A57 BT

Bluetooth Temperature Humidity Datalogger

User Manual

PREFACE

Thank you for purchasing the new Bluetooth Temperature Humidity Datalogger. In order to use this product safely and correctly, please read this manual thoroughly, especially the Cautions part.

After reading this manual, it is recommended to keep the manual at an easily accessible place, preferably close to the device, for future reference.

LIMITED WARRANTY AND LIABILITY

Uni-Trend guarantees that the product is free from any defect in material and workmanship within one year from the purchase date. This warranty does not apply to damages caused by accident, negligence, misuse, modification, contamination and improper handling. The dealer shall not be entitled to give any other warranty on behalf of Uni-Trend. If you need warranty service within the warranty period, please contact authorized service center or send the product back with problem description.

This warranty is the only compensation you can obtain. Uni-Trend will not be responsible for any special, indirect, incidental or subsequent damage or loss caused by any reason or speculation. As some areas or countries do not allow limitations on implied warranties and incidental or subsequent damage, the above limitation of liability and stipulation may not apply to you.

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1. Overview

A57 BT Bluetooth Temperature-Humidity Datalogger uses low-power microprocessors, equips internal temperature sensors and measures temperature and humidity via connecting external temperature probe or temperature-humidity probe. It features high accuracy, large storage, auto recording, time display, LED sound-light alarm, ultralow temperature recording, optional measurement methods, etc. Meanwhile, it supports to connect with mobile APPs and PC software to modify record settings, view data and export PDF reports. It meets requirements of high-accuracy temperature measurement, internal temperature measurement of target via external probe contact, ambient temperature and humidity measurement via external temperature-humidity sensor, and long-time temperature or temperature-humidity recording in various environments. It is widely used in fields of food processing, cold-chain transportation, warehousing, etc.

2. Features

★ Built-in high-precision NTC, accurately sensing temperature changes.

★ The external standard 2 meters high precision temperature and humidity probe makes the temperature and humidity detection more flexible and targeted.

★ 1 meter high precision NTC temperature probe can be selected to meet your personalized temperature measurement needs.

★ Wide range for temperature measurement, support to be used at minimum -40℃.

★ Large storage capacity, maximum record 64000 sets of data.

★ Audible and visible alarm indication.

★ Support to view data and export data report via mobile App and PC software.

★ IP54 rating supported.

★ Self-carried rear magnetic function and wall-mounted hole, easy to place and use.

3. Configurations

Datalogger ----------1

Quick Start Guide----------1

Safety Instructions ----------1

Common Files Download Guideline ----------1

Single-use Li-SOCl2 Battery (ER14505)----------1

Wall-mounted Screws ----------2

Expandable Rubber Plug ----------2

USB Cable ----------1

Temperature and Humidity Probe----------1

Please contact your seller if any components are missing or damaged.

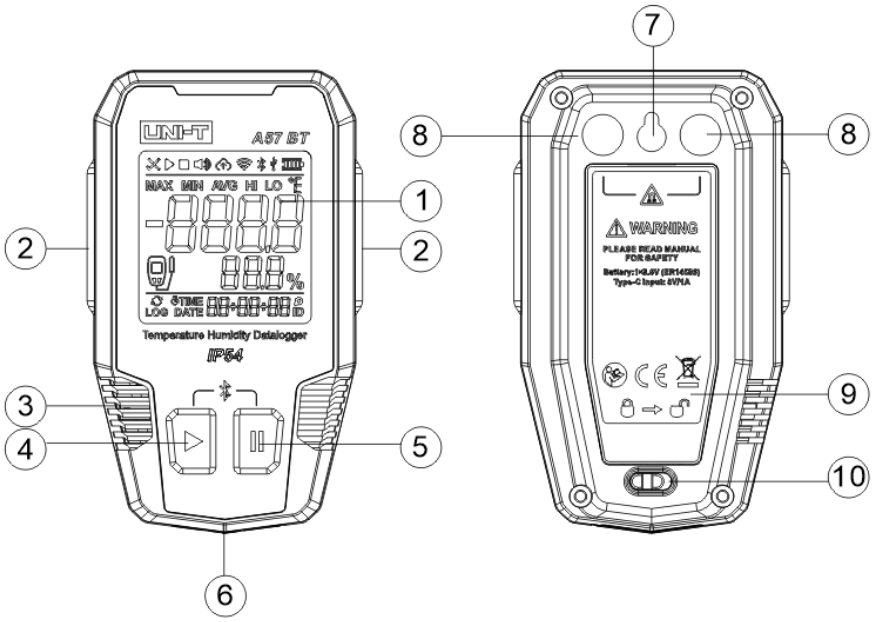
4. Safety

Read the Safety carefully and comply with it prior to using the datalogger.

⚠ “Warning” identifies dangerous situations and operations may cause to users. “Caution” identifies damage factors may cause to product or test equipment.

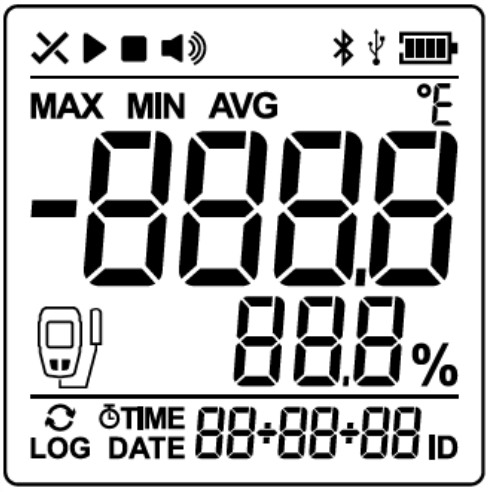
- Check if the device and accessories are damaged or abnormal prior to using. Do not use the device if any obvious housing damage showed or when you think it is fail to work.
- Do not dissemble the device randomly or change internal wirings to avoid damage.
- Do not store or use the device in high temperature, high humidity, flammable, explosive or strong electromagnetic environment.
- Please use soft cloth and neutral detergent to clean the housing. Do not use abrasives or solvent. Do not directly use water to flush it.
- Maintenance and service must be done by the specialized staffs or the specified department.

5. Structure



No.	Description
①	Screen
②	LED Indicators
③	Air Hole of Sensor
④	START Button
⑤	STOP Button
⑥	USB Cover
⑦	Wall-Mounted Hole
⑧	Magnet
⑨	Battery Cover
⑩	Battery Cover Toggle

6. Display



	No Alarm Alarmed		Start to record		Stop recording
	Buzzer		Bluetooth		USB connecting
	Battery status	MAX	Maximum value in data record	MIN	Minimum value in data record
AVG	Average value in data record	°F	Temperature units: ℃/℉	-888.8	Temperature display area
88.8%	Humidity display area		Loop record	LOG	Number of data record
	Booking record	TIME	Time	DATE	Date
88-88-88	Sub display area	ID	Device ID		Select the internal temperature sensor Select the external probe

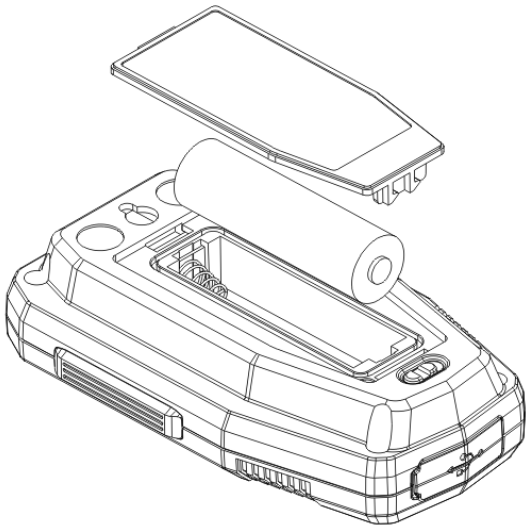
7. Operation

1) Battery Installation

a) Install the battery in the first use.

b) Toggle right to open the battery cover.

c) Install the battery as follows.



⚠ Cautions ：

- Note the battery polarity when install the battery.
- Use equipped 3.6V battery（ER14505）, and AA battery (1.5V) does not work.
- Equipped battery is one-time, and do not charge it.

2) Basic Operation

▶START Button：

- Short Press: Loop switch pages of Main Display > MAX > MIN > AVG (Note: The action is only effective when not in 0 data storage.

  Long Press: Start to record data (Note: The action is only effective when sets ‘Button’ to

start. In the 'Button' start way, if set the "Restart" function to 'Disabled' and not in 0 data record, long press START button is only effective when read data through any one in three ways:

1, App reading

2, Auto read data/generate files once connect the PC

3, PC software reading.

■STOP Button:

- Short Press: Loop switch pages of Time > Device ID > Storages > Date on the sub display area, lower side of the screen.
- Long Press: Stop recording data (Note: Effective in record status)

Bluetooth ON/OFF

- **Bluetooth ON:** Simultaneously long press STRAT and STOP button, Bluetooth icon flashing.
- **Bluetooth OFF**: Simultaneously long press START and STOP button, Bluetooth icon disappeared.

Note:

① Bluetooth ON with screen always-on will be OFF in 5 minutes if no connection.

② Bluetooth

a. Flashing: Waiting to be connected.

b. Solid Bluetooth: Connected.

3) . Parameter Setting

a. Set parameters via the mobile APP or PC software.

b. Parameter details are as follows:

1. **SN**: Factory No., Serial No.
2. **ID:** Device ID, 0~100 can be set
3. **Note:** Note the information
4. **Temperature Units:** ℃/℉
5. **Date & Time:** Manual set or follow the system
6. **Auto Screen OFF:** Solid light or 10s~5min can be set for auto screen off.
7. **Backlight:** Screen backlight ON/OFF
8. **Buzzer:** Beeps 3 times in alarming when buzzer ON, and repeats with a one-hour interval.
9. **LED Indicators:** LED flashes in red for 3 times in alarming when indicators ON, and repeats with a one-hour interval.
10. **Temporary PDF: T**emporary report generates when connecting computer.
    a) With this function ON and connecting computer via USB cable, LED flashes in green, generating process of report showed on the screen, generating a U disk included PDF and CSV files.
    b) With this function OFF, using USB cable to connect datalogger with computer will generate an empty U disk.
    c) Report viewing ways:
        ① Directly view the report once computer connected.
        ② View the report via the PC software downloading.
        ③ View the report via the Bluetooth connecting mobile App.

        Note: If connects datalogger with computer or mobile in record status, all

data included the data before connection will be generated into a report, then the datalogger keeps recording data, and the new recorded data will be generated into a report in the next connection.

Report generating duration depends on how many the data stored

, in seconds or minutes, maximum 64000 sets of data takes about 10min to generate a report.

11. **Record Modes:**

a) Stops when records full: Auto stop recording when the data is up to 64000 sets.

b) Loop record: Rerecorded data will cover the previous data when it fully records 64000 sets of data, e.g. the 64001 data covers 1st data, the 64002 data covers 2nd data, and the exported data is chronological.

12. **Start-up Ways:** Software, Buttons and Booking.

a) Software: Two start ways.

① Select the Software option in the mobile App page “Record Start” to start.

② The “Record Start” option shows when connects the PC software.

b) Buttons: Long press START button to start recording.

c) Booking: Preset the start time here.

13. **Delay Start-up:** 0~240min can be set to delay the first data recording.

14. **Record Interval:**10s~24h settable

15. **Buttons Stop:** Enabled/Disabled. Stop recording can only be done via the App or PC software when this function is set to disabled.

16. **Restart-up:** Enabled/Disabled. In the condition with data records, only when the button is the start-up way, can the Restart-up function set to enabled or

disenabled.

a) When the Restart-up function is set to disabled but with available recorded data, use the button to restart-up only effective after reading data in temporary PDF way via the mobile App or PC software.

b) No limit when the Restart-up function is enabled.

Note: Restart-up will generate new data records and delete the previous stored data.

17. Alarm Settings:

a) Thresholds: Alarms when the data is out of limit.

b) Types: Single/Cumulative.

c) Delay: Used to compare with the alarm duration to judge if it is in alarm status.

d) Alarm Settings and Results:

① Single Alarm: When the single temperature (humidity) is up to or exceeds the threshold duration, ≥ the delay time of alarm.

② Cumulative Alarm: When the cumulative temperature (humidity) is up to or exceeds the threshold time, ≥ the delay time of alarm.

③ Alarm Duration: When the recorded temperature (humidity) is up to or exceeds the total threshold duration.

④ Alarm Times: When the recorded temperature (humidity) is up to or exceeds the threshold until to recover or end the record, considered as one alarm time.

18. Sensor Setting:

* The three sensor modes need to be selected in the APP or PC software for measurement.

a) Internal Temperature sensor: Use the internal temperature sensor of the meter to measure the ambient temperature

b) External Temperature Probe: Used to measure the surrounding temperature of probe or the target temperature contacted by probe for display and record. After this function is successfully set, “Err” will show on the temperature display area of LCD when no temperature probe is connected.

c) External Temperature-Humidity Probe: Used to measure the surrounding temperature and humidity of probe for display and record. After this function is successfully set, “Err” will show on the temperature-humidity display area of LCD when no temperature-humidity probe is connected.

8. Specification & Default Configurations

1）Technical Specification

<table>
<tr><td rowspan="7">External
Temperature-Humidity
Sensor Probe</td><td>Temperature Range</td><td colspan="2">-40℃～ 85℃ (-40℉～ 185℉)</td></tr>
<tr><td>Relative Humidity
Range</td><td colspan="2">0%～100%RH</td></tr>
<tr><td rowspan="5">Temperature</td><td>Temperature Range</td><td>Accuracy</td></tr>
<tr><td>0℃≤ t ≤60℃</td><td>±0.3℃</td></tr>
<tr><td>-40℃≤ t＜0℃
60℃＜ t ≤85℃</td><td>±0.5℃</td></tr>
<tr><td>32℉≤ t ≤140℉</td><td>±0.6℉</td></tr>
<tr><td>-40℉≤ t ＜32℉</td><td>±0.9℉</td></tr>
</table>

		140℉ < t ≤185℉	
	Relative Humidity	Relative Humidity Range	Accuracy
		0%≤ RH ≤90%	±2.5%RH (When in 25℃)
		90% < RH ≤100%	±3.5%RH (When in 25℃)
Internal NTC Temperature Sensor	Temperature Range	-40℃ ~ 85℃ (-40℉ ~ 185℉)	
	Temperature	0℃≤ t ≤60℃	±0.4℃
		-40℃≤ t <0℃	±1.0℃
		60℃< t ≤85℃	±1.0℃
		32℉≤ t ≤140℉	±0.8℉
		-40℉≤ t <32℉	±2.0℉
		140℉< t ≤185℉	±2.0℉
External NTC Temperature Probe	Temperature Range	-40℃ ~ 85℃ (-40℉ ~ 185℉)	
	Temperature	-20℃≤ t ≤40℃	±0.5℃
		-40℃< t <-20℃	±1.0℃
		40℃< t ≤85℃	±1.0℃
		-4℉≤ t ≤104℉	±0.9℉
		-40℉≤ t <-4℉	±2.0℉
		140℉< t ≤185℉	±2.0℉
Temperature/Relative Humidity Resolution		0.1℃(0.1℉)/0.1%RH	
LCD		FSTN, six o'clock direction in viewing angle, size:	

	39.0x39.0mm
Record Capacity	64000 sets
MAX/MIN/AVG	√
LED Indicators	√ (By default OFF)
Backlight	√ (By default OFF)
Buzzer Alarm	√ (By default OFF)
PC Software	√
Mobile APP	√ (TempLink)
Low-Battery Indication	√
Record Interval	10s ~ 24h (Set it via PC software/APP, by default in 15min)
Start-up Ways	Buttons/Software/Preset (By default: Buttons)
Screen-Off Time	15s±2s (By default, set via PC/APP)
USB Interface	USB Type-C
USB Power Supply	Supported (Not for battery charge)
Battery Type	Single-use Li-SOCl2 Battery of 3.6V 2700mAh (ER14505)
Working Time	2yr (Room temperature, Record interval of 15min, 15s Screen off , Buzzer OFF, Alarm indicators OFF/Backlight Bluetooth OFF)
Hanging Ways	Rear magnetic or wall-mounted hole
Working Temperature-Humidity	-40℃ ~ +85℃ , ≤99%RH, No condensation

Storage Temperature	-40℃ ~ +85℃（Not battery included） -40℃ ~ +60℃（ER14505 Battery included）
Certificate	EMC: EN 61326-1:2021,ROHS
IP Rating	IP54
Weight	About 110g
Size	62x104x25mm

Note: LCD display may response slowly in the low temperature environment, but without influencing the normal measurement.

2）Default Configurations

Parameter	Default Value	Parameter	Default Value	Parameter	Default Value
Record Interval	15min	Backlight	OFF	Auto Screen OFF	15s
Temperature Units	℃	Temporary PDF	ON	Time	Follow System
LED Indicators	OFF	Buzzer	OFF	Record Modes	Stop as Records Full
Restart-up Ways	Buttons	Button Stop	Enabled	Restart-up	Enabled
Record Delay	0s	ID	0	Alarm	ON
Sensor Type	Internal NTC Temperature Sensor				

3）Sensor Storage and Precautions:

a) Prolonged exposure of humidity sensors to high concentrations of chemical vapors will cause drift in the sensor readings. Therefore, during use, it is essential to ensure that the sensors are kept away from high concentrations of chemical solvents.

b) Sensors exposed to extreme working conditions or chemical vapors can be restored to their calibrated state through the following treatment:

Bake at 85°C and <5% RH for more than 12 hours.

Then, let them sit at 25°C and 85%~95% RH for 12 hours.

c) The internal temperature and humidity sensor and circuit components of the module have been treated with silicone rubber for protection and are housed in a waterproof and breathable enclosure, which enhances their service life in high-humidity environments. However, it is still necessary to avoid immersing the sensor in water or using it for extended periods in high-humidity environments with condensation.

9. Mobile App/PC Software Download

1) Mobile App Download

To download mobile App as follows

a) For IOS, search and download TempLink in App Store.

b) For Android, search and download TempLink in Play Store.

2) PC Software Download

Download Temperature Humidity Datalogger：

a) See the attached Common Files Download Guideline to download PC software.

b) Visit UNI-T's https://www.uni-trend.com/ and find the right product model to

download.

10. Operating Hints

- Replace the battery when ▭ is flashing on the LCD.
- The battery ER14505 is single-use and do not charge the battery to avoid battery leakage.
- Take the battery out when it is long-time no use.
- OL/-OL showed on the Datalogger means the measured temperature is higher/lower than Hi/Lo range.
- Do not plug or unplug USB during the Mobile App using to avoid Bluetooth disconnection.
- Do not open Bluetooth during the PC connecting to avoid the connection conflict between mobile App and PC , otherwise “Err” shows.

The manual is subject to change without prior notice!

Due to different batches, the materials and details of actual products may be slightly different from the graphic information, please refer to the actual product received. Experimental data provided in the page is from internal laboratory of UNI-T, but it should not be a reference for customer to place orders. Any questions, please contact the customer service, thanks!