



**CNBM·SA**

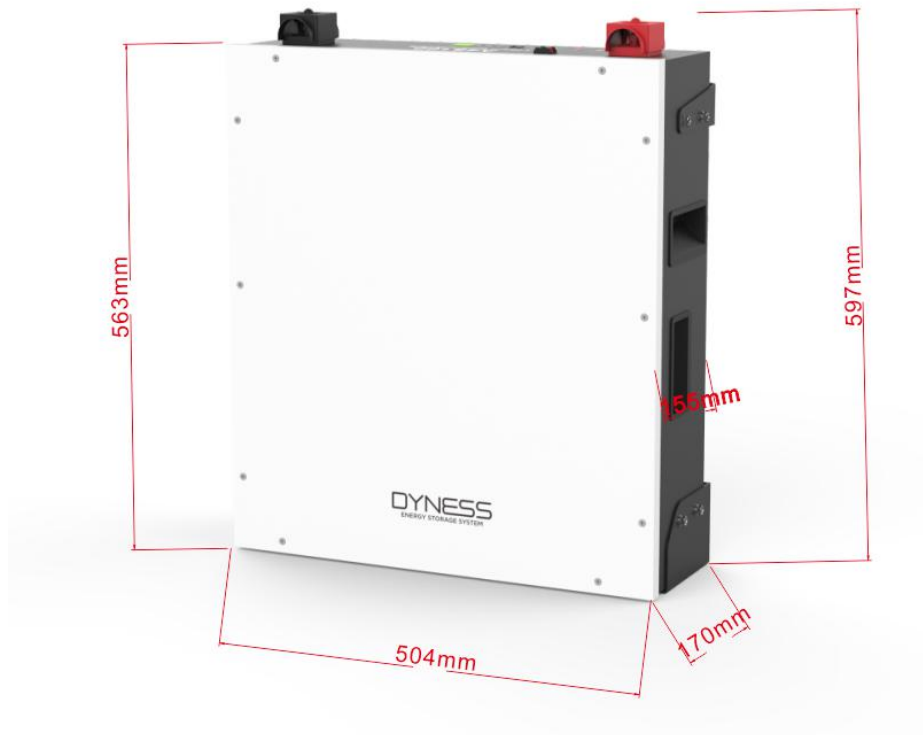
# Specification

## of A48100 Battery System



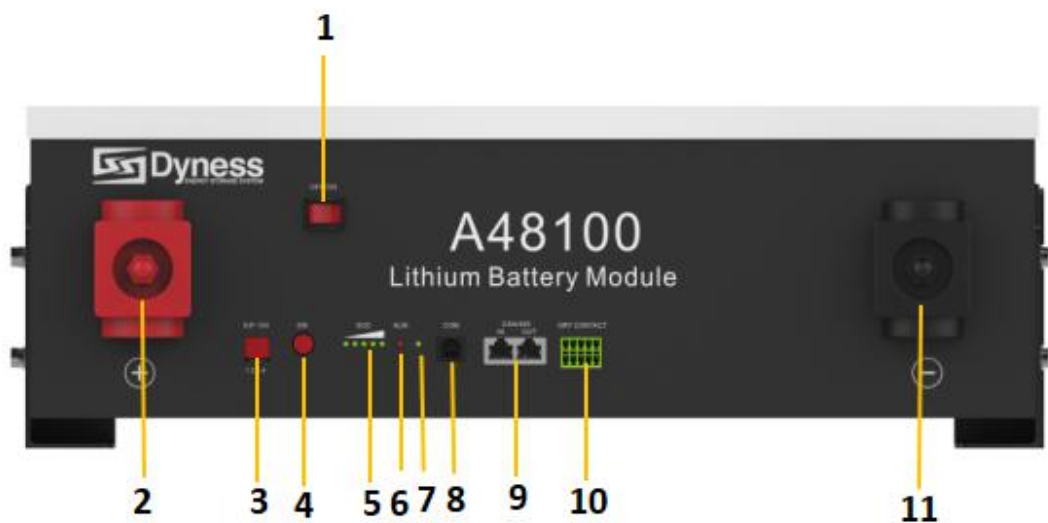
## 1. Specification

| Production | Nominal Voltage | Nominal Capacity | Weight | Protection Level | Configuration               |
|------------|-----------------|------------------|--------|------------------|-----------------------------|
| A48100     | DC48V           | 100Ah            | 55kg   | IP20             | 40 modules parallel at most |



## 2. System internal module A48100 specification

### 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 warning, always on when Protection. When the condition of triggering protection is removed, the battery can recover automatically |
| 7    | RUN                            | Green light, flashing when standby, always on when discharge, flash when charging  |
| 8    | COM                            |  |
| 9    | CAN/485                        | Communication Port<br>Communication (factory default CAN communication)  |
| 10   | DRY CONTACT                    | /  |
| 11   | Negative socket                | Battery output or parallel cathode line  |

## 2.2 Product parameters

| Module Name                                  | H5A              |
|--|------------------|
| 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)           | 15               |
| Battery Cell Capacity (Wh)                   | 320              |
| Battery Cell Voltage (Vdc)                   | 3.2              |
| Battery Cell Capacity (AH)                   | 100              |
| 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)  | 504*597*155mm                                  |
| Communication         | CAN/RS485                                      |
| Pollution Degree (PD) | II   |
| IP Grade              | IP20   |
| Weight(kg)            | 55   |
| 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                                    |

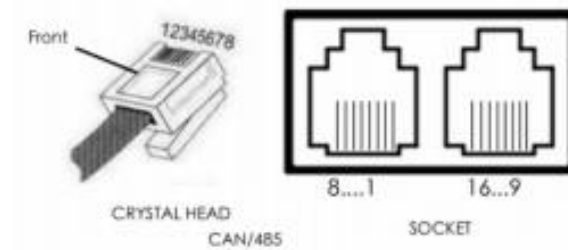
### 2.3 Alarms and protection

| No. | Item  | Default value             | Remark |                            |
|-----|---|---------------------------|--------|----------------------------|
| 1   | High charging voltage protection and recovery | Alarm value               | 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               | 3.57V  |                            |
|     |   | 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 3A |

| No. | Item                                  | Default value  | Remark |
|-----|---------------------------------------|--|--------|
|     | Protection value                      | 100A   | 15s    |
| 6   | 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   | 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 | Short circuit protection value     | 400A          |        |

## 2.4 Communication port



### 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    |

