

TM 1 YEAR
WARRANTY



HUATO

User's Guide



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S630GPRS-GSM

Real-time printing temperature &humidity
data logger



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Table of Contents

Section	Page
Section 1 Introduction	1
1.1 Introduction	1
1.2 Features	1
1.3 Applications	1
1.4 Data Logger Model	1
1.5 Temperature and Humidity Data Logger Appearance	2
1.6 Temperature and Humidity Data Logger Screen	6
1.7 Button function instructions	7
Section 2 Installation and Instruction	7
2.1 Operation and use process.....	7
2.2 Install the software.....	7
2.3 Install the driver	7
2.4 Instrument GPRS setting	8
2.5 Device SMS alarm setting.....	10
2.6 open and log in ToMonitor	10
2.7 add instruments to the monitoring system	11
2.8 Monitoring system Settings	12
2.9 description of real-time data monitoring interface	14
2.10 Query historical data	15
Section 3 GPRS status description	18
Section 4 Matters needing attention.....	18

Section 1 - Introduction

The data logger S630 series is an Internet of things end device combines the functions of temperature & humidity data collecting, GPRS wireless data transmission, GPS positioning, remote real-time temperature & humidity monitoring, SMS alarming when data value exceeds limits.

Section 1.2 - Features

- Compact portable design with IP65 water proof.
- External power supply and rechargeable battery supply .
- GPRS upload interval can be set according to customer demand.
- Base station location function help users to read the truck/car location.
- With print temperature &humidity data in real time with Bluetooth.
- Remote online monitor ,export excel,graph,report,BMP,TXT.
- GPRS data transmission can be set to remotely view and search data in real time.
- Support HUATO cloud service system.
- Users can set the upper &lower limits,the host and Tomonitor software will alarm simultaneously when the limit is exceeded.
- Host Size(L x H x D): 90mm x 55mm x18mm

Section 1.3 - Application

- Cold storage vehicle.
- Food and pharmaceutical cold storage and cold storage transportation.
- Cool library.

NOTE:

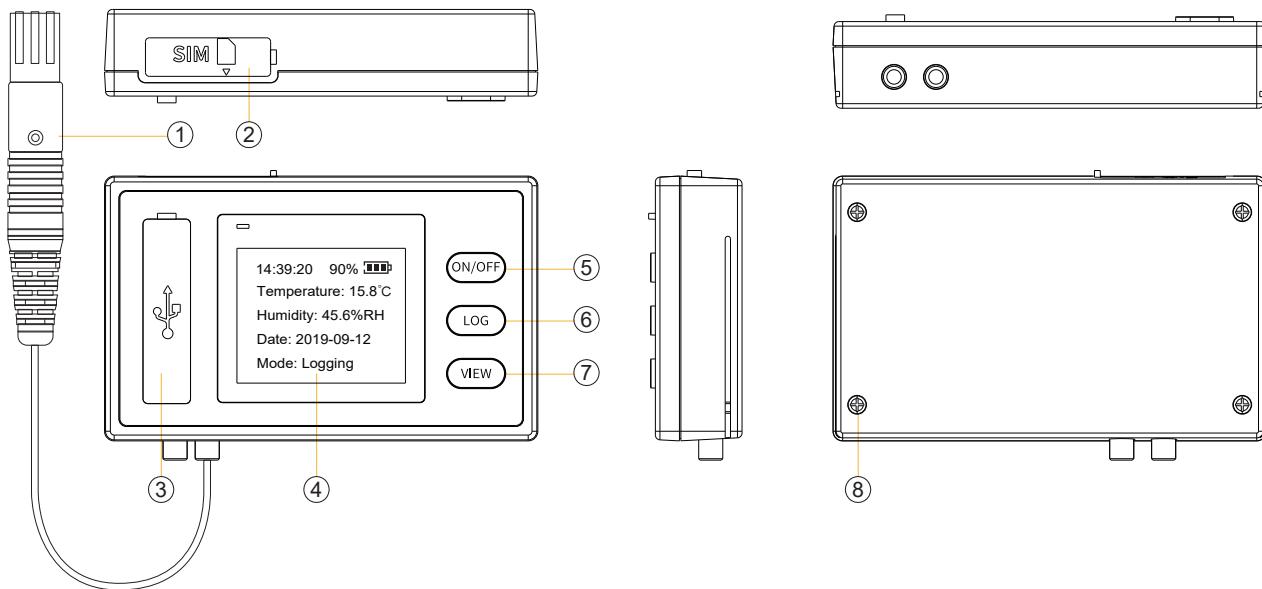
There are no user serviceable parts inside your unit. Attempting to repair or service your unit may void your warranty.

Section 1.4 - Data Logger Model

Model	Temperature Range	Humidity Range	Temperature Accuracy	Humidity Accuracy	Capacity of Records	
S630-EX	-40~85°C	0~100%RH	±0.5°C	±5%RH	65.000	
S630-ET	-40~85°C	(none)	±0.5°C	(none)		
S630-DT						

Section 1.5 - Temperature and Humidity Data Logger Appearance

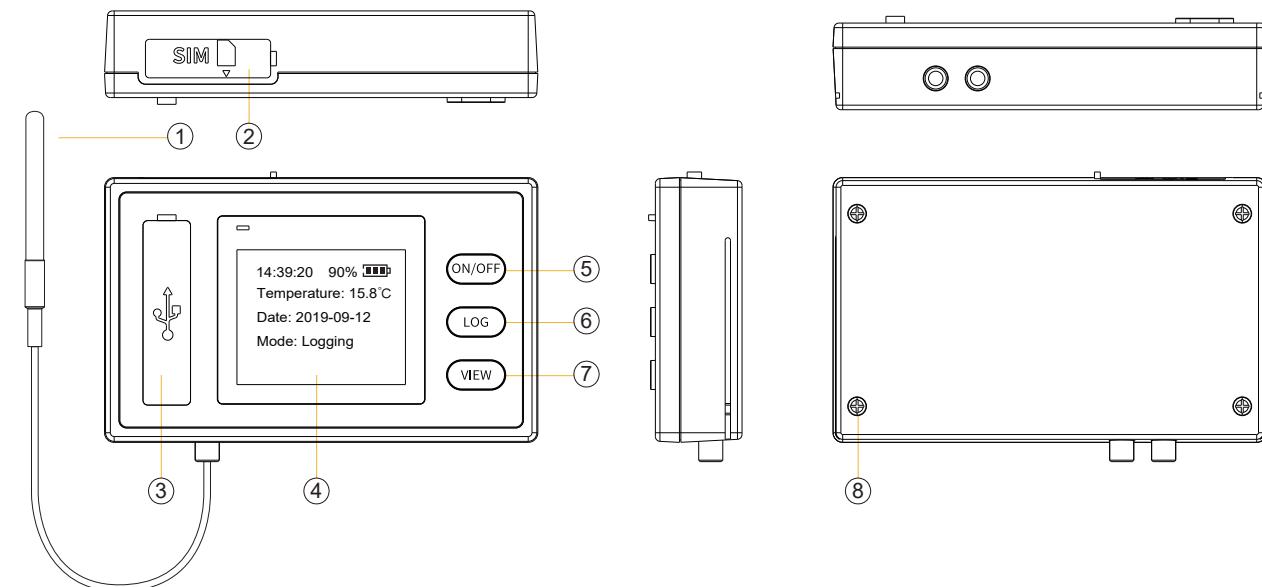
S630-EX



- | | | |
|--------------------|------------------|----------------|
| 1. External sensor | 4. LCD Screen | 7. VIEW button |
| 2. SIM card slot | 5. ON/OFF button | 8. Hanger |
| 3. USB cable | 6. LOG button | |

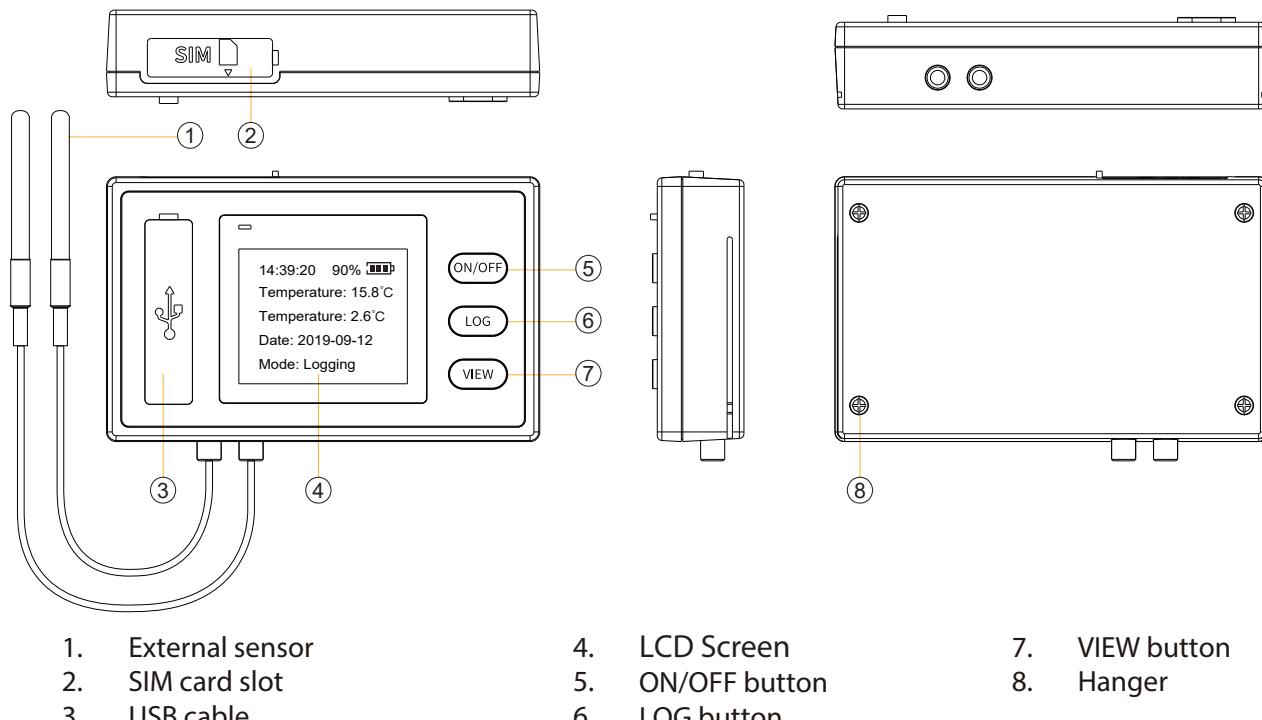
Section 1.6 - Temperature Data Logger Appearance (S630-ET/DT)

S630-ET

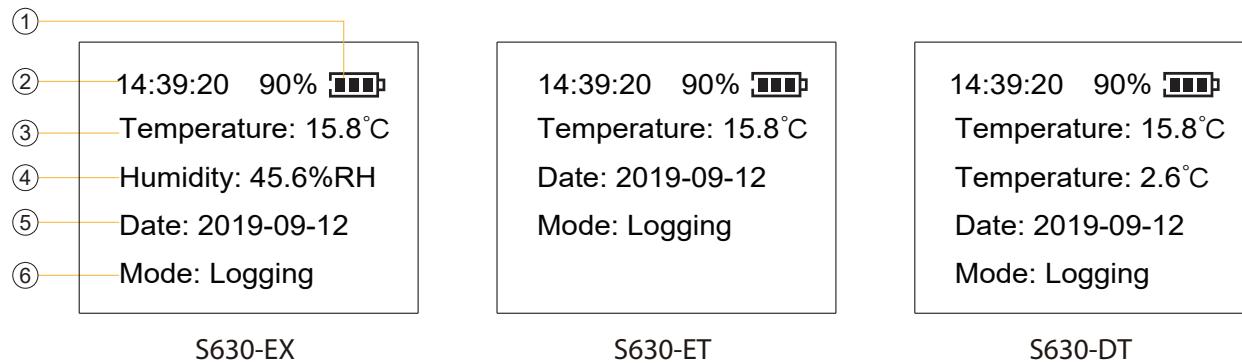


- | | | |
|--------------------|------------------|----------------|
| 1. External sensor | 4. LCD Screen | 7. VIEW button |
| 2. SIM card slot | 5. ON/OFF button | 8. Hanger |
| 3. USB cable | 6. LOG button | |

S630-DT



Section 1.6 - Data Logger Screen (S630-EX/S630-ET/S630-DT)



- | | | |
|------------------|------------------------|--------------------------------------|
| 1. Power display | 3. Temperature display | 5. Date display: year, month and day |
| 2. Time display | 4. Humidity display | 6. Record status |

Section 1.7 - Button function instructions

[ON/OFF]: ON/OFF Button

- Extended press 2s to turn on.
- In the startup state, shutdown is only allowed when logging is not on, when turning off the device, comes with a confirm interface in 10 seconds. Press **[key]** to turning off during this 10 seconds.
- Short press to awaken screen when device screen in rest state.

[LOG]: LOG (Confirm) Button

- Short press to start logging when log is off.
- Short press to back to Home page during Query page.
- Extended press to start printing function, Printing process:
 - 1). Extended press Log key, device prompt whether to print data, select YES /NO:
 - Select NO: back to home page.
 - Select YES: start searching BT printer device.
 - 2). Press **[VIEW]** key to back home page while searching, to stop searching BT device, as a result searching failed.(searching time is 90 seconds maximum, preferential choice the memorized ones).
 a. When searching failed, interface prompts whether to search again, select YES/NO:
 - Select YES, to do step 2) again.
 - Select NO to back to main interface and leave BT printing function.
 - b. When searching successfully, Prompts whether to continue the last printing, select YES/NO :
 - Select YES: continue the last printing mission and flashback print.
 - Select NO: start flashback print from the newest data .
 - 3). Enter the print interface, prompts data printing, Select Continue or Over:
 - Select Continue: print 10pcs data max each time.
 - Select Over: prompts printing finished, press back key to finish printing.
 - 4). When printing failure occurred during printing process, prompts Bluetooth print fail, whether to research, select YES or NO:
 - Sselect YES: Repeat step b.
 - Select NO: finish Bluetooth print, back to main interface.

[VIEW]: Query (Back) Button

- Short press key,enter to query information interface, 3 information interfaces plus main interface in cyclic display
- Extended press key to start transferring historic data or close logging function,

For example: Extended press key to check whether logging is start.

- 1). log function is off: checking whether there is data waiting for uploading.
 - a. Short press key to back to main interface when it prompts no data to upload.
 - b. When it have data waiting for uploading, the interface prompts whether to upload now,

Select YES or NO:
 - Select YES: start data uploading.
 - Select NO: back to main interface.
- 2). log function is on: checking whether there is data waiting for uploading.
 - a. When it have not data for uploading, the interface prompts whether to stop logging data now, Select YES or NO:
 - Select YES to stop log and back to main interface.
 - Select NO, back to main interface.
- 3). When it have data for uploading, the interface prompts whether to upload data now,

Select YES or NO:
 - Select YES: start uploading data, during uploading,the result interface prompts success or fail, refer to interface to select  key, back to step a. prompts whether to stop logging to process it.
 - Select No : back to Step a, prompts whether to stop logging to process it.

For example

- E.g 1: Query device's information

Press  key , display interface 1. press  again, display interface 2. press  key  again, display interface 3. press  one more time, back to main interface.

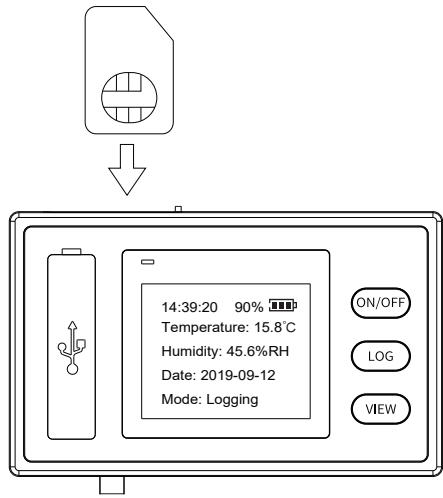
- E.g.2: Bluetooth print data

At main interface, extended press  key, enter to select interface prompts, short press  key, select yes to enter to bluetooth searching interface, during this time,can short press  key to back to main interface and finish bluetooth print. when bluetooth searching successful, short press  key to print data, short press  key to start flashback print from the newest data of 10pcs. short press  key to print again of 10pcs data, short press  key, prompts print finished.

- E.g.3: Uploading the historic data

At main interface, extended press  key, it prompts whether to upload data. short press  key, prompts data uploading, waiting for data uploading, interface prompts data uploading successful , short press  key to back, interface whether to stop logging, short press  key ,stop logging and back to main interface.

Section 1.8 -Device SIM card



Card insert instruction: cut out the dust proof rubber plug at the bottom of the instrument, and insert the MICRO SIM card into the SIM card slot with the gap facing down and the chip facing up.

Note 1: please turn off the device before SIM card is unplugged, or press reset button to reset and restart the device after SIM card is inserted.

Note 2: the device only supports mobile or unicom SIM CARDS, telecom mobile phone CARDS are not available.
Note 3: SIM card requires sufficient phone charges and has opened data service.

Section 2 - Installation and Instruction

This section will explain how to use the software to upload, read, configure and synchronize the settings, how to turn on/off the logger & enter/exist the loggingmode, and how to delete and download the logging data.

Section 2.1 - Operation and use process

Instrument add cloud service platform → installation software → installation driver → instrument GPRS setting → instrument SMS alarm setting → open and log in ToMonitor software → add instrument to monitoring system → monitor system setting → monitor instrument real-time data → query historical data.

Section 2.2 - Install the software

Put the CD in the box of the product into the computer DVD drive, copy and paste the whole folder of the monitoring software in the CD into the other disk of the computer (note: do not put this folder in the C disk or desktop), unzip and double-click to open the folder, to use what software directly in this folder double-click to open the corresponding software.

Section 2.3 - Install the driver

1. Click [install]

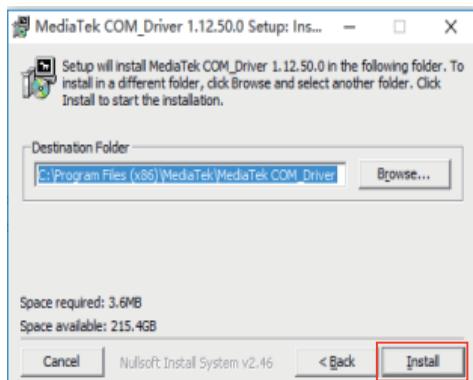


Figure 1-1

Click on the install

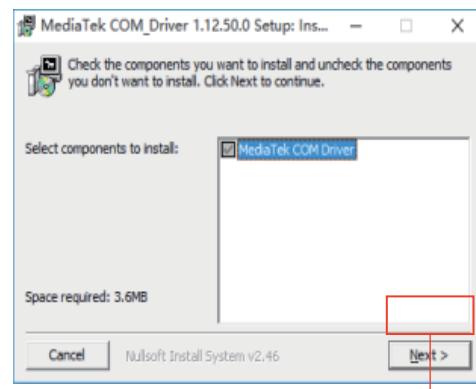


Figure 1-2 The installation is complete

Section 2.4 - Instrument GPRS setting

Start up the instrument → connect the instrument to the computer using the android data cable of Micro USB interface → enter [device manager] to check the corresponding COM slogan of the connected instrument → double-click to open the software folder of [LoPro. Exe] in figure 1-4.

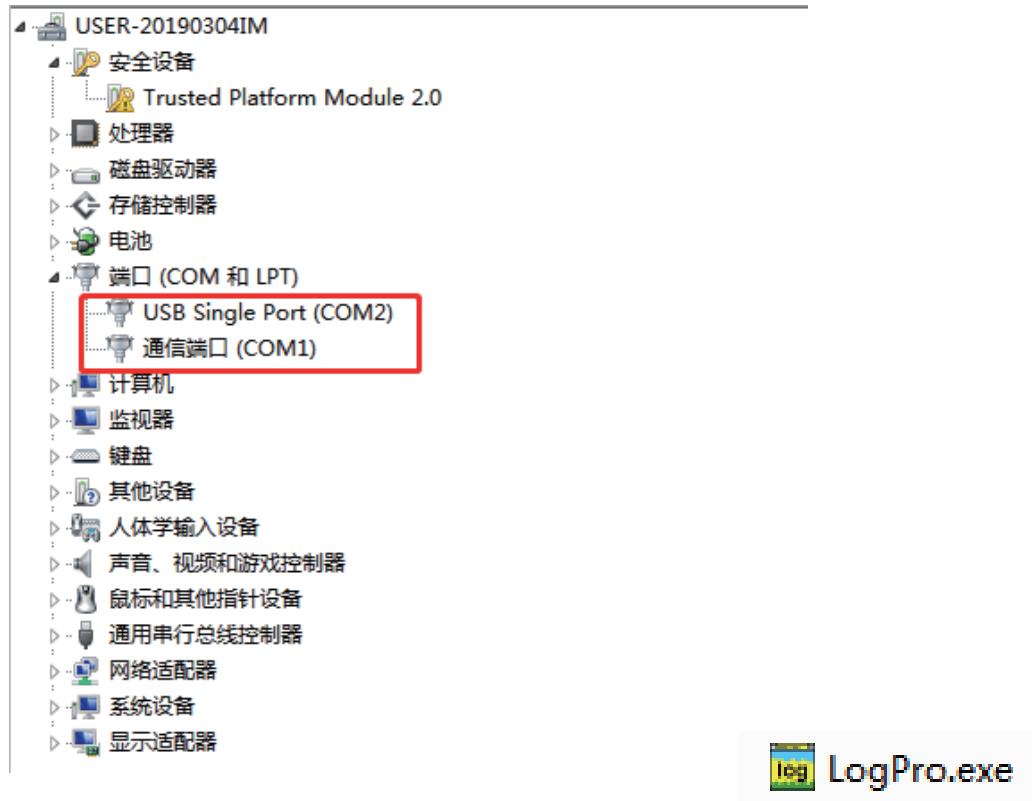


Figure 1-3 shows the COM slogan

Figure 1-4 LogPro software

Click "LoPro" software "connect" button to select the instrument corresponding COM slogans, click 【 confirm 】 - successfully connected to the software, click options (O) - > click 【 GPRS Settings 】 , pop-up GPRS Settings window to click on the "read configuration" window, as shown in figure 1-7 complete configuration information to fill out the information and then click the "write configuration" - the popup prompt window after successful setup GPRS 】 【 click [sure] to click the "cancel" GPRS Settings window, exiting GPRS Settings. Instrument GPRS setup is complete.

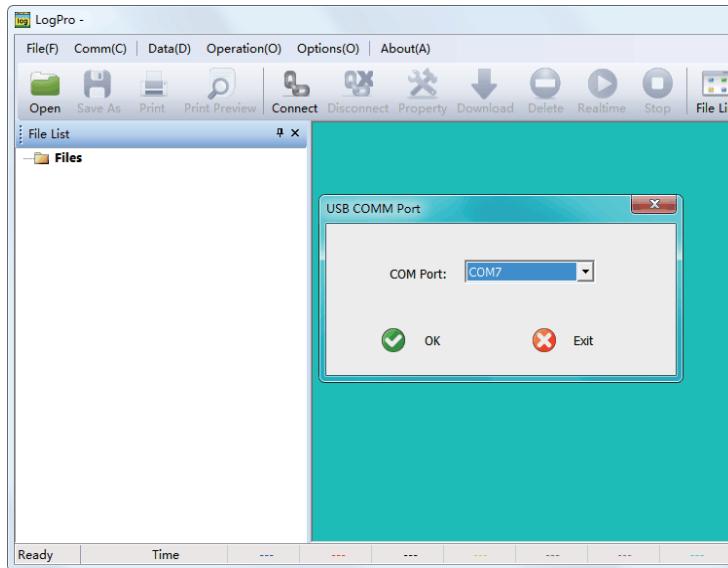


Figure 1-5 connecting LogPro software

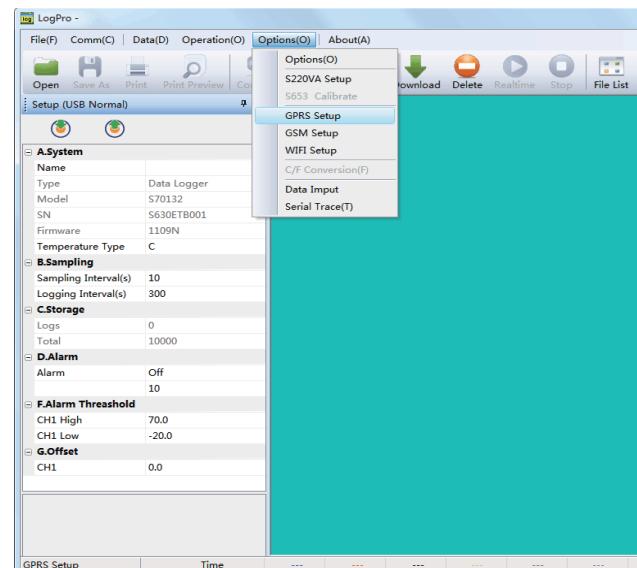


Figure 1-6 enter GPRS Settings

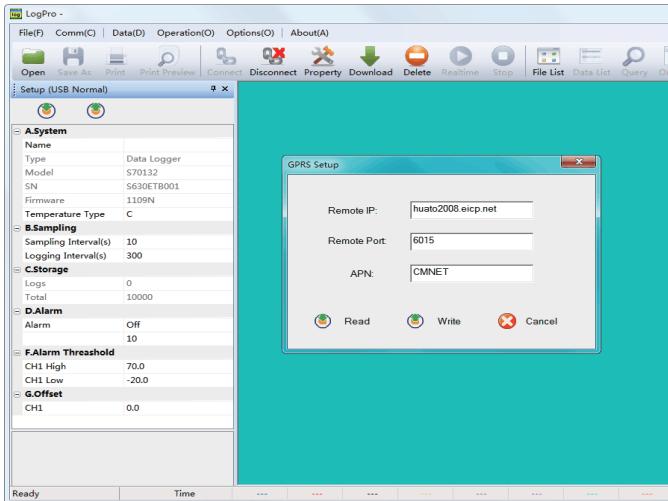


Figure 1-7 GPRS Settings

Section 2.5 -Device SMS alarm setting

Click [option (O)] → click [GSM alarm setting] to pop up the GSM alarm setting window → click [read configuration] in the window → fill in the phone number and alarm interval that need to receive alarm SMS (note: three phone Numbers can be set at the same time) → fill in the information and click [synchro-

Note: the mobile phone card used is China unicom card, fill in "unnet" in the column of "APN"; The mobile phone card used is a telecom card, and fill in [cmnet] in the column of [APN].

nous configuration] → pop up the prompt window of [successfully set alarm phone number] and click [ok] → click [cancel] in the GSM alarm setting window to exit the GSM alarm setting → click [disconnect] button on LogPro software to unplug the instrument data line. SMS alarm setting is completed.

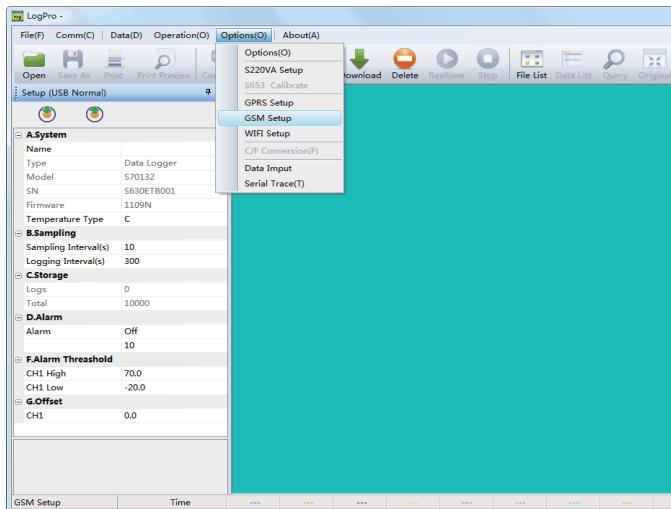


Figure 1-8entering GSM alarm setting

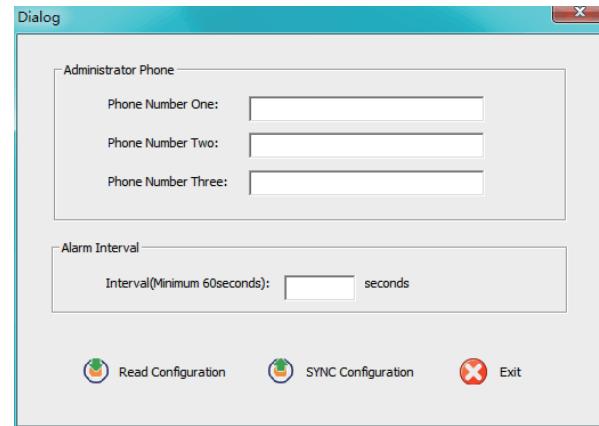


Figure 1-9 GSM alarm setting

Section 2.6 - open and log in ToMonitor

1. If the software prompts configuration ODBC data dialog box, click "ok", then the automatic configuration ODBC successful dialog box pops up, click "ok" to close the software, open the software again, and the software can start normally.

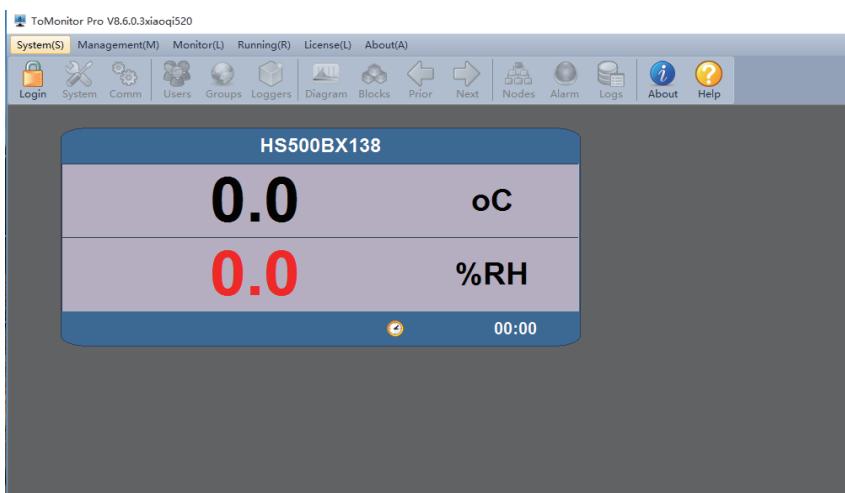


Figure 1-10

2. If the Windows firewall prompt window pops up, check both options and click [allow access (A)]. Otherwise the firewall will block traffic.



Figure 1-11

Note: if you have installed 360 antivirus, 360 security guard and other software, you must add the installation directory to the white list of trust. Every antivirus software should be added.

3. After entering the software, click "login" in the upper left corner of the interface and enter the user name and password. Other function buttons are activated after login is successful.

Note 1 the initial user name and password are admin and are case-insensitive.

Note 2: after 10 minutes of no operation, the software will log out automatically. At this time, all functions are in the inactive state to prevent others from modifying the software configuration. Please re-enter the user name and password.

Note 3: user login authentication is also required to exit the software to prevent others from closing the software.

Section 2.7 - add instruments to the monitoring system

1. Insert the SIM card with the function of flow and sufficient phone charges into the device → start up the device → open and log in ToMonitor software

2. Click on the "instrument" button - > - > instrument Settings window, on the part of the partition and used in the interface to select the most on the left side of the interface will appear a few instruments, just click on

one instrument (note: not a check box) -> fill in "basic Settings" column with the appropriate instrument name and according to the label on the instrument, instrument with the corresponding input serial number, fill in the sampling interval, instrument channel number. (note: symbols cannot be used in names. The letters in the serial number must be capitalized).

3. Select instrument type [7 GPRS] in the field of [instrument type setting]. Note: instrument type must be of this type, otherwise the instrument cannot upload data normally

4. Set the alarm upper and lower limits of each sensor in the column [sensor X], and select the sensor type according to the actual situation.

Note: X represents the channel value.

5. Click the "increase" button, and click "cancel" to exit the setting window after the increase is successful. Instrument addition is complete.

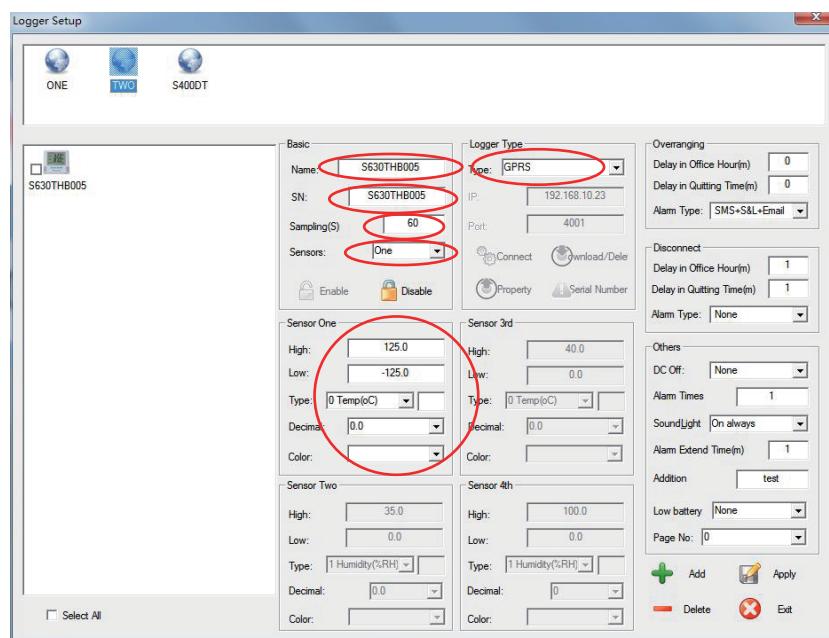


Figure 1-12 adding instruments

Section 2.8 - Monitoring system Settings

Click ToMonitor software the system (S) on the toolbar to click on the "additional Settings (I)", additional Settings window pops up after according to figure 1-14 GPRS cloud server Settings -> set after the completion of the click [sure] to exit the Settings window -> click on the "system" button, the pop-up system Settings window -> check the item in the options -> GPRS cloud synchronization] 【 click [sure] to exit the system Settings. The real-time data of the instrument can be normally monitored at this time.

Note: in case of failure to upload data, please first confirm whether the mobile phone card is in arrears or the traffic service is not opened.

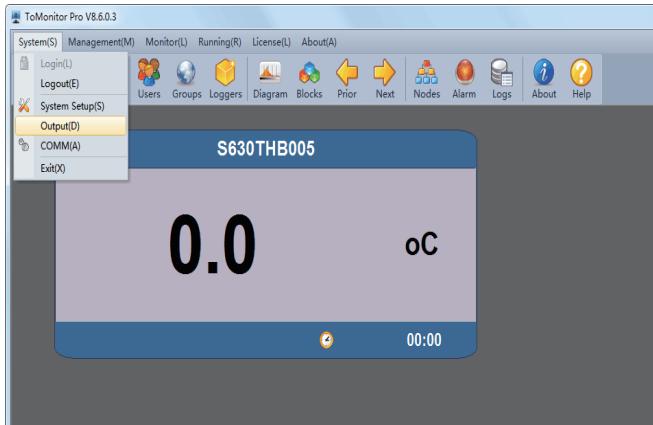


Figure 1-13enter additional Settings

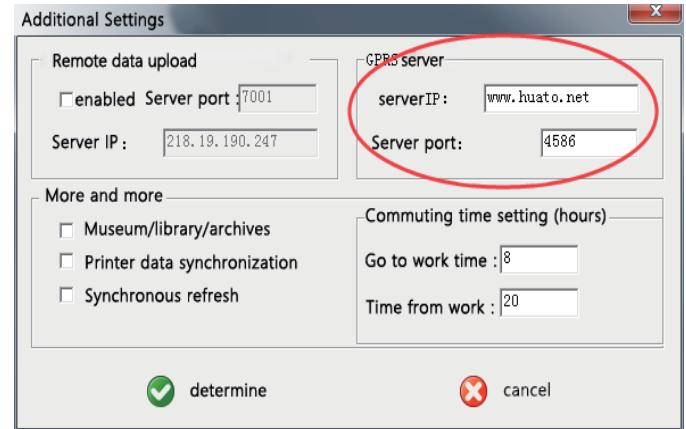


Figure 1-14 additional Settings

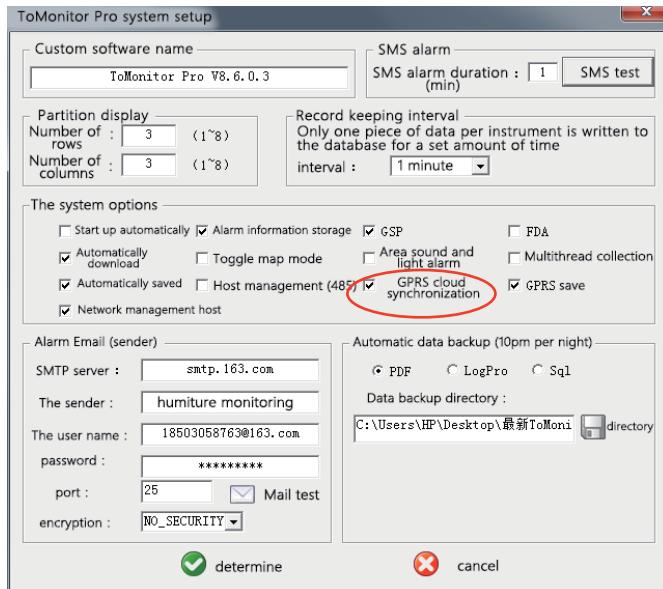


Figure 1-15 system Settings

Section 2.9 - description of real-time data monitoring interface

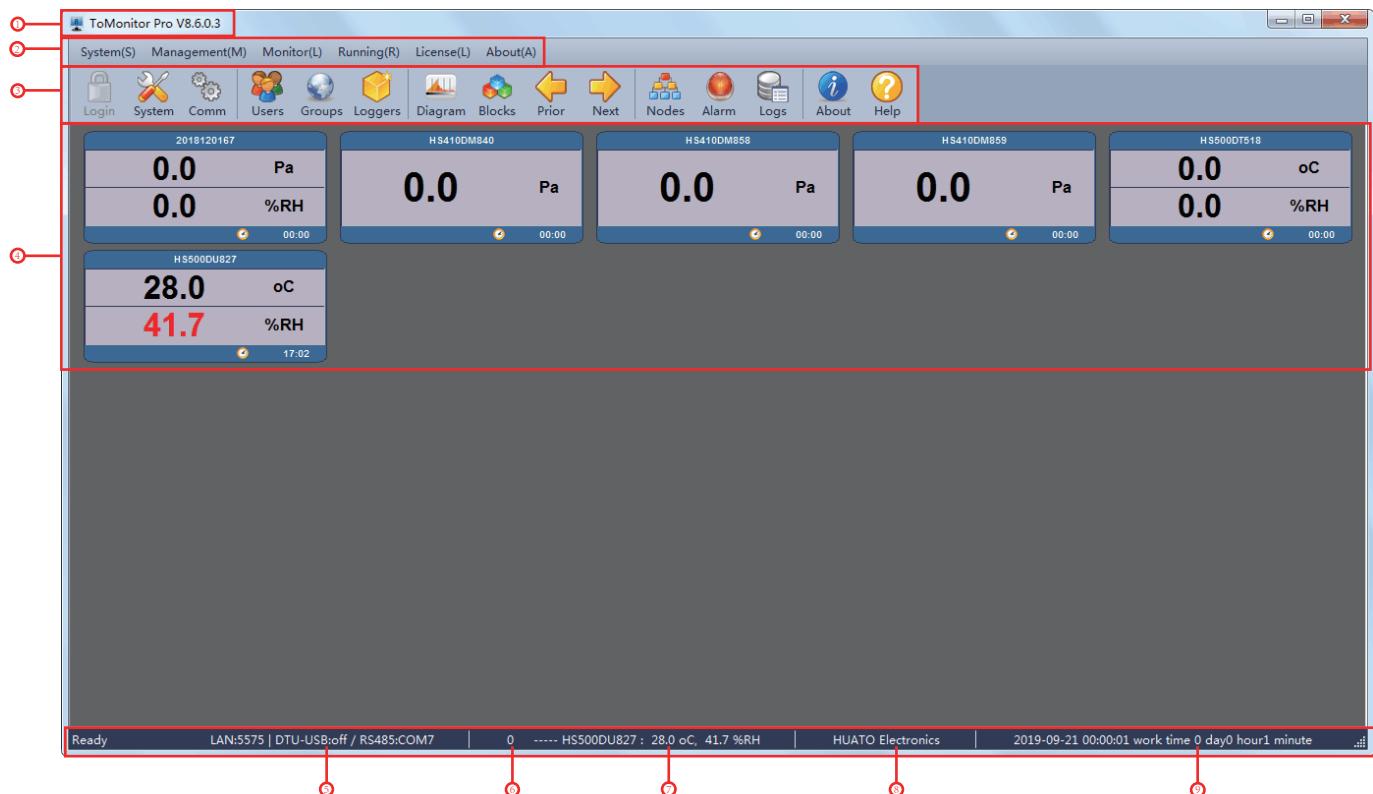


Figure 1-16 monitoring interface

project	instructions
①	The name of the software
②	Tool menu bar: click the drop-down menu to select the corresponding option function
③	The icon bar
④	Real-time data display area
⑤	Status bar: displays the system communication port and interface status
⑥	Displays the total number of data uploaded
⑦	Display the last real-time data uploaded at this time and the corresponding instrument name
⑧	Name of monitoring system developer
⑨	Displays the system time (in sync with computer time) and the time the system has experienced since it started working

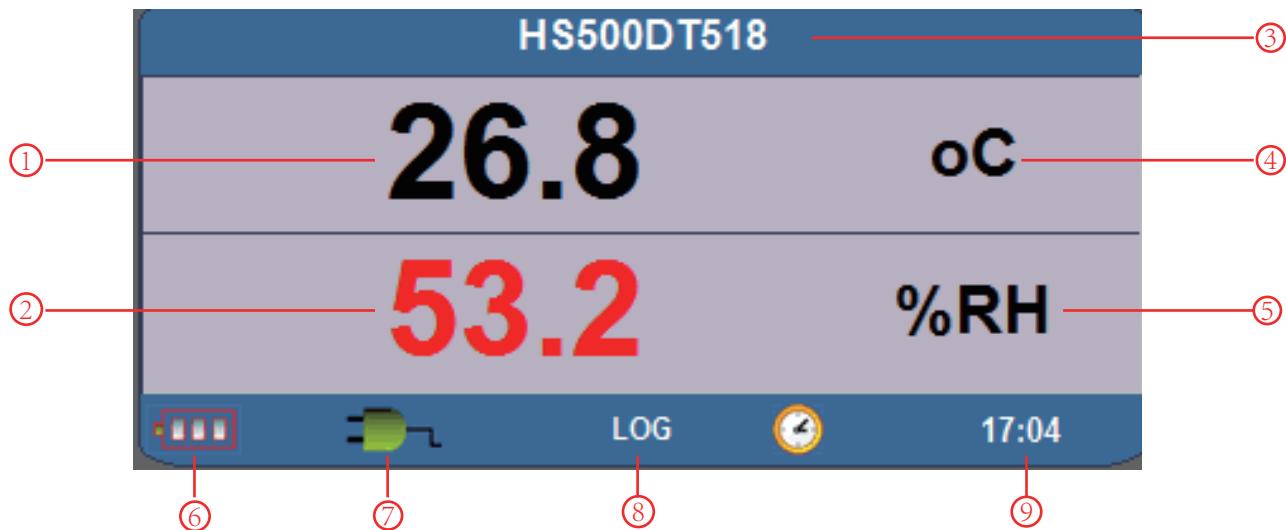


Figure 1-17 interface description of a single instrument

project	instructions
①	Channel one real-time data
②	Channel real time data
③	The name of the instrument
④	Channel 1 unit and alarm upper and lower limits
⑤	Channel 2 units and alarm upper and lower limits
⑥	Instrument battery capacity
⑦	The instrument is connected to an external power source
⑧	The instrument turns on the automatic recording function
⑨	The last real-time data upload time

Section 2.10 - Query historical data

1. Client query software connection server: open the ToClient client query software in the installation folder of ToMonitor monitoring software and log in the software. Note: ToMonitor monitoring software must be opened at the same time to properly connect to the remote server.

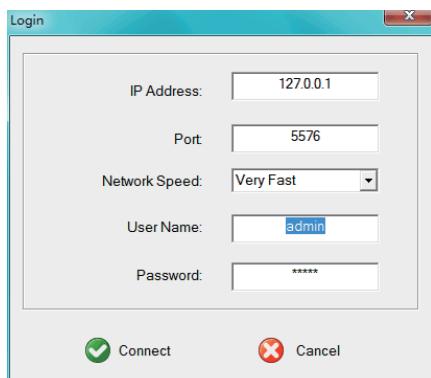


Figure 1-18 connecting to the server

project	instructions
IP address	1. Fill in the IP address of the computer running ToMonitor 2. If the computer running ToClient and ToMonitor are the same, the IP address of 127.0.0.1 (indicating local) can be filled in.
port	Fill in "ToMonitor software TCP monitor port number +1", the default is [4589]
Network speed	Choose according to the actual situation of network speed. If not sure, please select [slower]
The user name	This corresponds to the username and password entered in the user window in the ToMonitor software.
password	The default admin/admin

2. Query data: click the "record query" icon, select a partition in the left partition list, check the instrument to be searched in the right instrument list, select the start time and end time, click "start query" to generate a graph, and click "view data" icon to view the data in this period.

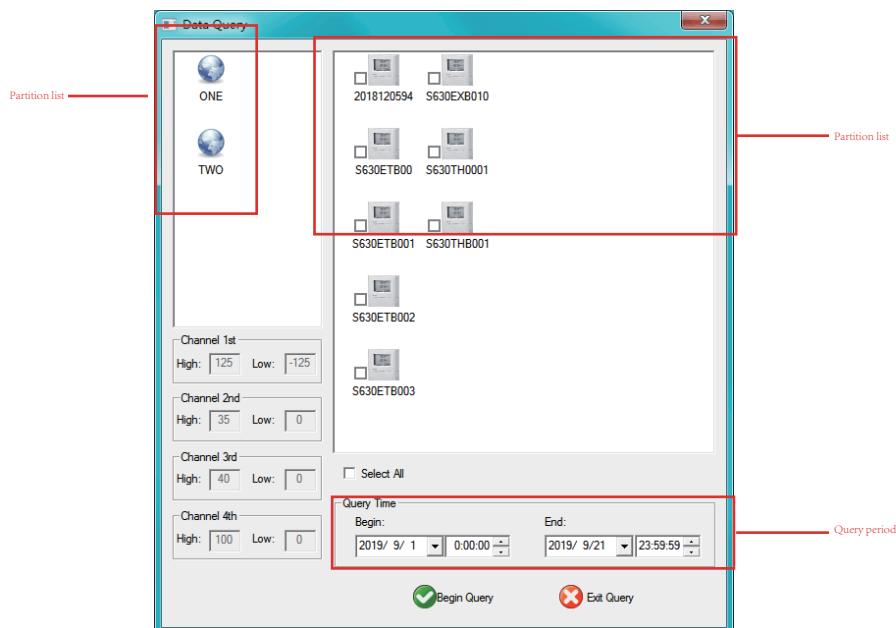
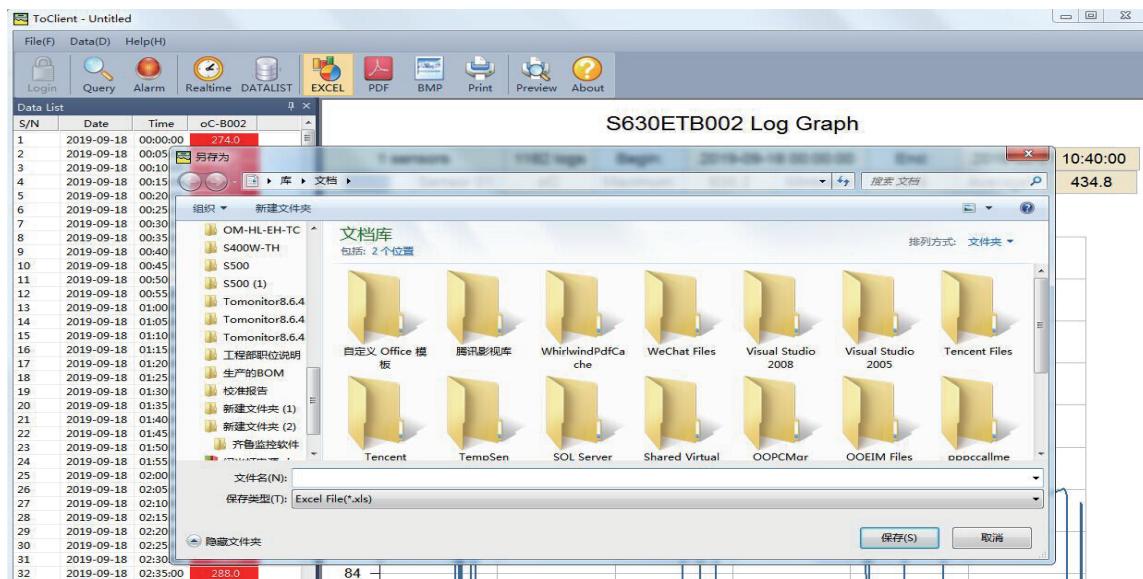


Figure 1-19 query data

3. Export data: query data, generate graphs, click the [EXCEL] icon → select the save path and fill in the name of the saved file, then click [save], and the data can be exported as an EXCEL table. Click the [PDF] or [BMP] icon to export the data to PDF file and BMP picture respectively, click the [print] icon to print the graph and data list.



3**GPRS status description**

- 1- No SIM card
- 3- Service limit
- 5- Normal service
- 7- Server error
- 10- The unknown
- 12- There is no service

- 2- Are the search
- 4- Not connected
- 6- Server not open
- 9- Server down
- 11- Power is too low

Note 1: the above instructions configure successful status code jump plus 1, retry status minus 1.

Note 2: signal quality format is "-xx."; Status code format: "-xx.-"

Note 3: signal strength above 20 is normal, signal quality below 20 is poor, there is a risk of unstable network connection;

When the signal strength is below 15, the device will automatically judge that the current signal strength cannot upload data and restart the network module.

4**Matters needing attention**

1. If you need to register users and add new equipment for the first use, please contact the after-sales engineer.
2. Set the upper and lower limits of temperature and humidity of the instrument, SMS alarm, connect the instrument to the computer with USB data cable, and set it with logPro.EXE software.
3. During the charging process of S630, in order to ensure the stability of charging current, the GSM module is closed and the status code is 90, so data cannot be uploaded.
4. If the alarm function is turned on, the alarm will be received only after the temperature and humidity of the instrument exceed the limit for 1 minute. If the temperature and humidity within the limit of 1 minute return to the normal range set, the alarm will not be issued.
5. When the temperature and humidity of the instrument exceed the limit, an alarm will be received every one minute. After receiving three alarms, a warning will be given that the number of alarms has reached the limit.
6. Record and upload a data every 2 minutes when the instrument exceeds the limit, and record and upload a data every 5 minutes when the instrument is not exceeding the limit. When the instrument is exceeding the limit or not exceeding the limit, the record interval will be 1min, 3min and 4min, which is a normal phenomenon.
7. Click "about us" → "check update" on the interface to check the latest version of the APP and upgrade.