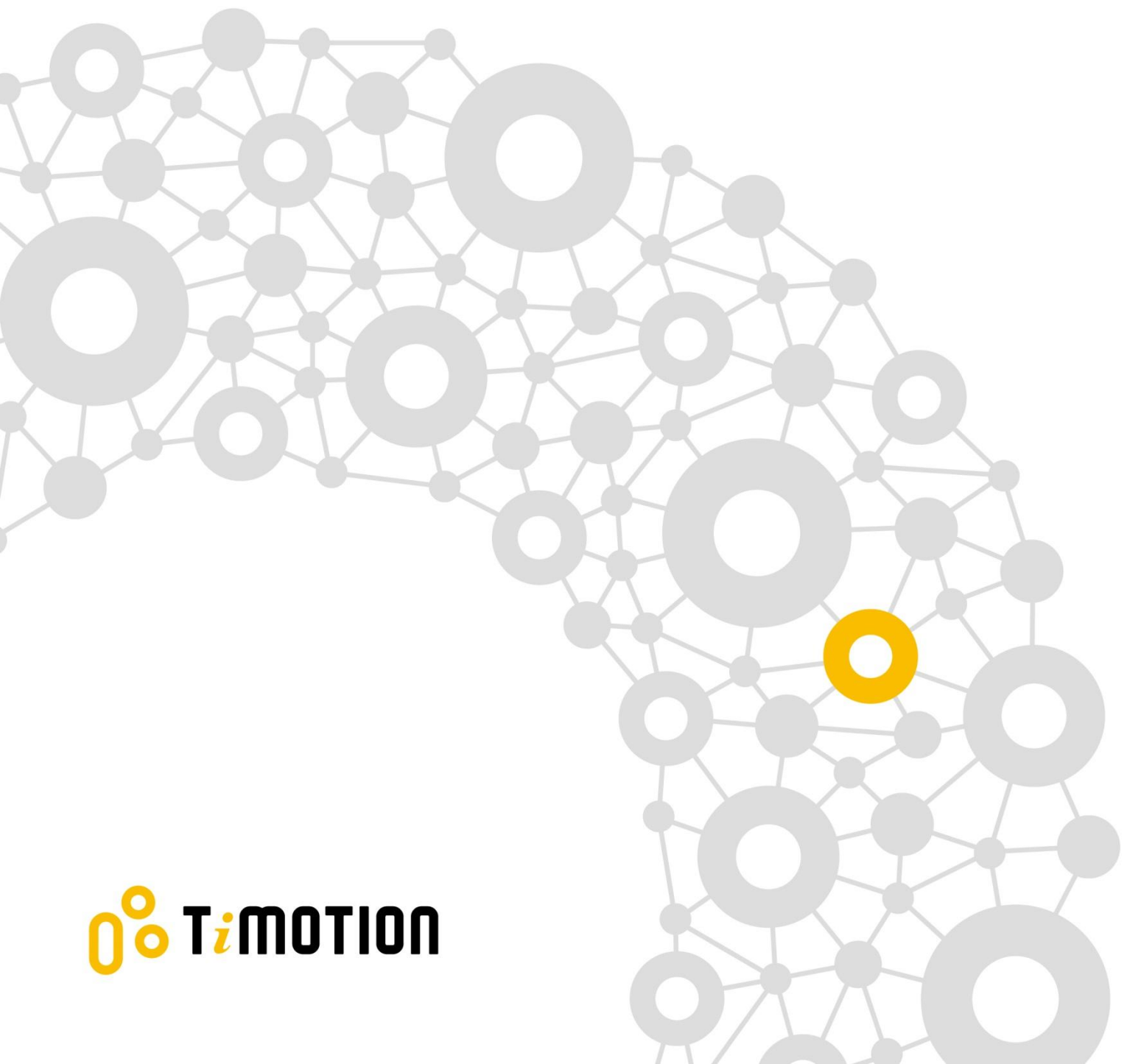


Rev. A
Jun 2025

TBB10 Li-ion User Manual



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0. History

Date	Rev.	Content	by
2025/7/3	A	First release	

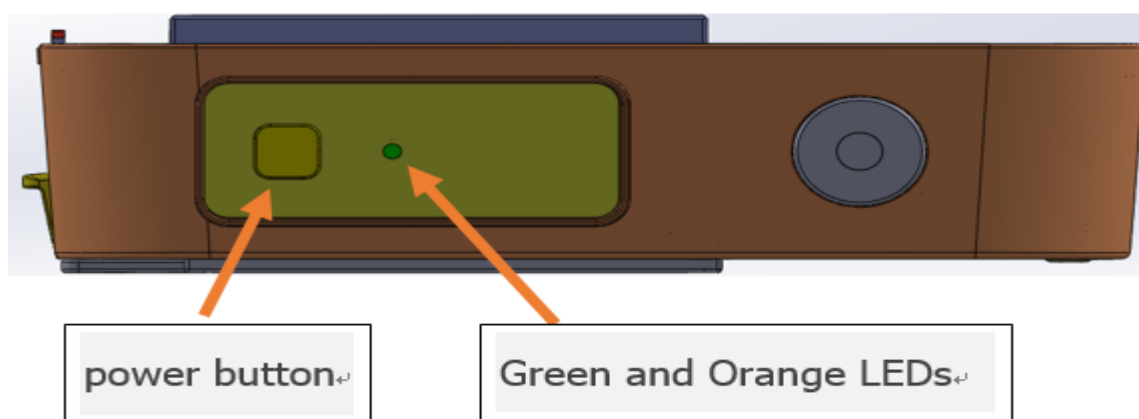
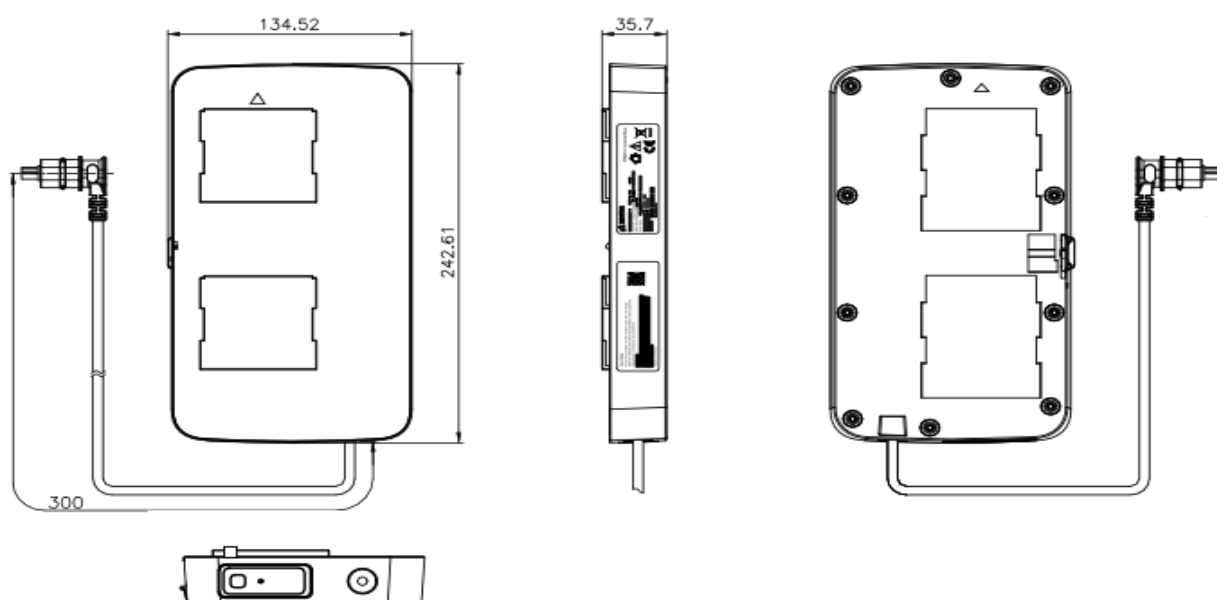
1. Safety Instructions

To prevent damage or injury from battery leaking, heating and/or explosion, please observe the following precautions before use.

- Must follow the rated input voltage.
- Don't discard or expose the products into water.
- Do not use or leave the battery under the blazing sun.
- Do not use or leave the battery at very high temperature conditions (e.g., strong direct sunlight)
Otherwise, it can overheat or catch fire or its performance will be degenerate and its service life will be decreased.
- Do not use and leave the battery near a heat source such as fire or heater.
- Do not short-circuit the positive and negative terminals.
- Do not disassemble or modify the cells.
- Use the manufacturer's designated charger for charging.
- Please comply with local battery recycling regulations and pay attention to environmental protection.

2. Specifications

Model name	TBB10
Battery capacity	2500mAh, 63.0Wh
Input	30V ~ 36V / 1A
Output	25.2VDC, 2.5A
Duty cycle	10%, 15A Max, (15A,30S / 6A, 30S); 1min/ON, 9min/OFF
Operation temperature	5-45°C
IP rating	IP66W Max
Dimension	242.61*134.52*35.7mm
Net weight/pc	0.75kg
ON & OFF switches	YES



3. Button Operation

When there is no AC-input

Button	Operation	Action
ON	Press>2sec	Turned on and discharging
OFF	Press>2 sec	Turned off and stop discharging

4. Indication

4.1 Status

Process	Status	
When charged	Hi charging	Charging
Discharging	Hi battery	Low battery
Others	Protection	Failure

4.2 Display

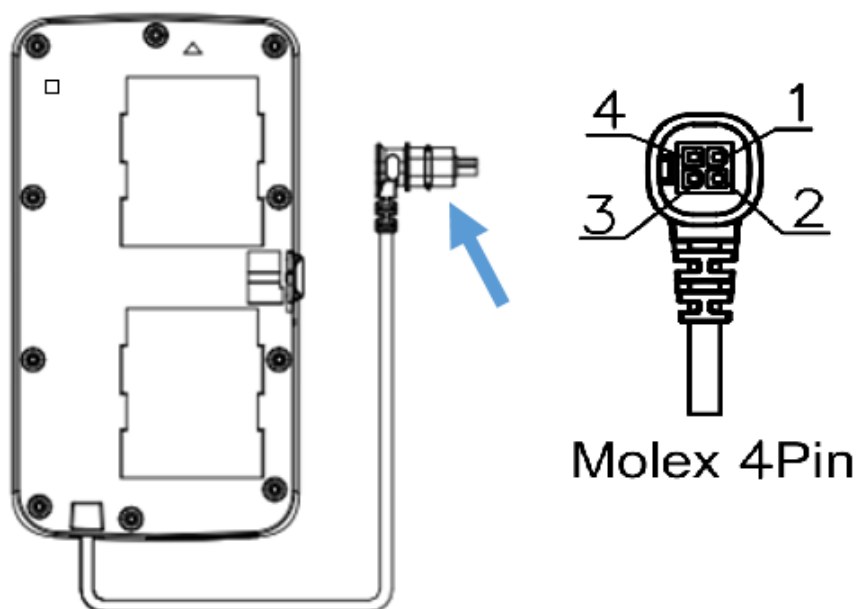
Status	Capacity	LED	
Hi charging	>80_ %	Green	continuous on
Charging	<80%	Green	short dimming (1 sec /1 sec)
Hi battery	>20%	Green	(With Load):Green LED lights on automatically
			(No Load): After pressing the button for 0.5s, green LED lights 5s
Low battery	10~20%	Orange	(With Load): Orange LED lights on automatically
			(No Load): After pressing the button for 0.5s, orange LED lights 5s
Protection	<10%	-	off
Failure	-	Orange	continuous on

4.3 Remarks

- From a Hi charging status (around 80%) to fully charged (up to 90% max capacity during the warranty period), it requires approximately 2 additional hours of charging.
- If you see a failure status indication, please contact the seller.

5. Installation

TBB10 can be charged directly from the 30V ~ 36V power supply.



Molex 4Pin

Molex 4Pin Function

PIN	Function
1	GND
2	Signal line
3	Signal line
4	VDD

6. Protection

Under below protection status- LED continuous off

Protection type	When	Lasting for
Discharge- Over current protect	Current > 15.0A	< 0.04 sec
Discharge- Low voltage protect	Voltage <19-20VDC Current 2.5-15A	5 sec
Short circuit protection	The output of TBB10 has short circuit protection, Turn on the TBB10 after charge.	< 0.04 sec
Over charged protection	Single cell voltage >4.25 or Battery set voltage >29.6V, The TBB10 will stop charging immediately.	< 1 sec

7. Maintenance

The product should be charged continuously at least 10hrs under following circumstances-

- During the first operation.
- Before long-term storage without AC-input.
- After long-term storage.

7.1 Storage

Storage period without AC-input versus estimated capacity (100% capacity when shipped out from the factory)

Period (including shipping)	Capacity	Status
3 months	79%	Ready to use
6 months	58%	Recommend to be fully charged prior to operation
>6 months	<58%	After a long period of storage, the TBB may be worn out, leading to reduced capacity. * It is highly recommended to charge the TBB for 24hrs+ every 6 months.

Conditions

- Temperature: 0 - 40°C
- Humidity: 20% - 85%
- Atmosphere: 86KPa - 106Kpa

7.2 Repair

For replacement, use a lead-acid maintenance-free battery cell with the same specifications and dimensions. Please consult the seller for assistance.

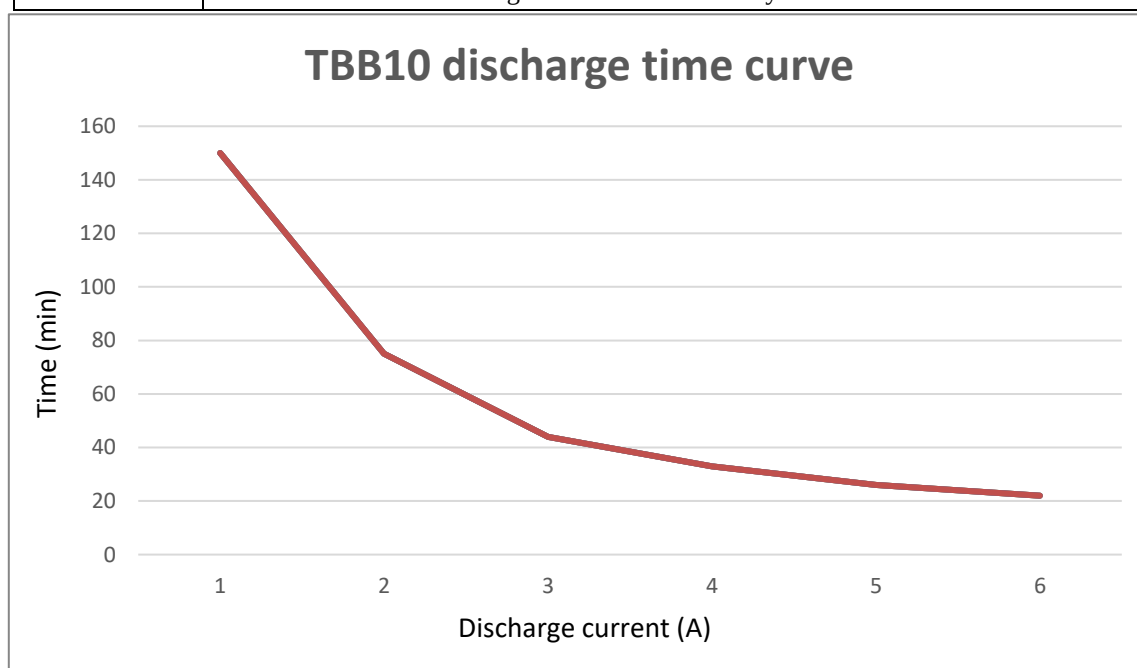
7.3 Transportation

Available for ocean and land shipment.

8. Appendix

8.1 Discharge time curve

Sample	Battery pack
Status	From full capacity (100%) to protect (20%)
X axis	Discharge current (A)
Y axis	Discharge time (min)
Remark	In real situation the discharge varies- this test is only for reference



8.2 Cycle test curve

Sample	Battery pack
Cycle	300 times (memo each 50 th times)
X axis	Cycle (times)
Y axis	Max capacity (Ah)
Remark	In real situation the discharge/ charge varies- this test is only for reference

