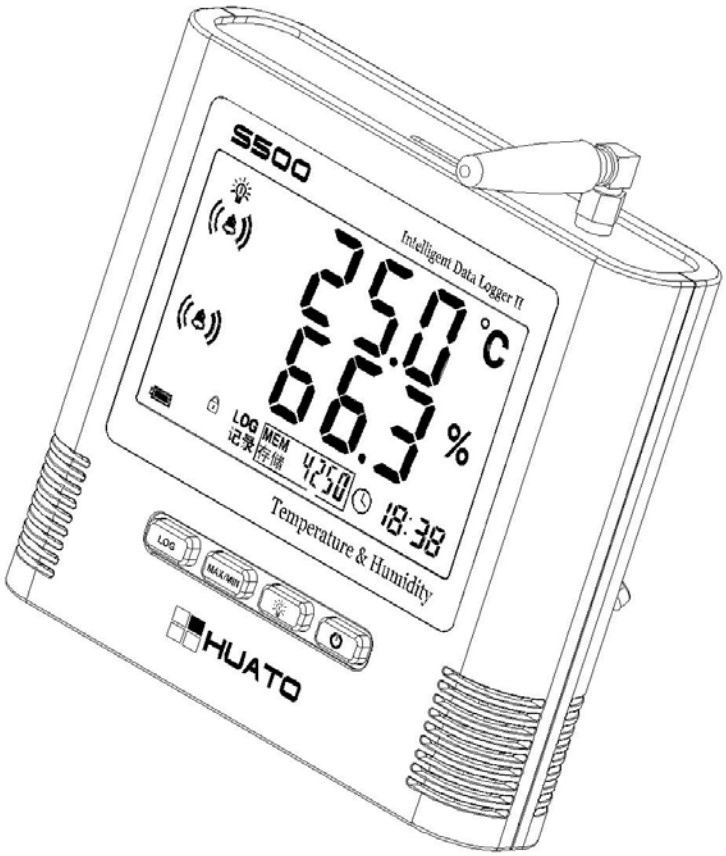
HUATO®

# S500 Series

## Operation manual for GSM temperature humidity data logger



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# Chapter 1. Introductions

S500 series GSM temperature humidity data logger is the new generation data logger of HUATO company; which has been added with the GSM alarm message function based on the original S500 series. Users can dial the data logger through any mobile phone to get the temperature and humidity values, besides, the temperature humidity data logger will send alarm message to defined users automatically once the setting limits being exceeded.

## 1.1 Features

- Elegant appearance, easy to operate and reliable. Desktop and wall-mounted.
- High accuracy (0.2~0.5℃/2~5%RH) with large capacity. (65000).
- Large LCD display, temperature and humidity being showed simultaneously.
- Internal audible and visual alarm and send alarm message to mobile phone once the setting limits beings exceeded.
- Data query function via mobile phone. Get the real time data anytime at anywhere.

## 1.2 Technical Specifications

| Model | Accuracy | Measuring range | Sensor type | Capacity |
|---|---|---|---|---|
| **S500-TH** | ±0.5℃/±5%RH | -20 ~ 70℃<br>0 ~ 100%RH | Temperature + humidity, internal | 65000 |
| **S500-EX** | ±0.5℃/±3%RH | -40 ~ 85℃<br>0 ~ 100%RH | Temperature + humidity, external sensor with 3 meters | 65000 |
| **S520-TH** | ±0.3℃/±3%RH | -20 ~ 70℃<br>0 ~ 100%RH | Temperature + humidity, internal | 65000 |
| **S520-EX** | ±0.3℃/±3%RH | -40 ~ 85℃<br>0 ~ 100%RH | Temperature + humidity, external sensor with 3 meters | 65000 |
| **S580-TH** | ±0.2℃/±2%RH | -20 ~ 70℃<br>0 ~ 100%RH | Temperature + humidity, internal | 65000 |
| **S580-EX** | ±0.2℃/±2%RH | -40 ~ 85℃<br>0 ~ 100%RH | Temperature + humidity, external sensor with 3 meters | 65000 |
| **S500-ET** | ±0.5℃ | -40 ~ 85℃ | Single Temperature external sensor with 3 meters | 65000 |
| **S500-DT** | ±0.5℃ | -40 ~ 85℃ | Dual Temperature external sensor with 3 meters | 65000 |
| **S520-ET** | ±0.3℃ | -40 ~ 85℃ | Single Temperature external sensor with 3 meters | 65000 |
| **S520-DT** | ±0.3℃ | -40 ~ 85℃ | Dual Temperature external sensor with 3 meters | 65000 |

## 1.3 Applications

It has been widely applied in agricultural research industry, food industry, medical industry, electrical industry, environment protection and laboratory fields.

## 1.4 Installation and instructions for SIM card

1、 Suggest to buy GSM SIM card (SIM card without monthly rent), it must be GSM network SIM card, CDMA network is invalid.

2、 Install or remove SIM card should be under the sate of OFF in case any SIM identification failure and damage.

3、 Just call the alarm temperature humidity data logger via any mobile phone and it will respond you with message when you want to know the temperature and humidity values.

## 1.5 Notice

1、Only GSM network SIM card is available (such as China mobile and China Unicom), CDMA network is invalid.

2、Ensure that the SIM card is of certain amount of money for the text message fee.

**3、The data logger must be supported by External Adapter—DC 9V and turn on the alarm function to activate the alarm message system, otherwise it can not send message successfully.**

## 1.6 Instructions

1、 Be sure that battery installed, external power connected and SIM card inset well before you turn on the data logger.

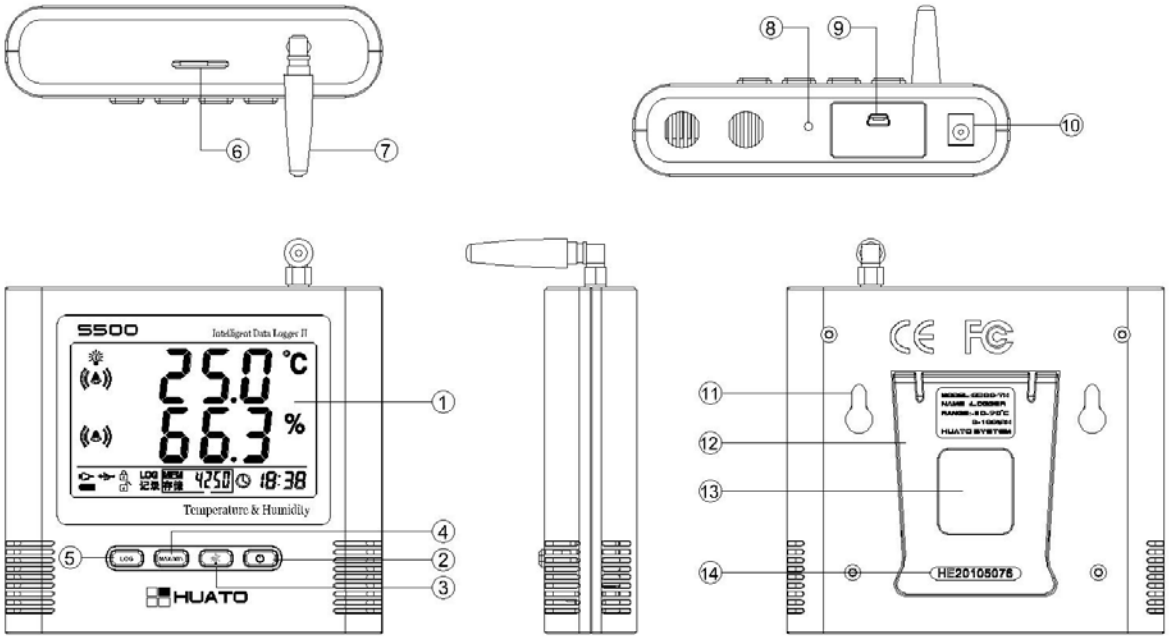
2、 Install Huato software and connect the GSM data logger with PC via USB connection cable.

3、 Run Huato ToAnalyzer software, click 19200 Baud rate and then click the “connect” button.

4、 Click 【setup】and set the high and low limits as well as the log interval. The name of the data logger should be in English and no illegal symbol. (Notice: Data logger will send alarm message when setting limits being exceeded and the data logger record the data. Suggest set log interval above 60 seconds.)

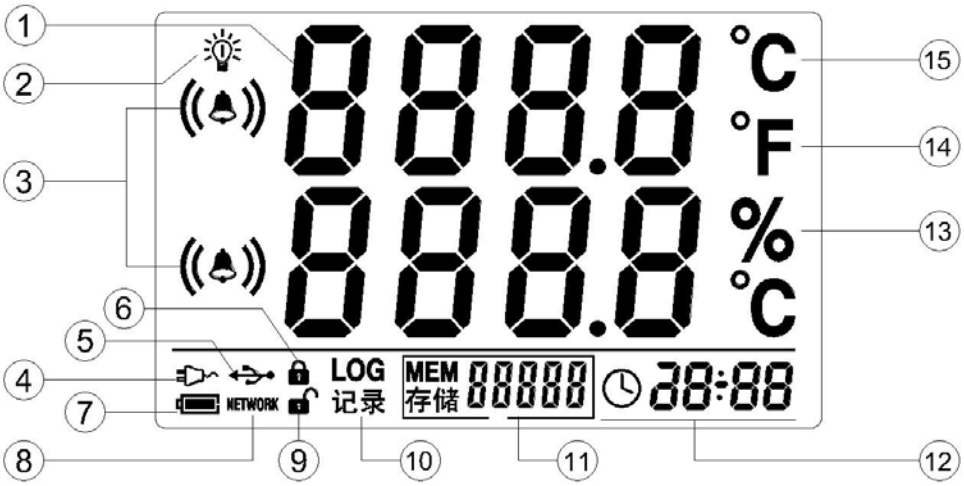
5、 Click【GSM】in the tool bar and set the mobile phone number. It can set 3 numbers in total.

## 1.7 Product structure




| | |
|---|---|
| 1 LCD display | 8 Reset button |
| 2 ON/OFF | 9 USB port |
| 3 Backlight | 10 DC 9V port |
| 4 MAX/MIN checking button | 11 Hanger (used for fixing on the wall) |
| 5 LOG | 12 Holder (used for desktop) |
| 6 SIM card slot | 13 Battery cover (screw to replace the battery) |
| 7 Wireless antenna | 14 Serial Number |

## 1.8 LCD display instructions




1. Temperature and humidity values display.
2. Symbol for backlight.
3. Symbol for alarm, it will alarm when temperature and humidity setting limits being exceeded.
4. This symbol shows that data logger is being supported by external power—DC 9V.
5. This symbol shows that data logger is connected with PC and you can download all the recording data.
6. This symbol shows that all buttons are locked.
7. Battery indication
8. This symbol shows that SIM card inset well.
9. This symbol shows that buttons are unlocked
10. This symbol shows that data logger is being the recording status.
11. Display area for recording numbers
12. Display area for year/month/date/time; alternate display.
13. Symbol for humidity unit
14. Symbol for temperature unit
15. Symbol for temperature unit

## 1.9 Instructions for buttons

Log function button, turn on/off the log function.

Maximum and minimum button.
Press to check the maximum and minimum value of all the recording data.

Backlight on/off button.

On/Off button

## Notice:

（1） Press

and simultaneously can lock and unlock data logger.

（2） Data logger has alarm message system only when data logger is under logging status.