



# **COS-03-X**

## **USB temperature and humidity recorder**

### **User manual**



## Context

1. Introduction.....	3
1.1 Features.....	3
1.2 Dimensions.....	3
1.3 Model.....	4
1.4 Technical data.....	4
2. Quickly use the recorder to record data.....	5
3. Get data recorder records.....	5
4. Functional description.....	6
5. Instructions.....	9
5.1 Key Description.....	9
5.2 Boot Record.....	10
5.3 Stop Record.....	10
5.4 Function Display Item Description.....	11
6. Data management software for use.....	13
6.1 Export Data.....	13
6.2 Saving Data.....	15
6.3 query data.....	16
6.4 Setting Recorder parameters.....	17
6.5 View current device status.....	19
6.6 Clear device data.....	20
7. Contact Information.....	21
8. Document History.....	错误！未定义书签。



# 1. Introduction

The recorder is mainly used to monitor the record of food, medicine, chemicals and other products in the storage and transportation process of temperature and humidity data, widely used in warehousing, logistics, cold chain of all links, such as refrigerated containers, refrigerated trucks, Cold storage, laboratory and so on.

## 1.1 Features

1. This recorder is equipped with a high-precision temperature and humidity sensor for accurate temperature and humidity measurement.
2. Built-in storage function, can record 260,000 pieces of temperature and humidity data, and can expand up to 2.08 million pieces of data.
3. Connect to the computer through the USB cable and use our company's supporting software to export the data stored in the device to the computer in EXCEL, TXT, PDF and other formats to facilitate subsequent report production and data analysis.
4. This recorder comes with a large LCD screen, which can display real-time temperature and humidity values, extreme temperature and humidity values, and the temperature units of Celsius and Fahrenheit can be freely selected.
5. This recorder uses a large-capacity rechargeable lithium battery, which can be used continuously for 1 year on a single charge.
6. Built-in buzzer, with over-limit alarm function, can automatically change the recording frequency when alarming, to ensure that the recorded data truly reflects environmental changes.
7. The function of timing start recording and timing stop recording can be set. When multiple recorders are used, ensure that the equipment starts recording at the same time and stops at the same time.

## 1.2 Dimensions



### 1.3 Model

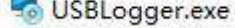
Product number		Description
COS-03	-0	Sensor built-in type
	-5	External type sensor; default probe length 0.6 m, up to 30 meters Please remarks when ordering

### 1.4 Technical data

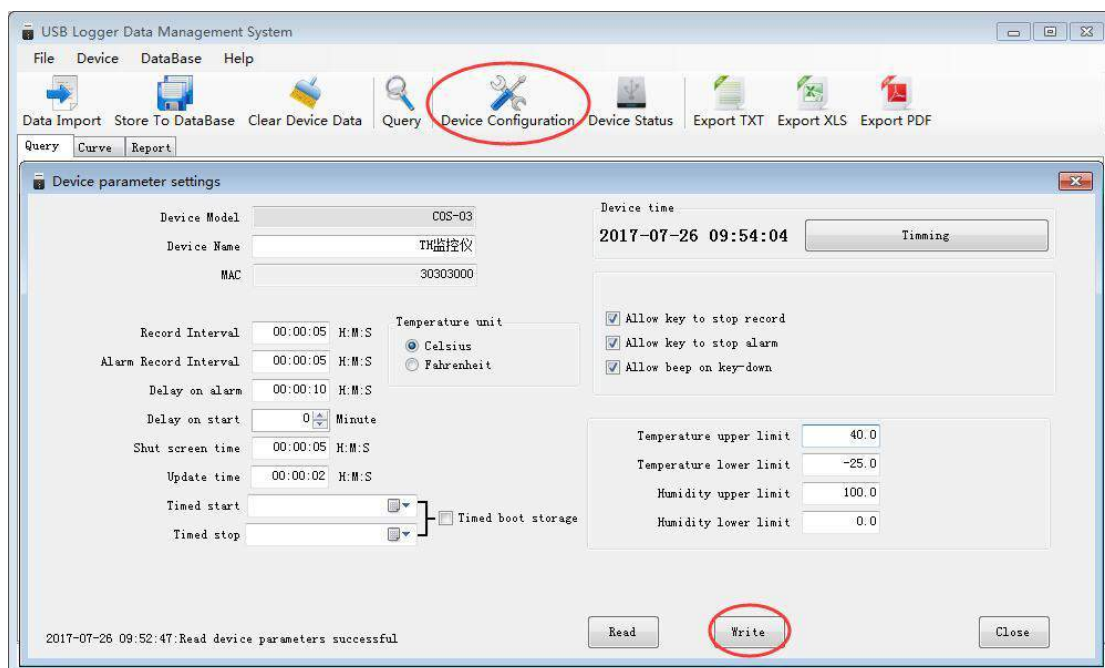
Equipment power supply	DC5V power supply or built-in battery power supply		
Recording capacity	260000		
Measuring range	tem perature	Probe built-in type	-20~+60℃
		Probe external type	-40~+80℃
	hu midity	Probe built-in type	0~95%RH
		Probe external type	0~100%RH
Transmitter circuit operating temperature and humidity	-20℃~+60℃, 0%RH~95%RH		
measurement accuracy	tem perature	Normal accuracy: $\pm 0.2^{\circ}\text{C}$ (25℃); High precision: $\pm 0.1^{\circ}\text{C}$ (25℃)	
	hu midity	Ordinary accuracy: $\pm 2\%RH$ (60%RH, 25℃); High precision: $\pm 1.5\%RH$ (60%RH, 25℃)	
Recording interval	5 seconds to 18 hours can be set		
Measurement update	2~255 seconds can be set		

time	
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## 2. Quickly use the recorder to record data

1. Installing the USB recorder management system "  "After the installation is complete, open the software.

2. The recorder connected to the computer via a USB cable and wait for the software interface click "Device Configuration" button after the driver is installed, if necessary, modify the set time, or the device parameters of the device, and then click the "write."



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

press  Key wait "▶" Lights up to start recording.

4.Exit the USB recorder management system.

## 3. Get data recorder records

You can get recorded historical data from the record, this process will not clear the recorder itself, the stored data, if the recorder is still in the record state, the process of extracting data will not affect the working state of the recorder.

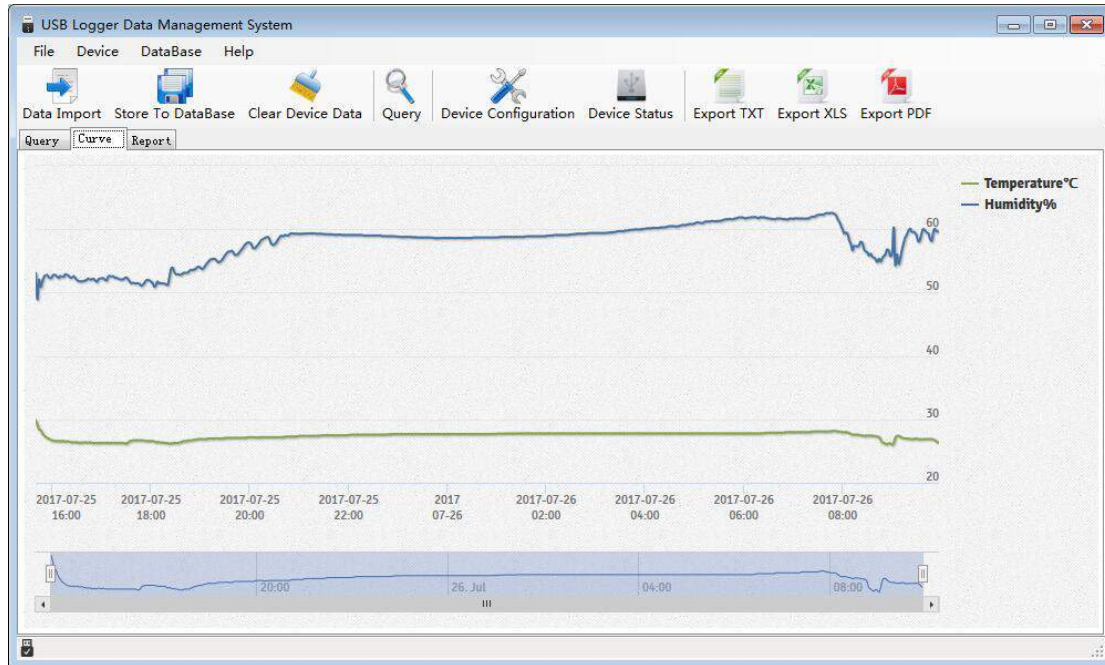
1. Open the USB recorder data management systems.

2, and a recorder connected to the computer via a USB cable, the software will automatically read all the data stored in the device.

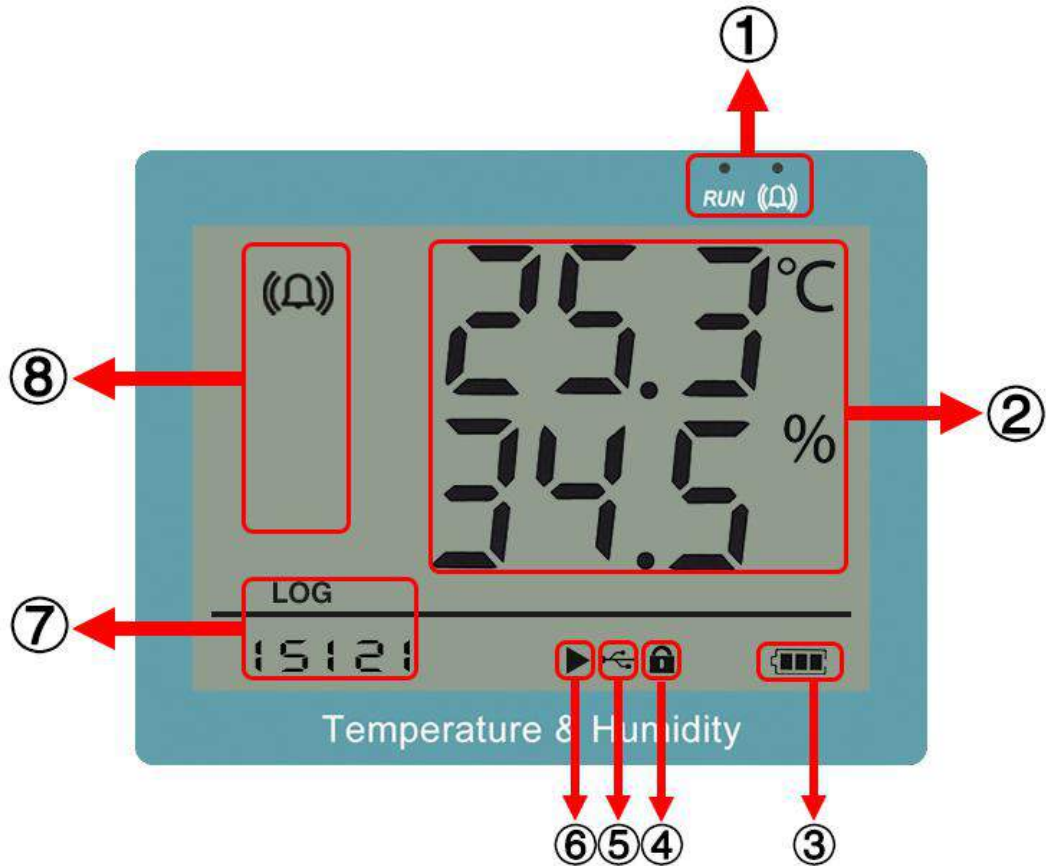


3, select the "Report", select the starting and ending time, click on the "Refresh", the software can obtain the data recording device, click "Export" to select TXT, XLS, PDF format, select the save path and click OK, you can export the data.

4, the data can also be stored to a computer database, click on the "stored in the database."



## 4. Functional description



Serial number	Description
1	The left side of the light to run the normal state of the second flash; the right light for the alarm light, temperature and humidity over the case of second flash, and the sound consistent,
2	Real-time temperature and humidity display
3	Remaining power display
4	Whether it is in the parameter modification mode
5	Whether it is online
6	The current logging status
7	Significant number wheel has been stored, the system time (the amount of data stored as LOG)
8	Temperature or humidity alarm

Recorder display interface: the main interface, the lower temperature and humidity display interface, temperature and humidity upper limit display interface, the minimum temperature and humidity display interface, temperature and humidity maximum display interface. Can be in the main interface by pressing the up and down keys to view.



Main interface

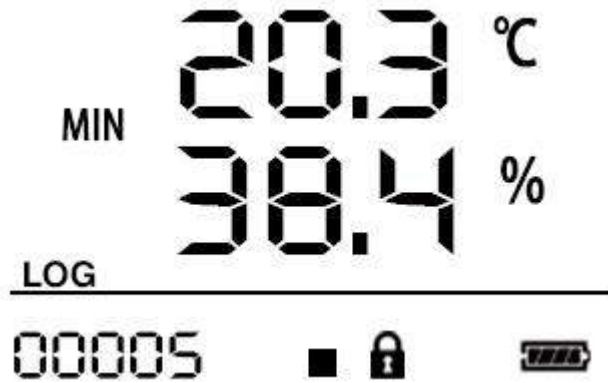


Lower limit of temperature and humidity alarm



Upper limit of temperature and humidity alarm






The minimum temperature and humidity of the stored data



Maximum temperature and humidity of stored data

If the recorder 20 seconds (may be provided) is not operated, the display automatically into a closed state. You can also set the screen. The recorder screen is long.





If the recorder is in the off display state, press any key briefly to enter the status display interface.

button  Each time you press it briefly, the recorder display interface will be switched in the order shown above.

## 5. Instructions

### 5.1 Key Description

Shandong Renke Control Technology Co., Ltd.,				9	www.renkeer.com
Button	Features	Description	Key operation mode		

	Clear key	<ul style="list-style-type: none"> <li>Exit operation when parameter setting is performed</li> </ul>	Short press
	return key	<ul style="list-style-type: none"> <li>Return to the main menu interface settings or view</li> </ul>	Short press
	Reduce the key	<ul style="list-style-type: none"> <li>When the parameter is modified, the data is reduced</li> </ul>	Short press: Decreased in decimal places Long press: To reduce the number of bits
	After the page	<ul style="list-style-type: none"> <li>When the menu button before the page view</li> </ul>	Short press
	Turn off the sound and light alarm	<ul style="list-style-type: none"> <li>main interface Press audible alarm off (stop button allowed)</li> </ul>	Long press
	Increase the key	<ul style="list-style-type: none"> <li>When modifying data parameter increasing button</li> </ul>	Short press: increase in decimal places Long press: increase by bit
	Before the page	<ul style="list-style-type: none"> <li>When the menu button before the page view</li> </ul>	Short press
	Open the sound and light alarm	<ul style="list-style-type: none"> <li>main interface Press audible alarm is turned on (key allows to stop)</li> </ul>	
	Save key	<ul style="list-style-type: none"> <li>the enter key after the completion of the modification parameters</li> </ul>	Long press
	Enter	<ul style="list-style-type: none"> <li>enter the menu</li> </ul>	Short press
	Start / Pause key record	<ul style="list-style-type: none"> <li>Boot Record; to pause the recording</li> </ul>	Long press

## 5.2 Boot Record

USB management system of the recorder Recorder parameters, the recorder does not start in

the recorded state, the display interface in the press state






Key on the screen " ► "The

symbol lights up to start the record." ► "The symbol flashes to indicate that it is in the start-up delay state.

Note: USB recorder data management system of the recorder parameter configuration, prior history data will be cleared, please read and save the historical data recorder before setting parameters.

## 5.3 Stop Record

(1) storage space automatically stops recording after the expiration. In the status display interface "  "The symbol is lit and it is stopped.

(2) setting allows the recording stop button, press  Key, in the status display interface "  "The symbol is lit and it is stopped.

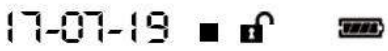

Note: After the recorder stops recording, the key can not start the recorder again. Only the recorder data can be cleared before you can start the recording again by pressing the key.


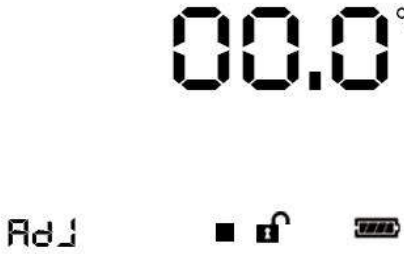



### 5.4 Function Display Item Description




Short press on the main interface  Key, enter the password, the default PIN

code 000, a short press  Key to enter the menu settings interface

When entering a password, press the up and down keys to increase or decrease with the rightmost digit, and press the up and down keys to increase the number of digits.

Show items	Features	Scope and description	default
	time	year month day	
	Clear the stored data	0 ~ 1 Set to 1 to clear the data stored	0

	password	0 ~ 999	000
	Temperature calibration value	-100 + 300	0
	Humidity calibration value	-100 + 100	0
	Temperature upper limit alarm value	- 40 ~ + 300	100
	Humidity upper limit alarm value	0 ~ 100	100

	Temperature lower limit alarm value	- 40 ~ + 300	-40
	Humidity lower limit alarm value	0 ~ 100	0
	time	Minutes and seconds	

## 6. Data management software for use

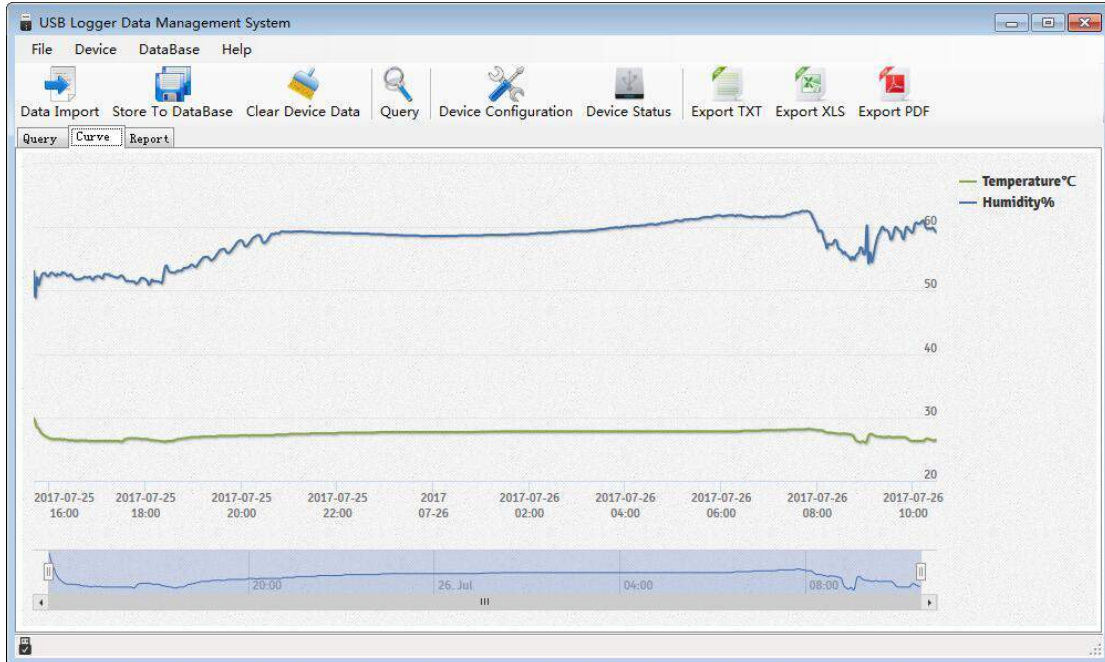
After the installation of the software will be completed in the desktop production



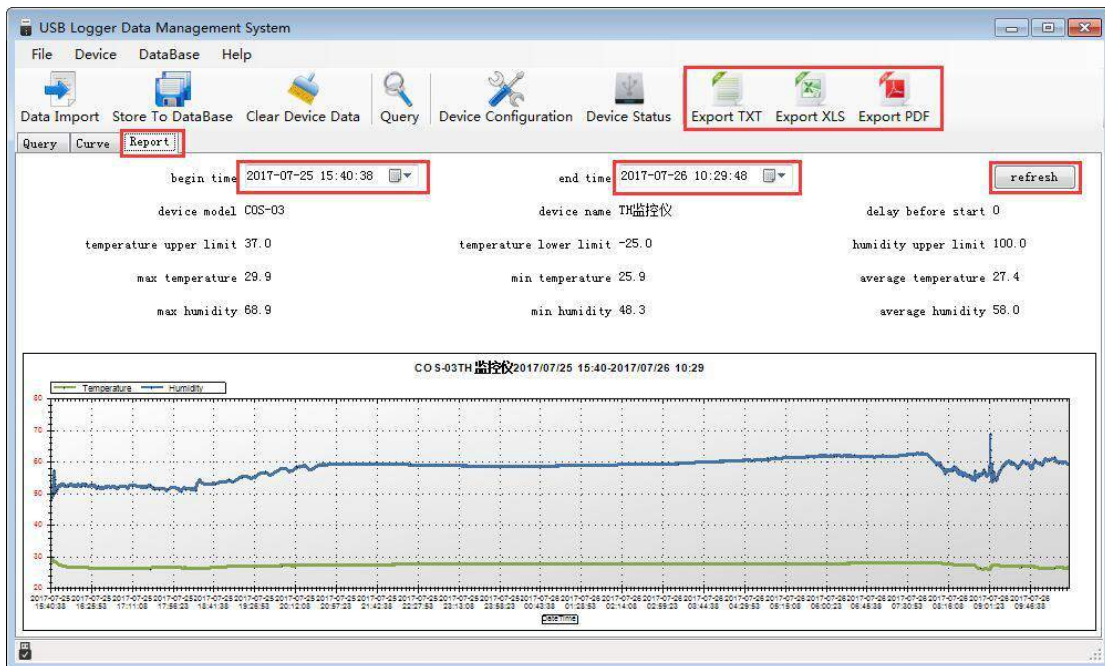
"Icon, double-click to open the software.

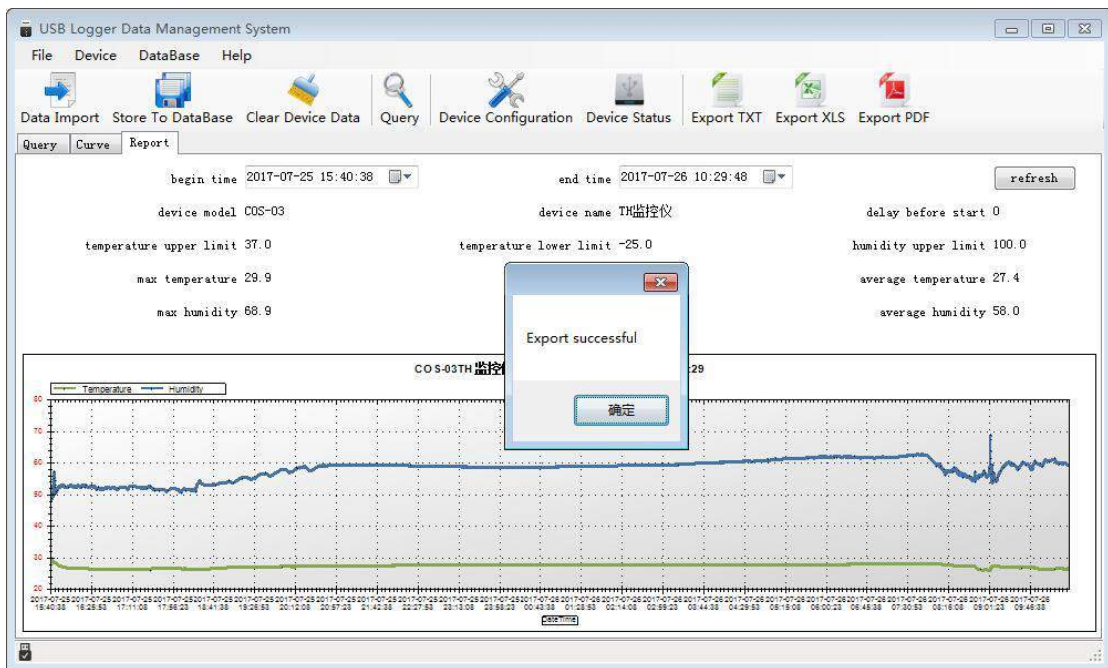
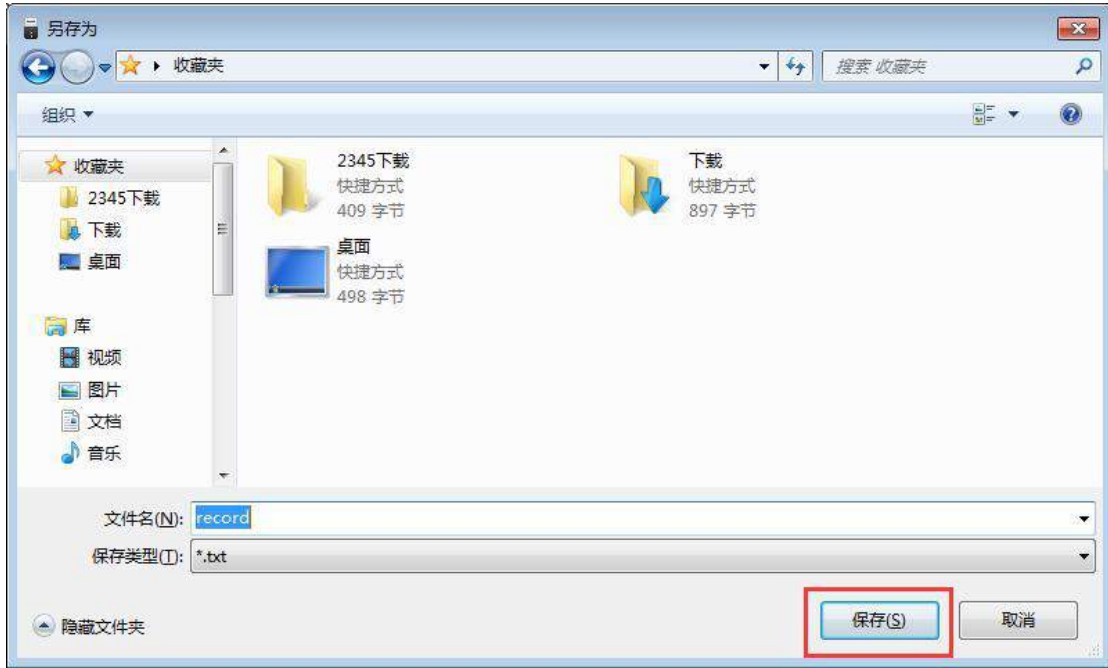
### 6.1 Export Data

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



Click on the "Reports", select the start and end time to export the data, click on the "Refresh" and then select the export format (TXT / XLS / PDF), you can export the data saved to the specified path (in PDF for example), suggesting that export success The



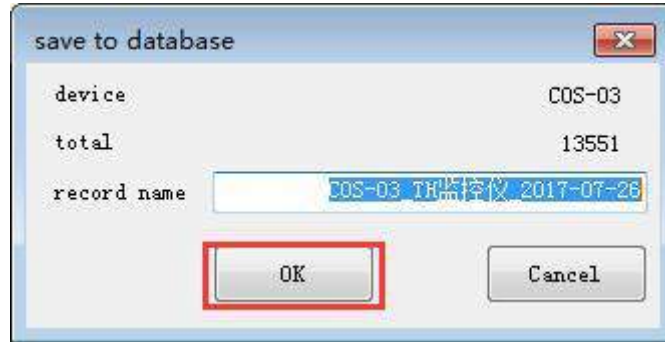


## 6.2 Saving Data

After importing the data, click "Store to Database"



To the database file named after the convenience of the query, click "OK" to save the data is successful.



### 6.3 query data

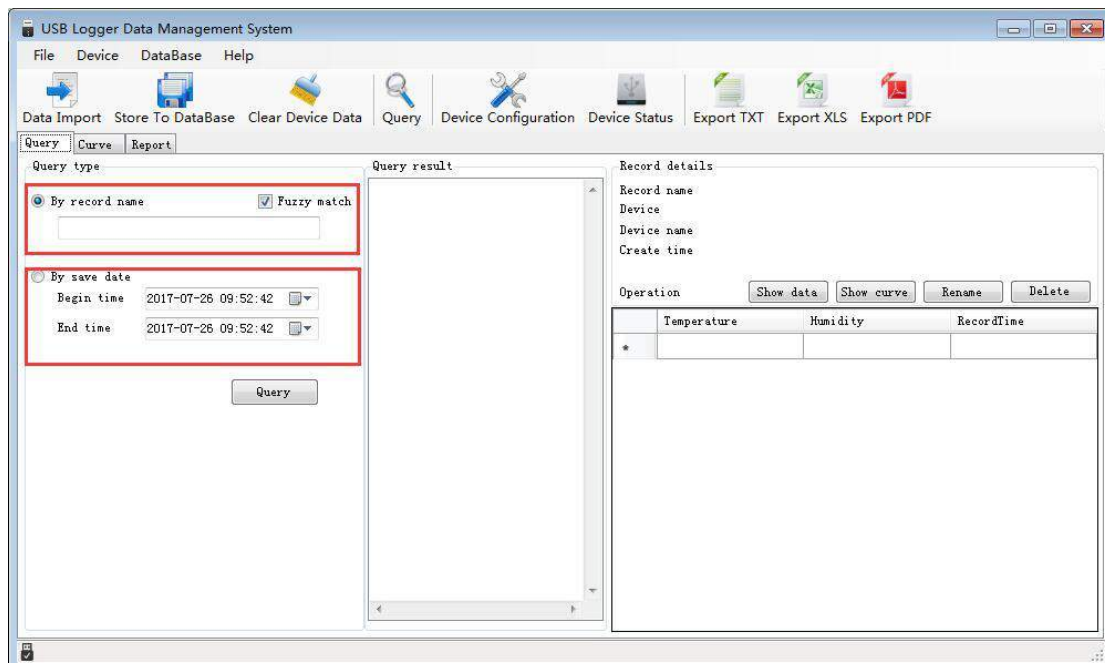
For data has been saved to the database can be queried via the USB recorder management system, click on the toolbar "Query"



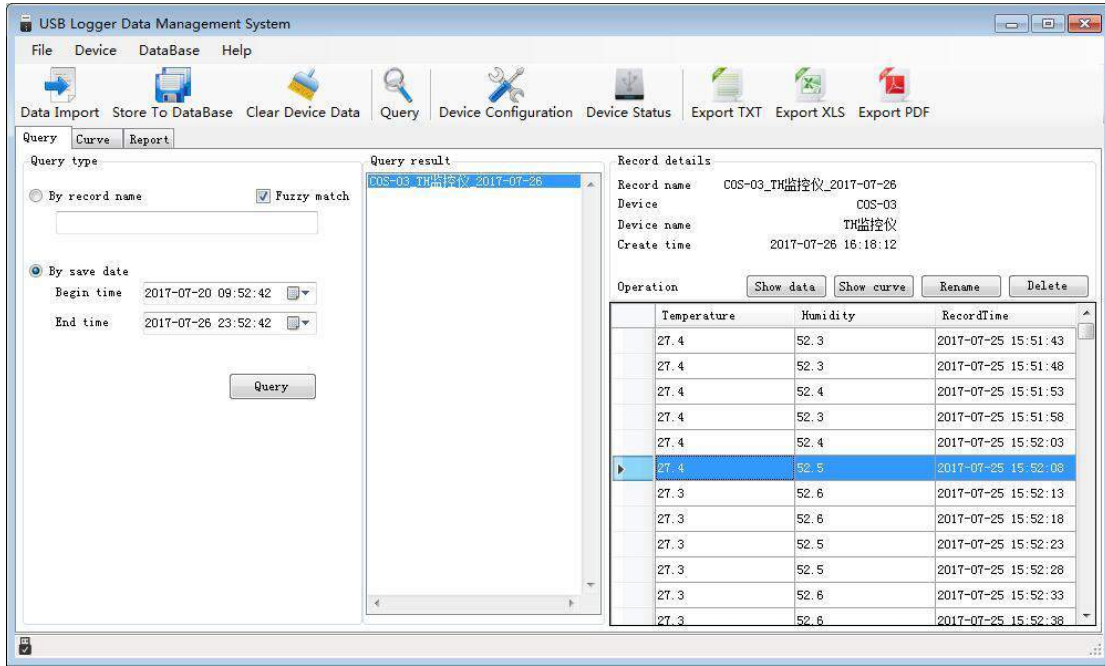
Can choose the query, click on the query;

**By record name:** to save the name of the database query

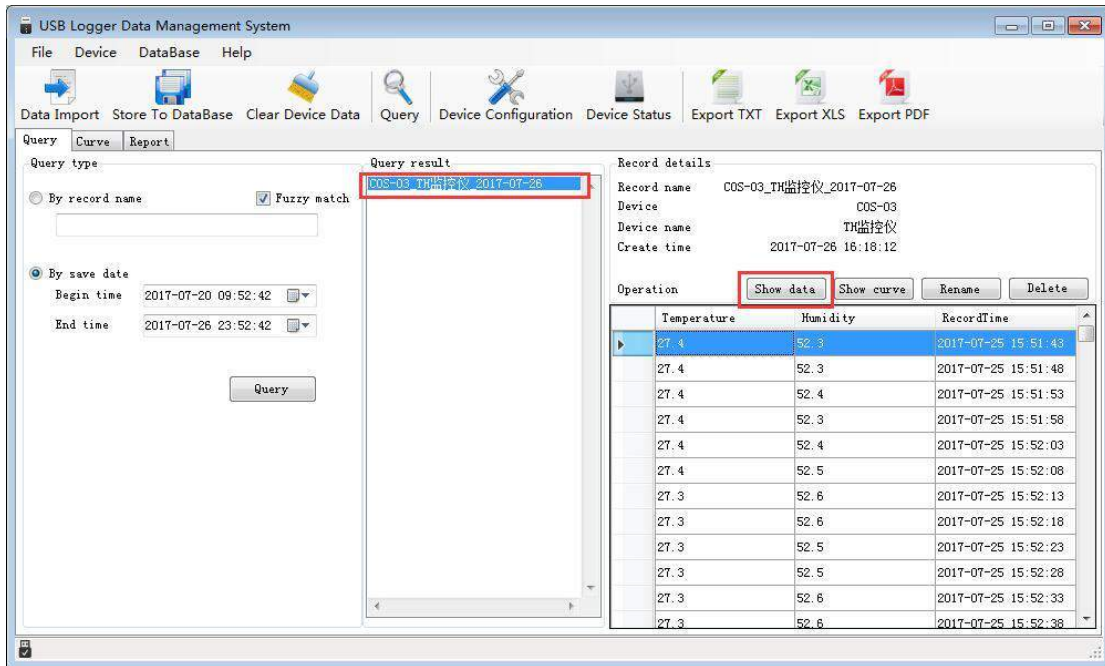
**Press inquiries into date:** Time to save the database query





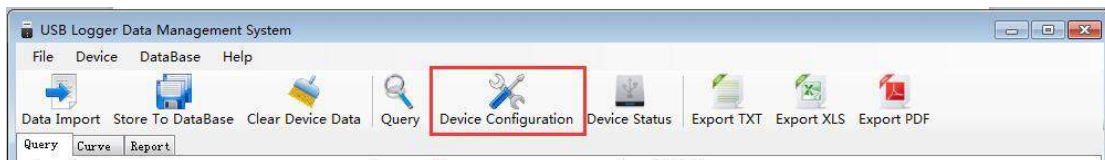


Double-click the query to the results, you can "view data", "view curve", "rename", "delete records" "export" operation.



## 6.4 Setting Recorder parameters

The devices connected to the computer via a USB cable, click on the toolbar "Device Configuration"





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

**Device Model:** The factory default can not be modified

**Device Name:** Custom, you can give your own logger named

**MAC:** Factory default can not be modified

**Device time:** synchronization clock time recorder

**Record interval:** interval storing data logger (minimum 5S)

**Alarm Record interval:** after recording the temperature and humidity recorder set overrun interval

**Delay on Alarm :** This value is set when the 10S and the upper temperature limit alarm on, if the temperature exceeds the upper limit and the time duration over device will exceed 10S super rising alarm device that, when the temperature exceeds the upper limit of the duration that the device temperature is less than 10S There is no upper limit; this parameter is also the lower temperature alarm, humidity alarm, humidity lower limit alarm effective

**Delay on Start:** Set records start time of 0 seconds by default, can not be modified

**Display time:** off-time logger is provided on screen display is set to 0 if no off-screen

**Measurement Update:** setting recorder data acquisition interval

**Timed start / Timed stop :** checking the timing of starting after storage, may be provided in the recorder data storage specified period of time

**Allow key to stop record:** When checked, then the key can be recorded on a recorder stop

**Allow key to stop alarm:** After checking, when the recorder overrun sound and light alarm, sound and light alarm can be turned off button

**Allow beep on key-down:** closed or open key sound

**Temperature upper limit:** Set the upper temperature alarm value

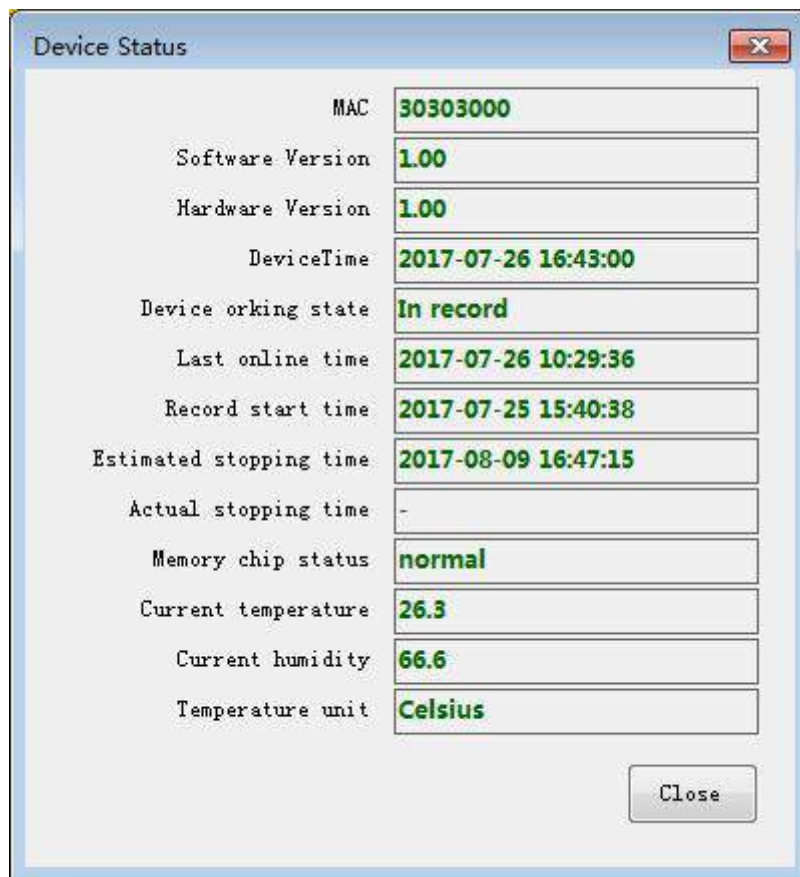
**Temperature lowerlimit:** Set the temperature lower limit alarm value

**Humidity upper limit:** Set the upper limit of humidity alarm value

**Humidity lower limit:** Set the humidity lower limit alarm value

## 6.5 View current device status

In the toolbar, select "Device Status" to see the specific status of the currently connected device



**MAC :** MAC address of the device current

**Software version :** software version number

**Hardware version:** version of the device

**Device Time:** The current time of the device

**Current working state:** record / Stopped

**Last online time:** the last online time

**Record start time:** time storage device starts recording data

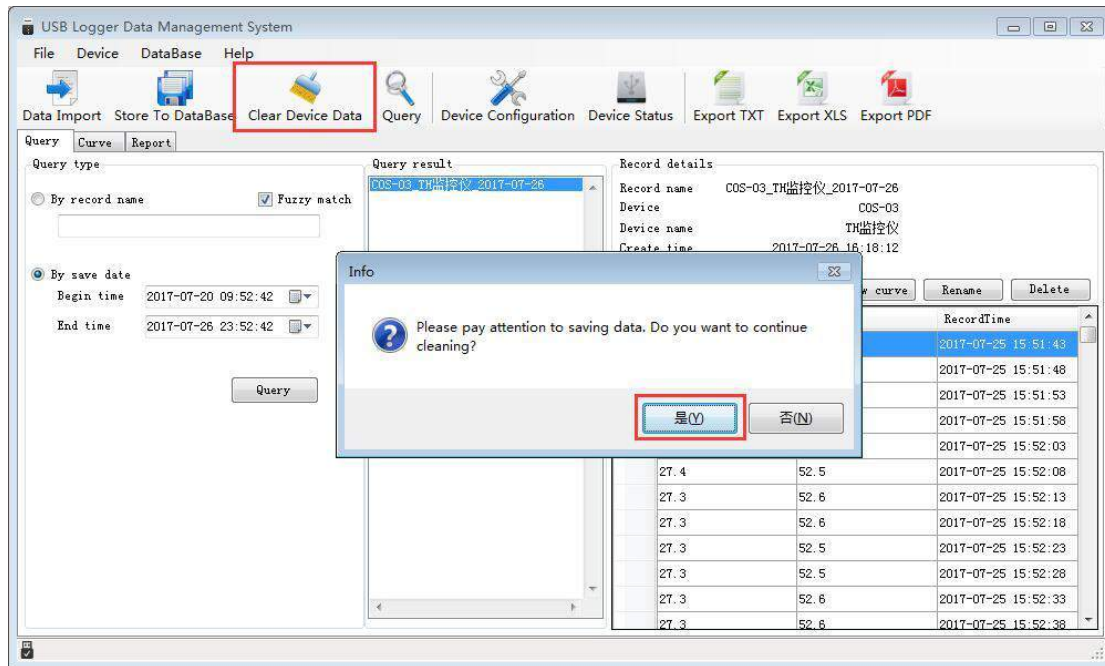
**Estimated stopping time:** according to the current recording interval, the absence of artificial stop recording, the device may stop normal recording time

**Actual Stopping time:** stop record time artificial

**Memory chip Status:** Normal / Abnormal  
**Current Temperature:** Equipment temperature  
**Current humidity:** Equipment humidity  
**Temperature unit:** Temperature unit

## 6.6 Clear device data

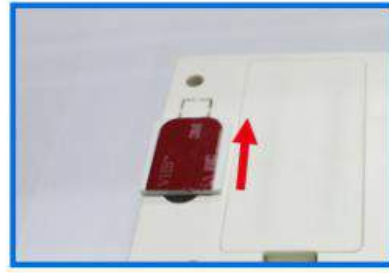
In the toolbar, select "Clear Device Data" and click "OK" to clear the device data.



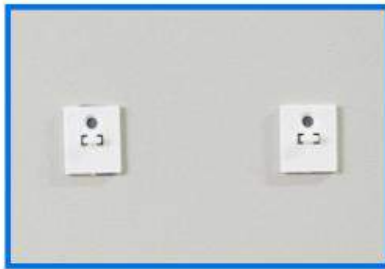
## 7. Installation Notes



1. 将壁挂扣安置在壁挂孔上



2. 将壁挂扣按箭头方向推到底



4. 上推取下设备，压紧壁挂扣，静置24h使3M胶达到最大强度



3. 揭下胶皮，将设备扣置在墙面（水平安装，请勿倾斜）

## 8. Contact information

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Web QR:

