INVERTER PACK
System Manual

Version:V1.1

Table Content

1 Safety Instructions

1.1 Security statement

1) The inverter, charger, and distribution modules in the system are subject to high temperatures and high voltage, and require trained and qualified professionals for installation, operation, and maintenance.

2) During the installation, operation and maintenance of the system modules, the safety codes and operating procedures of the location must be observed, otherwise it may lead to personal injury or charger damage. The safety precautions mentioned in the system user's manual are only intended as a supplement to the local safety norms.

3) The manufacturer assumes no liability for any violation of the general safety operating requirements or for any violation of the safety standards for the design, manufacture and use of the equipment.

4) The following illustrations are used throughout the manual to indicate potential hazards or important safety instructions.

WARNING: Potential hazards exist and this operation should be carried out with extreme caution!

WARNING: This operation/function is very important for the normal operation of the system, please give it enough attention!

1.2 Generic security precautions

1) Do not expose the system equipment to environments with water, fog, snow, dust, etc.

2) It is strictly forbidden to block or cover the ventilation ducts, otherwise there is a risk of over-temperature of the equipment.

3) To avoid fire and electric shock, make sure that all cables have good electrical characteristics and suitable wire diameter.

4) It is strictly prohibited to place flammable materials or any items that require fire protection around the equipment.

1.3 Generic security precautions

1.3.1 Battery system safety specification to meet EMC, reliability requirements

1.3.2 Safety Precautions for Battery System Use

1) Do not put the battery into fire or heat the battery, and do not store the battery under high temperature.

2) Do not reverse the positive and negative terminals of the battery when installing the battery.

3) Do not short-circuit the battery by connecting the positive and negative terminals of the battery directly with metal objects (e.g. wires, spanners).

4) Please avoid puncturing the battery with sharp objects, hitting it with a hammer, stepping on it, or subjecting it to any other kind of impact.

5) Please do not disassemble the battery by yourself and please do not change the structure of the battery at will.

6) Please do not put the battery into water, and be careful not to let the battery get wet when storing.

7) Do not use unqualified equipment when charging and discharging, please follow the correct instructions.

8) Do not mix batteries from different manufacturers or different types and models as well as old and new batteries.

9) Do not put hot, deformed or leaking batteries into the device for charging and discharging.

10) Do not continuously discharge the battery without a serious loss of charge.

11) Under the conditions of this regulation, products with a storage period of more than 3 months should be replenished with electricity once, products with a storage period of more than 6 months must undergo a capacity verification test, and products with a storage period of more than 1 year must be re-examined and qualified before use.

2 System Introduction

The **Inverter Pack** is an integrated system combining control, display, detection, and protection, designed specifically for applications in RVs, modified vehicles, and similar settings. This high-performance vehicle power system can manage high-power input and output for the entire vehicle. It features ease of operation, a sleek design, exceptional vibration resistance, flexible and convenient installation, powerful functionality, and high reliability.

2.1 System highlights

1) **PV Charging Wake-up Function**: When the system is in a shutdown state, connecting a photovoltaic (PV) panel allows the solar charger to detect sufficient PV energy. The system will automatically start up and initiate PV charging. When the PV is disconnected, the system will automatically shut down.
2) **Utility Power Wake-up Function**: When the system is in a shutdown state and utility power is connected, the inverter detects the utility power input. The system will automatically start up and begin utility power charging. When the utility power is disconnected, the system will automatically shut down.
3) **Battery Low Voltage Protection**: The system is equipped with multiple low voltage protection strategies for backup batteries, preventing premature battery failure due to excessive discharge.
4) **APP Firmware Update Function**: To provide users with the latest and best experience, the system supports firmware updates. Modules such as the C4, M12-400, SF100-50, and SP100-50 can be updated through a mobile app.

2.2 System components

Based on different usage requirements and application scenarios, the system supports four operating modes: Single Inverter 01 (TBB Lithium Battery), Single Inverter 02 (BM500), Battery Pack 01 (TBB Lithium Battery), Battery Pack 02 (BM500).

2.2.1 System diagram

1. The wiring diagram for Single Inverter 01 mode is shown in Figure 2.1, and the

system configuration list is shown in Table 2.1.

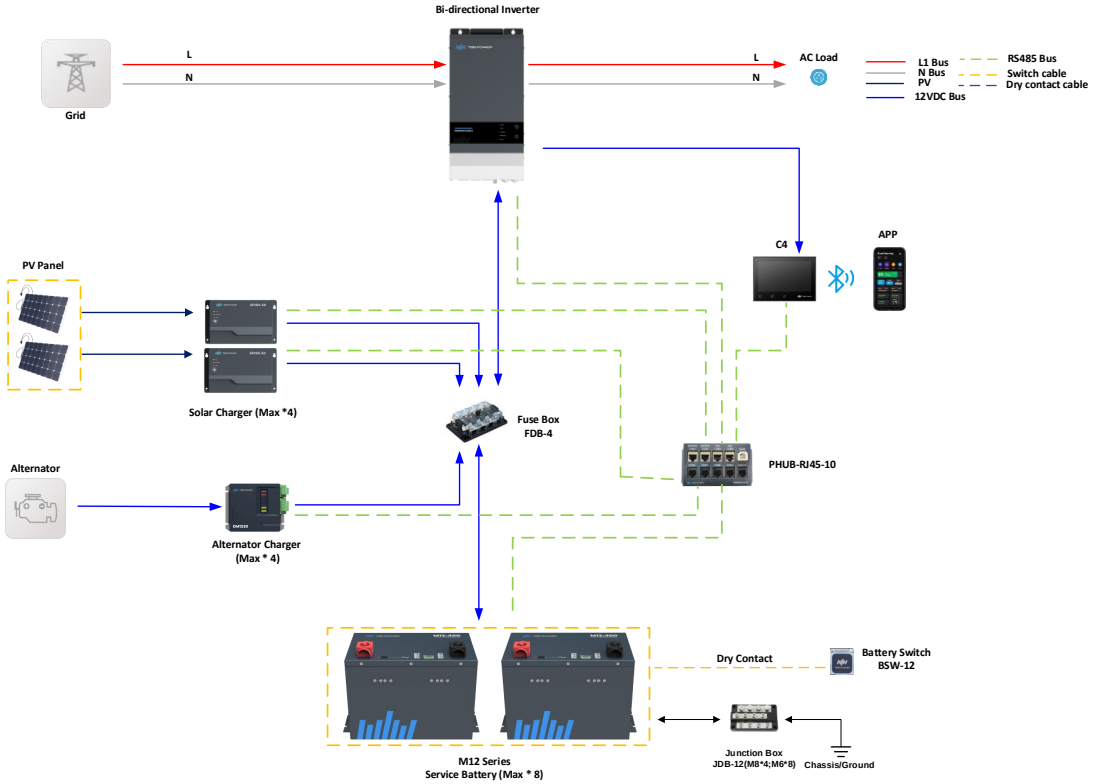

fig 2-1 Single Inverter 01 Mode

NO.	System Component	Remark
1	Bi-directional Inverter	CM Series (1PCS)
2	4" Touch Screen	C4 (1PCS)
3	12V Lithium Service Battery	M12 Series (1~8PCS)
4	MPPT Solar Charger	SF100 Series (1~4PCS)
5	Alternator Charger	DM12 Series (1~4PCS)
6	HUB-RJ45	PHUB-RJ45-10
7	Junction Box	JDB-12
8	Fuse Box	FDB-4

tab 2-1 Single Inverter 01 Mode

2. The wiring diagram for Single Inverter 02 mode is shown in Figure 2.2, and the system configuration list is shown in Table 2.2.

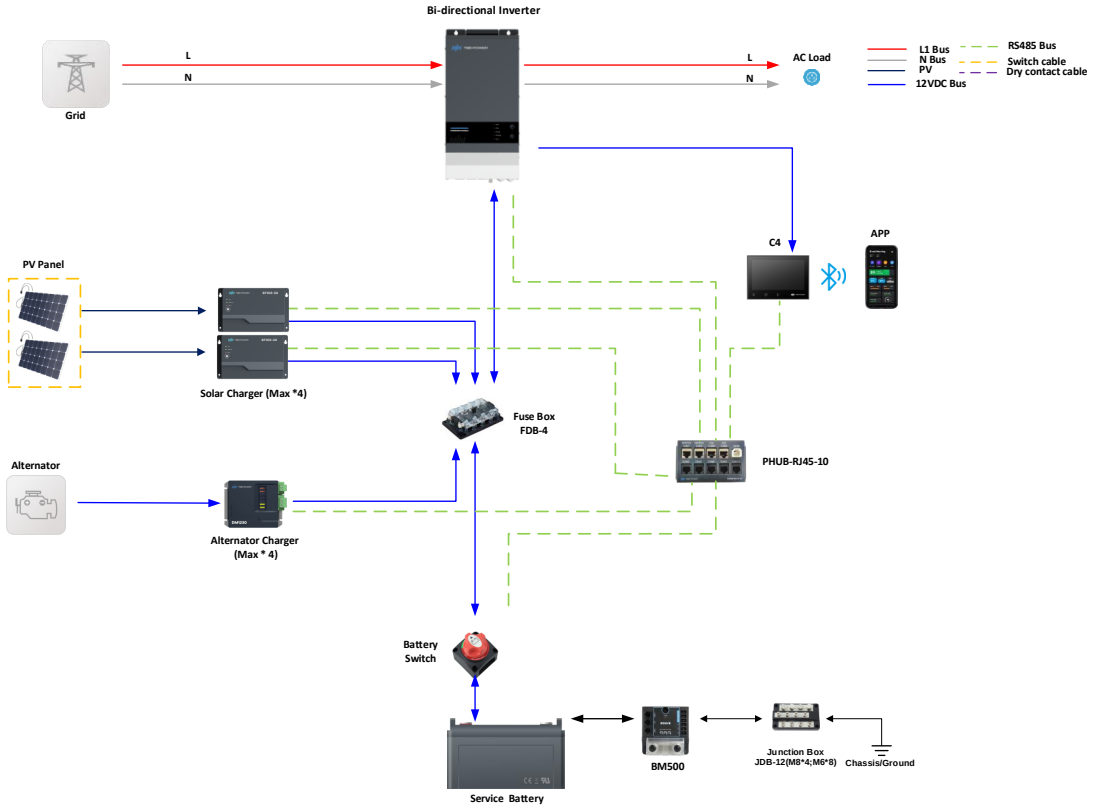

fig 2-2 Single Inverter 02 Mode

tab 2-2 Single Inverter 02 Mode

NO.	System Component	Remark
1	Bi-directional Inverter	CM Series (1PCS)
2	4" Touch Screen	C4 (1PCS)
3	500AMP Shunt Module	BM500
4	MPPT Solar Charger	SF100 Series (1~4PCS)
5	Alternator Charger	DM12 Series (1~4PCS)
6	HUB-RJ45	PHUB-RJ45-10
7	Junction Box	JDB-12
8	Fuse Box	FDB-4

3. The wiring diagram for Battery Pack 01 mode is shown in Figure 2.3, and the system configuration list is shown in Table 2.3.

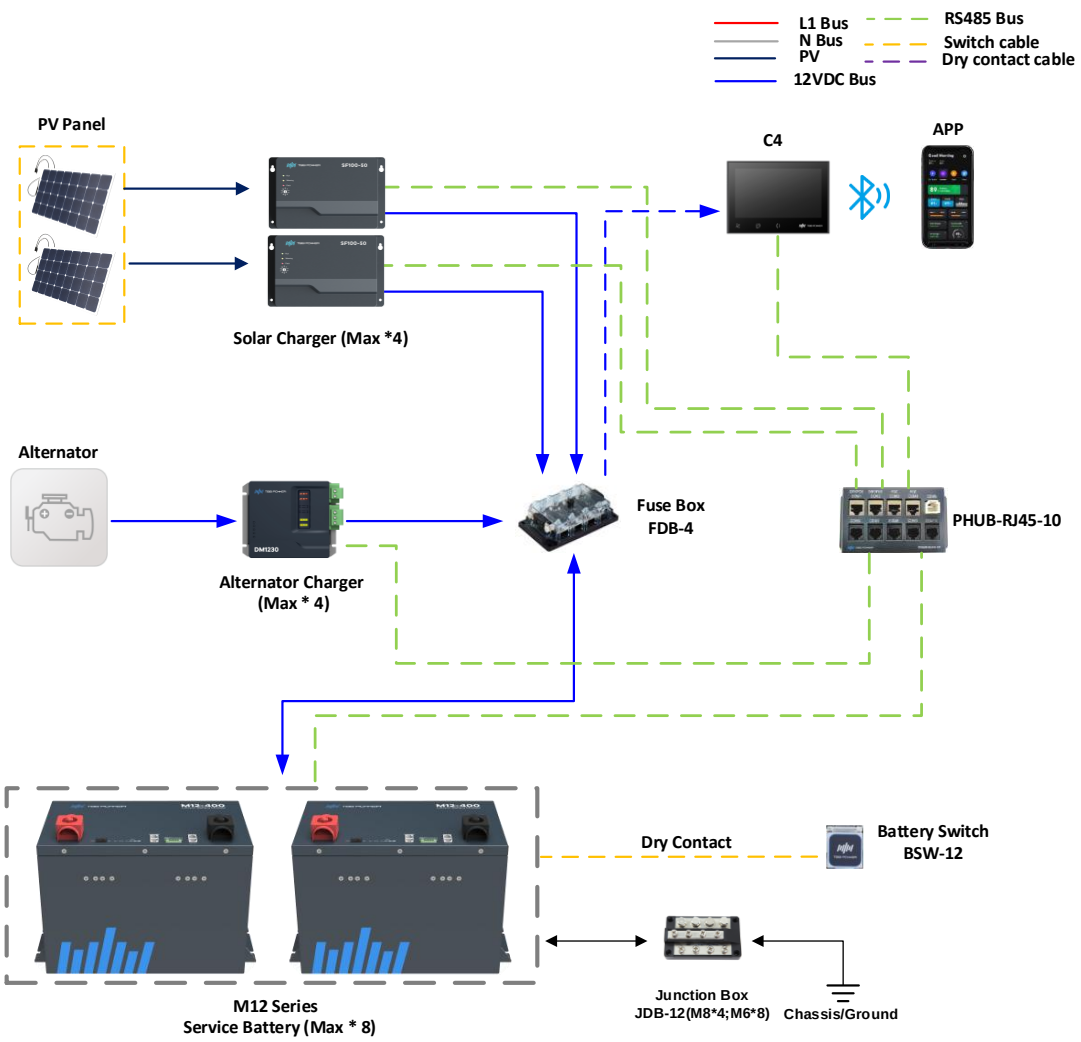

fig 2-3 Battery Pack 01 Mode

tab 2-3 Battery Pack 01 Mode

NO.	System Component	Remark
1	4" Touch Screen	C4 (1PCS)
2	12V Lithium Service Battery	M12 Series(1~8PCS)
3	MPPT Solar Charger	SF100 Series (1~4PCS)
4	Alternator Charger	DM12 Series (1~4PCS)
5	HUB-RJ45	PHUB-RJ45-10
6	Junction Box	JDB-12
7	Fuse Box	FDB-4

4. The wiring diagram for Battery Pack 02 mode is shown in Figure 2.4, and the system configuration list is shown in Table 2.4.

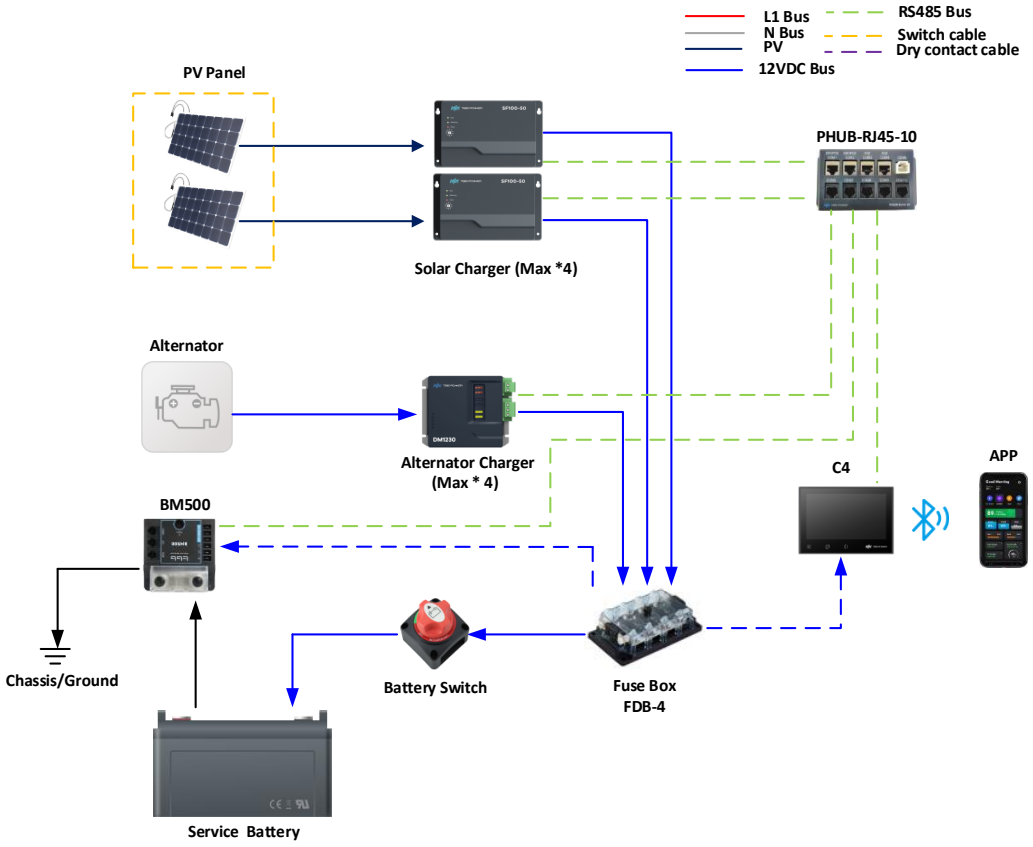

fig 2-4 Battery Pack 02 Mode

tab 2-4 Battery Pack 02 Mode

NO.	System Component	Remark
1	4" Touch Screen	C4 (1PCS)
2	500AMP Shunt Module	BM500
3	MPPT Solar Charger	SF Series (1~4PCS)
4	Alternator Charger	DM12 Series (1~4PCS)
5	HUB-RJ45	PHUB-RJ45-10
6	Junction Box	JDB-12
7	Fuse Box	FDB-4

2.3 Introduction to system modules

2.3.1 Bi-directional Inverter CM Series

The CM Series Integrated Inverter Charger has strong load capacity, meeting the power needs of various household appliances such as air conditioners, hair dryers, induction cookers, electric kettles, coffee machines, etc., fulfilling the demands for home appliances in RV living.

With its high efficiency and low noise, it saves limited energy and provides a quiet, comfortable living environment for RV users. Additionally, its 2-millisecond switching time ensures continuous operation of the load.

Features:

1) Pure sine wave output: The CM series inverter outputs a purer sine wave than utility power, with stable frequency and voltage, low ripple, and low distortion, ensuring stable operation of various electronic devices.

2) Strong load capacity: Adopting a low-frequency design, it can meet the stable load demands of various inductive loads such as air conditioners, microwaves, and induction cookers.

3) High efficiency: With industry-leading efficiency of 93% and standby power consumption of 16W, it ensures maximum utilization of energy stored in expensive battery investments.

4) Built-in lithium battery charging management strategy for system coordination: The CM series inverter has a built-in lithium battery charging strategy from the M series. With this coordinated charging management, the CM series can dynamically adjust the charging voltage and current based on instructions from the lithium battery's BMS, effectively preventing overcharging of individual cells and ensuring the battery's expected lifespan.

5) Comprehensive protection features: Equipped with a range of hardware and software protection features, including overload protection, over-temperature protection, short-circuit protection, and low battery voltage protection, ensuring stable and reliable operation.

6) Multiple communication functions: Includes one remote on/off control (for controlling the inverter’s power), two configurable dry contact outputs (for controlling other equipment), and RS485 communication (for communication with external devices).

Product Installation:

The product’s appearance and mounting dimensions are shown in the diagram below. Install the product horizontally, ensuring the mounting surface is strong enough. All screws in the four mounting holes must be tightly secured to ensure reliable installation. Leave at least 150mm of space on both sides and at least 300mm of space at the front

and rear to ensure proper heat dissipation, as shown in the diagram.

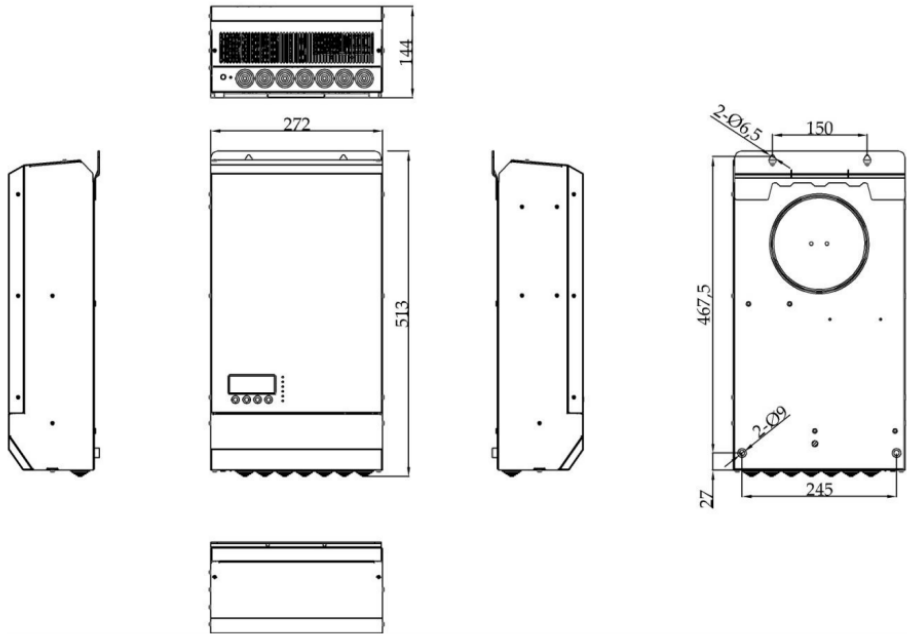

fig 2-5 Dimension of Bi-directional Inverter

2.3.2 SF Series MPPT Solar Charge Controller

With MPPT technology, the SF100 series solar charge controller enables maximum energy tracking for solar charging. This technology allows the controller to track the maximum power point of an array quickly and accurately in any environment, obtain the maximum energy of solar panel in real time, and charge the battery at maximum current.

The SF100 series controller has a built-in multi-stage battery charging algorithm, along with an MPPT algorithm that allows for wide voltage input ranges. This makes this controller suitable for charging various types of batteries, including Gel, AGM, Lithium, and traditional Lead-acid batteries. It has built in RS485 and CAN communication capabilities for system integration, as well as built in Bluetooth transmitter for monitoring and controlling from a smartphone or tablet via the Solar Mate app. The controller will also store data regarding historical events, daily power generation, monthly power generation, and total power generation. The main features are as follows:

- ➢ Wide MPPT voltage range;
- ➢ High conversion efficiency, the Max. efficiency ≥97.2%
- ➢ High MPPT efficiency, the Max. efficiency ≥99.9%
- ➢ Adaption on 12Vdc/ 24Vdc battery
- ➢ Built-in battery temperature compensation feature
- ➢ Support RS485, CAN and Bluetooth communication
- ➢ Support wide operation temperature, charging during -40~60℃
- ➢ Support 365 days real-time data recording, event recording and power statistics;

2.3.3 DM series Alternator Charger (12V Lithium Service Battery)

TBB's DM series charger is an in-vehicle charging solution which specified designed for on-board application such as RV, Marine, Utility Vehicle, Truck etc.

Dual outputs DMT1250 comes with a brilliant feature of dual outputs: one is for auxiliary battery charging with charge current up to 30A, and the other one is dedicated to power a DC load (Typically a DC fridge) with current up to 20A. When vehicle engine is running, DMT1250 will draw power from engine to charge battery as well as to power DC load; when vehicle engine is turned off, DMT1250 will draw power from auxiliary battery to power DC load. So that connected DC load could be powered always either by engine or auxiliary battery.

Single output DM1230 and DM1245 are the booster charger only with charge current up to 30A or 45A respectively for 12V system.

Single output DM2430 is a booster charger only with charge current up to 30A for 24V system.

All DM and DMT chargers are Euro-6 engine compatible, which is able to charge auxiliary battery properly and fully with much wider variable voltage output from engine.

- ➢ Dual outputs, separate circuits for charging battery and powering DC load (DMT1250);
- ➢ Non-isolation design with max efficiency 96%;
- ➢ Euro-6 engine (Smart alternator) compatible;

- TBB Premium II multiple stages charging algorithm;
- Multiple battery chemical for optional including lithium battery;
- Built-in automatic temperature compensated charging;
- Plug and Play for easy installation;
- Natural cooling without fan;
- Supports RS485 communication;
- Protection against input/output over voltage, output over current, output short circuit, internal over temperature, battery over temperature, battery low temperature protect for LFP etc.
- Back-charging function.

2.3.4 BM500(500AMP Shunt Module)

TBB's Battery Manito「 Kit is composed by two devices:

- A battery shunt BM500
- A monitor MBM

TBB's battery monitor kit is highlighted as below features:

- Measured current is up to 500A
- Could be used for battery (or battery bank) 12V, 24V or 48V
- Compatible with AGM, GEL or LFP battery
- Built-in Bluetooth on MBM to allow user to monitor battery by mobile APP
- Programmable dry contact allow user to connect with a warning facility
- Contact ratings 2A@30Vdc or 0.5A@125Vac
- Measurement accuracy
- Current: +/- 0.4%
- Voltage: +/-0.3%
- Support CAN and RS485

2.3.5 C4(4" Touch Screen)

C4 LCD Monitor is a 4.3-inch display-control-screen designed for vehicle and industrial sectors where a control functionality is required. Thanks to its compact design with multiple ports, C4 LCD Monitor offers a cost-effective and reliable method for most customers' demand for load control and data display.

2.3.6 M12 Series (12V Lithium Service Battery)

The M12 series is a 12V lithium-ion battery module. The positive electrode of the battery is made of lithium iron phosphate (LiFePO4) material. It configures high-performance and high-reliability BMS to effectively manage the cells, including cell over-voltage, under-voltage, charge over-current, discharge over-current, over-temperature, low temperature, short circuit and other protection functions. It also has built-in cell voltage balance, capacity calculation, SOC calculation, cycle life accumulation and low temperature heating functions. It is suitable for energy storage systems of vehicles, ships etc.

- The positive electrode of the battery is made of lithium iron phosphate (LiFePO4) material, which has good safety performance and long cycle life. 3000 cycles @ 25℃,0.5C charge and discharge.
- High-performance BMS with over-discharge, over-charge, over-current, temperature and other protection functions. With automatic charge and discharge management and single cell balance function.
- Supports maximum 300A discharge current.
- Supports up to 8 units in parallel.
- With external charging activation function. In the shutdown state, when the external charging voltage is >14V, the battery can actively wake up, and allow charging and prohibit discharging;
- It can be equipped with MEH-B display panel for battery switch and battery status (voltage, current, SOC) display.
- The battery has low self-discharge rate. The standby power consumption after the battery is turned on is <50mA, and it can be reduced to <0.1mA after the battery is turned off.

- Wide working temperature range, -30℃ ~ +60℃. Good cycle life and discharge performance at high temperature.
- Built-in low temperature heating element, with TBB power supply system, can realize automatic battery thermal management under low temperature conditions. With external power supply (mains power, solar energy, vehicle engine), the battery temperature can be automatically heated to meet the requirements of charging and discharging under low temperature conditions. It will take about 90 minutes from -20℃ to +5℃.
- The battery has small size, light weight and high energy density.

3 System Installation Requirements

3.1 Distribution compartment requirement

3.1.1 Heat dissipation in the compartment

As shown in the picture below, please make sure that the distribution compartment is equipped with 2 or more cooling fans (fan speed ≥ 2200RPM), which are installed in the front, back or left or right position of the distribution warehouse. There is no obstruction at a distance of 200mm or more in front of the fan, and the fan wind direction should be assembled according to one end of the inlet and one end of the outlet, so that the modules in the distribution bin can operate in a ventilated and cool environment.

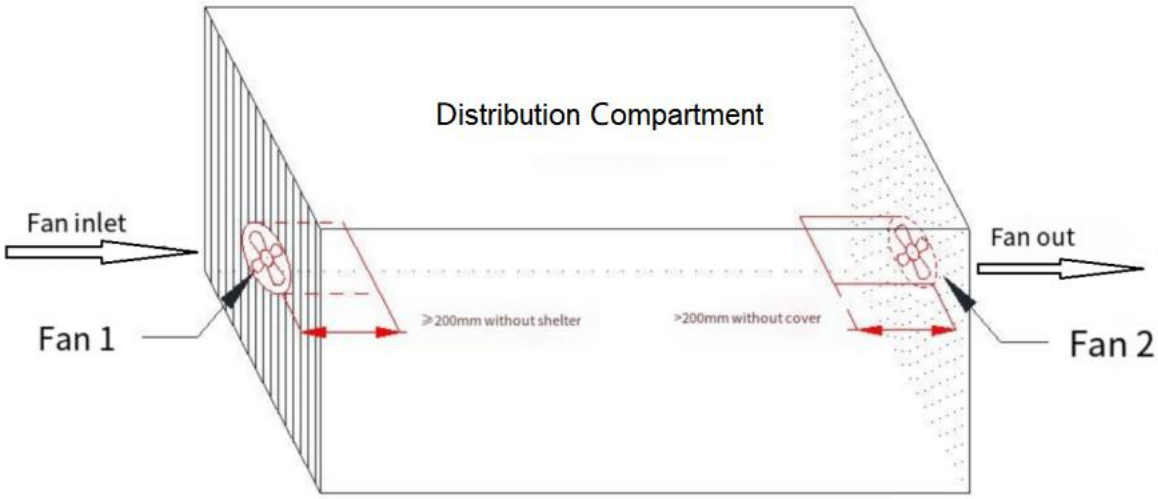

Figure 3.1 Schematic diagram of heat dissipation in distribution compartment

3.1.2 Water and electricity isolation

To prevent water leakage from water tanks, pipes, pumps, washing machines and other water-using equipment from affecting the safe operation of the modules, make sure that the water-using equipment is effectively isolated from the distribution bin, so that the modules, wiring harnesses, etc. in the bin are in a dry and safe environment.

3.2 System cables

3.2.1 Wire diameter recommendations

AC cables and DC cables are configured by the users themselves, in order to ensure the safety of electricity, the cable diameter should be selected in strict accordance with the system power line wiring diagram or refer to the following table:

Table 3.1 System Power Harness Recommendations

Equipment name	AC Side Wire Diameter	DC Side Wire Diameter
CM3.0L	≥10mm² (≤3m) Maximum current 50A	35-50mm² (≤3m) Maximum current 125A
SF100-50	/	12Vdc side: ≥25mm² (≤3m) 48Vdc side: ≥10mm² (≤5m)
DM1260	/	≥10mm² (≤3m)
M12-400	/	≥10mm² (≤3m)

NOTE:

1) To avoid fire and electric shock, make sure that all cables have good electrical characteristics and are of suitable wire diameter.

2) It is prohibited to use damaged or too small wire diameter cables.

3) Cables with a temperature resistance of 105°C need to be selected.

3.2.2 Wire colors

In order to ensure that the wires are standard and the connections are easily distinguishable, it is recommended to use red wires for the positive pole and black wires for the negative pole on the DC side, blue wires for the zero wire and red or brown wires for the fire wire on the AC side, and yellow-green wires for the earth wire;

3.2.3 Wiring requirements

1) To prevent the charger from working on the power when wiring, resulting in ignition

during wiring, before wiring, please make sure that the switch of each module and external control signals, the boat switch of each battery, and the big gate on the output side are all in the state of disconnection, and it is strictly prohibited to operate with electricity.

2) In order to prevent misconnection and omission of cables, please strictly follow the requirements of the system connection diagram for wiring.

3) Please make sure the polarity of DC input is correct, otherwise the module will be damaged. Please make sure that the AC input and output cables are connected correctly, otherwise the inverter may be damaged.

4) To ensure that the wires dissipate heat and make good contact, please make sure that each terminal is crimped securely and each wire is connected reliably.

5) Only one wire terminal can be locked in one locking hole, do not lock more than one wire in the same hole.

6) Please install each module as close as possible to the battery fuse box to reduce the length of the wires and thus reduce the voltage drop and wire loss between the module and the battery.

7) Please make sure that the battery negative terminal, inverter chassis lap iron is effective, and AC input/output ground wires are connected reliably and reasonably.

3.2.4 Wiring rules

1) In order to ensure the long-term stable operation of the wiring harness, power harness, signal harness, network lines need to go through a special slot, the way to ensure that there is no sharp objects, so as not to scratch the wiring harness.

2) In the terminal connection needs to leave some redundancy, especially near the harness terminals, network cable ends, so that the harness is not in a taut or folded state, so as not to damage the harness.

3) The permissible bending radius of cables with an external diameter (D) of less than 25mm² should not be less than 4D; the permissible bending radius of cables with an external diameter (D) of 25mm² and above should not be less than 6D (Note: D is the external diameter of the cable mm²).

4) In order to reduce the chance of signal interference, please separate wiring between

the signal harness and power lines.

5) Please make sure that the wiring harness is not crushed by the module, and the wiring channel should be laid to avoid the edges of each module, and do not close to the module, so as not to affect the module heat dissipation and burn the wiring harness.

3.3 Fuse recommendations

In order to ensure the independence of each module input and the safety of the system, please make sure that each module input is equipped with a fuse, and the fuse specification should be configured in strict accordance with the system power wiring diagram or the following table:

Table 3.2 Positive Input Fuse Specification Configuration Recommendations

Equipment name	Positive Fuse Specifications
CM3.0L Inverter	300A, 80V, flat type fuse
DM1260	80A, 80V, flat type fuse
SF100-50	60A, 80V, flat type fuse

NOTE:

1) It is recommended to choose ceramic material with good heat dissipation effect for the external heat dissipation material of the fuse.

2) Please make sure that each module is equipped with one fuse, and it is strictly prohibited to share the fuse between modules.

3.4 PV panel configuration requirements

To ensure normal PV charging and normal and safe operation of the inverter, please strictly refer to the following requirements when configuring the PV panel:

1) The configured PV voltage value needs to be between 65~140V (ideal voltage value is 100~135V);

2) The maximum PV input power value is 1600W;

4 Dip Switch Setting

4.1 SF Series MPPT Solar Charge Controller

fig 4-1 SF Series Battery Type Dip Setting

DIP Switch Status	Definition
0/Other	Battery Type: GEL/OpzV
1	Battery Type: AGM
2	Battery Type: LFP
3	Battery Type: WET

5 System Operation

5.1 Pre-startup Inspection

1) Confirm once again that the battery circuit breaker is in the OFF position.
2) Check if each module is securely installed and that the installation space meets the heat dissipation requirements.
3) Ensure that the actual input voltage of each module matches the required operating voltage of the module.
4) Confirm once again that the DC input polarity of each module is correct and that there is no short-circuiting, as this could damage the modules.
5) Verify that all signal cables are properly connected and securely fastened.
6) Ensure that power cables and signal cables are reliably connected.
7) Check that the DIP switch settings of each module are correct.

5.2 System Power-Up

WARNING: Double-check battery polarity and battery voltage before closing the battery circuit breaker.

1) Turn each lithium battery boat switch to ON.
2) Close the battery gate (if there is a gate added to the battery output, this operation is required), press the BSW battery switch once (battery switch is shown in the following figure), after eight seconds, the battery switch indicator light will be on, and the battery has output.

3) The system will enter the boot self-test process and enter the main page.

5.3 System Shutdown

1) Short press the BSW battery switch once, after five seconds have passed, the battery switch indicator will go out, the battery will turn off and the system will shut down.

5.4 Automatic Charging Function

1) Utility automatic charging: the system and battery are in off state, when the system detects a utility to enter, the system will be turned on after the battery is woken up, when C4 initialization is completed to enter the main page, the utility to start charging the battery in the system; the utility disconnected, the inverter exits the charging state, the battery detects that the inverter exits from the charging state to power down, the system follows the power down

2) ALT automatic charging: the system and the battery are off, when the system detects an external voltage coming in, then the system will be turned on after the battery is woken up When C4 initialization is completed, ALT starts to charge the battery in the system; after the generator is disconnected, DM1260 exits the charging state, the battery detects that DM1260 exits from the charging state and then goes down, and the system follows the power down.

3) PV automatic charging: the system and the battery are off, when the system detects an external voltage coming in, the system will be turned on when the battery is woken up When C4 initialization is completed, MPPT starts charging the battery in the system; after PV disconnection, SP exits the charging state, the battery detects that SP exits from the charging state and powers down, and the system follows to power down.

6 Display Operating Instructions

6.1 Description of C4 interface display

6.1.1 Home-Bluetooth:

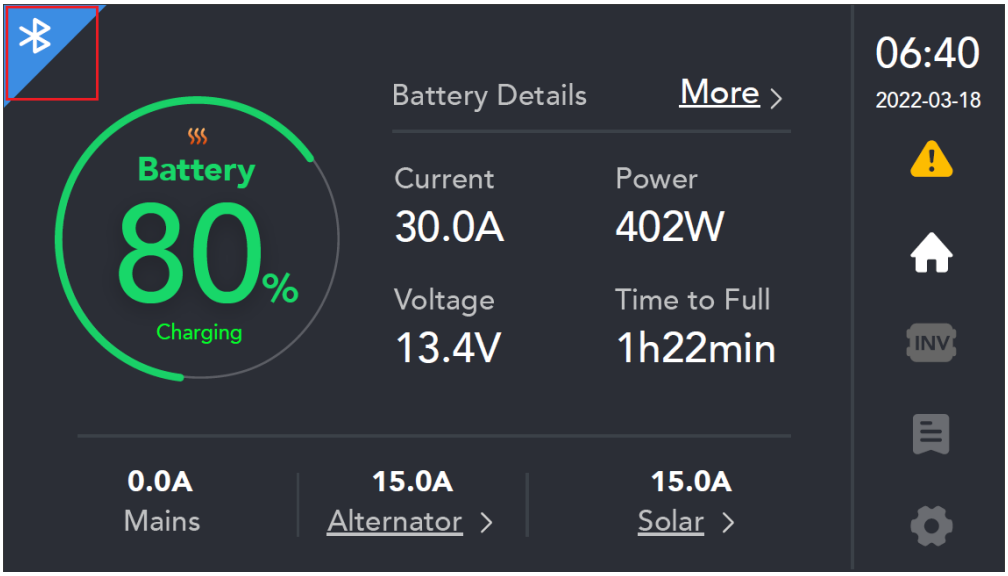

fig 6-1 Home Page-Bluetooth

The top left corner of the home page is the Bluetooth status display, if there is no Bluetooth access is grayed out, such as clicking on the top Bluetooth icon, you can pop-up window to prompt the Bluetooth name and check code for Bluetooth connection with the phone.

Mobile APP of TBB's Inverter Pack can be downloaded by scanning below QR codes

Apple Store

Google Play

6.1.2 Home-Battery:

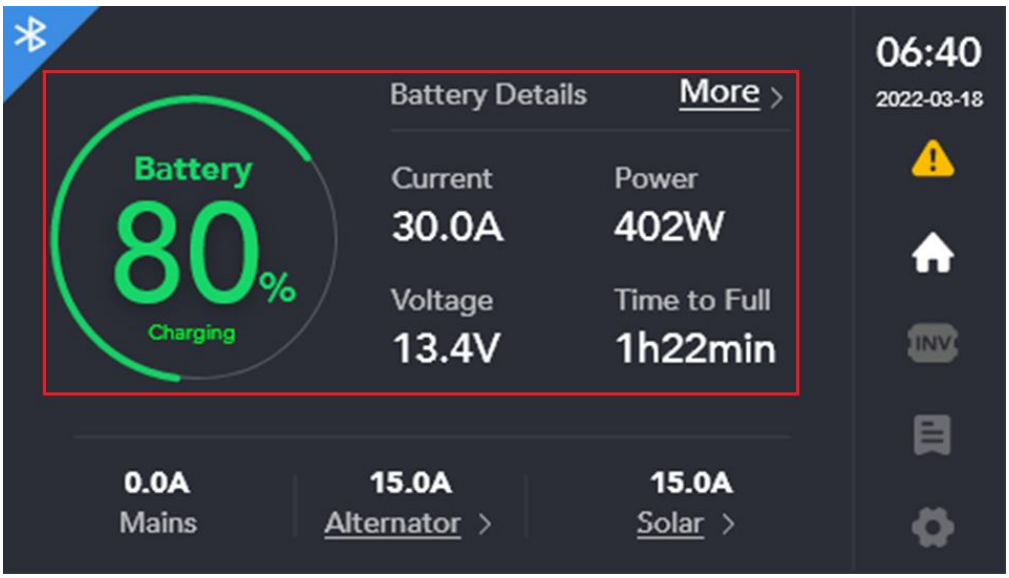

fig 6-2 Home Page-Battery

1. It can display the current state of the battery (charging/discharging), such as charging, the home page - battery status will display the current charging current, charging voltage, charging power, charging time remaining; such as discharging, the home page - battery status will display the discharging current, discharging power, discharging voltage, discharging time remaining, and so on.

2. Click “More” to enter the battery detail page (this function is not available in Battery Pack 02 mode).

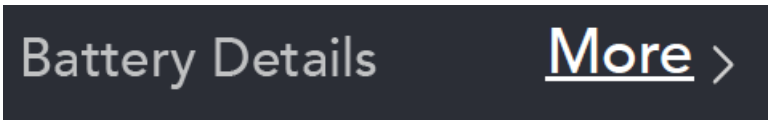

fig 6-3 Home Page-Battery-More

The details page is as follows:

fig 6-4 Home Page-Battery-Detail

3. Battery Status Bar: can intuitively display the current battery in the charging / discharging state and the remaining power, the remaining power when the SOC bar is green, blue when discharging, red when the power is low.

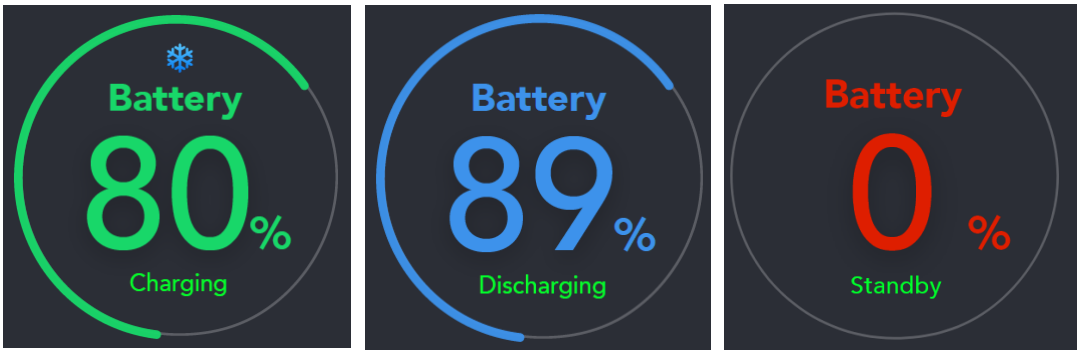

fig 6-5 Home Page-Battery-State

6.1.3 Home-Charger

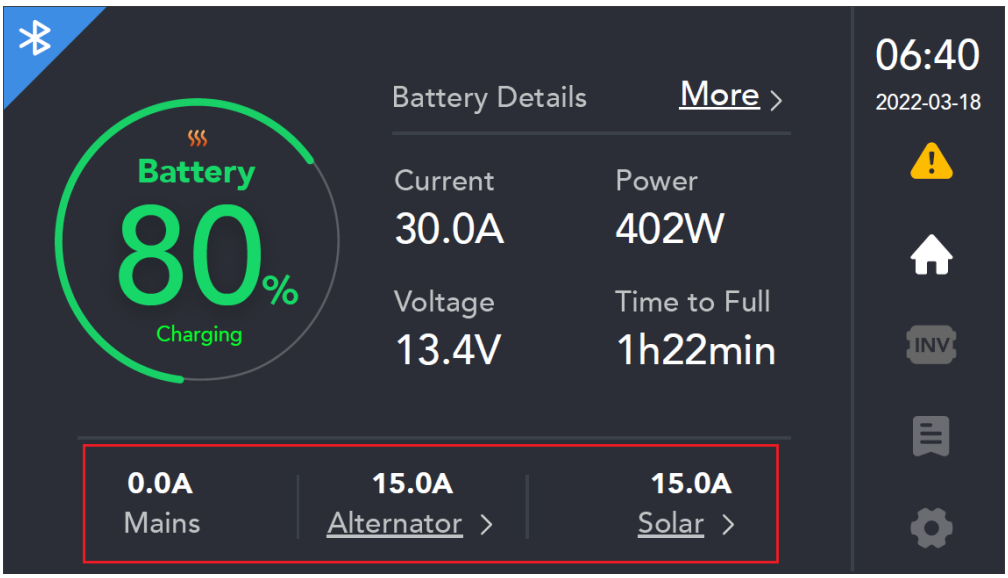

fig 6-6 Home Page-Charger

At the bottom of the home page are the utility input current, traveling charging current, and solar charging current. (When there are more than one, the value is the sum of more than one)

When the charger is not working or out of connection, the data shows “- -” and the unit is reserved, as shown in the figure below.

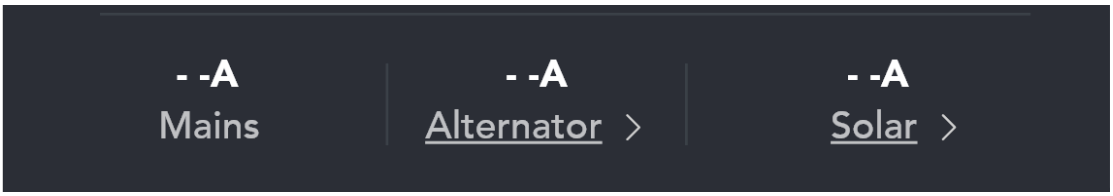

fig 6-7 Home Page-Charger

1. Click on the “Alternator” can enter the car charger to view the detailed page, as follows:

fig 6-8 Home Page-Charger-ALT

2. Click “Solar” can enter the solar charger to view the detailed page, as follows:

fig 6-9 Home Page-Charger-Solar

6.1.4 Home - Right Sidebar

The right sidebar, from top to bottom, shows the current time display, alarm page, main page, inverter detail page, software detail page, and setting page.

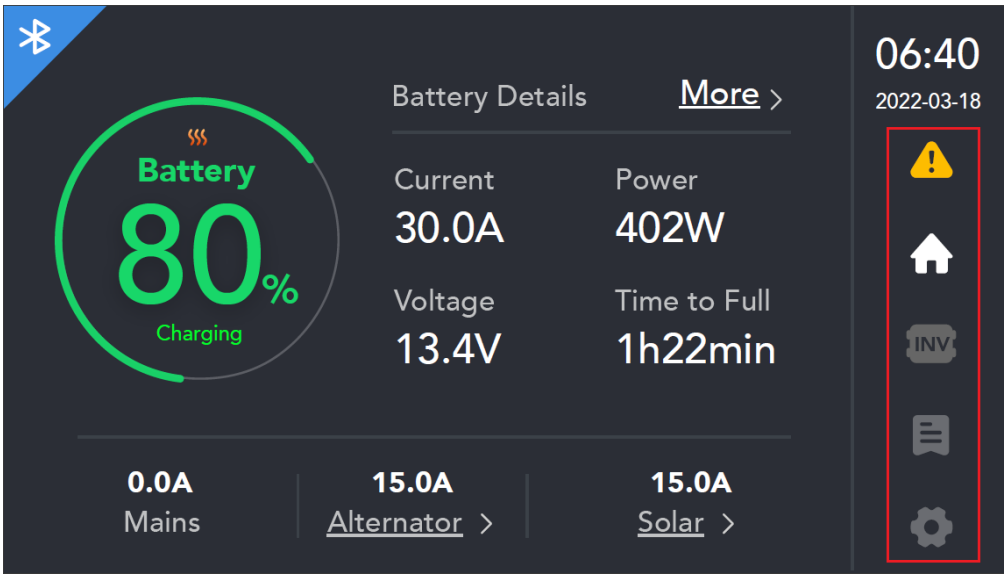

fig 6-10 Home Page - Right Sidebar

6.2 Description of the warning page

Can check the current alarm information:

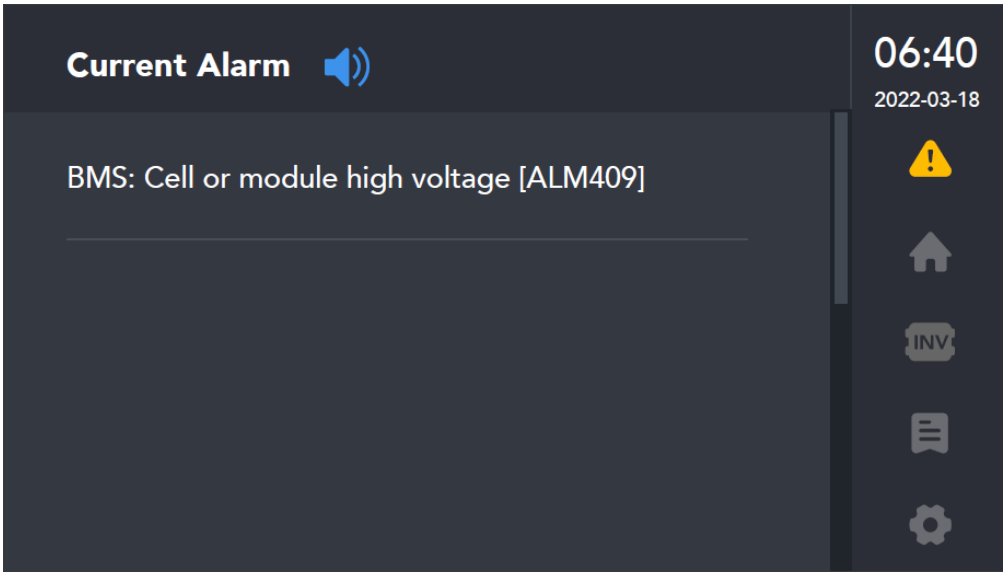

fig 6-11 Alarm Page-Alarm Message

When an alarm exists, click on the blue horn icon to turn off the buzzer alert for the current alarm and gray out the icon.

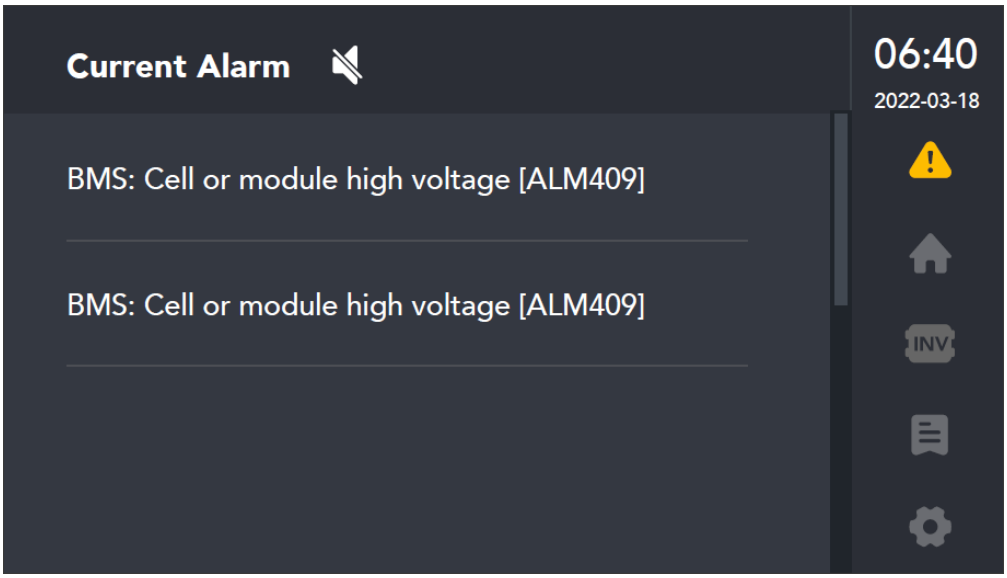

fig 6-12 Alarm Page -Buzzer

6.3 Inverter Detail Page

In this page, you can view the current working status of the inverter in the system, the inputs and outputs of both AC and DC sides, and the inverter's inverter switch is also placed in this page. This screen is hidden when the system selects Battery Pack 01/02 mode.

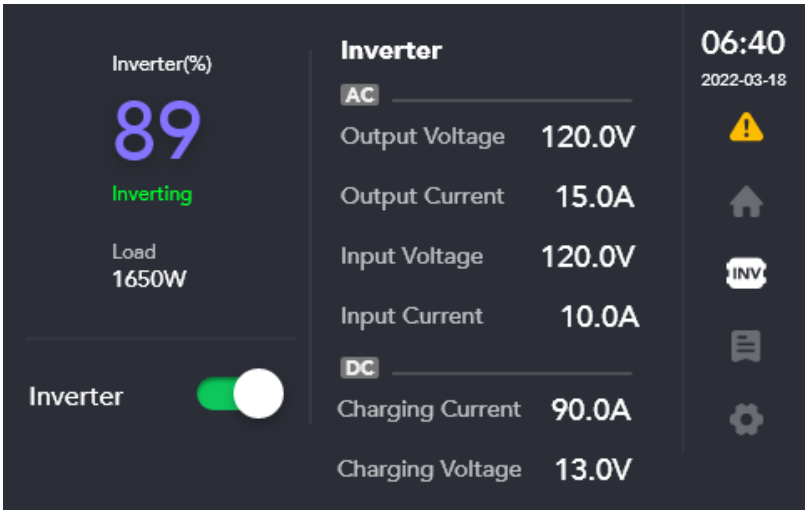

fig 6-13 Inverter Detail Page - Input and Output Conditions

6.4 Software Detail Page

This page allows to view the software version of each module under the current system, so that you can check whether the current system functions are perfect in order to

update the module software in time.

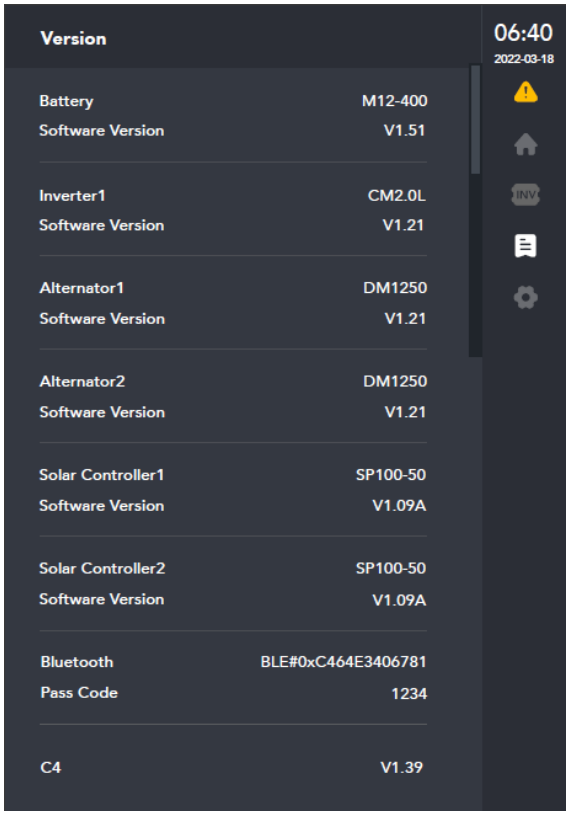

fig 6-14 Software detail page

6.5 Setup Page

6.5.1 System Setup Page:

This screen allows you to set the options in order from top to bottom:

1. System Mode : Single Inverter 01, Single Inverter 02, Dual Inverter 01, Dual Inverter 02, Battery Pack 01, Battery Pack 02 (Dual Inverter Mode for US only);

2, TBB Solar Controller Number: Max 4;

3, TBB ALT Charger Number: Max 4;

4, Date Format: The default is Year-Month-Day;

5, Date;

6, Time Format: The default is 24-Hour;

7, Time;

8, Standby Time: The default is 30s;

9, Brightness: The default is 50%;

10, Buzzer Silent Mode: The default is OFF;

11, Restore Default Settings;

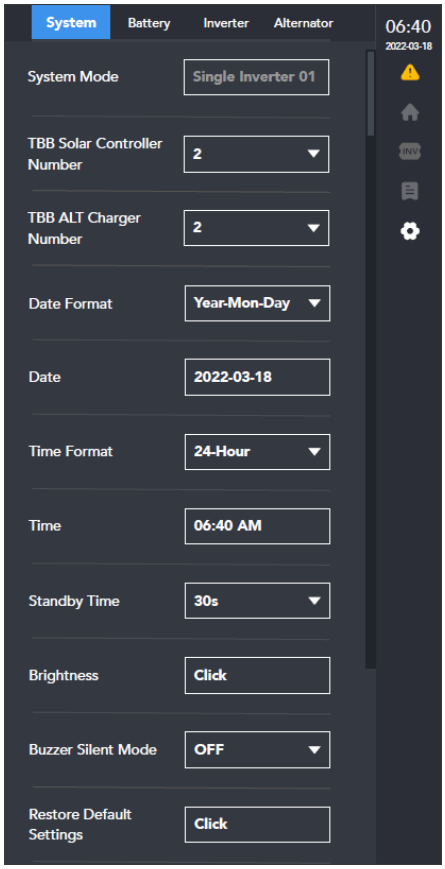

fig 6-15 System Settings Page

6.5.2 Battery Settings Page:

The Battery Model option is automatically recognized by the communication, grayed out and not settable, and the settable options are: Low Voltage Alram、Low Soc Warning、Low Soc Disconnect;

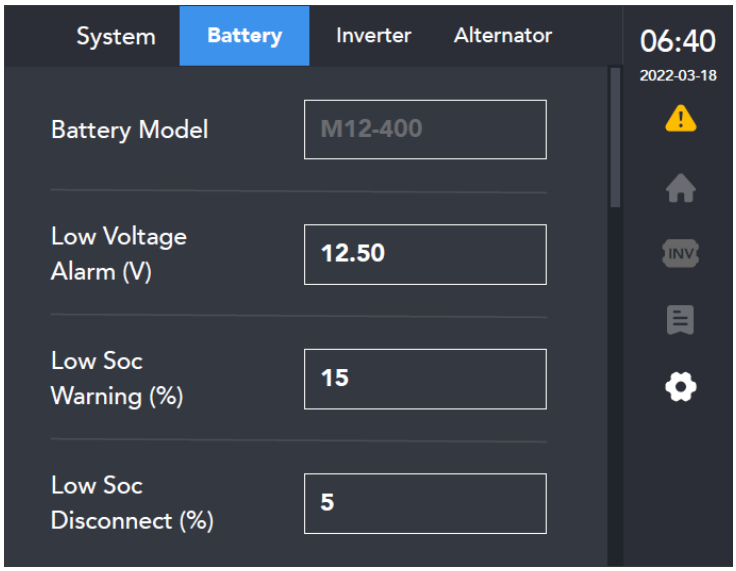

fig 6-16 Battery settings page

6.5.3 Inverter Settings Page:

Output Voltage、Output Frequency、Ground Relay options are grayed out and not configurable; configurable options are listed in order from top to bottom: **Shore Input Value** (Default values are automatically recognized through the newsletter); **AC Wave Harmonic Adaption** (set only in standby); **"Sync"** (Synchronize settings to the inverter).

This setting page is hidden by default when the system mode is Battery Pack 01/02.

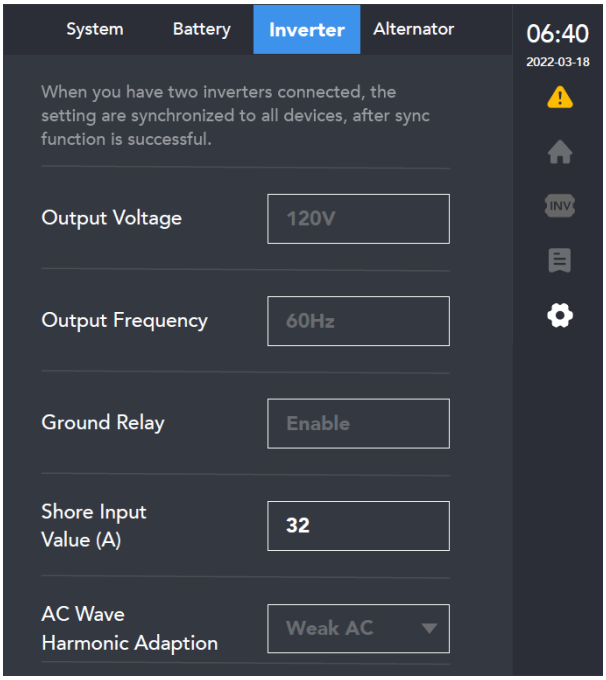

fig 6-17 Inverter Settings Page

6.5.4 ALT Charger Setting Page:

ALT Charger option is grayed out and cannot be set; the options that can be set from top to bottom are: **start charging voltage** (default value 13.2, setting range 12~14.5V); **stop charging voltage** (default value 12.8V, setting range 11.6~13.5V); **delayed opening time** (default value 20S, setting range 5~60S); **maximum charging current** (setting range 30~ 60A)

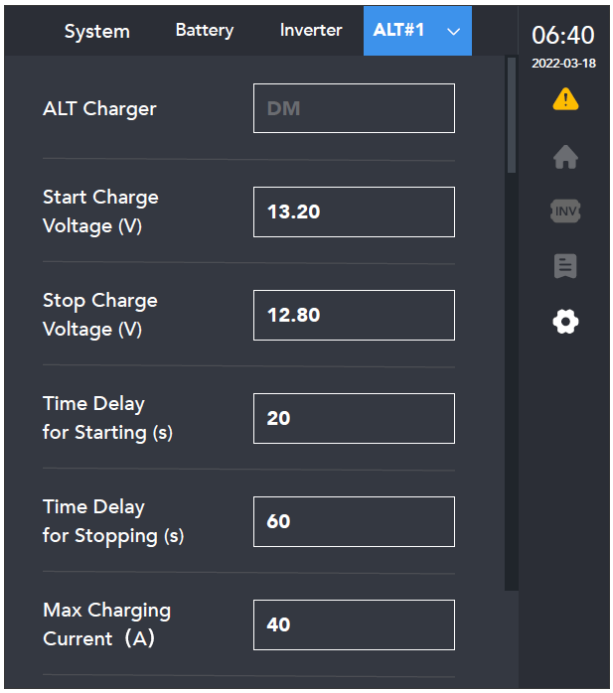

fig 6-18 ALT Charger Setting Page

6.5.5 BM500 Settings Page:

The options that can be set in order from top to bottom are: battery type (GEL/AGM/LFP/WET); battery capacity (the setting range is from 50~5000Ah); maximum charging rate (the default value is 0.05C, and the setting range is from 0.05~1C); SOC calibration voltage (the setting range is from 13.2~14.6V); ” Calibration” (manual calibration button, current SOC will be set to 100%). (This setting page is only applicable in Battery Pack 02 mode)

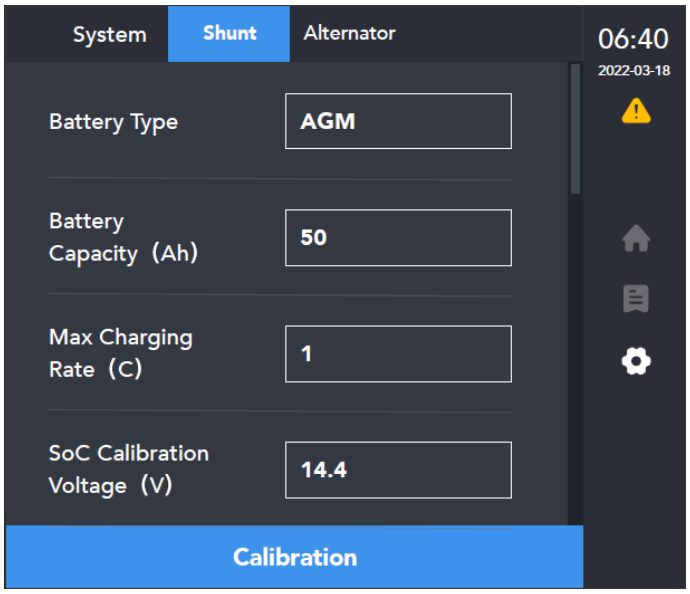

fig 6-19 BM500 Setting Page

7 System connection

7.1 Single Inverter 01 wiring diagram

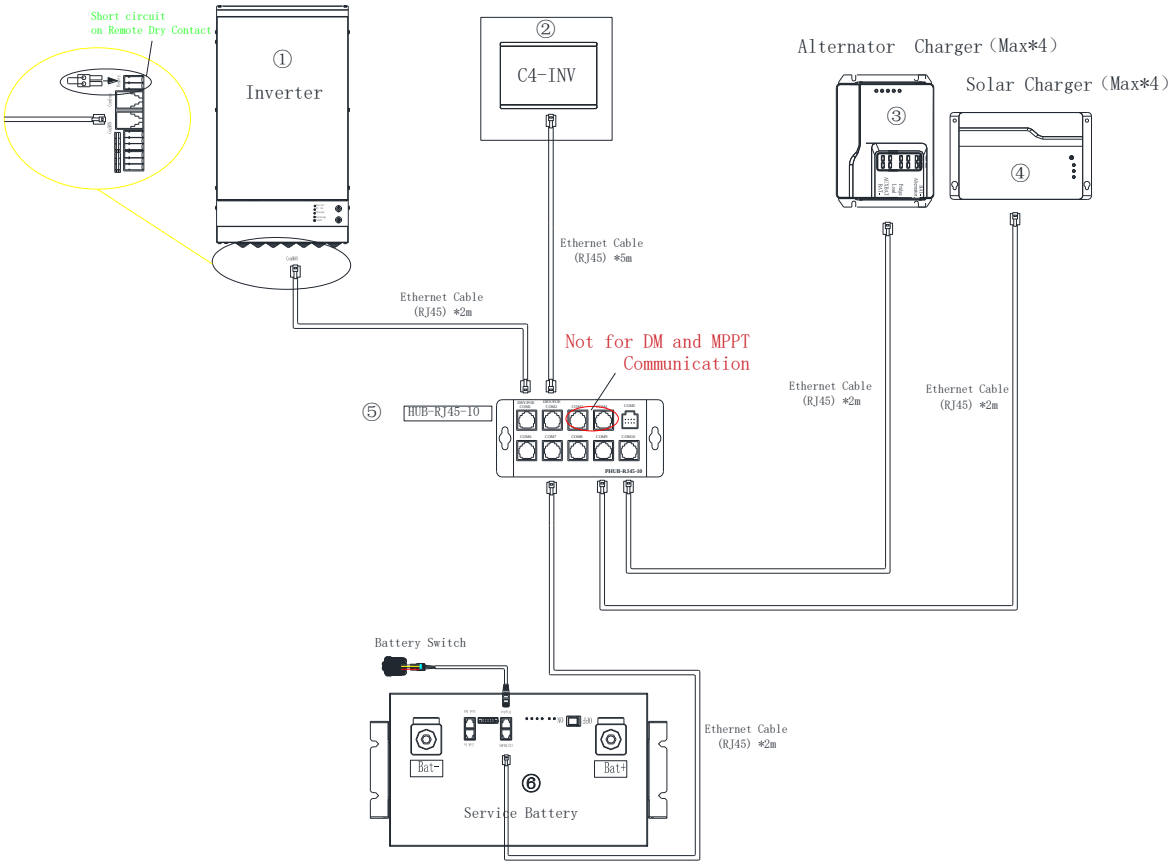

fig 7-1 Single Inverter 01 communication cable connection

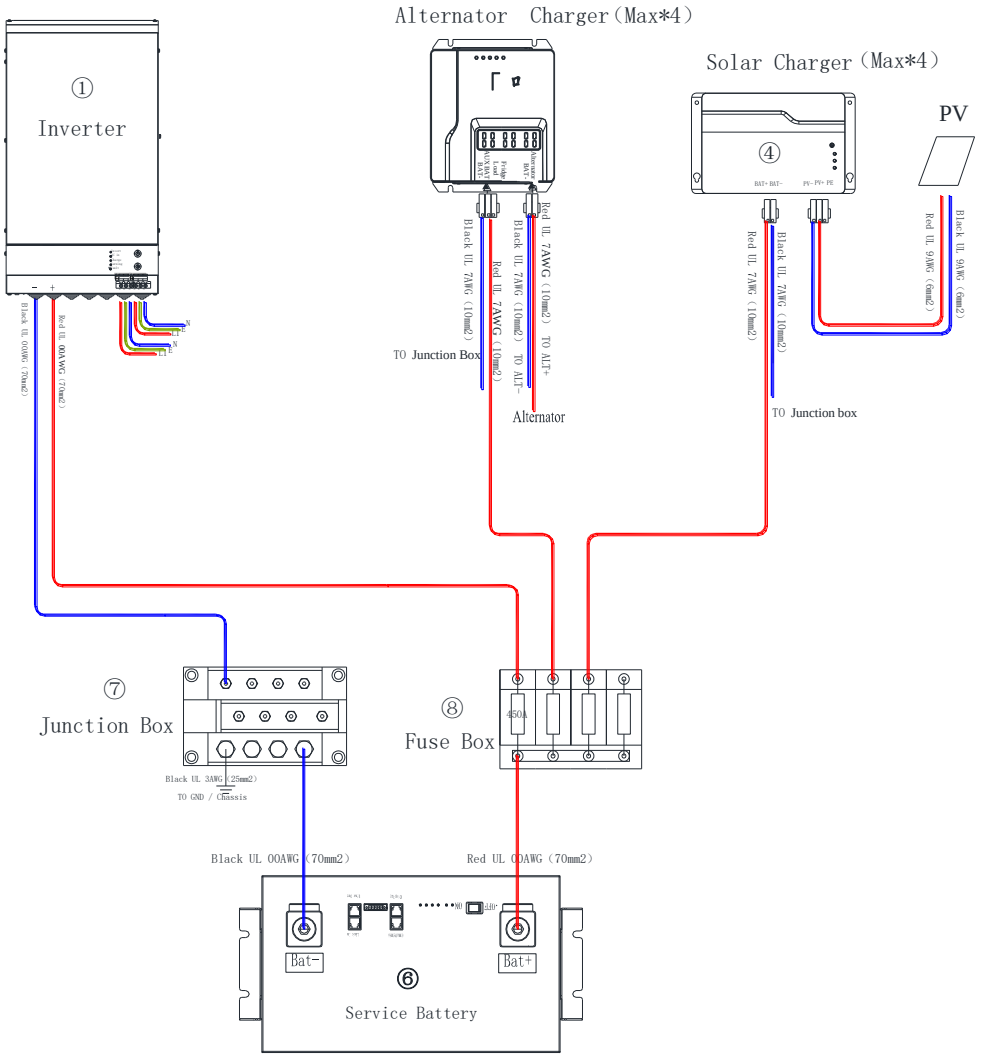

fig 7-2 Single Inverter 01 power cable connection

7.2 Single Inverter 02 wiring diagram

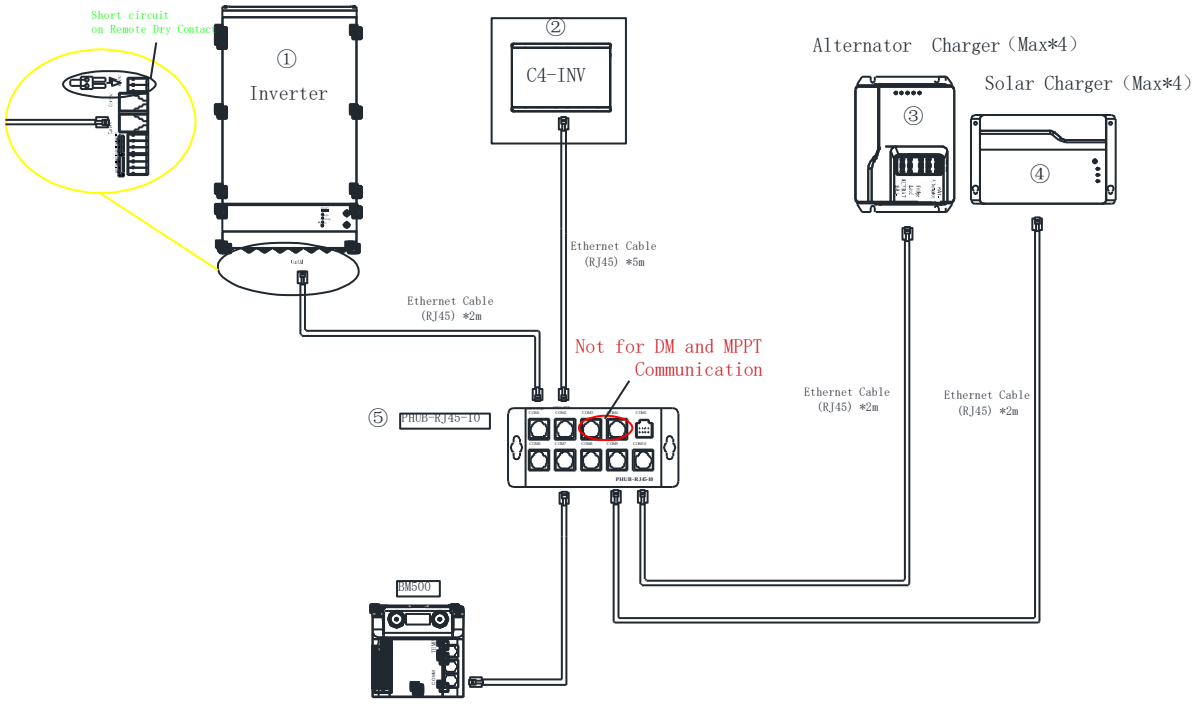

fig 7-3 Single Inverter 02 communication cable connection

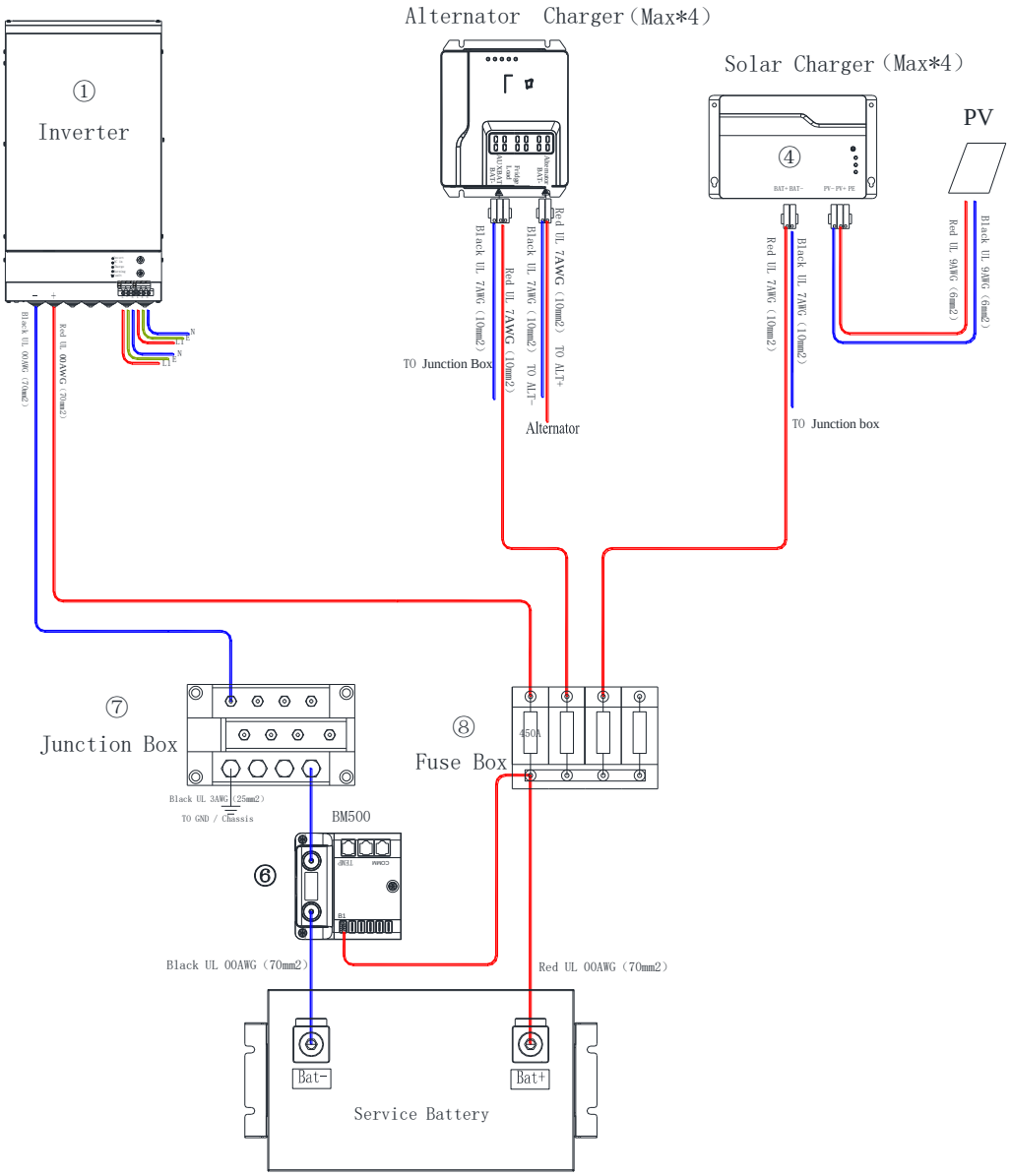

fig 7-4 Single Inverter 02 power cable connection

7.3 Battery Pack 01 wiring diagram

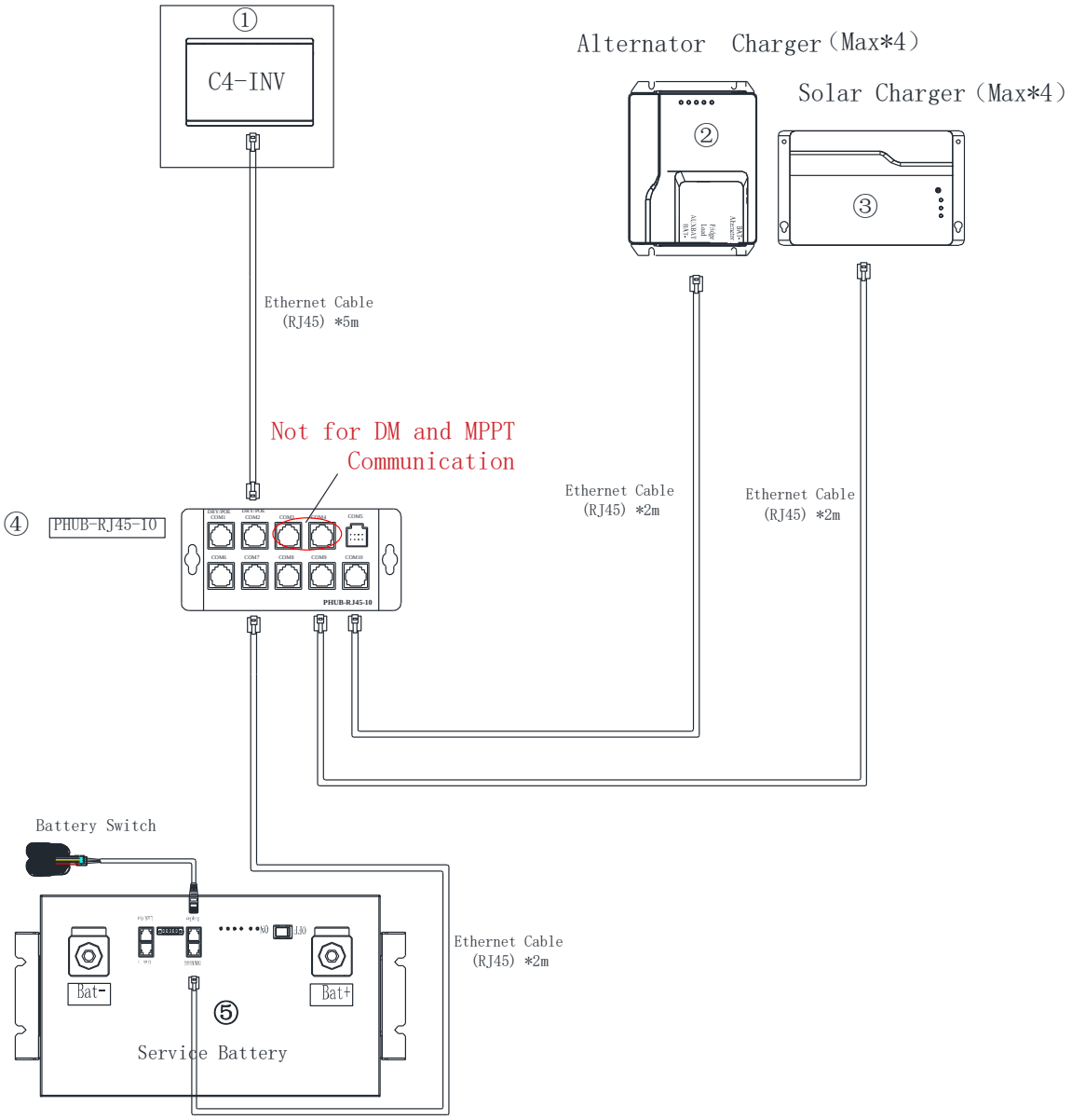

fig 7-5 Battery Pack 01 communication cable connection

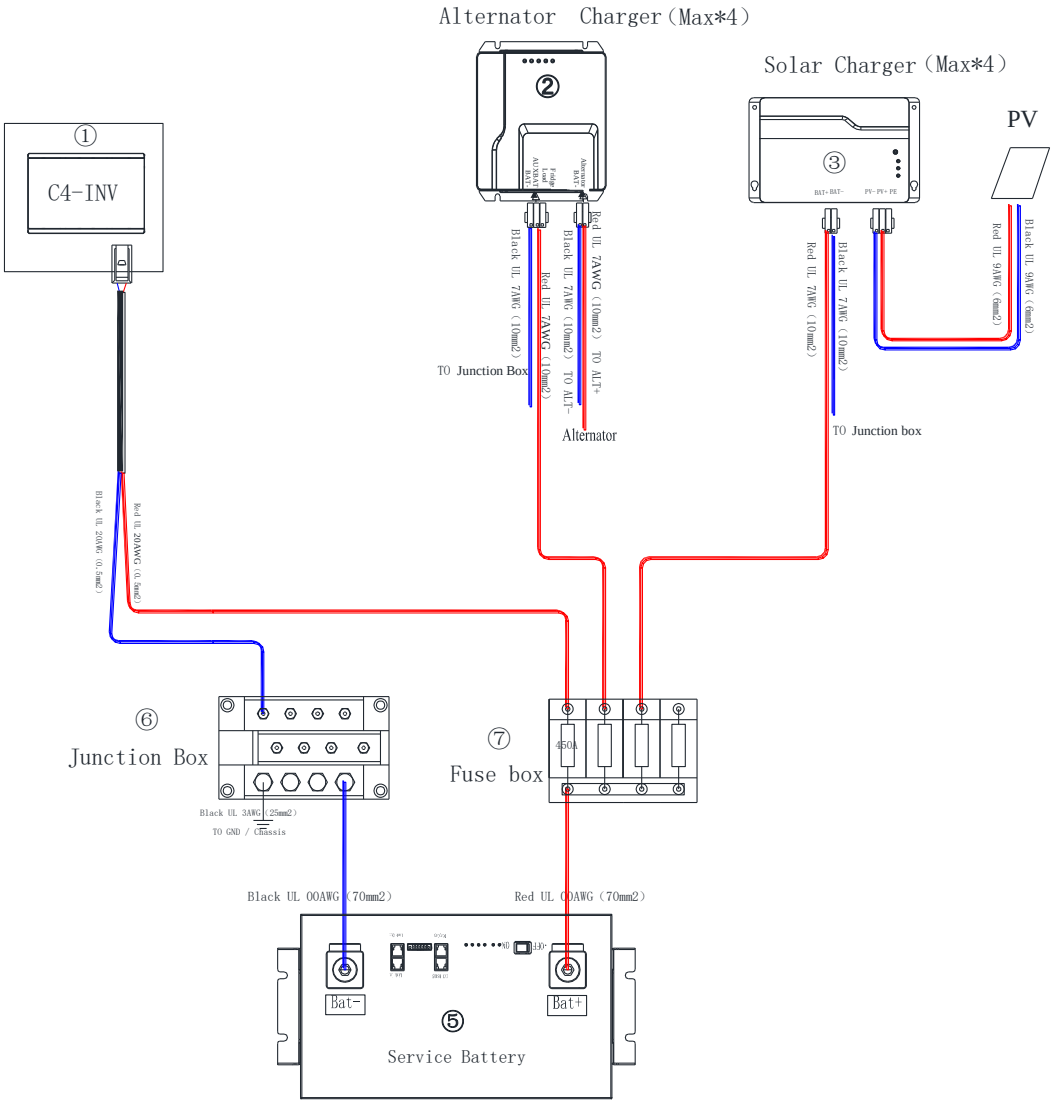

fig 6 19 Battery Pack 01 power cable connection

7.4 Battery Pack 02 wiring diagram

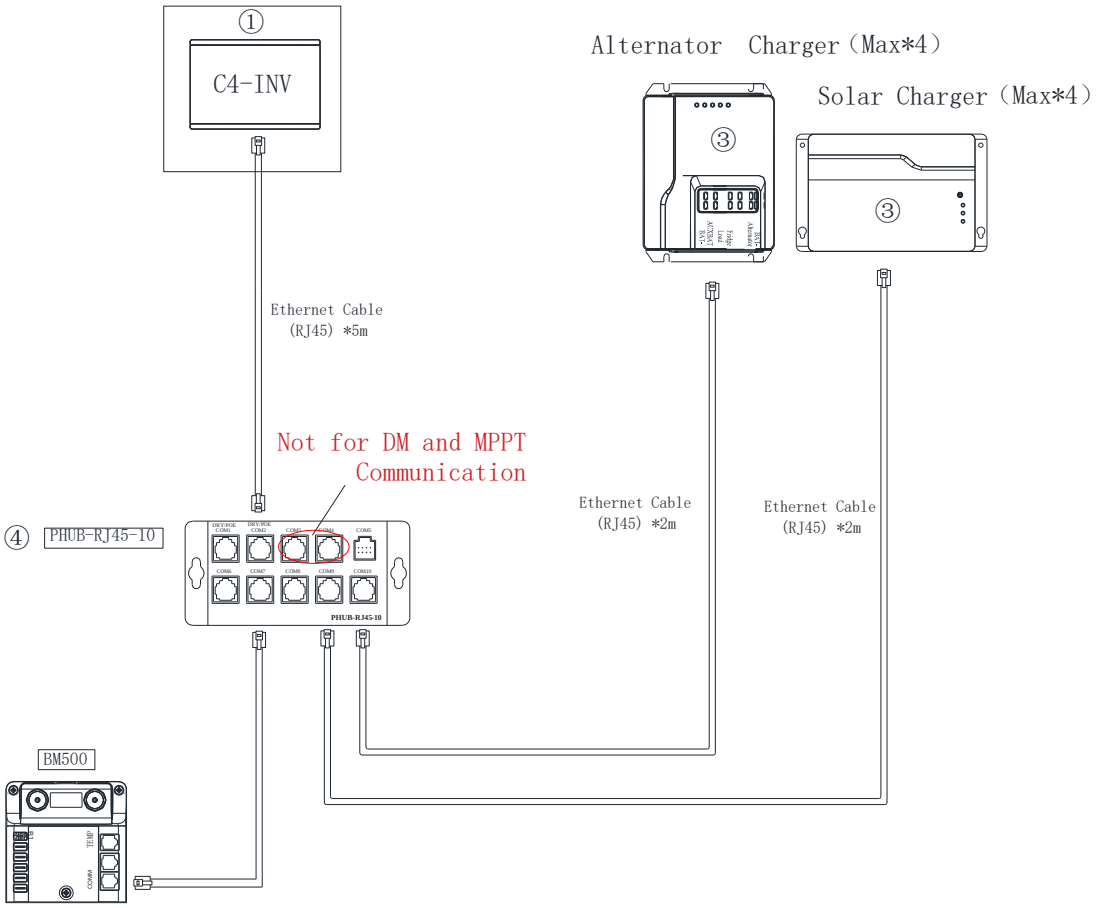

fig 6 19 Battery Pack 02 communication cable connection

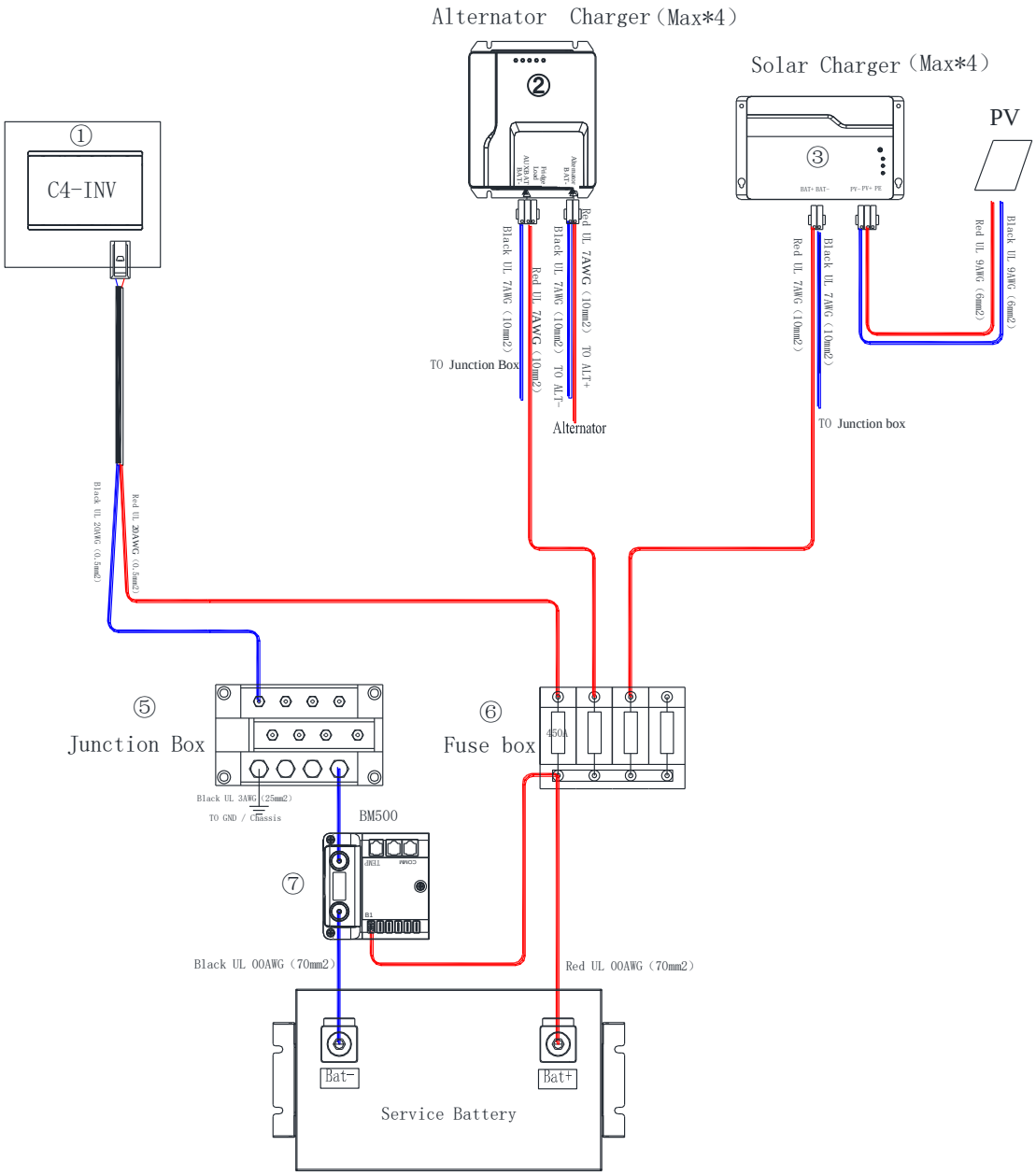

fig 6 19 Battery Pack 02 power cable connection