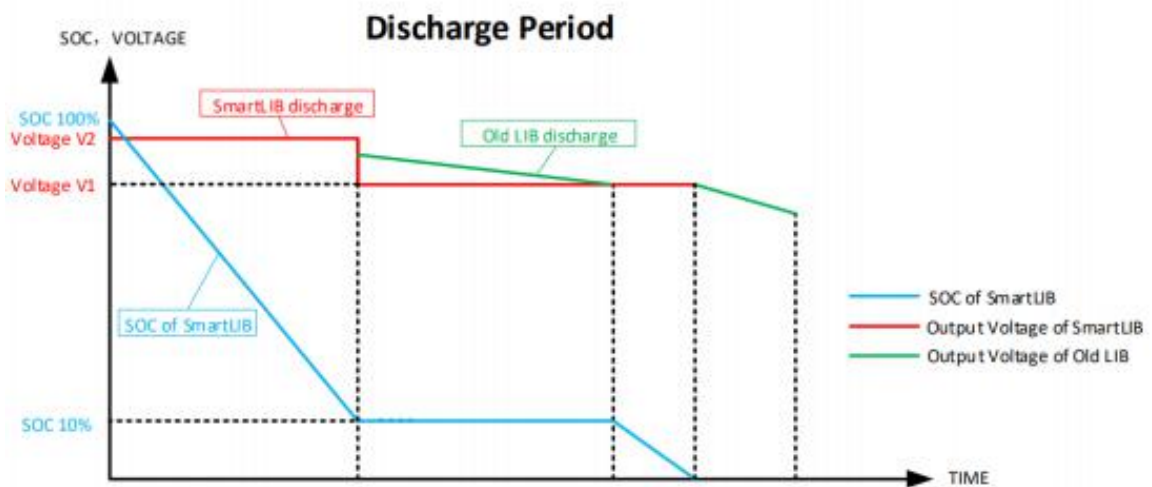
6、Product Parameter

NO	Item	TP-48V100	TP-51.2V100
1	Cell Type	LFP	
2	Rated Voltage	48V	51.2V
3	Rated Capacity	100Ah @0.5C , 25 °C	
4	Size (W*D*H)	442*400*133mm (not including mounting ears)	
5	Rated Output Voltage	56.4V	
6	Output Voltage Range	40~58V (supporting constant voltage output)	
7	Output Power	4800W	
8	Max Charge/Discharge Current	100A	
9	Weight (kg)	46	49
10	Cycle	4000 times (25 °C0.5C, 80%DOD, 80%EOL)	
11	Communication Interface	RS485*1 、 CAN*1 、 Dry Contacts*2	
12	Maximum Parallel Number	32 pcs (CAN Communication) 、 16 pcs (RS485 Communication)	

13	Balancing Method	Passive Balancing
14	Balancing Current	100mA
15	Cooling Method	Natural Cooling
16	Working Temperature	Charge : 0~45 °C; Discharge : -20~45 °C
17	Storage Temperature	0~40 °C
18	Relative Humidity	5%~95%
19	Protection/Alarm	Overtemperature, Overcurrent, Short circuit, Overcharge, Overdischarge, etc
20	Designed Life	10 years
21	Work Mode	<ul style="list-style-type: none"> ● Follow bus voltage mode, ● Constant voltage output mode, ● Battery characteristic discharge output mode, ● Peak clipping mode, ● Peak shifting mode, etc

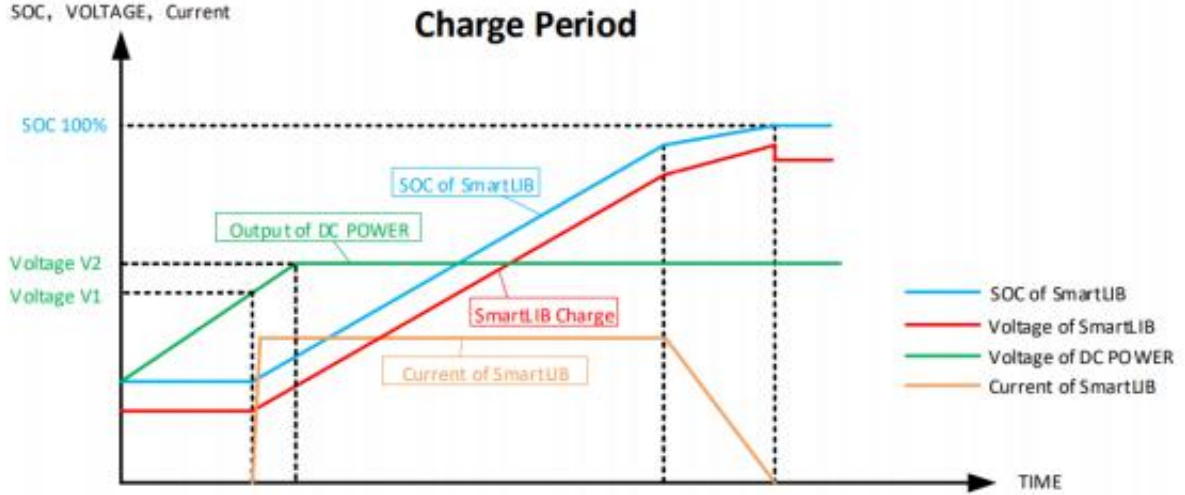
6. Performance Curve

6.1 Constant Voltage Discharge Curve

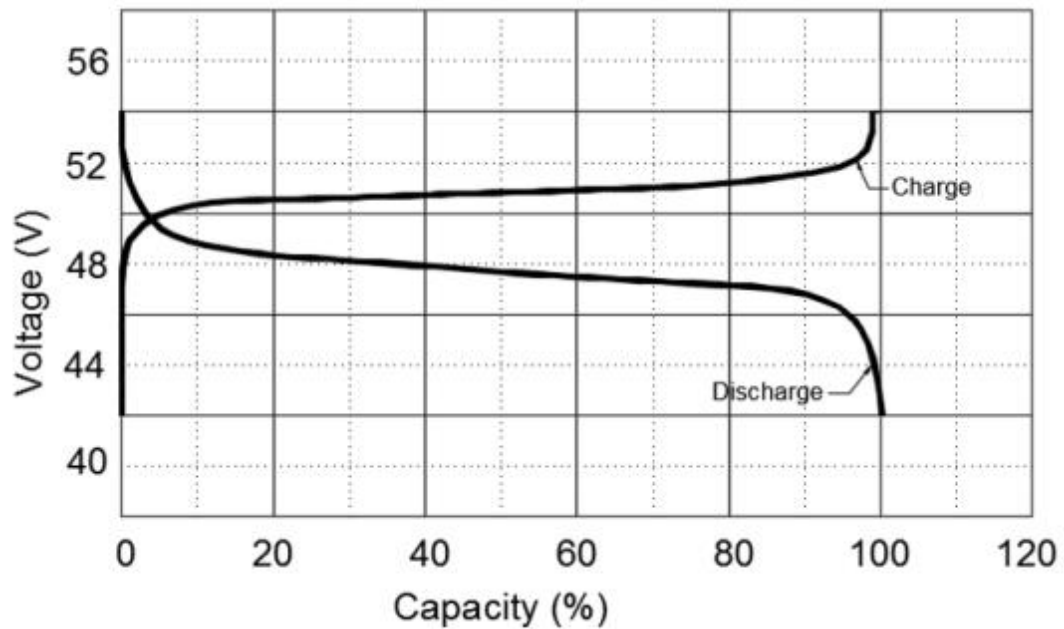


6.2 Constant Voltage Charge Curve

SOC, VOLTAGE, Current



6.3 Battery Charge/Discharge Curves



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