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2021.5.10

Specification

of B51100 Battery System

1. Specification

| Production | Nominal Voltage | Nominal Capacity | Weight | Dimension(W*D*H, mm) | Configuration |
|------------|-----------------|------------------|--------|----------------------|-----------------------------|
| B51100 | DC51V | 100Ah | 44kg | 481*535*135mm | 40 modules parallel at most |

2. System internal module B51100specification

2.1 Front Panel of battery module



Port 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 |
| 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 |

2.2 Product parameters

| Module Name | H5B |
|--|------------------|
| 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*135mm |
| 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

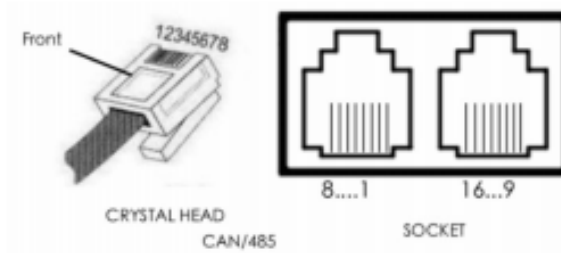
| No. | Item | Default value | Remark | |
|-----|---|---------------------------|--------|----------------------|
| 1 | High charging voltage protection and recovery | Alarm value | 56V | |
| | | Alarm recovery value | 54.4V | |
| | | Protection value | 57.6V | |
| | | Protection recovery value | 55.5V | |
| 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 |

| No. | Item | Default value | Remark |
|-----|---------------------------------------|--|--------|
| | | | to 3A |
| | Protection value | 100A | 15s |
| 6 | Alarm value | 90A | |
| | 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 | Charging alarm value | 55°C | |
| | Charging alarm recovery value | 50°C | |
| | 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 | 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 | |

| No. | Item | Default value | Remark |
|-----|------------------------------------|---------------|--------|
| | Charging protection recovery value | 2°C | |
| 9 | Short circuit protection | 400A | |

2.4 Communication port

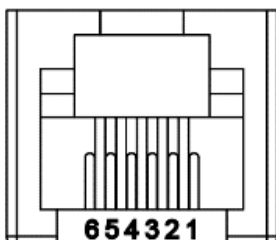
2.4.1 Interface definition of CAN/485



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 |