



TZONE TZ-BT04 Logging Recording Measuring Temperature Sensor User Manual

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TZ-BT04 User Manual V1.9



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Product overview

TZ-BT04 is Bluetooth Low Energy temperature and humidity data logger with the latest Bluetooth 4.1 technology and Nordic NRF51822 chip. It can collect the temperature and humidity of the surrounding environment. Such data can be recorded as history data. BT04 can store up to 12000 pieces of the temperature and humidity data.

Mobile phones with Bluetooth 4.0 or above can download and install App. It can store and monitor the temperature and humidity of the environment comprehensively. Its characteristics are small-sized, low-weighted, easily portable, and highly accurate for wide use in cold chain logistics, archives, labs, museums, etc.

Product application

1. Refrigerated storage and transportation;
2. Archives;
3. Experimental (test) rooms;
4. Workshop;
5. Museums;
6. Pharmaceutical environment;
7. Fresh transport.

Product features

1. High accuracy and stability;
2. Bluetooth 4.1;
3. Long-distance wireless transfer;
4. Built-in highly sensitive temperature and humidity sensor;
5. Real-time display temperature and humidity;
6. It can store 12000 pieces of temperature and humidity data;
7. You can set the alarm temperature range;
8. Can be set the scope of temperature alarm;
9. Can be set normal storage temperature and humidity data interval and alarm storage temperature and humidity data interval;
10. Can choose time to query data, the stored data can be saved in history;
11. History report can be sent to specified email;
12. By pairing Bluetooth printer to print the data report;
13. Can by OTA update version.

Product specification

Item	
Signal transmission frequency	2.400 – 2.4835GHz
Protocol standard	Bluetooth 4.1
Modulation mode	GFSK
Send interval	2S, adjustable
Built-in battery	CR2450,620mAh /3V
Output power	-4dBm, adjustable
Communication rate	1Mbps
Transmission distance	55 meters, adjustable
Storage	Can save 12000 temperature and humidity data
battery life	1.5 years(Depends on the mode of operation, c
Net weight	30g
Outline size	50mm*50mm*16mm
Operating temperature range	-25°C~ +60°C
Operating Humidity range	0~85%RH
Temperature detection accuracy	±0.3°C(0~60°C),±0.3~0.7°C(other)
Humidity detection accuracy	±3%RH(20~80%),±4%(other)

Caution

1. Being close to a metal object will interfere with the signal, causing the signal to be weakened.
2. Note the distance between TZ-BT04 and the receiver to guarantee the accuracy of receiving.
3. Keep away from water and corrosive objects.

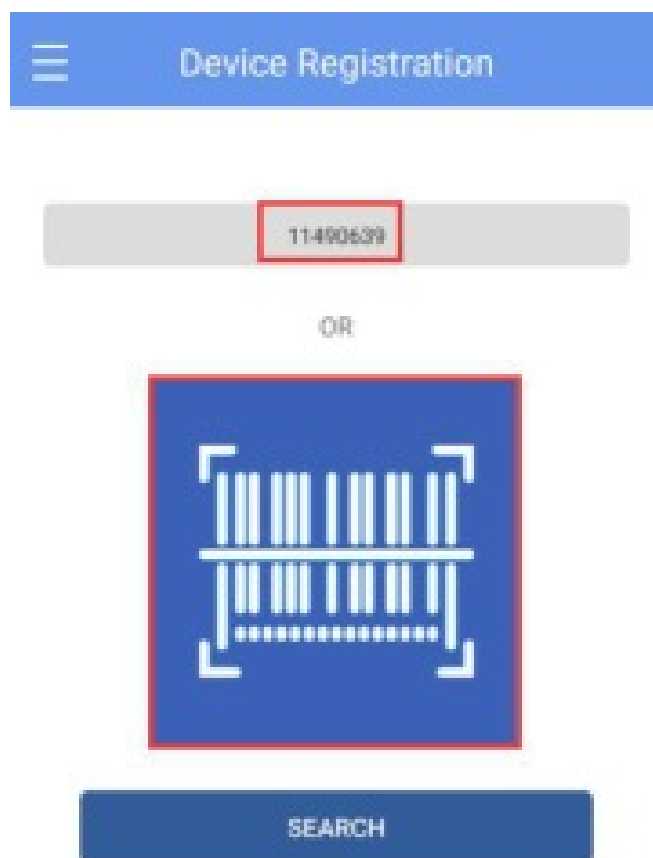
APP

'Temp Logger' is a free mobile application which is provided by our company to the users, can connect the BT04 through the Bluetooth of the mobile devices and do the settings, data transmission, recording, synchronization, send to email. Apply the Bluetooth BLE way, so you can use an Android phone for temperature monitoring. The client can download App by scanning the QR code below(V25 and above available):



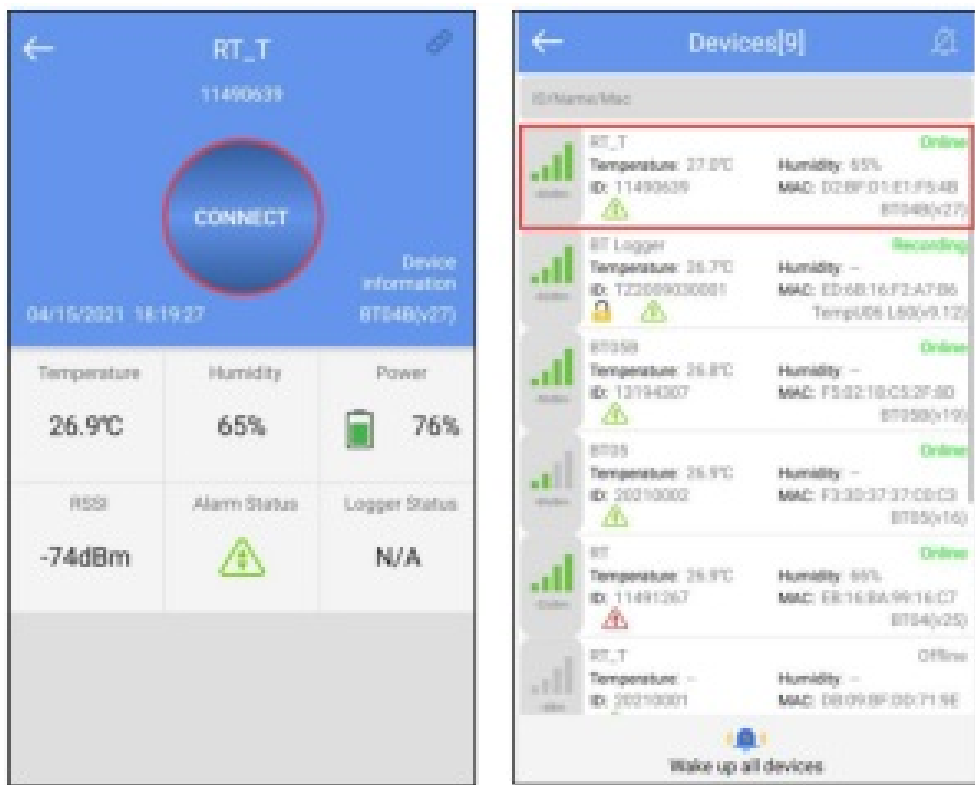
6.1 Device Registration

6.1.1 Open the APP, enter the device ID directly to register on the homepage, or scan the QR code to get the device ID, or do not enter any ID and directly click search to find the device.



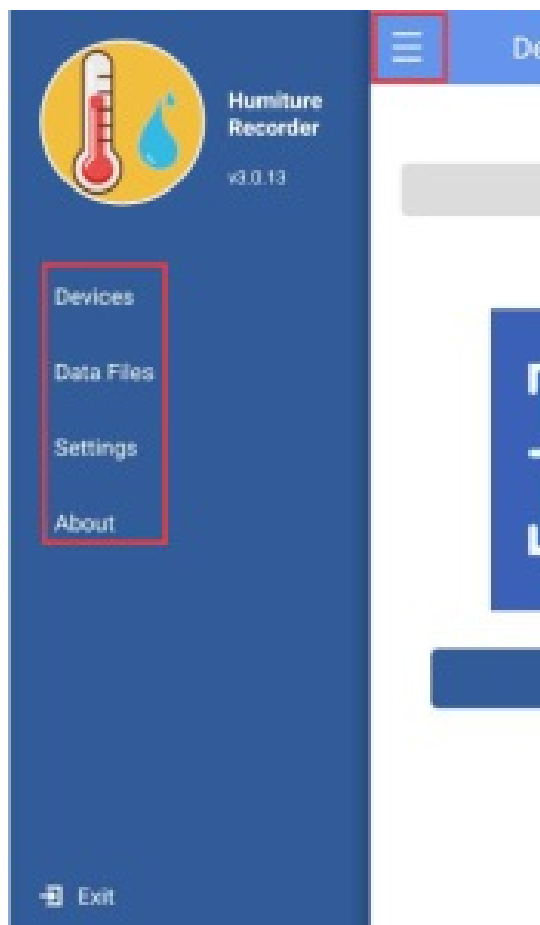
The image shows a mobile application interface for "Device Registration". At the top is a blue header bar with a white hamburger menu icon on the left and the text "Device Registration" in white. Below the header is a light gray input field containing the device ID "11490639", which is highlighted with a red rectangular border. Underneath the input field is the text "OR" in a small, gray font. Below "OR" is a square QR code with a blue background and white vertical bars, also highlighted with a red rectangular border. At the bottom of the screen is a dark blue button with the word "SEARCH" in white capital letters.

6.2.2 Enter the device connection page and click Connect. After a successful connection, the device ID will be displayed on the "Devices" page, indicating that the device has been registered successfully.



6.2 Device View

Click the icon in the upper left corner of the home screen to expand the main menu. You can select the menu function and click “device” to enter the multidevice interface. The functions of the device interface are as follow:



6.2.1 To view device information

The name, ID, MAC, temperature/humidity data, model, and status of all the current devices can be viewed, or

you can view the specific device information by ID, name, and MAC.

Devices[9]		
ID/Name/Mac		
	<div>RT_T</div> <div>Temperature: 27.0°C</div> <div>ID: 11490639</div> <div></div>	<div>Humidity: 65%</div> <div>MAC: D2:BF:D1:E1:F5:4B</div> <div>BT04B(v27)</div> <div>Online</div>
	<div>BT Logger</div> <div>Temperature: 26.7°C</div> <div>ID: T22009030001</div> <div></div>	<div>Humidity: -</div> <div>MAC: ED:6B:16:F2:A7:B6</div> <div>TempU06 L60(v9.12)</div> <div>Recording</div>
	<div>BT05B</div> <div>Temperature: 26.8°C</div> <div>ID: 13194307</div> <div></div>	<div>Humidity: -</div> <div>MAC: F5:02:18:C5:2F:8D</div> <div>BT05B(v19)</div> <div>Online</div>
	<div>BT05</div> <div>Temperature: 26.6°C</div> <div>ID: 20210002</div> <div></div>	<div>Humidity: -</div> <div>MAC: F3:3D:37:37:C0:C8</div> <div>BT05(v16)</div> <div>Online</div>
	<div>RT</div> <div>Temperature: 26.5°C</div> <div>ID: 11491267</div> <div></div>	<div>Humidity: 66%</div> <div>MAC: EB:16:BA:99:16:C7</div> <div>BT04(v25)</div> <div>Online</div>
	<div>RT_T</div> <div>Temperature: -</div> <div>ID: 20210001</div> <div></div>	<div>Humidity: -</div> <div>MAC: DB:09:BF:DD:71:9E</div> <div>Offline</div>
<div></div> <div>Wake up all devices</div>		

Status description of the device in different symbols:



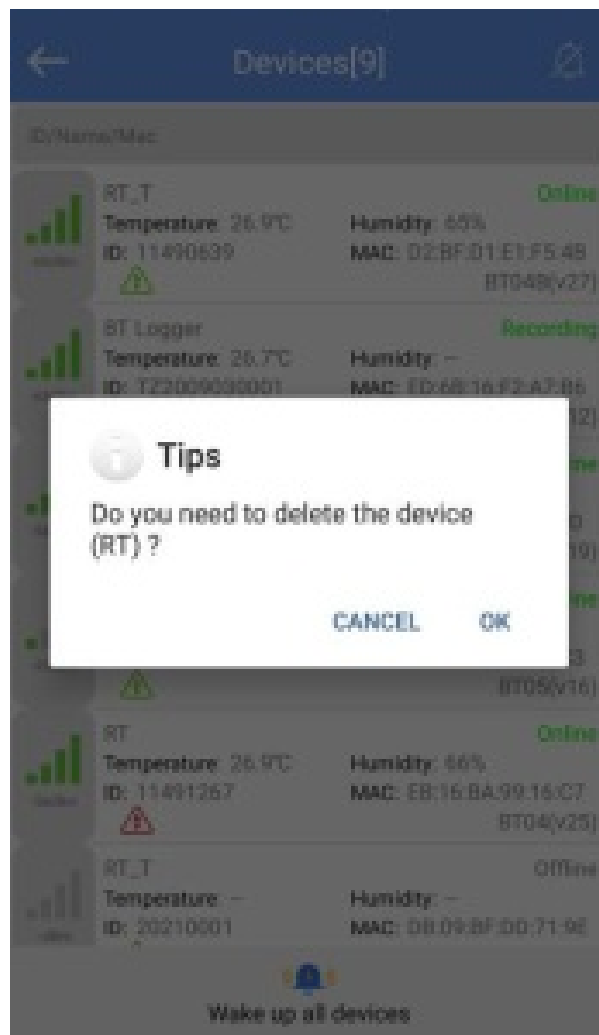
: Temperature normal



: Temperature alarm (including both high and low temperatures)

6.2.2 Delete the device:

Long press to delete the device:



6.2.3 Device alarm:

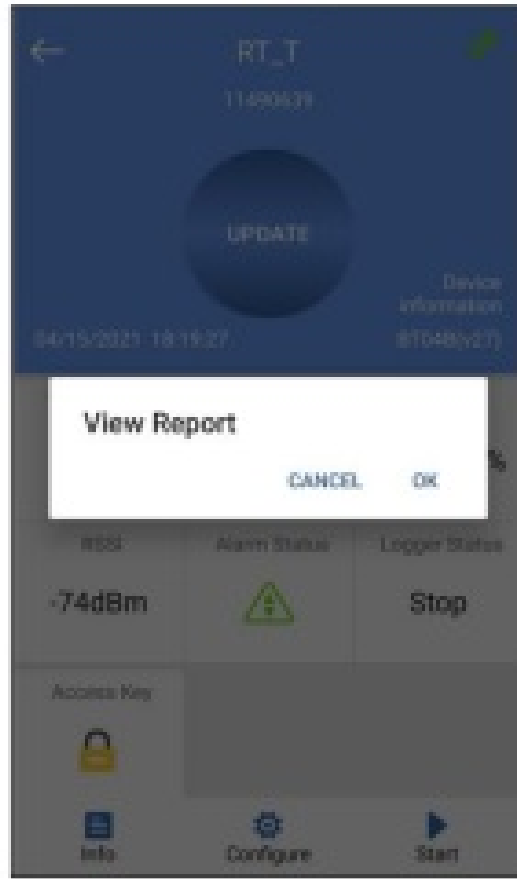
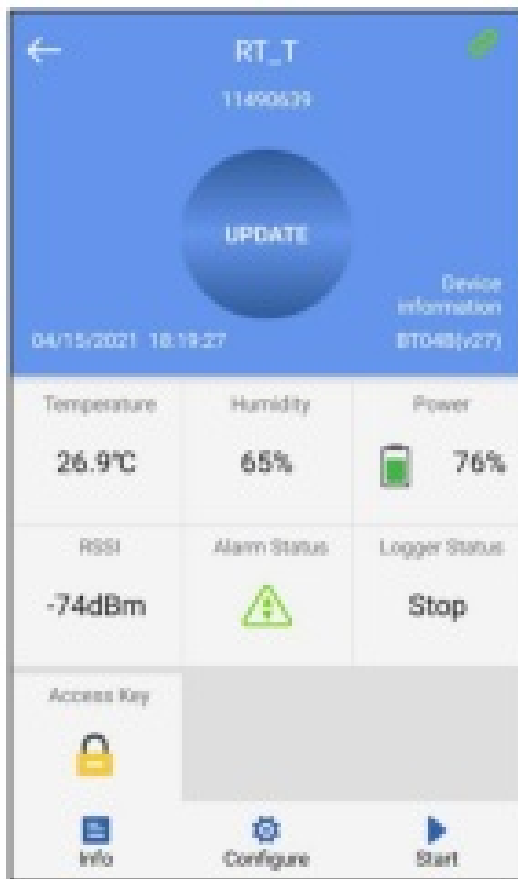
When the device exceeds the preset upper or lower limit, the alarm information will be displayed, and the alarm bell will ring. Clicking “CLOSE ” to turn off the alarm information and alarm bell.



6.3 Device connection

Click a single device quickly to enter the connection interface. It will display the temperature/humidity, voltage, RSSI, alarm status, and logger status of the device.

Click "CONNECT," and jump to update after the connection is successful, indicating that the device has been successfully connected and read the current data content. After the connection is successful, it will prompt you whether to view the report, or the access key and flight mode of the device will be displayed. Four buttons will be displayed at the bottom of the interface:



Note: The device will not update the data in the connection process. By default, the device will be disconnected after 1 minute and the four buttons at the bottom will become gray and cannot be clicked again.

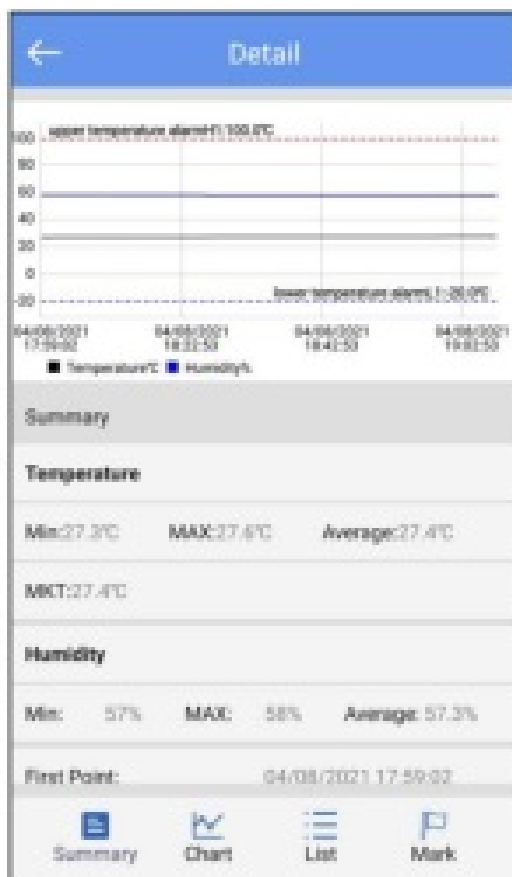
6.3.1 Device access key

Click "Access Key" to encrypt the device, and set the level-1 and level-2 access keys.

6.3.2 Detail and email function

Click "Detail" to view all information reports of the device. Click "EXPORT" to generate PDF and CSV reports, and send the reports to the designated mailbox by email.

A: Details summary



Detail	
First Point:	04/08/2021 17:59:02
Stop Time:	04/08/2021 19:08:31
Trip Length:	01h 09m 29s
Number of Points:	66
Device Info	
Device Name:	RT_T
ID:	11490639
MAC:	02:BF:D1:E1:F5:4B
Firmware Version:	27
Alarms	
Alarm Condition	No. of Violations Status
H2	

Summary Chart List Mark

Detail		
Alarms		
Alarm Condition	No. of Violations	Status
H2		
H1: Over 105.0°C	0	OK
L1: Below -20.0°C	0	OK
L2		
Report Information		
Start Delay:	00h 00m 00s	
Log Interval:	00h 01m 00s	
Start Mode:	-	
Stop Mode:	App Stop	
Description:		

Summary Chart List Mark

Detail

L1: Below -20.0°C

0

OK

L2

Report Information

Start Delay:

00h 00m 00s

Log Interval:

00h 01m 00s

Start Mode:

-

Stop Mode:

App Stop

Description:

EXPORT

Summary

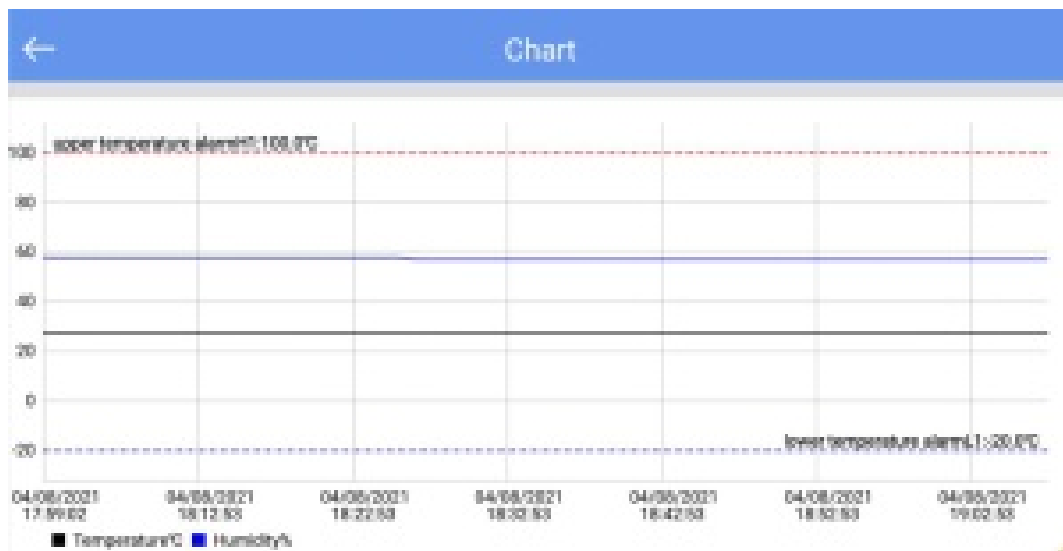
Chart

List

Mark

Note: The smartphone must have a mailbox APP and login account to send an email.

B: Chart:



C: List:

List			
NO.	DateTime	Temperature	Humidity
1	04/08/2021 17:59:02	27.3°C	58%
2	04/08/2021 18:01:35	27.3°C	58%
3	04/08/2021 18:02:35	27.4°C	58%
4	04/08/2021 18:04:59	27.4°C	58%
5	04/08/2021 18:05:59	27.4°C	58%
6	04/08/2021 18:06:59	27.4°C	58%
7	04/08/2021 18:08:53	27.4°C	58%
8	04/08/2021 18:09:53	27.4°C	58%
9	04/08/2021 18:10:53	27.4°C	58%
10	04/08/2021 18:11:53	27.4°C	58%
11	04/08/2021 18:12:53	27.4°C	58%
12	04/08/2021 18:13:53	27.4°C	58%
13	04/08/2021 18:14:53	27.4°C	58%
14	04/08/2021 18:15:53	27.4°C	58%
15	04/08/2021 18:16:53	27.4°C	58%

6.4 Configure device

After connection, when the device does not start recording, you can click “Configure” to set the device.

← Configure Device

BT04B 11490639

Device Name: RT_T

Basic Settings

Transmit Power: -4 dBm

Logging Interval: 00 H 01 m 00 s

Logging Cycle: 8 Day

Advanced Settings

Access Key ON

Alarms

Low temperature limit: -20

High temperature limit: 8

Description

Save

6.4.1 Device name: The device name can be modified (up to 7byte) by users.

6.4.2 Basic settings:

A: Transmission power: The device transmission power(range:-30dbm~4dbm, default:-4dbm)

B: Logging interval: Record time of the stored data (range:10s~1h, default:1mins).

C: Logging cycle: It changes with the logging interval.

6.4.3 Advanced settings

A: Access key: Must be enabled, default: 000000.

6.4.4 Alarms:

A: Low temperature limit:-25°C

B: High temperature limit:100°C

6.4.5 Description: You can set a description for this device (up to 56 characters).

6.4.6 Start or stop

You can set whether the device starts or stops through the APP.

6.5 Data files

Click the “Data Files” menu bar to enter the data files interface. The functions of the device interface are as follows:

Data Files			
8	TZ2020022500	02/25/2021 12:03:28	<input type="checkbox"/>
9	TZ0120100008	02/22/2021 17:07:30	<input type="checkbox"/>
10	TZ0120010001	02/06/2021 17:31:36	<input type="checkbox"/>
11	20210002	02/06/2021 16:53:44	<input type="checkbox"/>
12	20210003	02/06/2021 16:34:34	<input type="checkbox"/>
13	20210003	02/06/2021 16:28:16	<input type="checkbox"/>
14	20210002	02/06/2021 16:17:29	<input type="checkbox"/>
15	20210002	02/06/2021 15:56:35	<input type="checkbox"/>
16	11491267	02/06/2021 12:26:43	<input type="checkbox"/>
17	13191706	02/06/2021 12:04:48	<input type="checkbox"/>
 Comparison		 Delete	

6.5.1 To View a single data file

The time displayed in this file is the time when the device data is read for the first time. The information will be updated after each reading until the machine stops recording.

6.5.2 Chart report comparison supporting up to 5 files

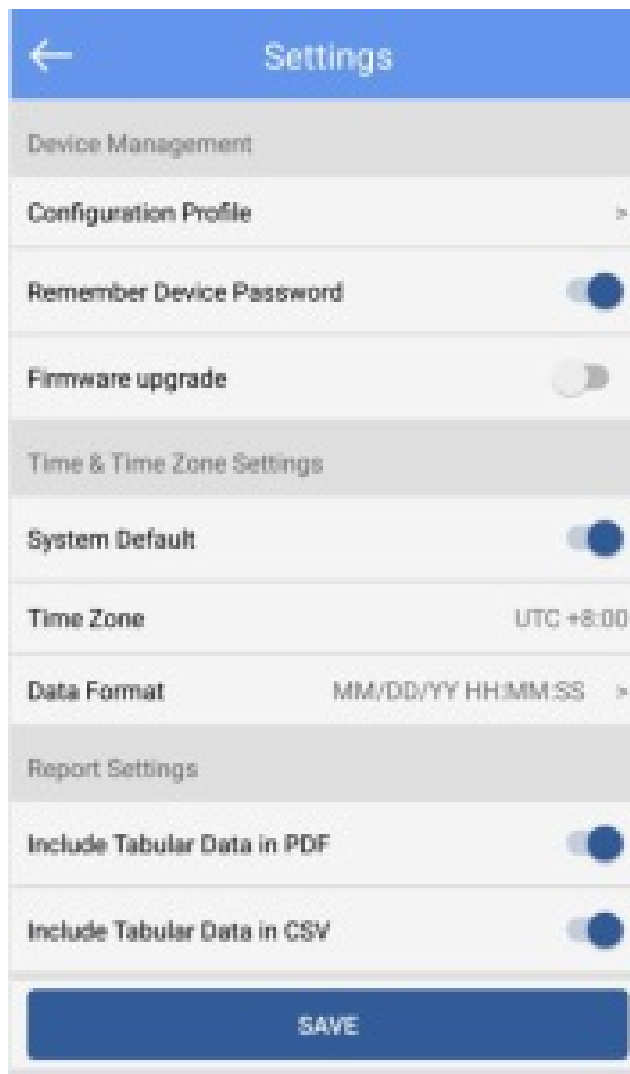
Check the data file and click “Comparison” to compare the temperature chart reports of different data files.

6.5.3 Delete data file

Check the data file and click “Delete” to delete the data file.

6.6 System setting

Click the “System setting” menu bar to enter the system setting interface. The functions of the system setting interface are as follows:



7.6.1 Device Management:

1. Configuration file: You can view the configuration file saved in "Configure".
2. Remember the device access key:
 Don't turn on the switch: enter the access key every time you connect the device
 Turn on the switch: when connecting the device, you only need to input the access key once (default: remember the key)
3. The firmware update:

Don't turn on the switch: Firmware upgrades are not allowed

Turn on the switch: After connection, there is a firmware upgrade function(default)

7.6.2 Time&Time zone Setting(Only for generating reports through the APP):


1. System default/Time Zone:
 Don't turn on the switch: is UTC time zone or another time zone as you choose
 Turn on the switch: is the current time zone of the system (default: system default)
2. Data Format: MM/DD/YY HH:MM: SS(default) or DD/MM/YY HH:MM: SS

7.6.3 Report settings(Only for generating reports through the APP):

1. Include Tabular Data in PDF: Select include or exclude (default: include).

2. Include Tabular Data in CSV: Select include or exclude (default: include).

Documents / Resources

<div><div>TZ-BT04 User Manual - v1.0</div><div></div><div><p>Product overview</p><p>The TZ-BT04 is a portable, battery-powered, and wireless temperature sensor. It is designed for use in a wide range of applications, including industrial, commercial, and residential. The device features a large LCD display, a keypad, and a USB port. It is also compatible with a variety of software applications, including the TZ-BT04 Logger and the TZ-BT04 Web Interface. The TZ-BT04 is a versatile and reliable device that can be used in a wide range of environments.</p></div></div>	<p>TZONE TZ-BT04 Logging Recording Measuring Temperature Sensor [pdf] User Manual</p> <p>TZ-BT04, Logging Recording Measuring Temperature Sensor</p>
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