TOPFLYtech T-one BLE Temperature Sensor User Manual

Contents

TOPFLYtech T-one BLE Temperature Sensor

Product Usage Instructions

- Follow the user manual instructions to activate the sensor and pair it with your tracker/Phone via BLE.
- The sensor can store data locally, refer to the user manual for details on accessing and managing stored data.
- Explore the sensor's settings to customize temperature thresholds, alerts, or other configurations based on your monitoring needs.
- If you encounter any issues with the sensor, consult the troubleshooting section in the user manual for possible solutions.
- Refer to the user manual for a detailed explanation of each setting parameter and its impact on sensor functionality.

FAQ

- **Q:** How do I change the battery of the T-one sensor?
- **A:** The T-one sensor comes with a non-replaceable CR2477 battery. Once the battery life is depleted, the entire sensor unit will need to be replaced.
- **Q:** Can the T-one sensor be submerged in water?
- **A:** The T-one sensor has an IP67 waterproof rating, indicating that it is protected against immersion in water up to 1 meter depth for up to 30 minutes.

Thanks for your purchase ing of the high quality I o T sensor from TOPFLY tech Please read this user manual carefully before installation and operation. Information in this manual is the property of TOPFLY tech Changes to the specifications and features in this manual may be made by TOPFLY tech without prior notice. No part of this manual could be reproduced, copied, translated, transmitted, or published in any form or by any means without TOPFLY tech's prior written permission.

The sensor is using BLE 5.1 technology and can measure Temperature and send data to the tracker/Phone via BLE. It provides the customer with a cost-effective, efficient, and safe environment remote monitoring method. It's suitable for use in commercial cold-chain transport/storage and other segments.

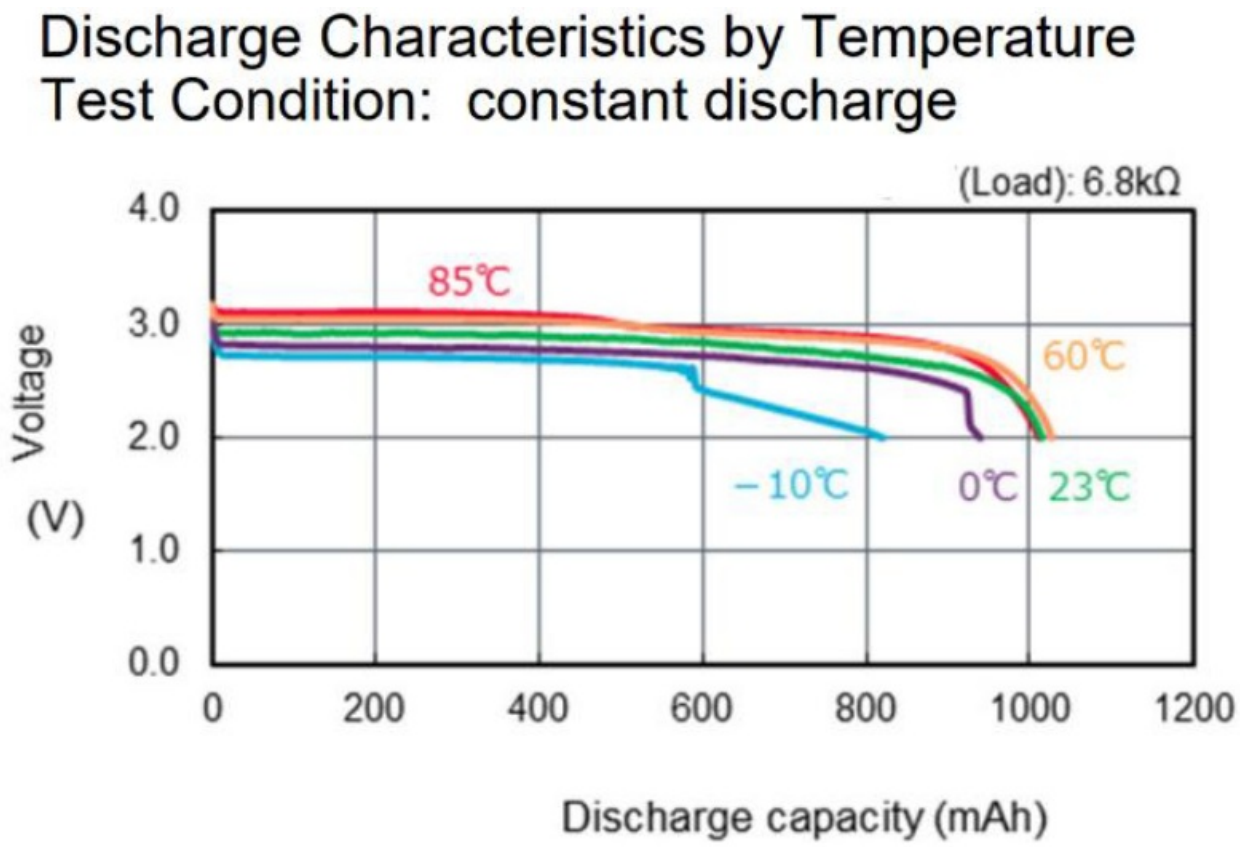
Quick Reference

Product Specifications

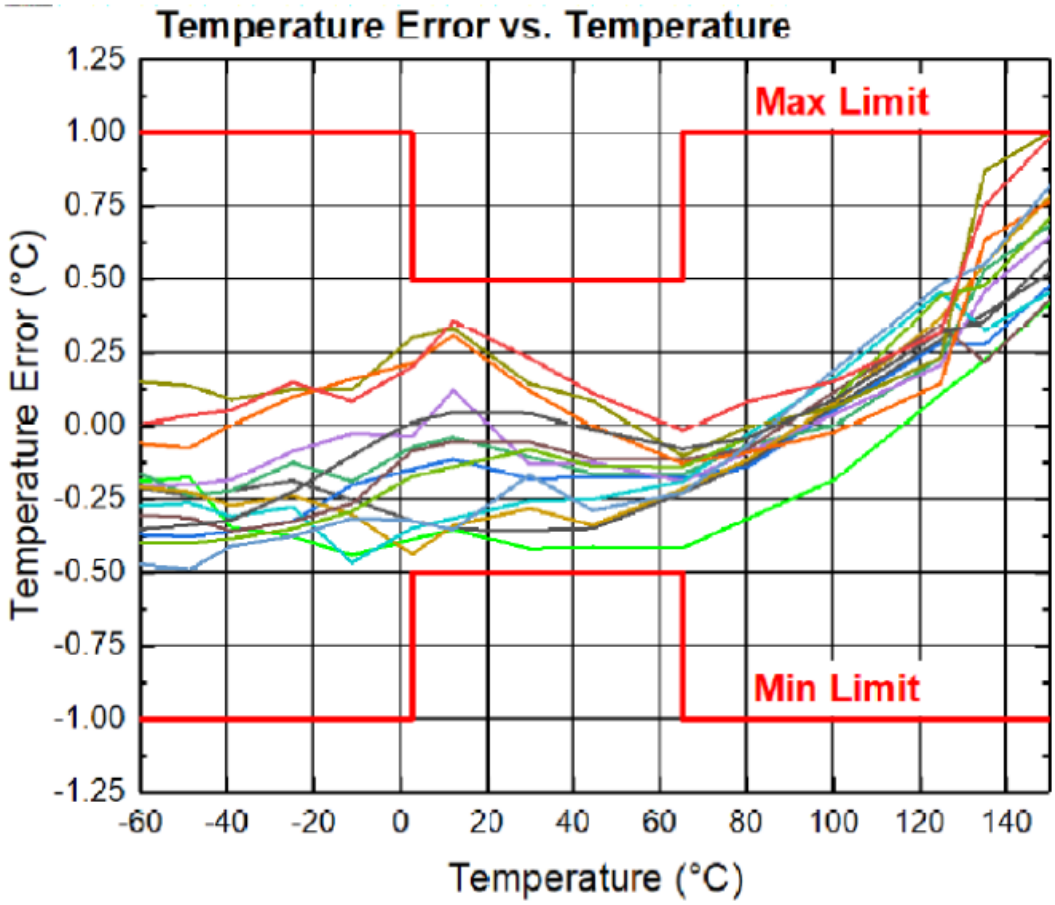
General Specifications	
Model Name	T-one
Waterproof	IP67
Dimensions	59.9mm*40.0mm*14.6mm (2.36” *1.57” *0.57”)
Weight	59g (2.40 oz, battery and 1-meter probe included) / 36g (1.50 oz, probe not included)
Battery	Non-Replaceable CR2477 Battery (1000mAh)
Battery Life *Refer to the 2.1 battery discharge curves	Only use TFT Eddystone (default enable)
	1800 days @ interval: 10s & TX= 0 dBm & temperature = 25℃ & Temperature on (default off) 1650 days @ interval: 10s & TX= 4 dBm (default) & temperature = 25℃ & Temperature on (default off) 1450 days @ interval: 10s & TX= 8 dBm & temperature = 25℃ & Temperature on (default on)
	1450 days @ interval: 5s & TX= 0 dBm & temperature = 25℃ & Temperature on (default on) 1200 days @ interval: 5s & TX= 4 dBm (default) & temperature = 25℃ & Temperature on (default on) 1000 days @ interval: 5s & TX= 8 dBm & temperature = 25℃ & Temperature on (default on)
Operating / Storage Temperature	Housing: -30℃ ~ +80℃ (-22°F ~ 176°F)
	Probe: -55℃ ~ +150℃ (-67°F ~ 300°F)
Probe Length	1-meter standard (5 / 10 / 15 meters optional)
Temperature Measurement Accuracy *Refer to the 2.2 temperature accuracy charts	Typic: ± 0.25(± 0.5℃) (0-65 ℃ , Long-term drift Typ. <0.02 °C/Y)
Power Output(default)	4 dBm and 10s broadcast
Transmission Range (BLE 5.1)	Up to 200m (656 fts) (Open Field, Power: 4 dBm(default), BLE5 .1) Up to 400m (1312 fts) (Open Field, Power: 8 dBm, BLE5.1)

Protocols compatibility	
TFT Eddystone	Yes (default)
Eddystone UID	Yes
Beacon	Yes
Protocols compatibility	
Front Light Sensor for Power on	
Installation Methods: Polyurethane glue, Screws, Cable zip tie	
Compatible with all TOPFLYtech trackers that have BLE functionality	

Battery discharge curves



Temperature accuracy chart



Start to use

How to power on

1. Power on through the phone's flashlight
2. Turn on and keep the flashlight focused on the center of T one for more than 3 seconds. As a result, the LED will blink, indicating that the device is powered on.

How to power off

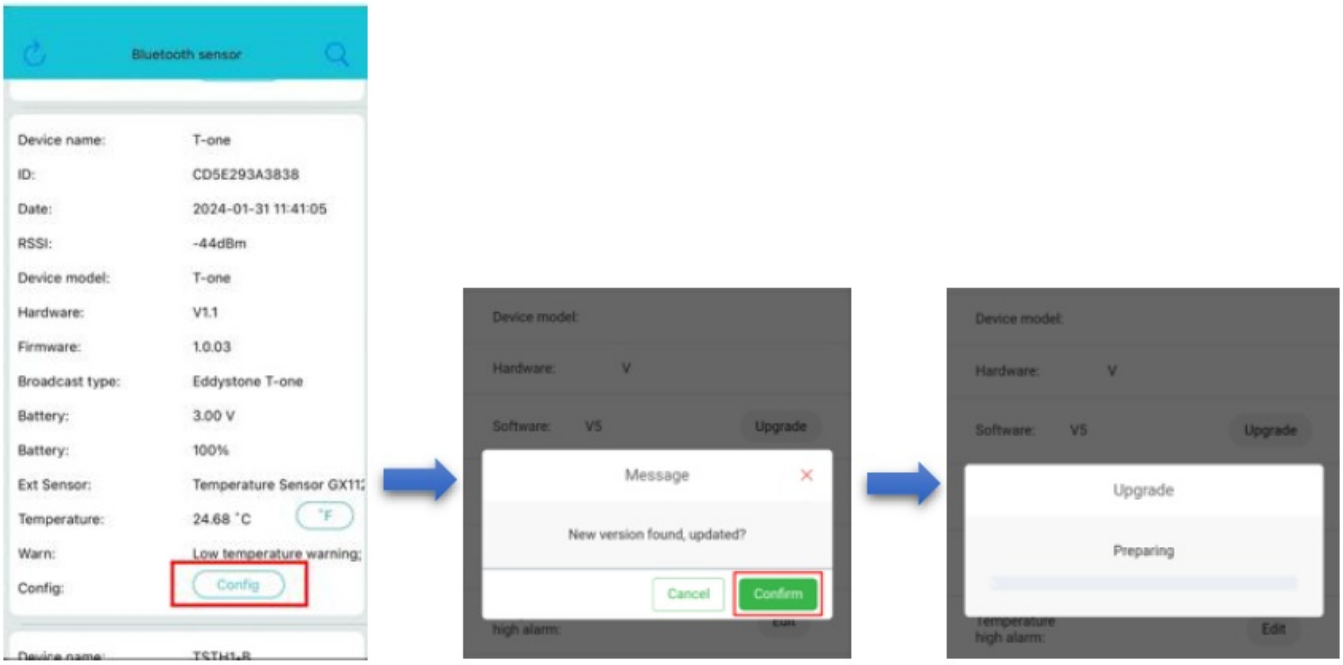
1. Install the app named "TFTBLE" from Google Play or the App Store.
2. Turn on the cellphone Bluetooth.
3. Run the "TFTBLE" app and allow all the permissions it needs.
4. Connect the sensor via "TFTBLE" and config device (default passwor dd 6 54321) and click the shutdown button.

How to read the sensor information through a cellphone

1. Power on the sensor by following the steps in 3. 1
2. Find the device model named T-one
3. The sensor ID will be shown in the app. It also can be obtained by scanning the QR code on the product label.

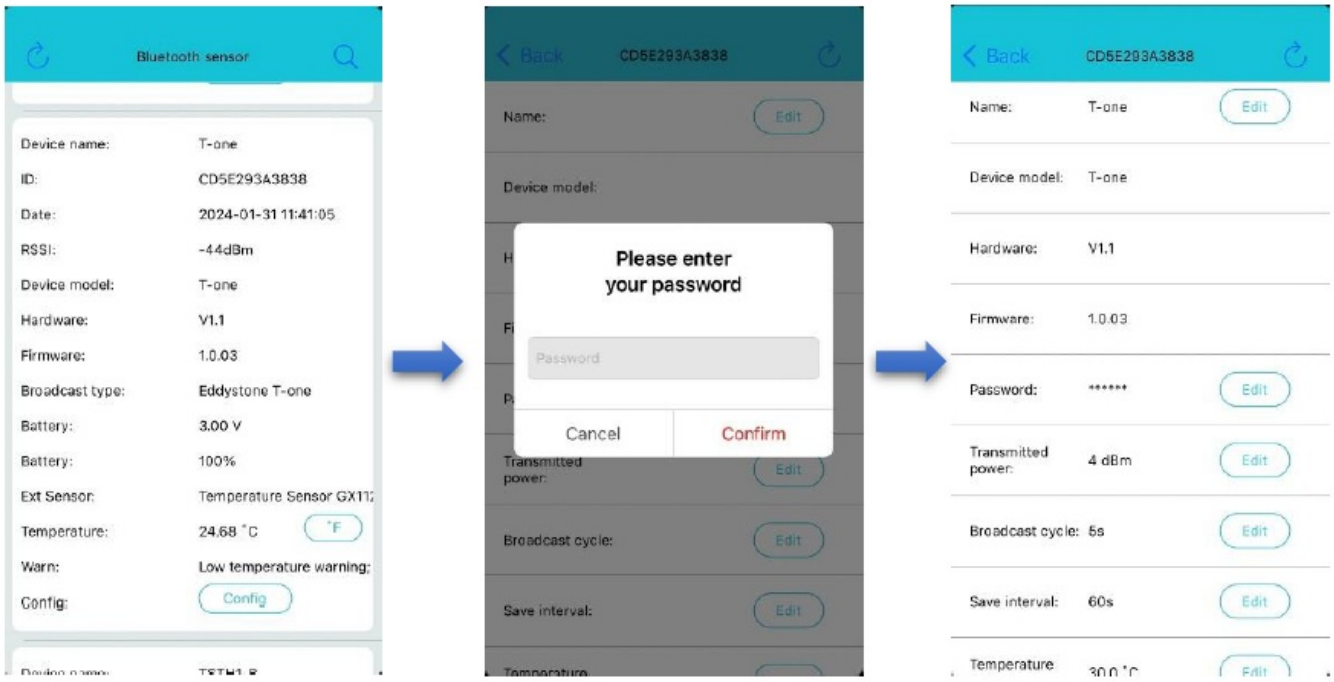
How to upgrade the sensor firmware

1. Click the “Config” button.
2. If there is a new version of firmware, the app will give a popup notice.
3. Tap “Confirm” to upgrade the firmware.
4. Waiting for a while. In the process of updating, please keep the cell phone close to the sensor.



How to configure the sensor by cell phone

1. Run the TFTBLE app and click the “Config” button.
2. Input the password. The default password is 654321.
3. Then you can change any configuration.



How to connect the sensor to a TOPFLY tech tracker

1. The tracker must have BLE connectivity
2. Get the sensor ID from the TFTBLE app or scan the QR code
3. A dd the sensor ID into tracker (TLW2 2/6/12BL, TLD2 L/D, TLP2 SFB TLW2 12B)

BLEIDA,0000,A,B,C#	Add a BLE sensor A=sensor ID B=sensor type (1=TSTH1-B, 2=TSDT1-B, 3=TSR1-B, 4=TPMS, 5=TZ T&H) C=sensor nick name, optional, max len = 8

4. On TLW2 2/6/12BL, TLD2 L/D, TLP2 SFB, and TLW2 12B, the tracker BLE is enabled by default.

TIMERTH,0000,A:B#	Define the tracker reporting rate of temperature & humidity sensor data A, Ignition on uploading interval, range: 300/15 (TLP2-SFB/other)~65535, unit is second B, Ignition off uploading interval, range: 300/15 (TLP2-SFB/other)~65535, unit is second

5. Connect the sensor to another 3 rd party device
   Please contact TOPFLYtech if you want to use this sensor with a 3 rd party BLE device

Local Storage

1. It requires the sensor version ≥ V1.0.02 Connect the sensor via the TFTBLE app
2. Tap “Start Record” to enable the local
3. The sensor will save the data every 1 minute by default. This period is adjustable, range 60 600s, stepping every 10s.
4. The sensor can save 1 5,000 pieces of historical data. If the memory is full, new data will overwrite old data.

Other Settings

1. The default broadcasting cycle is every 10s.
2. The broadcasting cycle is adjustable, range 5 ~ 30s.

Quick Trouble Shooting

The APP shows “Loading” all the time

1. Terminate the app.
2. Check the cellphone’s Bluetooth status and make sure it is on.
3. Make sure all the permissions of the APP are given to the app. You can enter <Se ttings >>–<Per missions> to manage it.
4. Put the sensor close to the cellphone then run TFTBLE APP again.

Setting Parameter Description

Parameter	Description
Password	Default Password Is 654321. It can be changed to any other 6-digits password.
Broadcast Cycle	The sensor information broadcasting cycle.
Temperature High Alarm	The sensor will broadcast an alarm message once meets the condition
Temperature Low Alarm	The sensor will broadcast an alarm message once meets the condition
LED	Sensor LED light on/off
Reset Factory	Reset all settings in the sensor

Documents / Resources

	TOPFLYtech T-one BLE Temperature Sensor [pdf] User Manual T-one BLE Temperature Sensor, T-one BLE, Temperature Sensor, Sensor

References

- User Manual