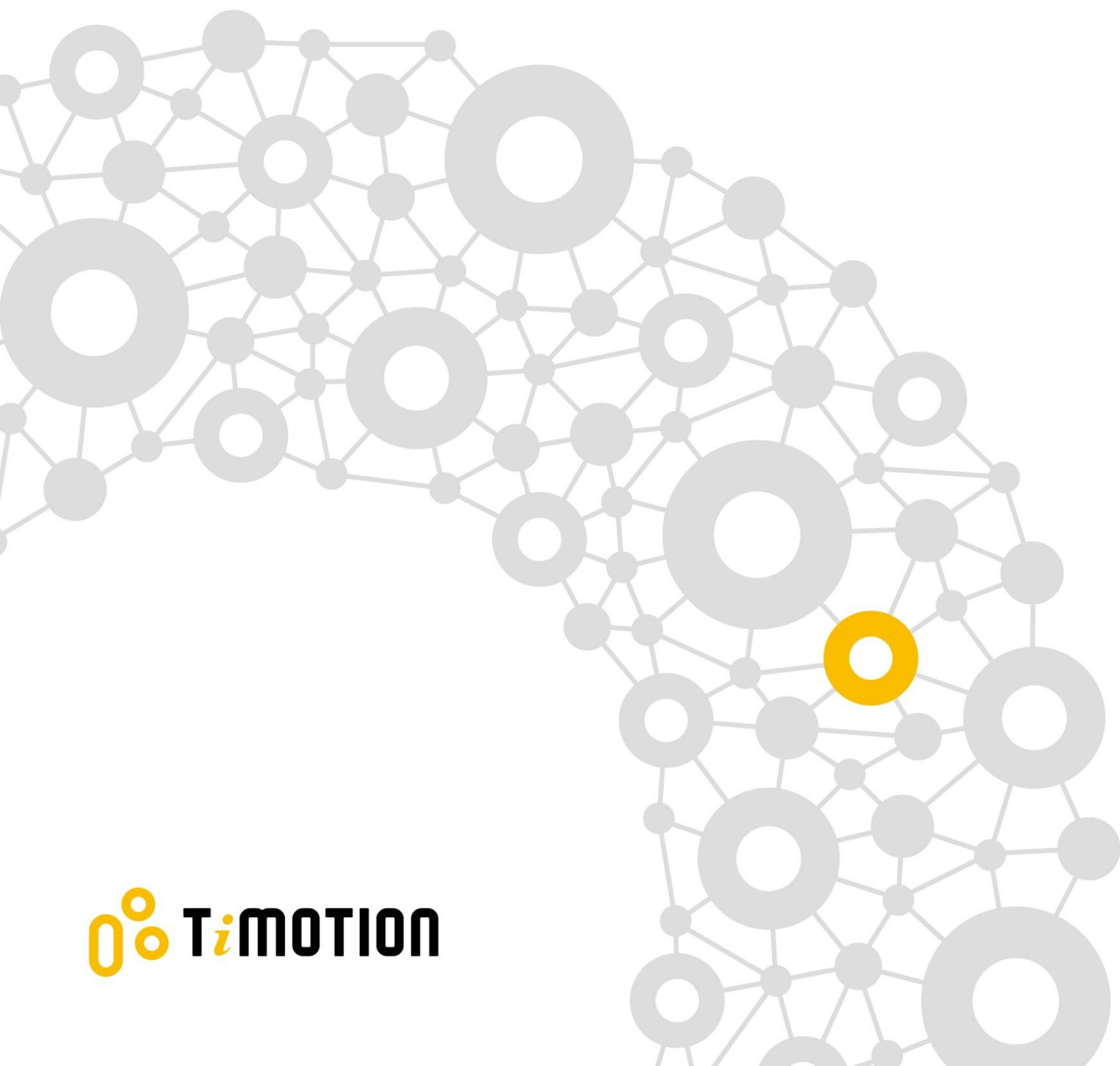


VERSION: E
20201021

TBB3 USER MANUAL



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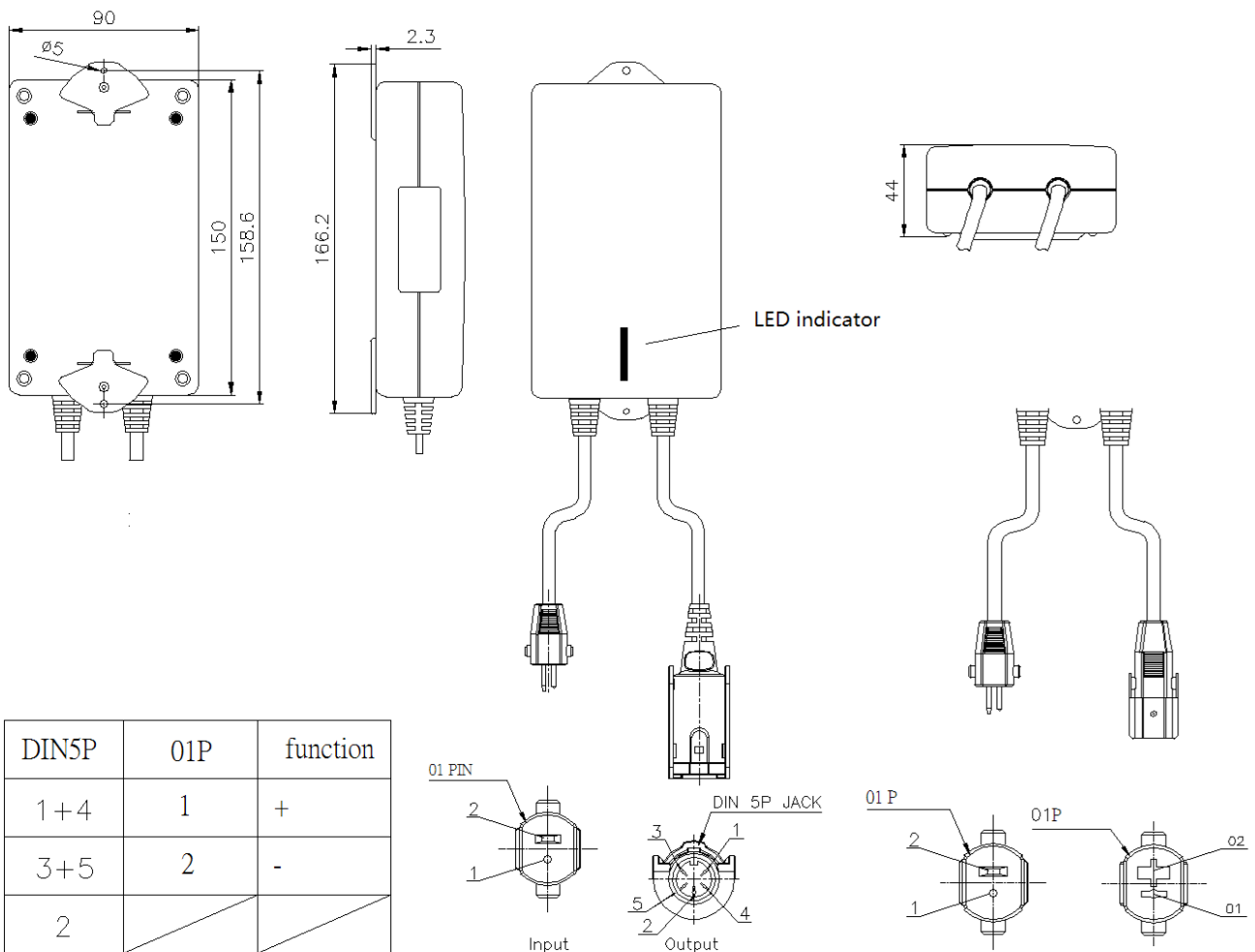
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1.Warning

- Must follow the rated input voltage
- Don't discard or expose the products into water or heat source
- Recycle with certified depots
- Repair by authorized maintenance centers

2. Specifications

Model name	TBB3
Battery capacity	1.8Ah (0.1C discharge, 180mA)
Input	24~32VDC
Output	25.2VDC, 1.8A (Max discharge current 5A, 2 min; Peak 10A, 20 sec)
Duty cycle	10% (2 min on / 18 min off)
Operation temperature	5~45°C
IP rating	Up to IP66
Dimension	158.6*90*44mm
Net weight/pc	0.6kg
ON/OFF switches	Without
Buzzer	With (optional)



3. Indications

3.1 Status

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

3.2 Table

Status	Capacity	LED		Buzzer
Hi charging	>90%	Green	Continuous on	off
Charging	<90%	Orange	Short dimming (1 sec /1 sec)	off
Hi battery	>25%	-	Off	off
Low battery	<25%	-	Off	Alarm (1 beep / sec)
Protection	<20%	-	Off	off

3.3 Remarks

- First time use: Pre charge about 10 sec until orange LED dimming
- It takes 7hrs to charge from protect to fully charged status

4. Protection

Under below protection status- LED continuous off, without beep alarm

Protection type	When	Lasting for
Discharge- Over current protect	Current = 5A	>2 min
	Current =11A	>20 sec
	Current >14A	0 sec (instant protection)
	Output short circuit	0 sec (instant protection)
Standby- Low voltage protect	Voltage <21VDC	0 sec (instant protection)

5. Maintenance

The product should be charged continuously at least 7hrs under following circumstances- First operation

- Before long period storage without AC-in
- First operation after long period storage

5.1 Storage

Storage period when without AC-in V.S estimated capacity (100% capacity when shipped out from factory)

Period (including shipping)	Capacity	Status
1 months	80%	Usable
3 months	70%	Please charge before using
>6 months	<60%	Too long storage period, battery capacity harmed * Be sure to charge 7hrs every 6 months least

5.2 Repair

Please consult to the seller

5.3 Transportation

By air, ocean & inland shipment

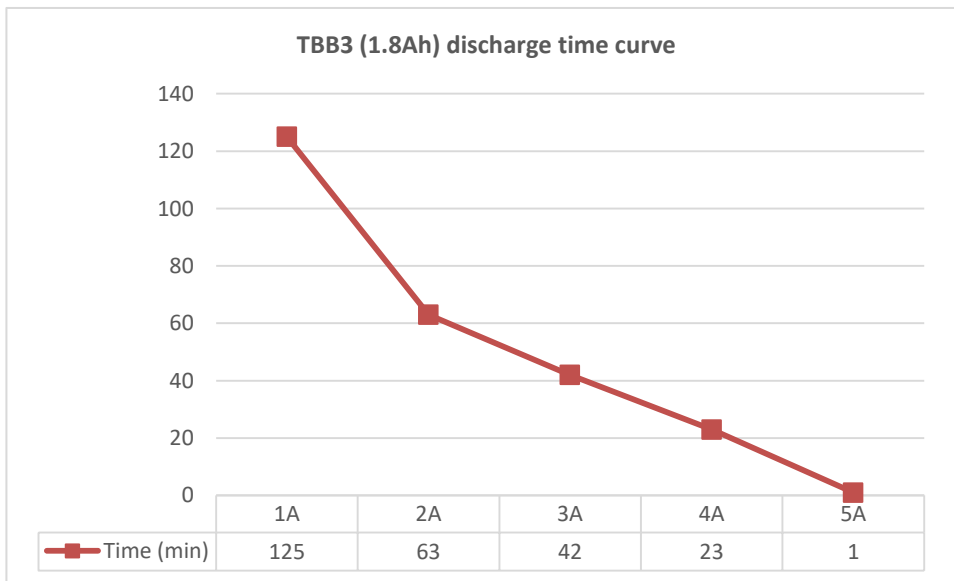
5.4 Storage

- Temperature: 0~ 40°C
- Humidity: 10%~93%
- Atmosphere: 86kPa ~106kPa

6. Appendix

6.1 Discharge time curve

Sample	Product
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



6.2 Discharge voltage - current curve

Sample	Product
Status	At full capacity (100%)
X axis	Discharge current (A)
Y axis	Discharge voltage (V)
Remark	In real situation the discharge varies- this test is only for reference

