UT330T/UT330TH USB Datalogger

Introduction

The USB datalogger (Hereinafter referred to as “logger”) is a low power consumption, high-accuracy temperature & humidity device. It has the characteristics of high accuracy, large storage capacity, auto save, USB data transmission, time display and PDF export. It can meet the requirements of various measurements and long-term temperature and humidity recording, and can be used in food processing, cold chain transportation, warehousing and other fields. UT330T is designed with IP65 dust/water protection.

Accessories

Logger(with holder)……..……....1 piece
User manual……..…1 piece
Battery……1 piece
Screw……..2 pieces

Safety information

- Check if the logger is damaged before use.
- Replace the battery when the logger displays “ ”.
- If the logger is found abnormal, please stop using and contact your seller.
- Do not use the logger near explosive gas, volatile gas, corrosive gas, vapor and powder.
- Do not charge the battery.
- 3.0V CR2032 battery is recommended.
- Install the battery according to its polarity.
- Take out the battery if the logger is not used for a long time.

Structure (Figure 1)

No.	Description
1	USB cover
2	Indicator (Green light: logging, red light: alarm)
3	Display screen
4	Stop/switch humidity and temperature(UT330TH)
5	Start/select
6	Holder
7	Air vent (UT330TH)

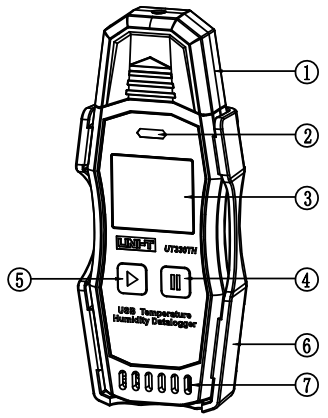


Figure 1

Display (Figure 2)

No.	Description	No.	Description
1	Start	10	Low battery
2	Maximum value	11	Humidity unit
3	Stop	12	Temperature & humidity display area
4	Minimum value	13	Time display area
5	Marking	14	Set a fixed time/delay
6	Circulatory	15	Alarm due to abnormal logging
7	Mean kinetic temperature	16	No alarm
8	Number of sets	17	Lower value of alarm
9	Temperature unit	18	Upper value of alarm

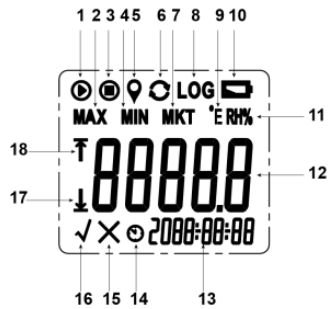


Figure 2

Setting

USB communication

- Download the instruction and PC software according to the attached file, then, install the software step by step.
- Insert the logger into USB port of PC, the main interface of logger will display “USB”. After the computer identifies the USB, open the software to set parameters and analyze the data. (Figure 3).
- Open the computer software to browse and analyze data. As for how to use the software, users can click the help option on the operation interface to find “software manual”.

Parameter configuration

Model	The computer identifies the logger model automatically.
Unit	°C or °F.
Language	The generated report language can be set to English or Chinese.
ID	Users can set the ID, the range is 0~255.
SN	Factory number.
Description	Users can add descriptions. The description will show in the generated PDF and should be less than 50 words.
UTC/Time zone	The product uses the UTC time zone, which can be set according to the local time zone.
PC time	Obtain PC time in real time.
Device time	Obtain the time when the device is connected. Check "Update" and click "Write", the logger will synchronize with the PC time.
Mode	Users can select Single/Accumulate alarm mode.
Threshold	Users can set the alarm threshold. The low temperature (low humidity) must be smaller than the high temperature (high humidity).
Delay	The delay time used to determine the alarm state (0s to 10h)
Temperature and humidity Adjusting	Linear temperature and humidity adjustment -6.0°C(RH%)~6.0°C(RH%)
Recording mode	Normal/Circulatory
Sampling interval	10 seconds to 24 hours.
Sampling delay	Start logging after the delay time. 0 to 240 minutes.
Start with	Press the button to start, start immediately through the software, start at a fixed time.
Stop with key	Choose if press the button to stop.prevent recording stop resulting from misoperation.
Write	Write parameters to the logger.
Read	Read logger parameters into the computer software.
Close	Close the interface.

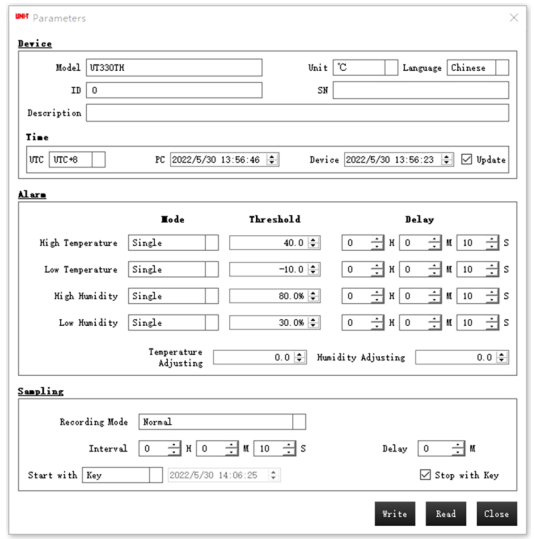


Figure 3

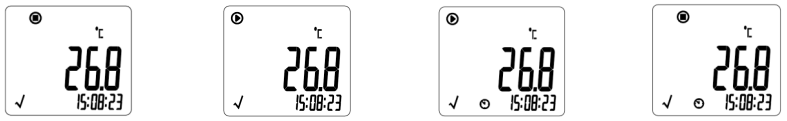
Operations

Starting the logger

There are three starting modes:
1.Press the button to start the logger
2.Start logging through the software
3.Start logging at preset fixed time

- Mode 1: Long press the start button for 3 seconds in main interface to start logging. This start mode supports start delay, if delay time is set, the logger will start logging after a delayed time.
- Mode 2: Start logging through the software: On PC software, when parameter setting is completed, the logger will start logging after user unplugs the logger from the computer.
- Mode 3: Start the logger at preset fixed time: On PC software, when parameter setting is completed, the logger will start logging at preset time after user unplugs the logger from the computer. Mode 1 now is disabled.

Warning: please replace the battery if low power indication is on.



Not logging　Logging　Delay logging　Logging at fixed time

Stopping the logger

There are two stop modes:
1.Press the button to stop
2.Stop logging through the software

- Mode 1: In main interface, long press stop button for 3 seconds to stop the logger,
  If "Stop with key" is not checked in the parameter interface, this function cannot be used.
- Mode 2: After connecting the logger to the computer, click the stop icon on the main interface of the computer to stop logging.

- Recording mode

Normal: The logger automatically stops recording when the maximum number of groups is recorded.
Circulatory: When the maximum number of groups is recorded, the latest records will replace the earliest records in turn. ↻ will show on the screen if this function is enabled.

Function Interface 1

UT330TH:Short press stop button to switch between temperature and humidity in the main interface.
In the main interface, short press the Start button to step through measured value, Max, Min, mean kinetic temperature, upper alarm value, lower alarm value, current temperature unit, optional temperature unit (long press the Start and Stop buttons at the same time to switch between the units), and measured value.
Users can short press stop button at any time to go back to the main interface. If no button is pressed for 10 seconds, the logger will enter the power-saving mode.

Marking

When the device is in logging state, long press start button for 3 seconds to mark the current data for future reference, the mark icon and current value will flash 3 times, total number of mark value is 10.

Function Interface 2

In the main interface, press the start button and stop button together for 3 seconds to enter the Function Interface 2, short press start button to view: Y/M/D, device ID, maximum numbers of remaining storage groups, numbers of marking groups.

Alarm State

When the logger is operating,

Alarm disabled: Green LED flashes every 15 seconds and main interface displays √.
Alarm enabled: Red LED flashes every 15 seconds and main interface displays ×.
No LED lights when the logger is in stopping state.
Note: The red LED will also flash when the low voltage alarm appears. Users should save the data in time and replace the battery.

Viewing data

Users can view the data in stop or operating state.

- View the data in stop state: Connect the logger to the PC, if the LED flashes at this time, the PDF report is being generated, do not unplug the logger at this time. After the PDF report is generated, users can click the PDF file to view and export the data from the computer software.
- View the data in operating state: Connect the logger to the PC, the logger will generate a PDF report for all previous data, at the same time, the logger will continue logging data and it can only generate a PDF report with new data the next time.
- Alarm setting and result
  Single: The temperature (humidity) reaches or exceeds the set threshold. If the continuous alarm time is not less than the delay time, the alarm will be generated. If the reading returns to normal within the delay time, no alarm will occur. If the delay time is 0s, an alarm will be generated immediately.
  Accumulate: The temperature (humidity) reaches or exceeds the set threshold. If the accumulated alarm time is not less than the delay time, the alarm will be generated.

Specification

Function		UT330T	UT330TH
	Range	Accuracy	Accuracy
Temperature	−30.0℃～−20.1℃	±0.8℃	±0.4℃
	−20.0℃～40.0℃	±0.4℃	
	40.1℃～70.0℃	±0.8℃	
Humidity	0～99.9%RH	/	±2.5%RH
Protection degree		IP65	/
Resolution		Temperature: 0.1°C; Humidity: 0.1%RH	
Logging capacity		64000 sets	
Logging interval		10s～24h	
Unit/alarm setting		The default unit is °C. Alarm types include single and accumulated alarm, the default type is single alarm. Alarm type can be changed through the PC soft.	
Start mode		Press the button to start the logger or start the logger through the software (Immediately/delay/at fixed time).	
Logging delay		0min～240min, it defaults at 0 and can be changed through the PC software.	
Device ID		0～255, it defaults at 0 and can be changed through the PC software.	
Alarm delay		0s～10h, it defaults at 0 and can be changed through the PC software.	
Screen off time		10s	
Battery type		CR2032	
Data export		View the real-time data and export the data (PDF, XLS) through the computer	
Working time		140 days at an test interval of 15min.	
Working temperature & humidity		−30°C ~ 70°C, ≤99%, non-condensable	
Storage temperature		-50°C~70°C	

EMC standard: EN61326-1 2013.

Maintenance

Battery replacement (Figure 4)

Replace the battery with the following steps when the logger displays "▭".

- Rotate the battery cover counter-clockwise.
- Install CR2032 battery and waterproof rubber ring(UT330TH)
- Install the cover in arrow direction and rotate it clockwise.

Cleaning the logger

Wipe the logger with soft cloth or sponge dipped with a little water, detergent, soapy water.
Do not clean the logger with water directly to avoid damage to the circuit board.

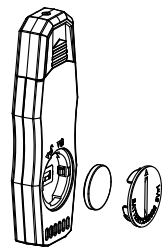


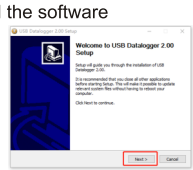
Figure 4

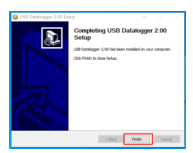
Download

Download the PC software according to the attached operation guide
Download the PC software from official website of UNI-T product center :http://www.uni-trend.com.cn

Instal

Double-click Setup.exe to install the software





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