



COS-04-X

USB type temperature and humidity recorder

User manual





Table of Contents

1. product description.....	4
1.1Features.....	4
1.3Product number.....	4
1.3Technical Parameters.....	5
2. Quickly record data with the recorder.....	错误！未定义书签。
3. Obtain logger record data.....	6
4.Functional description.....	错误！未定义书签。
5.Instructions.....	错误！未定义书签。
5.1Key Description.....	8
5.2Start record.....	8
5.3Stop recording.....	8
5.4Function display item description.....	9
5.4.1Set parameter operation instructions.....	9
6. Data Management Software Instructions.....	13
6.1export data.....	13
6.2save data.....	15
6.3Query data.....	16
6.4Set the recorder parameters.....	18
6.5View current device status.....	19
6.6Clear device data.....	20
7.Installation Notes.....	22
8. Contact information.....	23
9.Document history.....	错误！未定义书签。
Appendix: Housing dimensions.....	错误！未定义书签。



1. product description

The recorder is mainly used to monitor the temperature and humidity data of food, medicine, chemical products and other products during storage and transportation. It is widely used in all aspects of warehousing and logistics cold chain, such as reefer containers, refrigerated trucks, refrigerated bags, Cold storage, laboratories, etc.

1.1 Features

- The recorder comes with a high-precision temperature and humidity sensor for accurate temperature and humidity measurement.
- Built-in storage function, can record 260,000 temperature and humidity data, and can expand up to 2.08 million data.
- Connected to the computer via USB cable. The software stored in the device can be exported to the computer in EXCEL, TXT, PDF and other formats to facilitate subsequent report production and data analysis.
- The notebook has its own LCD screen that displays real-time temperature and humidity values.
- The Sakamoto Recorder uses a large-capacity rechargeable lithium battery that can be used continuously for one year on a single charge.
- Built-in buzzer with over-limit alarm function, can automatically change the recording frequency when alarming, to ensure that the recorded data truly reflects the environmental changes.

You can set the timing to start recording and stop the recording function. When using multiple recorders, make sure that the device starts recording at the same time and stops at the same time.

1.2 Product number

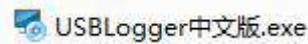
Product number		Description
COS-04	-0	Sensor built-in type
	-5	Sensor external type; probe line length defaults to 0.6 meters, up to 30 meters, remarks when ordering



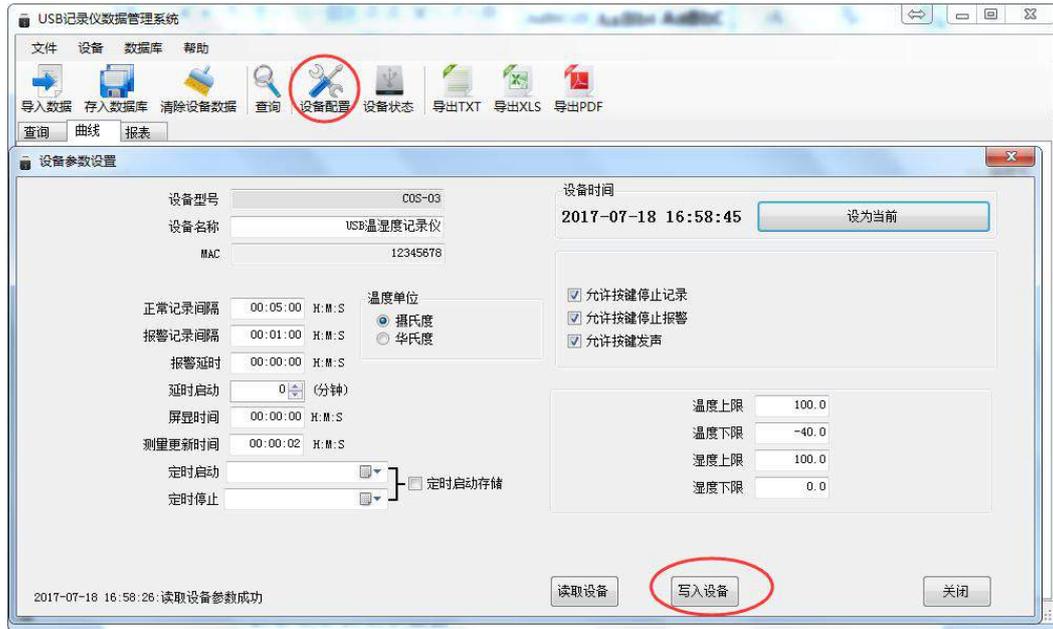
1.3 Technical Parameters

Equipment power supply	DC5V powered or built-in battery		
Recording capacity	260000 group		
Measuring range	temperature	Probe built-in type	-20~+60℃
		Probe external type	-40~+80℃
	humidity		0~100%RH
measurement accuracy	temperature	±0.3℃ (25℃)	
	humidity	±2%RH(5~95%RH,25℃)	
Recording interval	5 seconds to 18 hours to set		
Measurement update time	2~255 seconds to set		
Battery Life	1 full charge can work continuously for one year The maximum number of cycles of charge and discharge of the battery is 1200 times.		

1.2. Quickly use the recorder to record data

2. Install the USB Recorder Management System"  " , After the installation is complete, open the software.

3. Connect the recorder to the computer via the USB cable. After the driver installation is complete, click the "Device Configuration" button on the software interface. Set the device time or modify the device parameters as required, and then click "Write Device" .



3. Unplug the USB cable, take the device to the environment to be tested, and press and

hold  Key waiting “▶” Lights up to start recording.

3.4. Exit the USB Recorder Management System.

4.4. Exit the USB Recorder Management System.

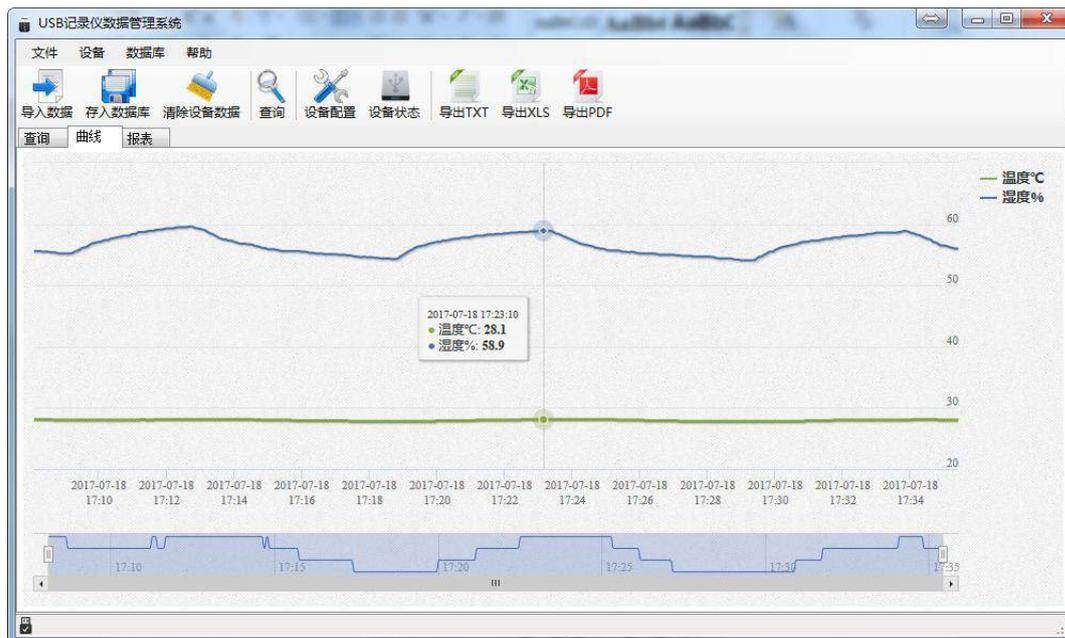
1、 You can get the historical data information of the record from the record. This process will not clear the stored data of the recorder itself. If the recorder is still in the recording state, the process of extracting data will not affect the working state of the recorder.

2. Open the USB recorder data management system.

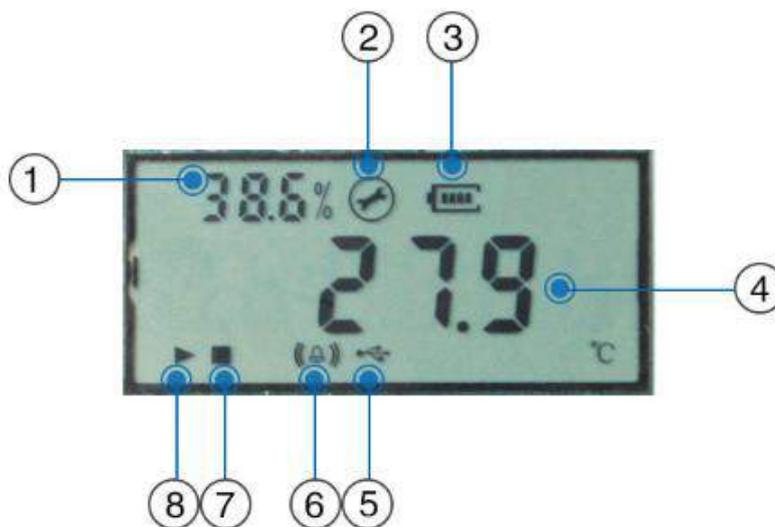
3. Connect the recorder to the computer via the USB cable, and the software will automatically read all the data stored in the device.

4. Select “Report”, select the start and end time, click “Refresh”, the software can get the record data of the device, click “Export” to select TXT, XLS, PDF format, select the save path and click OK to export the data.

5. You can also store the data in a computer database and click on “Save in Database” .



4. Functional Description



Serial number	Description
1	Wheel display humidity and system time
2	Is it in the parameter modification mode prompt
3	Remaining battery display
4	Wheel display temperature and number of stored
5	Whether online
6	Temperature or humidity alarm prompt



7	Record status is stopped
8	Record status is in record state

If the recorder does not operate for 20 seconds, it automatically enters the low power mode. The screen refresh time is slowed down to 1 second to refresh.

If the recorder is in the off display state, short press  After entering the key, enter the temperature and humidity display interface.

4. Operating instructions

5.1 Key Description

button	Features	Description	Button operation mode
Left button	Shift key	● Exit operation when parameter setting	short press
	Page up	● Front page flip button when viewing menu	short press
	return key	● Return to the main menu when the interface is set or viewed	short press
	Shutdown button	● Device shutdown	hold down
	Power button	● Device boot	hold down
Right click	Page backward	● Page view button	short press
	Increase key	● Data increase button when parameter is modified	short press
	Enter	● Confirm the button after modifying the parameters	hold down

5.2 Start record

After the USB recorder management system sets the recorder parameters, the recorder is in the record not activated state, and long presses in the status display interface.  key, On the screen “” The symbol lights up to start recording.

Note: After the USB recorder data management system configures the recorder parameters, the previous historical data will be cleared. Please read and save the historical data of the recorder before setting the parameters.

5.3 Stop recording

(1) Recording is automatically stopped when the storage space is full. In the status display interface “” When the symbol is lit, the recording is stopped.

(2) Long press after setting the allow button to stop recording  key, In the status display



interface “■” When the symbol is lit, the recording is stopped.

5.4 Function display item description

Short press under the main interface , Enter the password, the default password is 000, long press , Can enter the menu setting interface.

Short press when entering your password  Increase or decrease, short press  The key is shifted.

Menu number	Features	Scope and description	default
1.	Set the temperature calibration value	-99.9~999.9	0
2.	Set the humidity calibration value	-99.9~999.9	0
3.	Set the upper temperature limit	-99~999	100
4.	Set the lower temperature limit	-99~999	0
5.	Set the upper humidity limit	-99~999	100
6.	Set the lower humidity limit	-99~999	0
7.	Set clear history data	0 means no clear, 1 means clear	0
8.	Set time	00:00~23:59, Can only set hours and minutes	Hours and minutes of system real time
9.	set password	000~999	0
A.	Set buzzer alarm enable	0 means prohibited, 1 means enable.	1, Alarm enable
b.	Set the normal recording interval	0~9999, 0Representative does not record	3 minutes
C.	Set the alarm logging interval	0~9999, 0Representative does not record	5 minutes

5.4.1 Set parameter operation instructions

 : Left button。  : Right click.

1. In the temperature and humidity display interface, short press “Right button” to enter the password input interface, short press “Right button” to add the current number, press the “Left button” button to shift, the default password is “000”, after entering the password, long press “Right click” enters the setting interface, first enter the wireless wake-up time interface, short press “right click” to page down, short press “left button” to page up, through page turning, you can enter different parameter setting interface, the following is the parameter setting Detailed description of the interface.



2. After a button operation of 20S in a certain setting interface, the device will automatically enter the main interface of temperature and humidity display.

3. Set the temperature calibration value

4. After entering this interface, display the current temperature calibration value, short press “Right click” to page down to enter “2. Set humidity calibration value” interface, short press “Left key” to page up to “C. Set alarm recording interval” Press and hold the “Right button” to start setting the decimal place of the temperature calibration value. Short press “Right button” to adjust the decimal place value, short press “Left button” to shift, after setting the calibration, long press “Right button” to save the current setting value. After the setting is successful, the interface will flash 5S. After the interface is stable, press “Right click” to page down to enter “2. Set humidity calibration value” interface, long press “Right button” to enter the set temperature calibration value again, long press “Left key” Return to the temperature and humidity display interface.

5. Set the humidity calibration value

6. After entering this interface, display the current humidity calibration value, short press “Right button” to page down to enter “3. Set temperature upper limit” interface, short press “Left button” to page up to “1. Set temperature calibration value” Press and hold the “Right button” to start setting the decimal place of the humidity calibration value. Short press “Right button” to adjust the decimal place value, short press “Left button” to shift, after setting the calibration, long press “Right button” to save the current setting value. After the setting is successful, the interface will flash 5S. After the interface is stable, press “Right click” to page down to enter “3. Set temperature upper limit” interface, long press “Right button” to enter the set humidity calibration value again, long press “Left” The key " returns to the temperature and humidity display interface.

7. Set the upper temperature limit

8. After entering this interface, display the current temperature upper limit value, short press “Right click” to page down to enter “4. Set temperature lower limit” interface, short press “Left key” to turn up page to enter “2. Set humidity calibration Value”, long press "right button" to start setting the single digit of the upper temperature limit, short press "right button" to adjust the single digit value, short press "left button" to shift, after setting the upper temperature limit, long press "right button" Save the current setting value. After the setting is successful, the interface will flash 5S. After the interface is stable, press “Right click” to page down to enter “3. Set temperature lower limit” interface, long press “Right button” to enter the upper limit of setting temperature again. Press and hold the "left button" to return to the temperature and humidity display interface.

9. Set the lower temperature limit

10. After entering this interface, display the current temperature lower limit value, short press “Right click” to turn to the “5. Set humidity upper limit” interface, short press “Left key” to turn up the page to enter “3. Set temperature Limit value”, long press "right button" to start setting the single digit of the upper temperature limit, short press "right button" to adjust the single digit value, short press "left button" to shift, after setting the upper temperature limit, long press "Right click" to save the current setting value. After the setting is successful, the interface will flash



5S. After the interface is stable, short press “Right click” to page down to enter “5. Set humidity upper limit” interface, long press “Right button” to enter the lower limit of setting temperature again. Press and hold the "left button" to return to the temperature and humidity display interface.

11.Set the upper humidity limit

12.After entering this interface, display the current humidity upper limit value, short press “Right click” to turn to the “6. Set humidity lower limit” interface, short press “Left key” to turn up the page to enter “4. Set temperature Limit value”, long press "Right button" to start setting the ones of the upper humidity limit value, short press "Right button" to adjust the ones digit value, short press "Left button" to shift, after setting the temperature upper limit value, long press " Right click to save the current setting value. After the setting is successful, the interface will flash 5S. After the interface is stable, short press “Right click” to page down to enter “6. Set humidity lower limit” interface, long press “Right button” to enter the upper limit of humidity again. Press and hold the "left button" to return to the temperature and humidity display interface.

13.Set the lower limit of humidity

14.After entering this interface, display the current humidity lower limit value, short press “Right click” to page down to enter “7. Clear historical data” interface, short press “Left key” to turn up the page to enter “5. Set humidity upper limit value Press and hold the "Right button" to start setting the ones of the lower limit of the humidity. Short press the "Right button" to adjust the value of the ones. Short press the "Left button" to shift. After setting the upper temperature limit, long press the right button to save the current Set the value. After the setting is successful, the interface will flash 5S. After the interface is stable, press “Right click” to page down to enter “7. Clear historical data” interface, long press “Right button” to enter the lower limit of humidity again, long press “Left button” ” Return to the temperature and humidity display interface.

13.7.15. Clear historical data

After entering this interface, the current humidity lower limit value is displayed. Short press the right button and turn to the page to enter the “8. Set time” interface. Short press the “left button” to page up to enter “6. Set the humidity lower limit value”, long press “ Right click to enter the setting, short press “Right button” to adjust the one-digit value. Set to 1 to clear the data. After setting the value, set it to 1 and press “Right button” to clear the data. After clearing, the interface will flash 5S, wait for the interface. After stabilization, short press “Right click” to page down to enter “8. Set time” interface, long press “Right button” to enter clear data setting again, long press “Left key” to return to temperature and humidity display interface.

8. Setting time

After entering this interface, the current time and minute are displayed. Short press “Right click” to page down to enter “9. Set password” interface, short press “Left key” to page up to enter “7. Clear historical data”, long press “Right click” ” Start setting the digits of the minute, short press “Right button” to adjust the digit value, short press “Left button” to shift, after setting



the time, press “Right button” to save the current setting value. After the setting is successful, the interface will flash 5S. After the interface is stable, press the “Right click” button to enter the “9. Set Password” interface. Press and hold the “Right button” to enter the setup time again. Press and hold the “Left button” to return to the temperature and humidity display interface.

9.set password

After entering this interface, the current password is displayed. Short press “Right click” to page down to enter “A. Set buzzer alarm enable” interface, short press “Left button” to page up to enter “8. Set time”, long press “Right button” starts to set the ones digit of the password, short press “Right button” to adjust the ones digit value, short press “Left button” to shift, after setting, long press “Right button” to save the current setting value. After the setting is successful, the interface will flash. 5S, after the interface is stable, short press “Right click” to page down to enter “A. Set buzzer alarm enable” interface, long press “Right button” to enter the setup password again, long press “Left button” to return to temperature and humidity display interface .

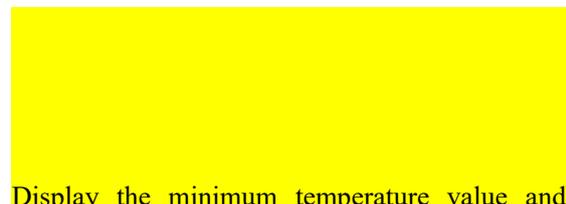
A.Set buzzer alarm enable

After entering this interface, the current status is displayed, 1 means enable, 0 means disable, short press "right click" to page down to enter "b. set normal recording interval" interface, short press "left button" to page up to enter 9. Set the password, press and hold the right button to start setting, press the right button to adjust the state. After setting, press and hold the right button to save the current setting. After the setting is successful, the interface will flash 5S. After the interface is stable, press short. Right click “Flip down” to enter “b. Set normal recording interval” interface, long press “Right button” to enter the setting buzzer alarm enable again, long press “Left key” to return to the temperature and humidity display interface.

In the main interface state, short press 1 to query the maximum temperature, maximum humidity, minimum temperature, and minimum humidity of the stored data. The specific display is as follows:



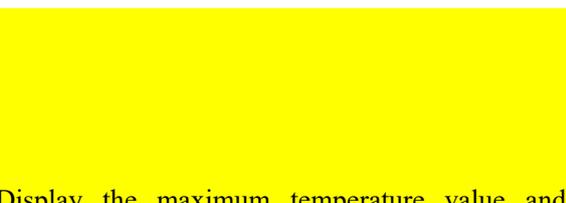
a Display the minimum temperature value and minimum humidity value of the stored data.



Display the minimum temperature value and



b Display the maximum temperature value and maximum humidity value of the stored data.



Display the maximum temperature value and

b.Set the normal recording interval

After entering this interface, the current password is displayed. Short press “Right click” to page down to enter “C. Set alarm record interval” interface, short press “Left button” to page up to enter “A set buzzer alarm enable”, long Press “Right button” to start setting the digit of the recording interval, short press “Right button” to adjust the digit value, short press “Left button” to shift, after setting, long press “Right button” to save the current setting value. After setting successfully, the interface is successful. It will flash 5S. After the interface is stable, press the right button and scroll down to enter the “C. Set Alarm Record Interval” interface. Press and hold the “Right button” to enter the normal recording interval again. Press and hold the “Left button” to return to the temperature and humidity display interface.

C.Set the alarm logging interval

6.After entering this interface, the current password is displayed. Short press “Right click” to page down to enter “1. Set temperature calibration value” interface, short press “Left key” to page up to “b. Set normal recording interval”, long press “Right click to start setting the ones of the alarm recording interval, short press the “right button” to adjust the ones digit value, short press “left button” to shift, after setting, long press “right button” to save the current setting value. After the setting is successful, the interface will be After flashing 5S, after the interface is stable, press the right button and click the page to enter the “1. Set temperature calibration value” interface. Press and hold the “right button” to enter the setting alarm recording interval again. Press and hold the “left button” to return to the temperature and humidity display interface.

7.Data Management Software Instructions

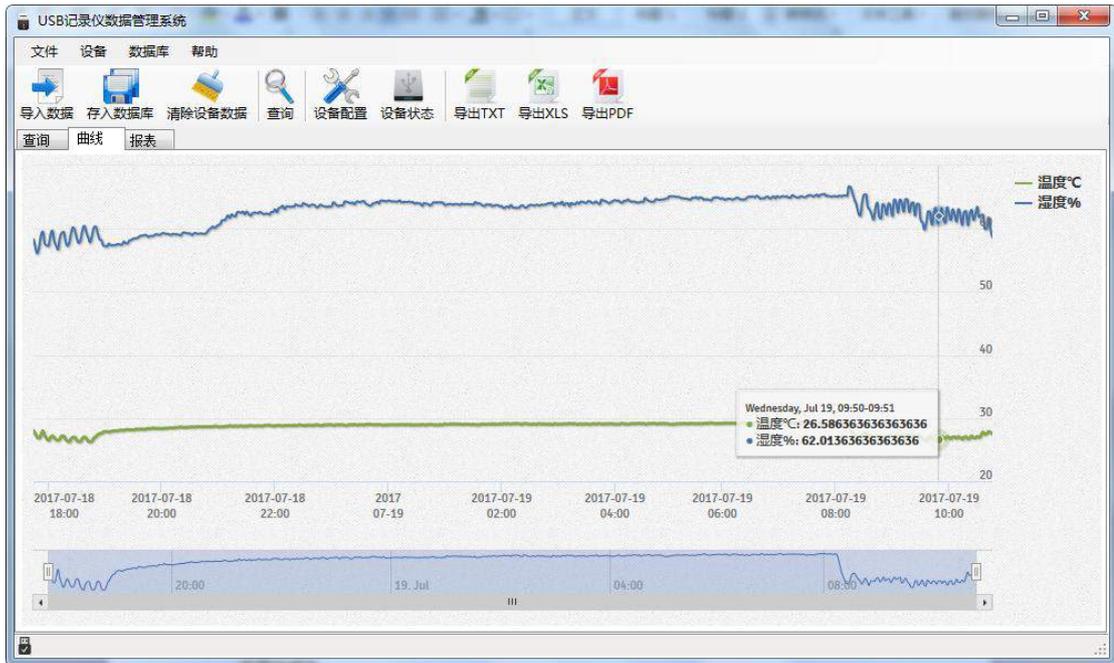


After the software is installed, it will be produced on the desktop.“”8. Icon, double click to open the software.

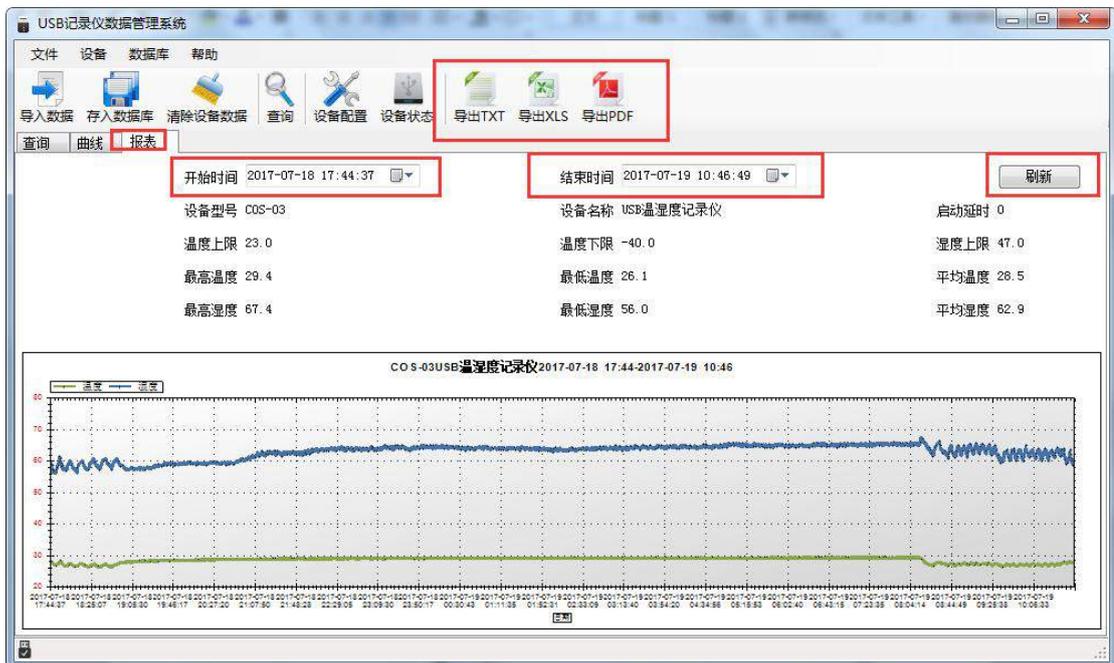
6.1export data

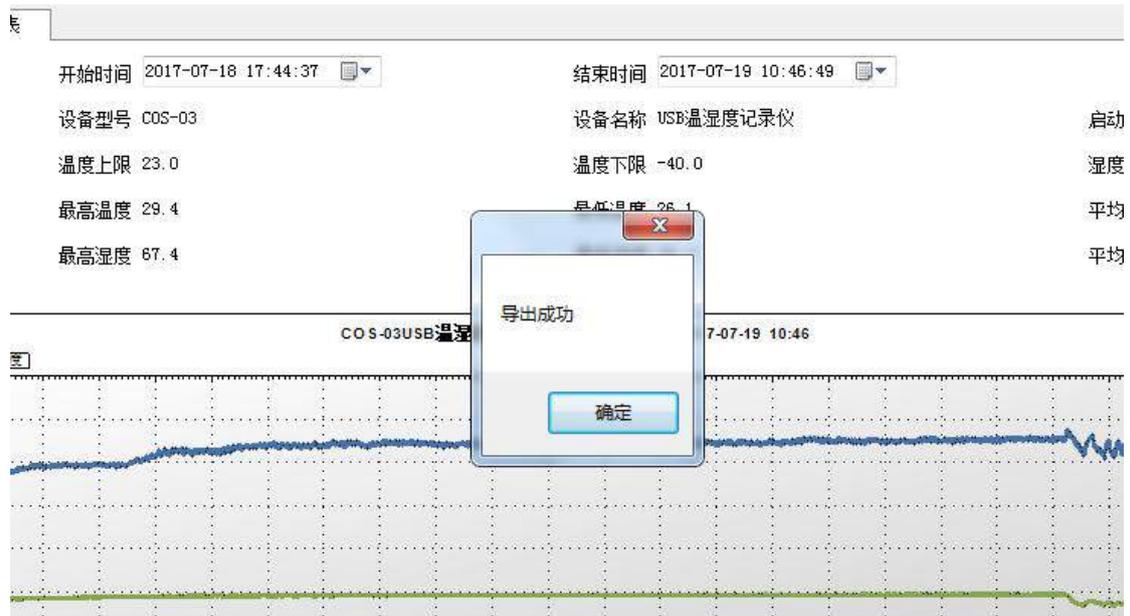
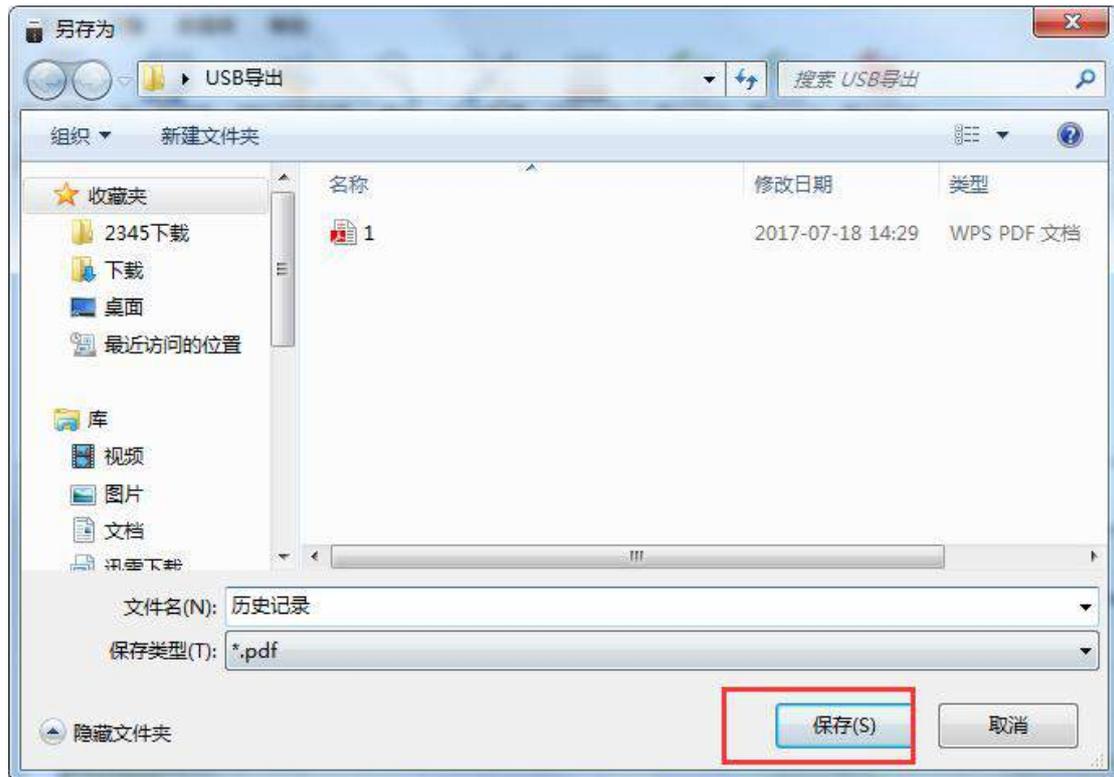
Open the USB recorder data management system and connect the recorder to the computer via the USB cable. Click "Import Data" to import the data stored in the recorder into the data management system.





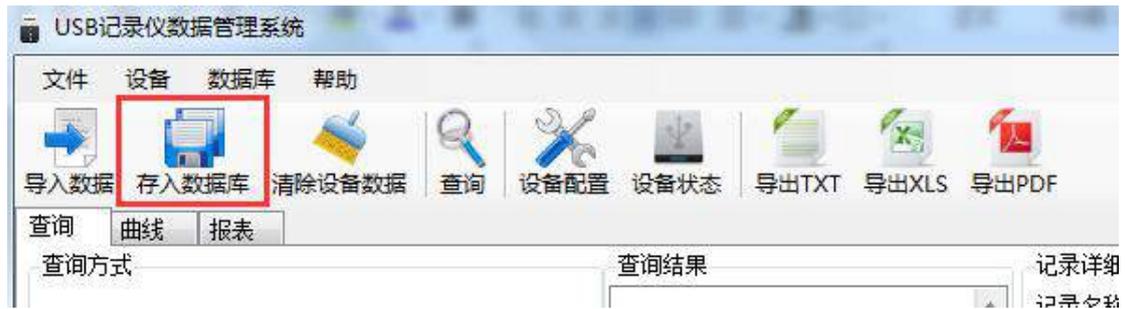
Click "Report", select the start and end time of the data to be exported, click "Refresh", and then select the exported format (TXT/XLS/PDF) to save the data to the specified path (take PDF as an example), prompting the export success.





6.2 save data

After importing the data, click "Save to Database"



Name the database file for future query, click "OK" to save the data successfully.。



6.3 Query data

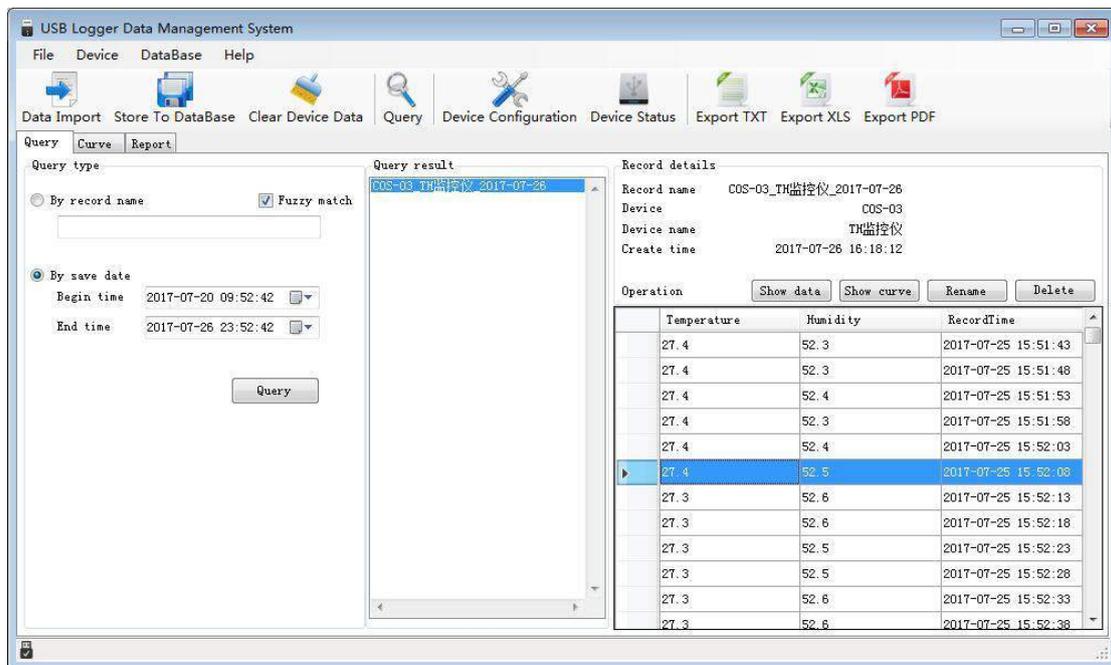
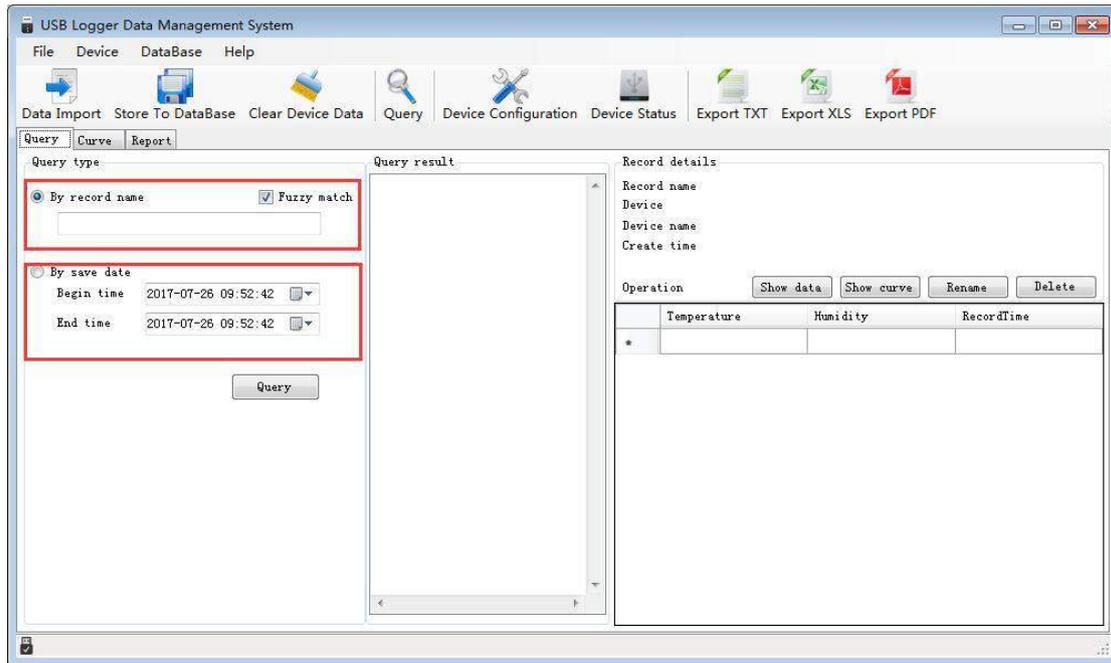
For the data that has been saved to the database, you can query it through the USB recorder management system, click the toolbar "query"



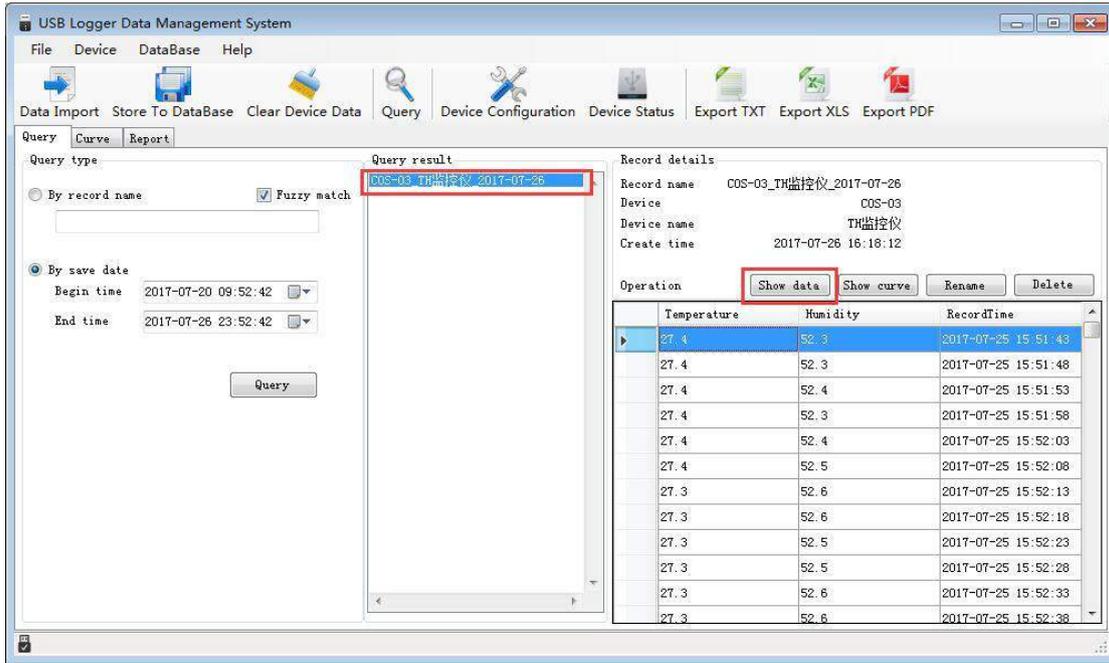
You can choose the query method and click on the query.

By record name: Query by name saved in database

Query by deposit date: query by time saved in database

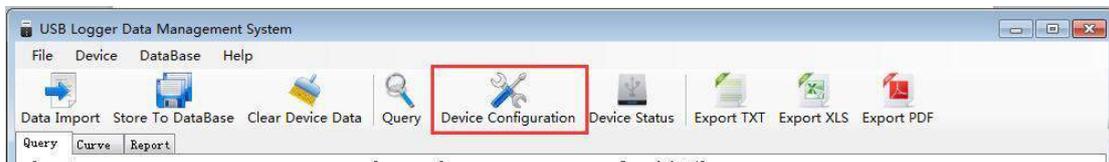


Double-click the query to the results to perform the "View Data", "View Curve", "Rename", "Delete Record" and "Export" operations.

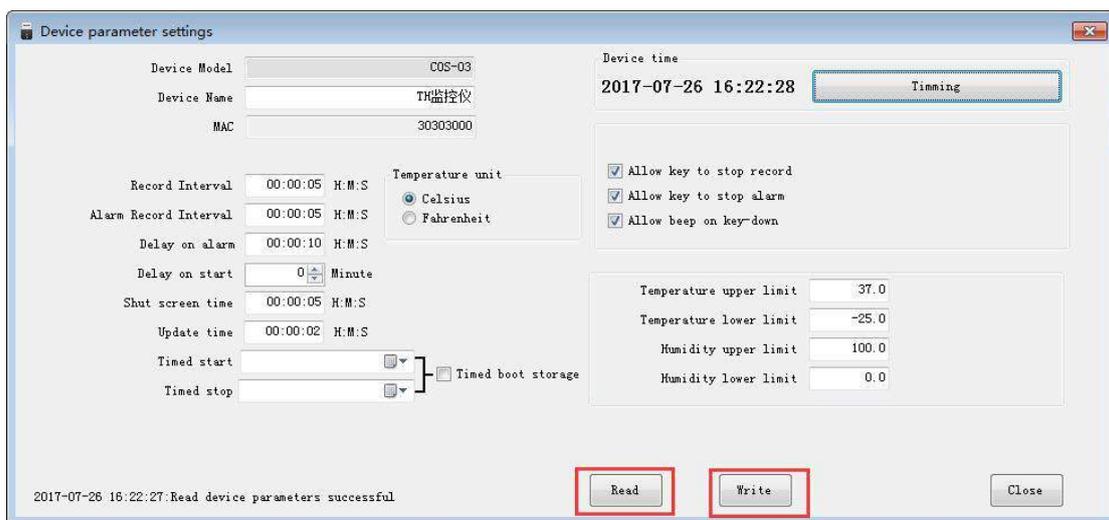


6.4 Set the recorder parameters

Connect the device to the computer via the USB cable and click on the "Device Configuration" toolbar.



After editing the device parameters, click "Write Device" to write the parameters to the recorder.



Device model: factory default, not modifiable

Device name: Custom, you can name the recorder yourself



MAC: Factory default, not modifiable

Device time: can synchronize the clock time of the recorder

Normal recording interval: set the interval at which the recorder stores data (minimum 5S)

Alarm recording interval: set the recording interval after the temperature and humidity of the recorder exceeds the limit

Alarm delay: If this value is set to 10S and the upper temperature alarm is enabled, the device will consider the device to exceed the upper limit alarm if the temperature exceeds the upper limit and exceeds the upper limit time for more than 10 seconds. If the temperature exceeds the upper limit duration, the device considers the temperature. There is no upper limit; this parameter is also valid for the lower temperature alarm, the upper humidity alarm, and the lower humidity alarm.

Delayed start: set the start time of the recorder, the default is 0 seconds, you can not modify

Screen display time: set the time when the recorder turns off the screen display. If it is set to 0, it will not turn off the screen.

Measurement Update: setting recorder data acquisition interval

Timed start/timed stop: After the storage is started when the check is selected, the recorder can be set to store data within the specified time period.

Allow button to stop recording: After checking, you can press the button on the recorder to stop recording.

Allow button to stop alarm: When checked, when the recorder exceeds the limit sound and light alarm, you can press the button to turn off the sound and light alarm.

Allow button sounds: turn button sound off or on

Upper temperature limit: set the upper temperature alarm value

Lower temperature limit: set the lower temperature alarm value

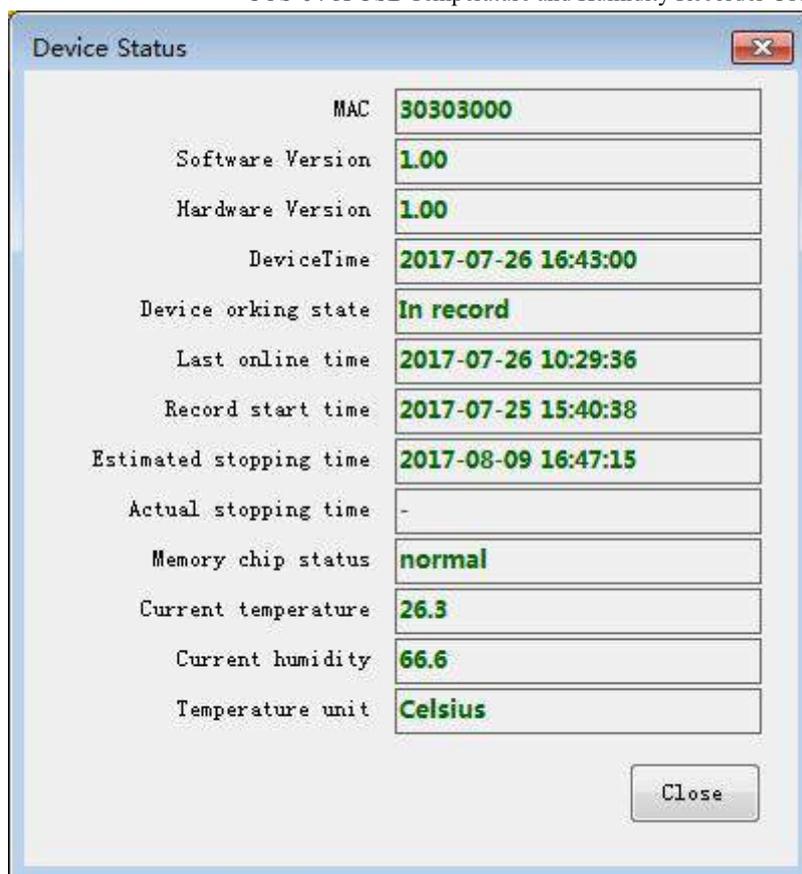
Humidity upper limit: set the humidity upper limit alarm value

Lower humidity limit: set the lower limit alarm value

6.5 View current device status

Select Device Status from the toolbar to learn the current status of the connected device.





MAC address: MAC address of the current device

Software version number: version of the current software

Hardware version number: version of the device

Device time: the current time of the device

Current working status: recorded / stopped

Last online time: The last time the device connected to the data management system

Record start time: The time at which the device starts recording data storage

Estimated stop time: According to the current recording interval, if no one stops recording, the device can record the stop time normally.

Actual stop time: the time to stop recording manually

Memory chip status: normal / abnormal

Current temperature: equipment temperature

Current humidity: equipment humidity

Temperature unit: temperature unit

6.6 Clear device data

Select "Clear Device Data" on the toolbar and click "OK" to clear the device data.



7. Installation Notes

The device can be hung wherever it can be hung, use a lanyard to hang the device





8. Contact information

Shandong Renke Control Technology Co., Ltd.

Address: 2 / F, East Block, Building 8, Shun Tai Plaza, High-tech Zone, Jinan City, Shandong Province

Post code: 250101

Phone: 400-085-5807

Website: www.renkeer.com

Cloud platform address: en.0531yun.cn Or: eniot.0531yun.cn

Web QR:



9. Document history

V1.0 document creation

V1.1 Modify product description

Appendix: Housing dimensions

