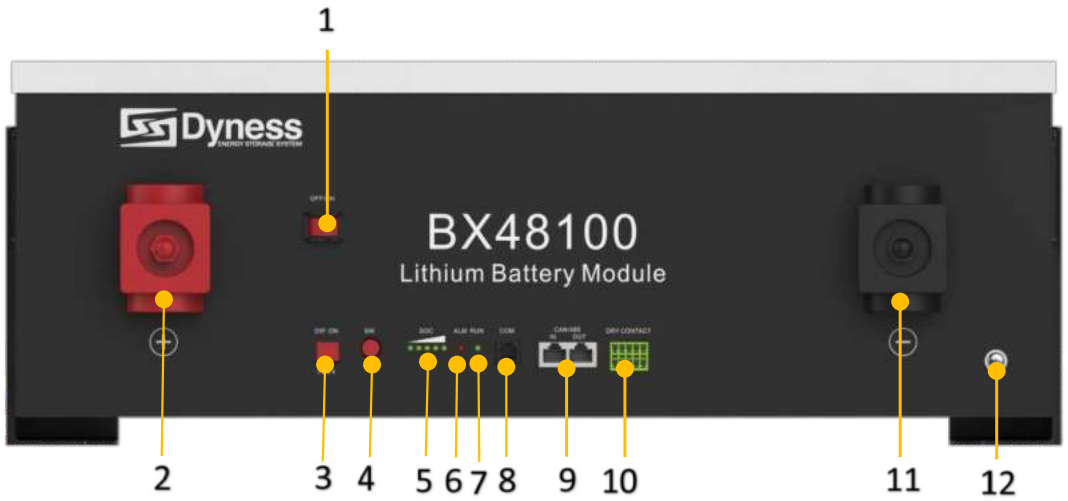
Dyness
ENERGY STORAGE SYSTEM

Specification of BX48100

1. Specification

Production	Nominal Voltage	Nominal Capacity	Dimension	Weight
BX48100	DC48V	100Ah	558× 466× 189.5mm	≈45kg

2. Interface Definition



Item	Name	Definition
1	Power switch	OFF/ON, must be in the "ON" state when in use
2	Positive socket	Battery output positive or parallel positive line
3	ADD	DIP switch
4	SW (battery wake/sleep switch)	When the "OFF/ON" switch button is in the ON state, press and hold this button for 3 seconds to put the battery into the power-on or off state.
5	SOC	The number of green lights shows the remaining power. Table 2-3 for details.
6	ALM	Red light flashing when an alarm occurs, red light always on during protection status. After the condition of trigger protection is relieved, it can be automatically closed.
7	RUN	Green light flashing during standby and charging mode. Green light always on when discharging.
8	COM	Communication cascade port, support RS232

Item	Name	Definition
9	CAN/485	Communication cascade port, support CAN/ RS485 communication (factory default CAN communication)
10	DRY CONTACT	/
11	Negative socket	Battery output negative or parallel negative line
12	Grounding	Shell ground connection

3. Product parameters

Module Name	BX48100
Cell Technology	Li-ion(LFP)
Battery Module Capacity (kWh)	4.8
Battery Module Voltage (Vdc)	48
Battery Module Capacity (Ah)	100
Battery Module Cell Quantity (pcs)	60
Battery Cell Capacity (Wh)	80
Battery Cell Voltage (Vdc)	3.2
Battery Cell Capacity (AH)	25
Battery Module Cell Quantity in Series (pcs)	15
Battery Module Charge Voltage (Vdc)	54.75
Battery Charge/Discharge Current (A)	50 (recommended)
	75 (max)
	100 (peak 15S)
Dimension(W*D*H, mm)	558*466*189.5mm
Communication	CAN/RS485
Pollution Degree (PD)	II
IP Grade	IP20
Weight(kg)	42.5
Working temperature	Charging 0℃~+55℃
	Discharging -20℃~+55℃
Humidity	5%~85% RH (No condensation, system work well.)
Storage temperature	-10℃~+35℃

4. Alarms and protection

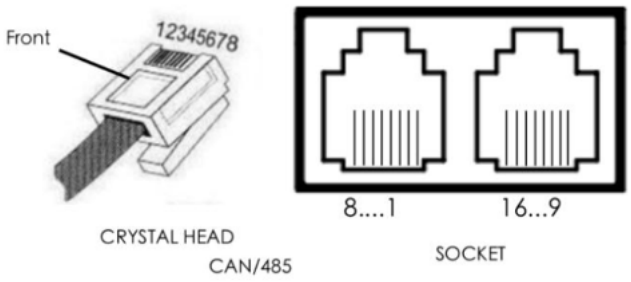
No.	Item		Default value	Remark
1	High charging voltage protection and recovery	Alarm value	52.5V	
		Alarm recovery value	51V	
		Protection value	54.75V	
		Protection recovery value	52V	
2	Low discharging voltage protection	Alarm value	45V	
		Alarm recovery value	46.5V	
		Protection value	42V	
		Protection recovery value	45V	
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	3.6V	
		Alarm recovery value	3.5V	
		Protection value	3.65V	
		Protection recovery value	3.45V	
5	Charging current protection	Protection value	90A	
6	Charging over current protection	Alarm value	50A	
		Alarm recovery	After the alarm, restored when the current release or if there is a discharge current recovery.	
		Protection value	100A 15S or 105A	
		Protection recovery value	After protection, restored in 60s delay or immediately when there is discharge current.	
7	Discharging over current protection	Alarm value	50A	
		Alarm recovery	After the alarm, restored when the current release or if	

No.	Item		Default value	Remark
			there is a charging current recovery.	
		Protection value	100A 15S or 105A	
		Protection recovery	After protection, restored in 60s delay or immediately when there is charging current.	
8	Cell over temperature protection and recovery	Charging alarm value	55℃	
		Charging alarm recovery value	50℃	
		Charging protection value	65℃with charging current	
		Charging protection recovery value	60℃	
		Discharging alarm value	55℃	
		Discharging alarm recovery value	50℃	
		Discharging protection value	65℃ with discharging current	
		Discharging protection recovery value	60℃	
9	Cell low temperature protection and recovery	Discharging alarm value	2℃	
		Discharging alarm recovery value	5℃	
		Discharging protection value	-20℃ with discharging current	
		Discharging protection recovery value	-10℃	
		Charging alarm value	2℃	
		Charging alarm recovery value	5℃	
		Charging protection value	0℃	
		Charging protection	2℃	

No.	Item		Default value	Remark
		recovery value		
10	Short circuit protection	Short circuit protection value	400A	

5. Communication port

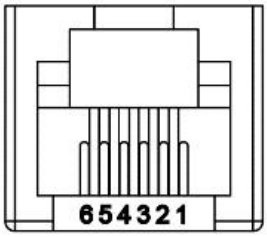
1)



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)



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

Figure 2-3 COM interface definition