Installation Guide
SERIE UE-T
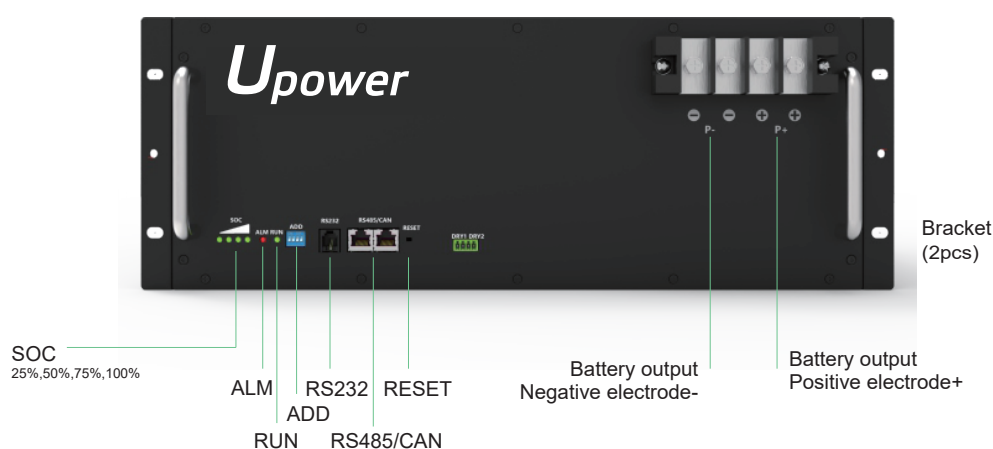### Rack Mounted Li-ion Battery

Upower

This guide provides guidance on the safe and effective installation and operation rack mounted Li-ion batteries (48V series). It also provides information on how to safely connect multiple batteries in parallel, as well as how to charge and discharge the batteries.

CAUTION

- Due to the regulations governing the transportation of Lithium Ion cells and batteries internationally. The battery is only 40~50% SOC during transport. Please charge battery fully in the first use.

- Before connecting any electrical cable, turn OFF all the switches and breakers and turn OFF the batteries by press the RESET button 6~10s.

- Avoid any fall or collision during the installation process.

- Do not remove the battery components. The maintenance of the battery should be carried out by a professional engineer.

- Do not expose the Li-ion battery to heat in excess of 55°C during operation, 60 °C in storage.

SYSTEM INTRODUCTION

SOC
25%,50%,75%,100%

ALM   RS232   RESET
ADD
RUN   RS485/CAN

Battery output
Negative electrode-

Battery output
Positive electrode+

Bracket
(2pcs)

RJ11 (RS232) PIN MAP

RJ11 PIN	Description
1, 2, 6	NC
3	TX
4	RX
5	GND

RJ45 (RS485) PIN MAP

RJ45 PIN	Description
1, 2, 3	NC
4, 5	CANH, CANL
6	GND
7, 8	RS485-A, B

RESET BUTTON

When the battery in dormancy mode, press reset button 1~6s and release, the system will be activated.

When the battery in working mode, press reset button 3~6s and release, the system will turn to dormancy mode.

When the battery in working mode, press reset button 6~10s and release, the BMS will be reset and all LED indicators will be light 1.5s at the same time.

MASTER BATTERY

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Rack Mounted Li-ion Battery

1.UNPACKING INSPECTION

1. Unpack the battery and visually inspect the appearance. If any shipping damage is found, notify the carrier immediately.
2. Press RESET button 1~6s to active the battery, the SOC and RUN indicator will be light. Measure the output voltage by multimeter, For parallel application, the voltage difference should less than 500mV.
3. Press RESET button 3~6s to shutdown the battery, the indicator light will turn off.

2.MECHANICAL INSTALLATION

1. Take out the brackets and M4*10 screws from the accessories, and fix the brackets onto the battery module using the screws through the installation holes.

2. Place the battery module onto the tray in the rack, and push it completely into the rack along the guide rail. Take out M6*10 screws from the rack accessories, and fix the battery module onto the rack using the screws through the installation holes of the brackets.

It should install the bottom layer first and then install the upper layer.

MASTER BATTERY

3.CONNECTING CABLES

RS232 to USB cable
To computer for failure
analysis.(Optional)

External communication Cable to Inverter

RJ45

Inverter

Output power cable

To Inverter

Breaker

The master
module's
ID must be 1

ON
1 2 3 4
OFF

Internal
communication
cable(RS485)

Internal
connection
power cable
(25mm²)

Step 1. Make sure all batteries are turned off and the breaker is in off condition. Connector the internal power cable and output power cable. Make sure the screws are tight.

Step 2. Connect the internal communication cable and external communication cable.

For external communication cable, there are battery terminal and inverter terminal difference. pay a

Step 3. Set the battery module ID by DIP switch. The master module which do communication with inverter must be 1 . Change the other modules ID from 2~

Step 4. Make sure the inverter had be installed correctly.

Step 5. Switch on the breaker first and then press the master module's RESET button 1~6s to active the battery. the slave modules will be activated automatic.

Step6. Charge the batteries fully in first use.

MASTER BATTERY

4.BMS TOOL OPERATION (Optional)

- BMS upper computer software is provided for battery failure analysis and software upgrade.

- Connect RS232 - USB cable to computer USB port and battery RS232 port.

- Double click "BMSTool.exe" file to open software. If the USB equipment is installed correctl y, the series port will be listed. The band rate is 9600bps. Click "connect" button to connect the BMS.

- The software will display the detailed BMS running information. The alarm, protection and fault information will be listed. When reporting the battery fault to Master Battery or dealer, please inform the battery model, machine No. (the bar code) and BMS software screenshot.

- BMS software update: In the "system setting" -" Program Updrade" - "Selec bin file" - Click "Download" Wait until the software update is completed.

5.LED INDICATOR DESCRPTION

| Status	Nominal Warning Protection	RUN ●	ALM ●	SOC ●	●	●	●	Description
Shut down	Dormancy	OFF	OFF	OFF	OFF	OFF	OFF	
Standby	Nominal	Flash 1	OFF	Follow module capacity				Standby
	Warning	Flash 1	Flash 3					Module at low voltage
Charge	Nominal	ON	OFF	Follow module capacity				
	Warning	ON	Flash 3					
	Over-charge Protection	ON	OFF	ON	ON	ON	ON	LED turn to standby if no power supply
	Temperature, over-current, Failure protection	OFF	OFF	OFF	OFF	OFF	OFF	Stop charging
Discharge	Nominal	ON	OFF	Follow module capacity				
	Warning	ON	Flash 3					
	Under voltage Protection	OFF	OFF	OFF	OFF	OFF	OFF	Stop discharging
	Temperature, over-current, short circuit, failure protection	OFF	ON	OFF	OFF	OFF	OFF	Stop discharging
Failure		OFF	ON	OFF	OFF	OFF	OFF	Stop charging and discharging

Note:
Flash 1: light 0.25s/off 3.75s
Flash 2: light 0.5s/ off 0.5s
Flash 3: light 0.5s / off 1.5s

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6. ADD SWITCH DESCRIPTION

ON

| 1 | 2 | 3 | 4 |

OFF
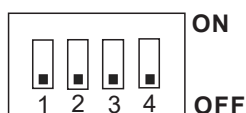
ADD	1#	2#	3#	4#	Remark	
0	OFF	OFF	OFF	OFF	Pack 0	
1	ON	OFF	OFF	OFF	Pack 1	Normally is master module
2	OFF	ON	OFF	OFF	Pack 2	
3	ON	ON	OFF	OFF	Pack 3	
4	OFF	OFF	ON	OFF	Pack 4	
5	ON	OFF	ON	OFF	Pack 5	
6	OFF	ON	ON	OFF	Pack 6	
7	ON	ON	ON	OFF	Pack 7	
8	OFF	OFF	OFF	ON	Pack 8	
9	ON	OFF	OFF	ON	Pack 9	
10	OFF	ON	OFF	ON	Pack 10	
11	ON	ON	OFF	ON	Pack 11	
12	OFF	OFF	ON	ON	Pack 12	
13	ON	OFF	ON	ON	Pack 13	
14	OFF	ON	ON	ON	Pack 14	
15	ON	ON	ON	ON	Pack 15	

MASTER BATTERY