

2021.12.01

# Specification

## of B51100 Battery System

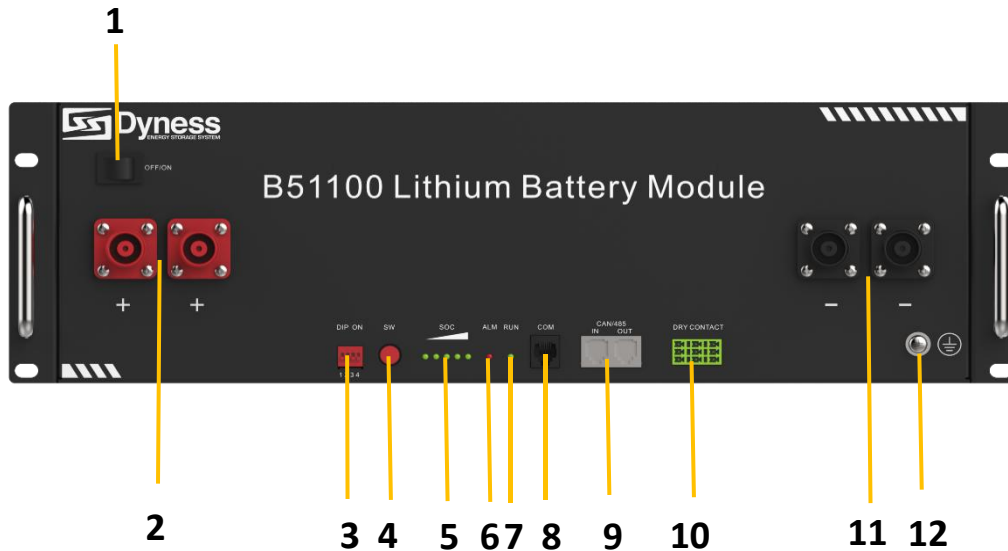


## 1. Specification

Production	Nominal Voltage	Nominal Capacity	Weight	Dimension(W*D*H, mm)
B51100	DC51.2V	100Ah	44kg	481*535*140mm

## 2. System internal module B51100specification

### 2.1 Front Panel of battery module



### Port Definition

Item	Name	Definition
1	Power switch	OFF/ON, remains 'ON when using
2	Positive socket	Battery output or parallel anode line
3	ADD	DIP switch
4	SW (battery wake/sleep Switch)	When power switch is in 'ON' , long pressing SW for 3s to enable the battery for switch-on or dormant state
5	SOC	Green light, showing battery capacity
6	ALM	Red lights, flash when warming, always on when Protection. When the condition of triggering
7	RUN	Green light, flashing when standby, always on when discharge, flash when charging protection is removed, the battery can recover automatically
8	COM	Communication port, support RS232
9	CAN/485	Communication Port Communication (factory default CAN communication)

Item	Name	Definition
10	DRY CONTACT	/
10	Negative socket	Battery output or parallel cathode line
11	Grounding	Shell ground connection

## 2.2 Product parameters

Module Name	B51100
Cell Technology	Li-ion(LFP)
Battery Module Capacity (kWh)	5.12
Battery Module Voltage (Vdc)	51.2
Battery Module Capacity (Ah)	100
Battery Module Cell Quantity (pcs)	16
Battery Cell Capacity (Wh)	320
Battery Cell Voltage (Vdc)	3.2
Battery Cell Capacity (AH)	100
Battery Module Cell Quantity in Series (pcs)	16
Battery Module Charge Voltage (Vdc)	56.5
Battery Charge/Discharge Current (A)	50 (recommended)
	80(max)
	100 (peak 15S)
Dimension(W*D*H, mm)	481*535*140mm
Communication	CAN/RS485
Pollution Degree (PD)	II
IP Grade	IP20
Weight(kg)	44
Working temperature	Charging 0°C~+55°C
	Discharging -20°C~+55°C
Humidity	5%~85% RH (No condensation, system work well.)
Storage temperature	-10°C~+35°C

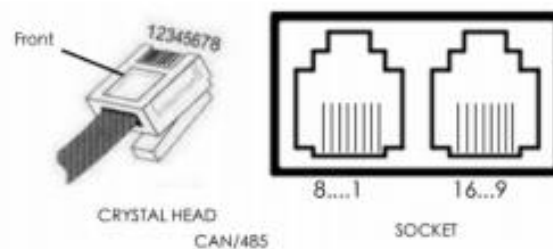
## 2.3 Alarms and protection

No.		Item	Default value	Remark
1	High charging voltage protection and recovery	Alarm value	56V	
		Alarm recovery value	54.4V	
		Protection value	57.6V	
		Protection recovery value	55.5V	
2	Low discharging voltage protection	Alarm value	48V	
		Alarm recovery value	49.6V	
		Protection value	44.8V	
		Protection recovery value	48V	
3	Low cell voltage protection and recovery	Alarm value	2.85V	
		Alarm recovery value	3.15V	
		Protection value	2.8V	
		Protection recovery value	3.1V	
4	High cell voltage protection and recovery	Alarm value	3.57V	
		Alarm recovery value	3.5V	
		Protection value	3.6V	
		Protection recovery value	3.45V	
5	Charging current protection	Charge limit value	90A	Charge limit current to 1A
		Protection value	100A	15s
6	Discharging over current protection	Alarm value	75A	
		Alarm recovery	After the alarm, restored when the current release or if there is a charging current recovery.	
		Protection value	100A	15s
		Protection recovery	After protection, restored in 60s delay or immediately when there is charging current.	
7	Cell over temperature	Charging alarm value	55°C	
		Charging alarm recovery	50°C	

No.	Item	Default value	Remark
	protection and recovery	value	
		Charging protection value	60°Cwith charging current
		Charging protection Recovery value	55°C
		Discharging alarm value	55°C
		Discharging alarm recovery value	50°C
		Discharging protection value	60°Cwith discharging current
		Discharging protection recovery value	55°C
8	Cell low temperature protection and recovery	Discharging alarm value	2°C
		Discharging alarm recovery value	5°C
		Discharging protection value	-20°C with discharging current
		Discharging protection recovery value	-10°C
		Charging alarm value	2°C
		Charging alarm recovery value	5°C
		Charging protection value	0°C
		Charging protection recovery value	2°C
9	Short circuit protection	Short circuit protection value	400A

## 2.4 Communication port

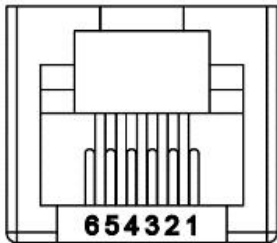
### 2.4.1 Interface definition of CAN/485



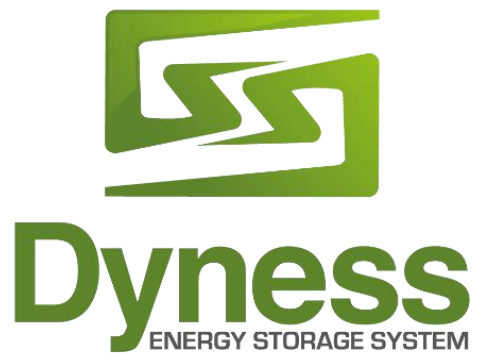
## Pin Definition

Foot position	Color	Definition
PIN1	Orange/white	485B
PIN2	Orange	485A
PIN3	Green/white	GND
PIN4	Blue	CANH
PIN5	Blue/white	CANL
PIN6	Green	Reserve
PIN7	Brown/white	XIN
PIN8	Brown	Reserve
PIN9	Orange/white	Reserve
PIN10	Orange	Reserve
PIN11	Green/white	XGND
PIN12	Blue	CANH
PIN13	Blue/white	CANL
PIN14	Green	Reserve
PIN15	Brown/white	XOUT
PIN16	Brown	Reserve

## 2.4.2 Interface definition of COM



Foot position	Definition
PIN1	Reserve
PIN2	GND
PIN3	TXD
PIN4	RXD
PIN5	GND
PIN6	Reserve



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