

Low Voltage Battery

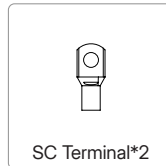
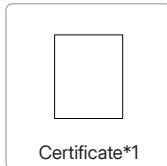
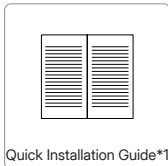
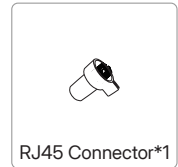
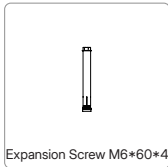
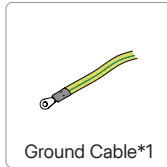
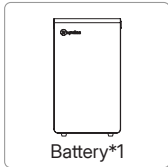
Quick Installation Guide

LB-16D-G2

1 General Declaration

- Read this quick installation guide carefully before installation to learn about product features and safety precautions.
- Only qualified personnel are allowed to install, operate, and maintain the equipment.
- Installers should be familiar with local laws and regulations.
- Check the deliverables for correct model, complete contents, and intact appearance. Contact the manufacturer if any damage is found or any component is missing.
- Installers must use insulated tools and wear personal protective equipment.
- As required by local regulations, an overcurrent protection and isolation device should be installed between the inverter and the battery. The cable needs to be prepared by the installer.
- Before installation, ensure that the battery is turned off, and any associated circuit breakers and disconnect switches are turned off.
- The information in this quick installation guide is subject to change due to product updates or other reasons.

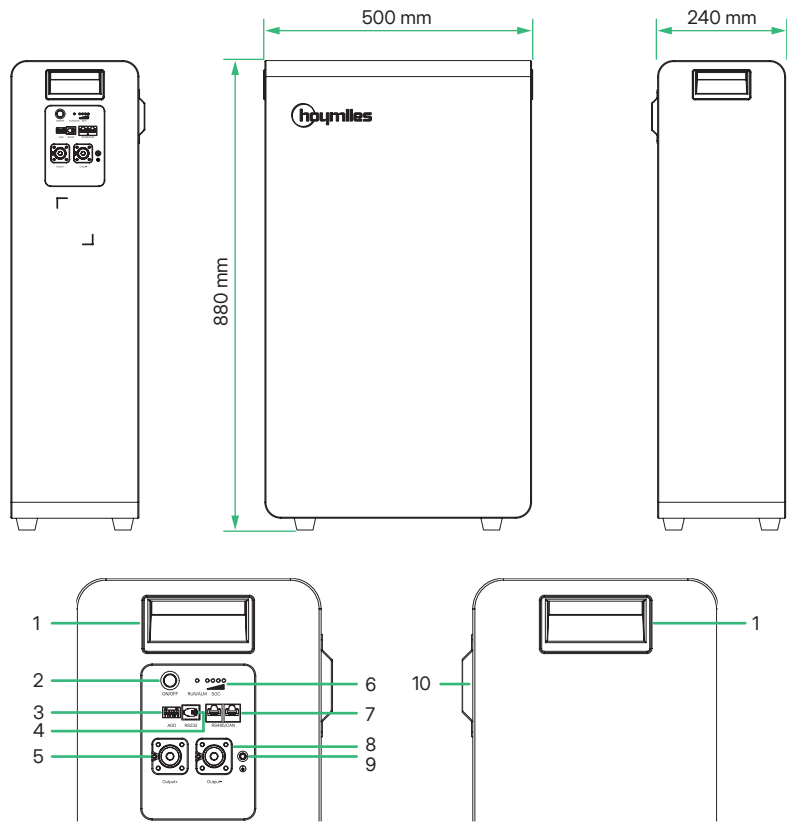
2 Packing List





NOTE

- The communication cables are available in two lengths (1 m and 1.5 m). The 1 m cable is for parallel connection, and the 1.5 m cable is used to connect to the inverter.
- The two SC terminals are for parallel connection.

3 Product Overview



NO.	Description
1	Handle
2	Power Switch
3	DIP Switch
4	Communication Terminal (RS232)
5	Positive Terminal
6	LED Indicators (Run, Alarm, and SOC)
7	Communication Terminals (CAN)
8	Negative Terminal
9	Ground Terminal
10	Mounting Bracket

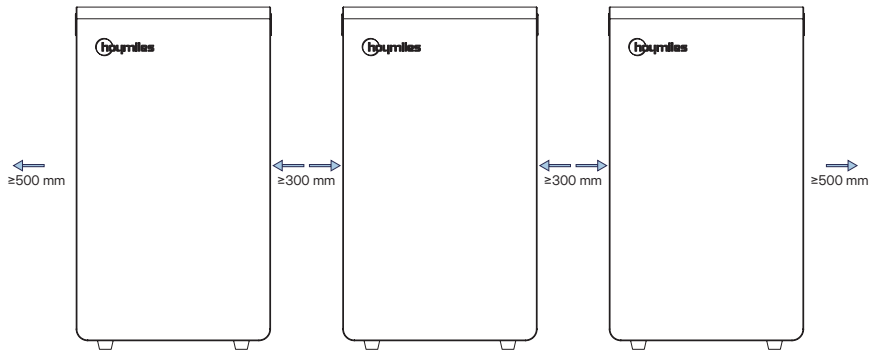
BAT RJ45 PIN	1	2	3	4	5	6	7	8	INV PIN
	RS485 2_A	RS485 2_B	NC	RS485 1_A	CAN_L	CAN_H	RS485 1_B	NC	

4 Installation Instructions

Environmental Requirements

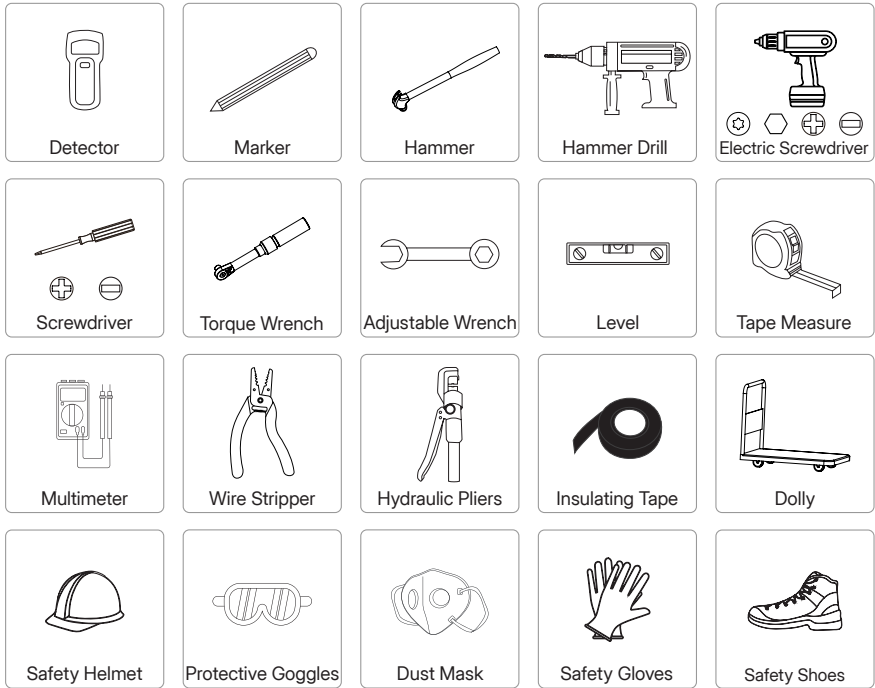
- The recommended ambient temperature is between 15°C and 35°C.
- The recommended relative humidity is between 10% and 95%, without condensing.
- The altitude should be no more than 2000 m.
- The product should be installed in an environment with good ventilation and heat dissipation conditions.
- The product should be installed indoors and should meet the following requirements, including but not limited to:
 - a) Keep distance from doors, windows, or other batteries.
 - b) Keep away from the heating device.
 - c) Keep away from corrosive chemicals.

Space Requirements



Installation Tools

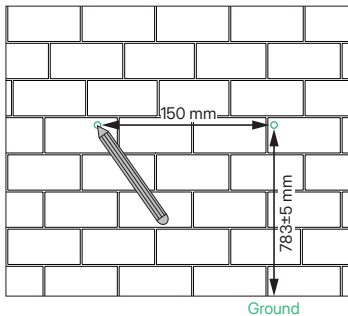
The following tools are recommended in the installation process, and other auxiliary tools can also be used on site if necessary.



Installation Steps

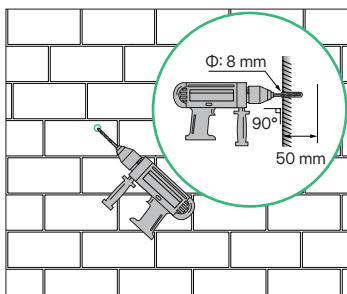
Step 1 Marking the Hole Position

- Select a load bearing wall constructed with reinforced concrete and use a detector to detect whether there are cables or water tubes behind it.
- Horizontally mark the hole position.



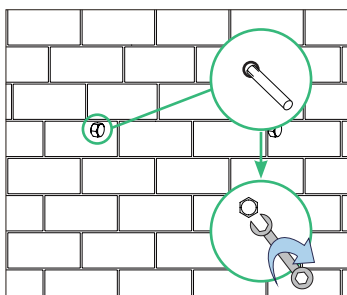
Step 2 Drilling Holes

Use a hammer drill to drill holes with a diameter of 8 mm and a depth of 50 mm.



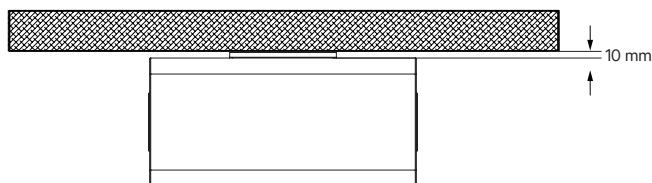
Step 3 Installing Expansion Screws

- Hammer the M6*32 sleeves into the hole.
- Tighten the M6*60 screws with a torque of 8 N·m and leave a certain length to secure the battery.



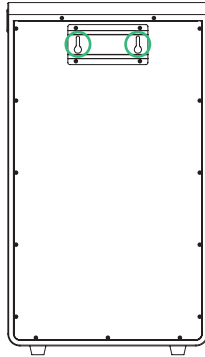
Step 4 Placing the Battery

Place the battery on a level ground (0° - 3°), parallel to the wall, and keep a distance of at least 10 mm.



Step 5 Fixing the Battery

Hang the battery on the expansion screws through the screw holes of the mounting bracket to fix the battery against the wall.



5 Electrical Connection

NOTICE

- Before the electrical connection, ensure that all power supplies are disconnected.
- It is recommended that a circuit breaker between the inverter and the battery be installed in accordance with local laws and regulations.

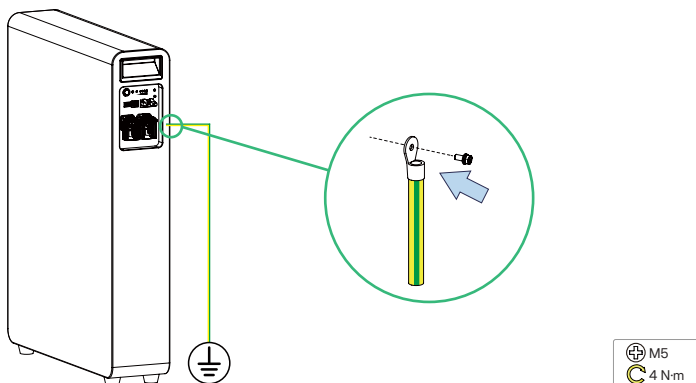
Cable (90°C, Copper)	Recommended Specification (mm ²)
Ground Cable	4 mm ² (12 AWG)
Positive Cable	50 mm ² (1/0 AWG)
Negative Cable	50 mm ² (1/0 AWG)
Communication Cable	Standard Ethernet cable

NOTE

- The communication cables are available in two lengths (1 m and 1.5 m).
- The 1 m cable is for parallel connection.
- The 1.5 m cable is used to connect to the inverter. Pay attention to the different marks (PACK and INV) on the two ends to correctly connect the battery and the inverter.

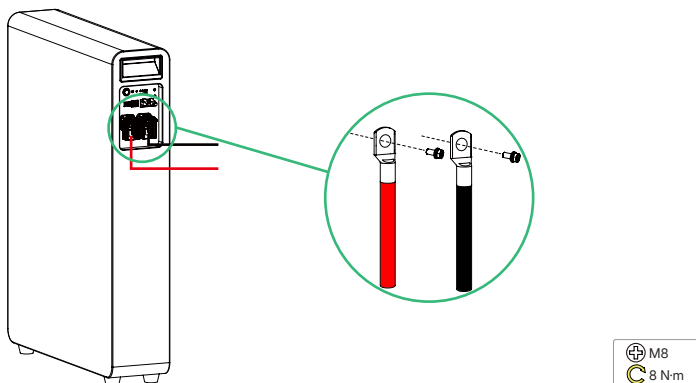
Step 1 Ground Cable Connection

- Connect the ground cable to the ground terminal.
- Tighten the M5 screw with a torque of 4 N·m.



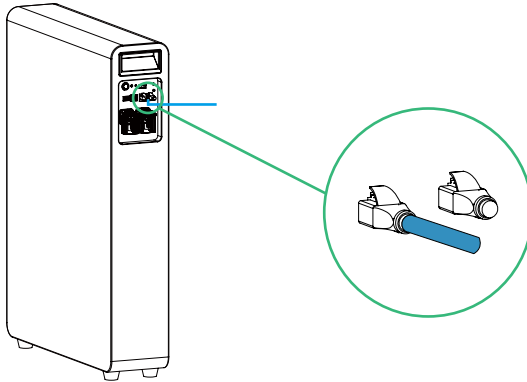
Step 2 Power Cable Connection

- Connect the power cables to the Output + and Output - terminals.
- Tighten the M8 screws with a torque of 8 N·m.
- Install the two terminals covers.



Step 3 Communication Cable Connection

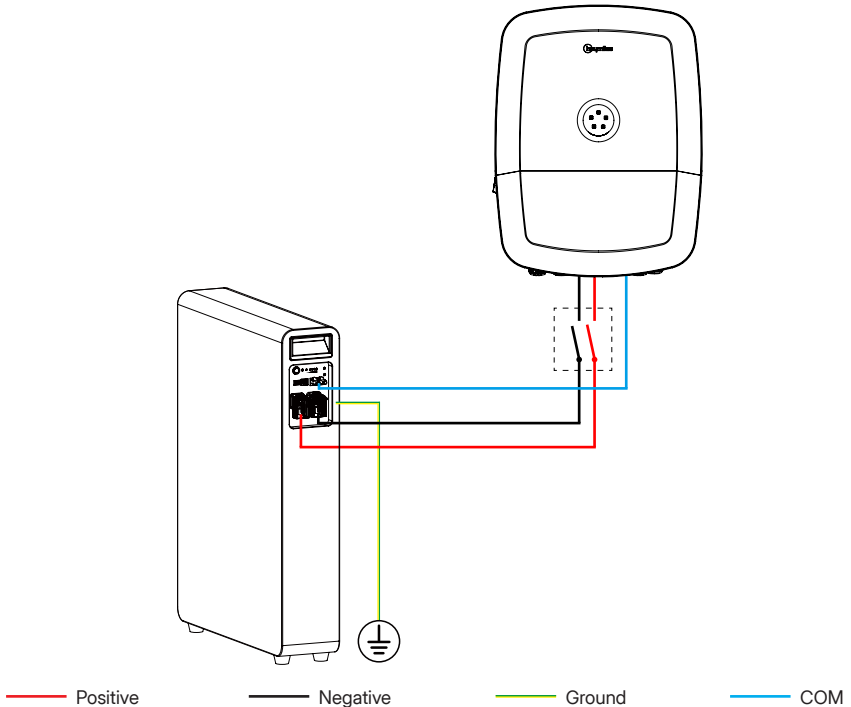
- Connect the communication cable to the communication terminal (CAN).
- Insert the provided 120 Ω RJ45 connector into the unused communication terminal.



6 System Overview

Single-battery System

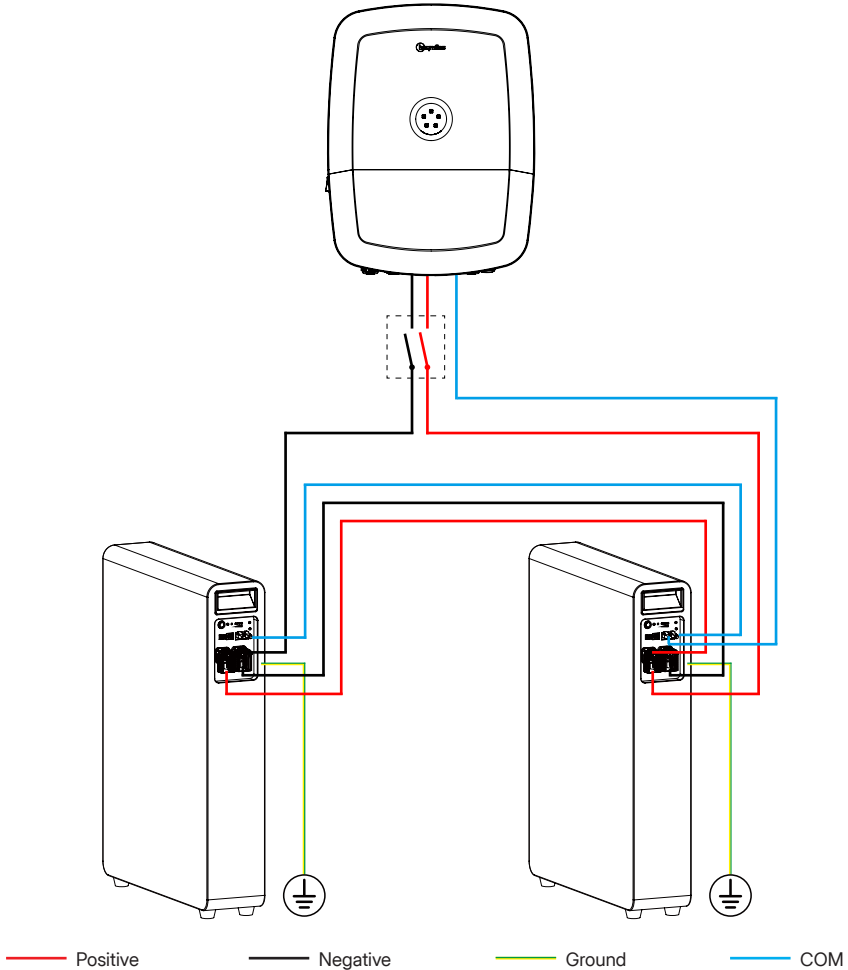
The maximum charging or discharging current of the battery is 200 A. If the current exceeds 200 A, it may cause a risk of fire accident.



Multi-battery System (Max. 15 Batteries in Parallel)

Parallel Connection without Busbar (Number of Batteries=2)

When two batteries are connected in parallel, they can be connected without a busbar, and the maximum charging or discharging current of the battery system is 200 A. If the current exceeds 200 A, it may cause a risk of fire accident.

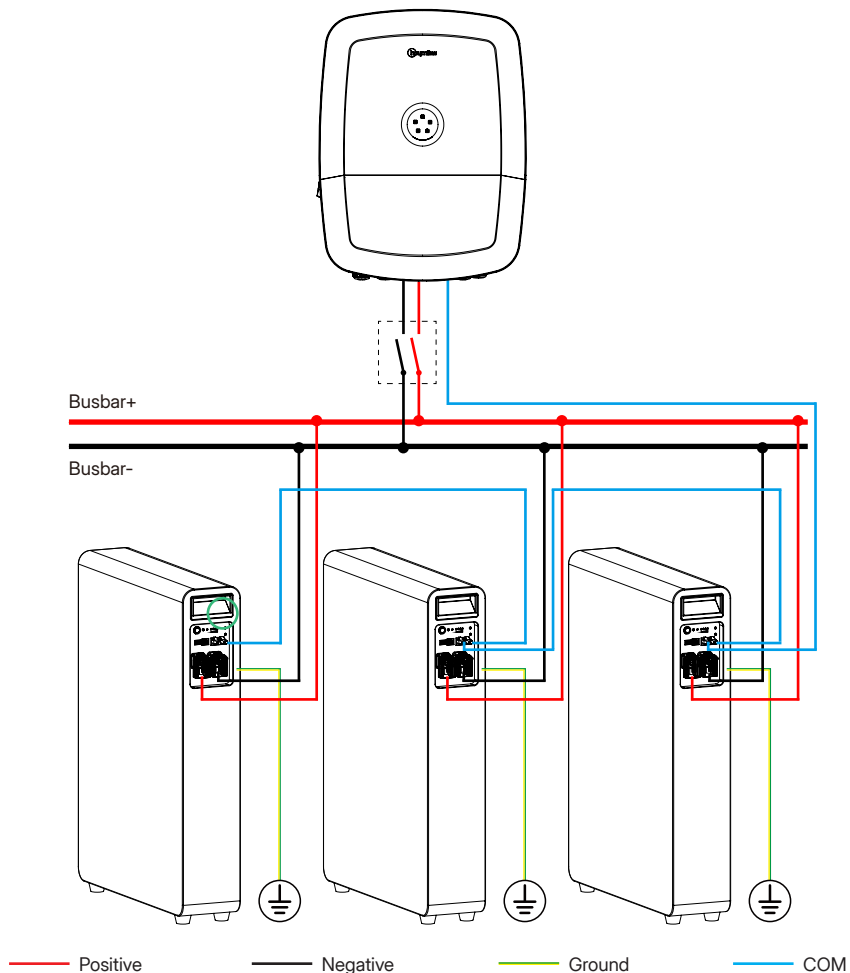


NOTE

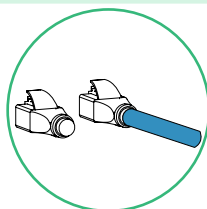
When two batteries are connected in parallel, this is the only solution.

Parallel Connection with Busbar ($3 \leq \text{Number of Batteries} \leq 15$)

When three or more batteries are connected in parallel, they must be connected through a busbar. The maximum charging or discharging current of the battery system is 400 A.



NOTE



Insert the provided 120 Ω RJ45 connector into the unused communication terminal.

7 System Power-on

Step 1 Turn on the circuit breaker between the battery and the inverter.

Step 2 Press the power switch for 1s. Wait until the LED indicators are on and there is no alarm sound, which means the battery works normally.

NOTE

- DIP Switch**

The DIP switch is used for parallel connection. When the battery communicates with the inverter via CAN, adjust the DIP switch to set the BMS address. Set the BMS address of the master battery to 0, and set the BMS address of the slave batteries to 1 - 15 in sequence. For DIP switch instructions, refer to [9 Appendix: DIP Switch Instructions](#) on page 13.








- System Power-off (If Needed)**

Step 1 Turn off the circuit breaker between the battery and the inverter.

Step 2 Turn off the power switch.

LED Indicators

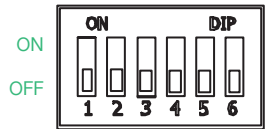


Indicator	Status	Explanation
	Flashing green (on for 0.25s; off for 3.75s)	The battery is in standby.
	Flashing green (on for 0.5s; off for 0.5s)	The battery is charging.
	Solid green	The battery is discharging.
	Flashing red (on for 0.5s; off for 0.5s)	Undervoltage protection and undertemperature protection
	Solid red	A fault occurs.
	Off	The battery is turned off.
	1/4 LED indicator on.	SOC is 0-25%.
	2/4 LED indicators on.	SOC is 25%-50%.
	3/4 LED indicators on.	SOC is 50%-75%.
	All LED indicators on.	SOC is 75%-100%.

8 Troubleshooting

Fault	Possible Causes	Handling Suggestions
The LED indicators do not light	The power cable of the battery is not properly connected.	Reconnect the power cable of the battery.
	The power switch is off.	Turn on the power switch.
	The BMS is in a sleep state.	Charge the battery.
	The BMS is damaged.	Please contact Hoymiles technical support team.
Unable to discharge	The terminals of the battery are damaged.	Replace the battery wiring terminals.
	BMS communication failure.	Reconnect the communication cable between the BMS and the battery. If the communication cable is damaged, replace it.
	The power switch is off.	Turn on the power switch.
Unable to charge	The terminals of the battery are damaged.	Replace the battery wiring terminals.
	BMS communication failure.	Reconnect the communication cable between the BMS and the battery. If the communication cable is damaged, replace it.
	The power switch is off.	Turn on the power switch.
Communication fails	The power switch is off.	Turn on the power switch.
	The BMS is in a sleep status.	Charge the battery.
	The communication cable is damaged.	Replace the communication cable.
Inaccurate voltage display	The voltage sampling cable is damaged.	Replace the voltage sampling cable.
	The BMS is damaged.	Please contact Hoymiles technical support team.
Low capacity	The battery has not been maintained for a long time.	Use an equalizer to maintain the battery.
	The single battery is damaged.	Replace the damaged single battery.
	Inaccurate voltage sampling.	Please contact Hoymiles technical support team.
Low cell voltage	The battery has not been maintained for a long time.	Use an equalizer to maintain the battery.
	The single battery is damaged.	Replace the damaged single battery.
	Inaccurate voltage sampling.	Please contact Hoymiles technical support team.

9 Appendix: DIP Switch Instructions



DIP 1	DIP 2	DIP 3	DIP 4	BMS Address	Battery
OFF	OFF	OFF	OFF	0	Master
ON	OFF	OFF	OFF	1	Slave 1
OFF	ON	OFF	OFF	2	Slave 2
ON	ON	OFF	OFF	3	Slave 3
OFF	OFF	ON	OFF	4	Slave 4
ON	OFF	ON	OFF	5	Slave 5
OFF	ON	ON	OFF	6	Slave 6
ON	ON	ON	OFF	7	Slave 7
OFF	OFF	OFF	ON	8	Slave 8
ON	OFF	OFF	ON	9	Slave 9
OFF	ON	OFF	ON	10	Slave 10
ON	ON	OFF	ON	11	Slave 11
OFF	OFF	ON	ON	12	Slave 12
ON	OFF	ON	ON	13	Slave 13
OFF	ON	ON	ON	14	Slave 14
ON	ON	ON	ON	15	Slave 15

NOTE

Leave DIP 5 and DIP 6 as default.



User Manual in the QR code or at
www.hoymiles.com/download-center/



Installation video in the QR code or at
www.youtube.com/@Hoymiles/videos



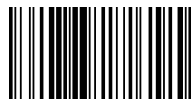
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