

1 YEAR
WARRANTY



HUATO User's Guide



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S100 Series Single Channel Temperature and Humidity Data Logger, Handheld



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Section 1 - Introduction

S100 temperature humidity data logger, developed by HUATO, is featured with LCD display, elegant appearance, low energy consumption, and excellent consistency. All the sensors are manufactured in Switzerland, which assures quality and stability.

Section 1.2 - Features

- Appearance is small and exquisite, cigarette packet size, easy to use.
- The sensor was produced by Switzerland, high accuracy.
- 2 x AAA Battery can be working 6 months with 25 °C environment.
(sampling interval is 60 secs, logging interval is 300 secs).
- Host Size(L x H x D): 57mm x 92mm x 20mm.
- LCD Screen Size: 37mm x 17mm.
- Temperature & Humidity External Probe Diameter: 16mm.
- Temperature External Probe Diameter: 6mm.

Section 1.3 - Application

- Transportation.
- Supermarkets.
- Working and Living Areas.

NOTE:

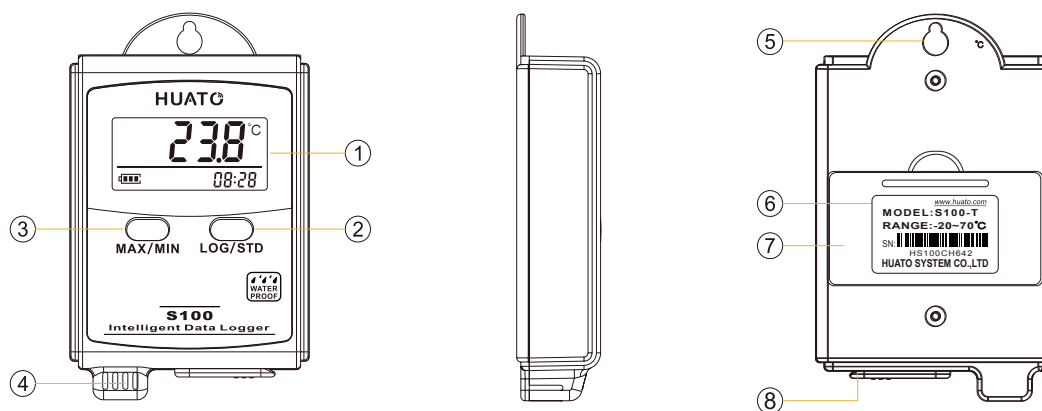
There are no user serviceable parts inside your unit. Attempting to repair or service your unit may void your warranty.

Section 1.4 - Data Logger Model

Model	Temperature Range	Humidity Range	Temperature Accuracy	Humidity Accuracy	Capacity of Records
S100-T	-20~70℃	(none)	±0.5℃	(none)	43,000
S100-T+			±0.3℃		
S100-ET	-40~85℃	(none)	±0.5℃	(none)	
S100-ET+			±0.3℃		
S100-TH	-20~70℃	0~100%RH	±0.5℃	±5%RH	
S100-TH+			±0.3℃	±3%RH	
S100-TH++			±0.2℃	±2%RH	
S100-EX	-40~85℃	0~100%RH	±0.5℃	±5%RH	
S100-EX+			±0.3℃	±3%RH	
S100-EX++			±0.2℃	±2%RH	

Section 1.5 - Temperature Data Logger Appearance(S100-T/S100-T+ /S100-ET/S100-ET+)

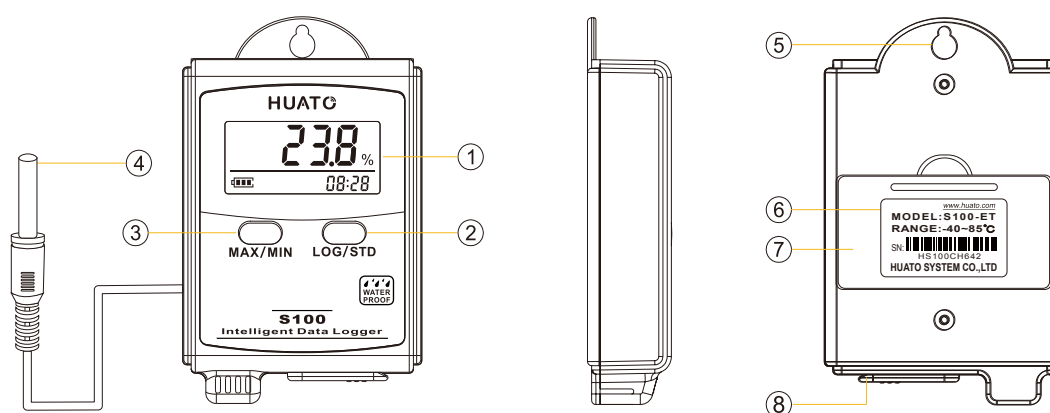
S100-T/S100-T+



1. LCD Screen
2. LOG/STD Button
3. MAX/MIN Button
4. Sensor

5. Hanger
6. Label
7. Battery Cover
8. USB Port

S100-ET/S100-ET+

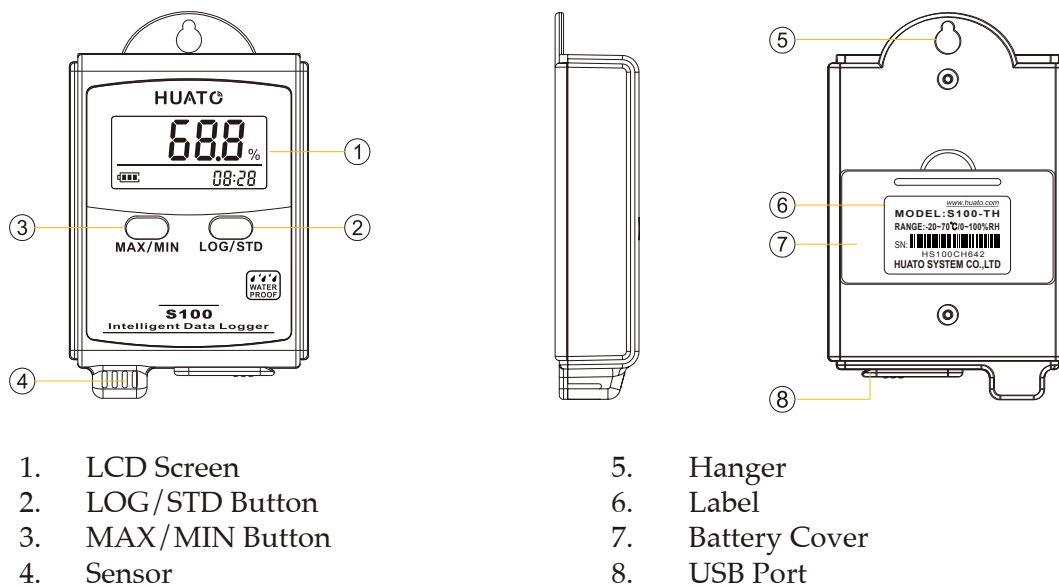


1. LCD Screen
2. LOG/STD Button
3. MAX/MIN Button
4. External Temperature Sensor

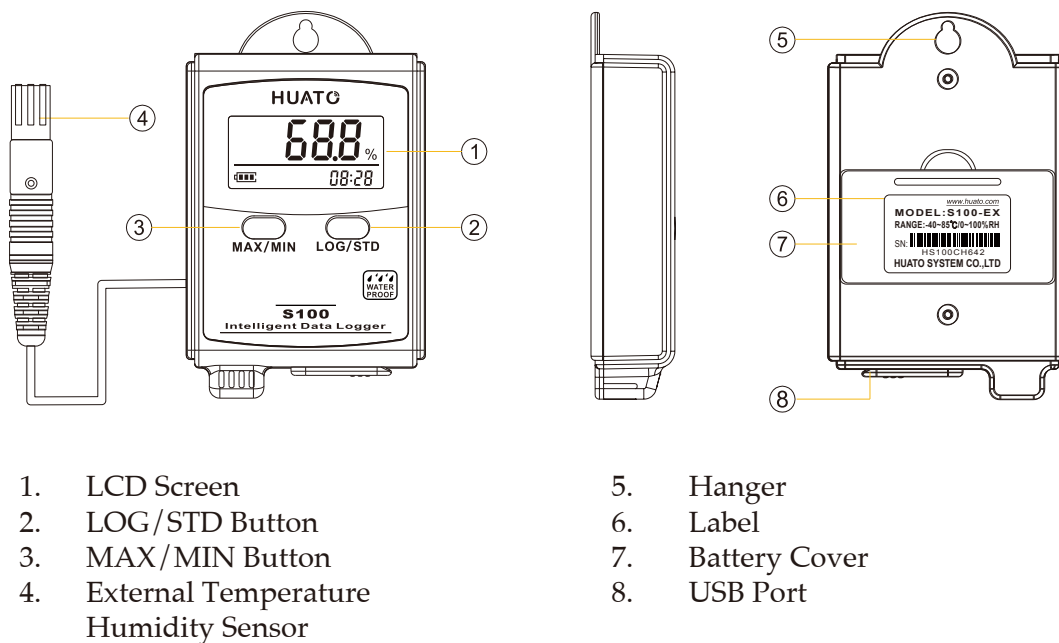
5. Hanger
6. Label
7. Battery Cover
8. USB Port

Section 1.6 - Temperature and Humidity Data Logger Appearance (S100-TH/S100-TH+/S100-TH++/S100-EX/S100-EX+/S100-EX++)

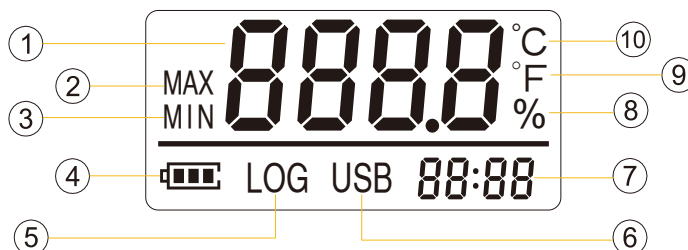
S100-TH/S100-TH+/S100-TH++



S100-EX/S100-EX+/S100-EX++



Section 1.7 - Temperature and Humidity Data Logger Screen (S100-T/S100-T+/S100-ET/S100-ET+/S100-TH/S100-TH+ /S100-TH++/S100-EX/S100-EX+/S100-EX++)



- | | |
|-----------------------------------------------------------------------|------------------------------------------------------|
| 1. Temperature & Humidity Value | 5. LOG Symbol |
| 2. Display the Maximum Values in the current recording section | 6. USB Communication Symbol |
| 3. Display the Minimal Values in the current recording section | 7. Display years, month/day, hour/minute recurrently |
| 4. Battery Symbol: Please replace the battery when show only one bar. | 8. Humidity Unit |
| | 9. Fahrenheit Unit |
| | 10. Centigrade Unit |

Section 1.8 - Button function instructions



MAX/MIN : Display the Maximum and Minimal Values in the current recording. If the logger stop recording and restart recording, the maximum and minimal values will recalculate.



LOG/STD : When device is off, press 5S to enter standby mode and press 3S to enter recording mode. When device is recording, press 3S can enter standby mode (only enter standby mode), in standby model, press 5S to turn the device off.

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 logging mode, and how to delete and download the logging data.

Section 2.1 - Software Installation

2.1.1 - The Requirement of the Computer Hardware

1. OS: Windows XP / Vista / 8 / 10 (32 / 64bit).
2. CPU: 1.6GHz.
3. Physical Memory: 512MB.
4. Hard-drive Space: 4 GB.
5. USB Port: 1.

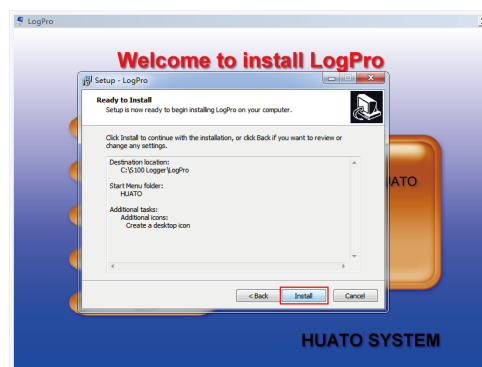
2.1.2 - Install Driver & Software

Note: "If need to install Driver separately, please install 64 bit driver for Windows 64 bit computer & 32 bit driver for Windows 32 bit computer".

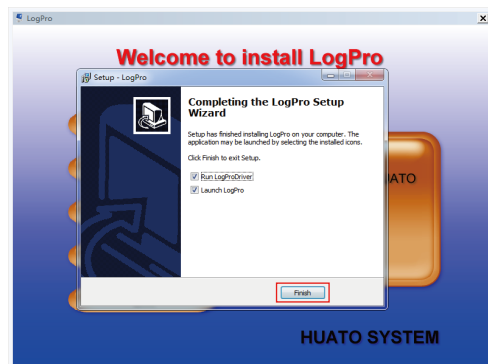
1. Install LogPro Software and Driver together(Default Path: C:\S100 Logger).
2. Installation Steps: When enter the software, click the 'Install LogPro and Driver' (as below Pic), and then click the 'Next' (5 times), click the 'Install', click the 'Finish'. When entering the LogPro software interface, the installation driver software window will pop up. Click 'Install', and the success of installation will be displayed.



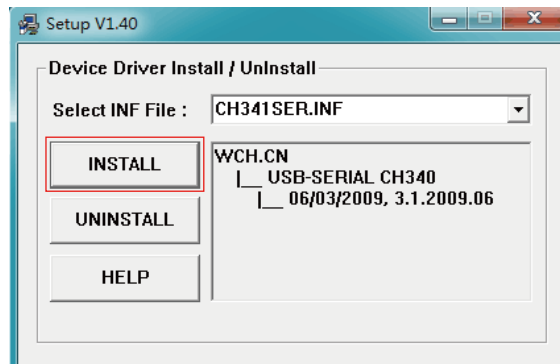
LogPro installation page



Default installation folder



The successful installed

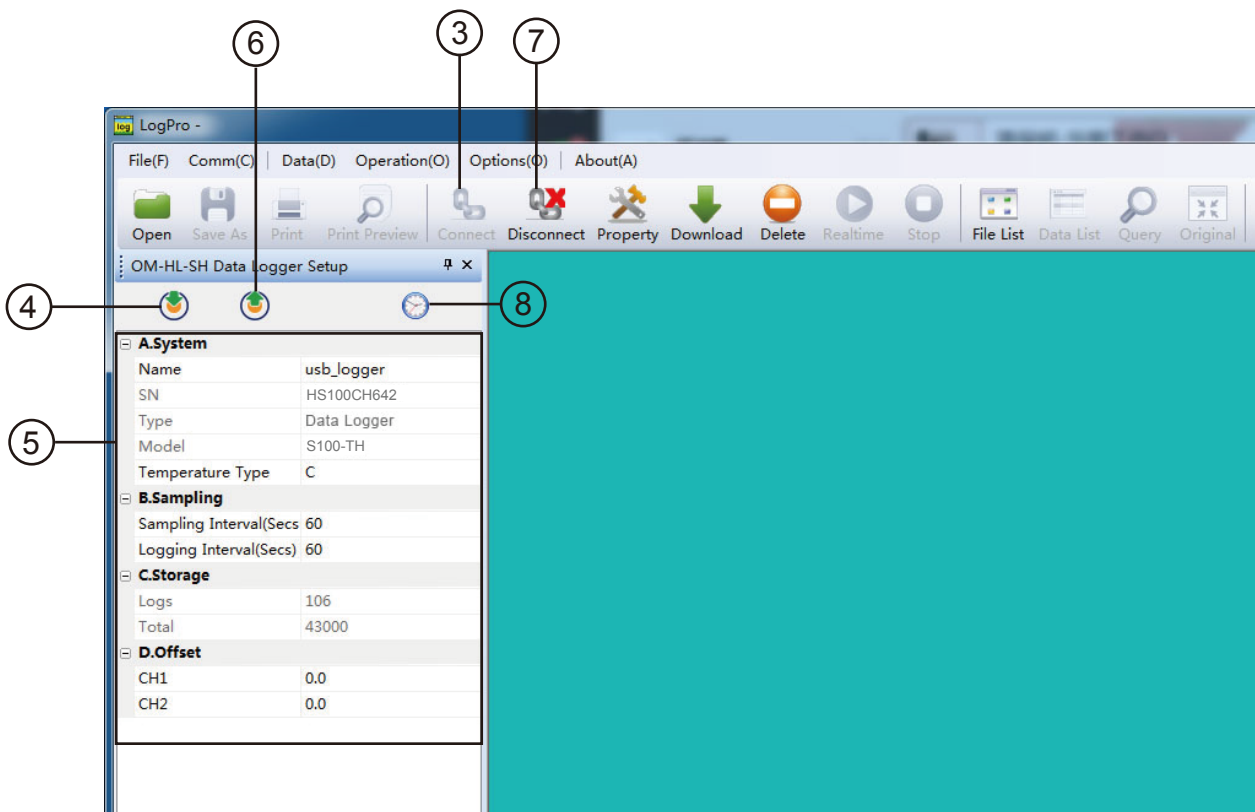


Install driver

Section 2.2 - How to Read and Configure the Logger

2.2.1 - Read and Configure the Logger's Settings

1. Turn on and Insert the data logger to the computer¹.
2. Start LogPro software on the PC.
3. From the toolbar select Connect.
4. Load & Read the logger's current settings.
5. Configure the new settings.
6. Sync the settings & time. (The PC time will be synchronized to the logger as well.)
7. From the toolbar select disconnect.
8. Sync the Computer's Data & Time to the Data Logger.
9. Unplug the logger from the computer, and then the logger is in Standby mode.



1. The windows operating system cannot handle USB devices being unplugged and plugged back too fast. When unplugging the logger, wait for about 5 seconds before plugging it in again. If you unplug and plug back a device too quickly, the computer may stop recognizing any USB devices on that port. If this happens you will have to restart the computer. This is a windows USB problem and is not related to LogPro.

2.2.2 - Setting Parameters Description

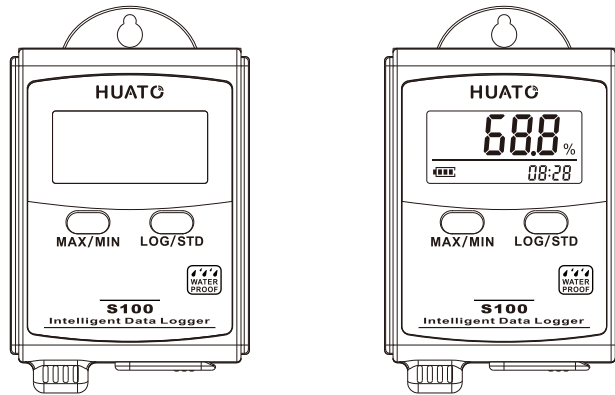
A.System	
Name	usb_logger
SN	HS100CH642
Type	Data Logger
Model	S100-TH
Temperature Type	C
B.Sampling	
Logging Interval(Secs)	60
Sampling Interval (Secs)	60
C.Storage	
Logs	43000
Total	43000
D.Offset	
CH1	0.0
CH2	0.0

Setting Parameter	Text	Description
Name	English letters or numbers	Name of the logger
SN	10 characters	Must be the same as the one in the label of logger
Temperature	Celsius & Fahrenheit	Select the Celsius and Fahrenheit readings
Logging Interval (secs)	Number from 2 to 86400	Logging frequency
sampling Interval (secs)	Number from 1 to 240	Sampling frequency in LCD screen
Logs	Number from 0 to 43000	The count of records in the memory
Total	Number 43000	The total capacity of the logger's storage
Offset	Calibration mode: For example, pls fill in 1.5 if the displayed temperature is higher than the actual temperature of 1.5 °C; fill in -1.5 if the displayed temperature is lower than the actual temperature of 1.5 °C. If you need to adjust the humidity, do the same, then number field is -100~100.	Input positive number to decrease the value. Input negative number to increase the value.

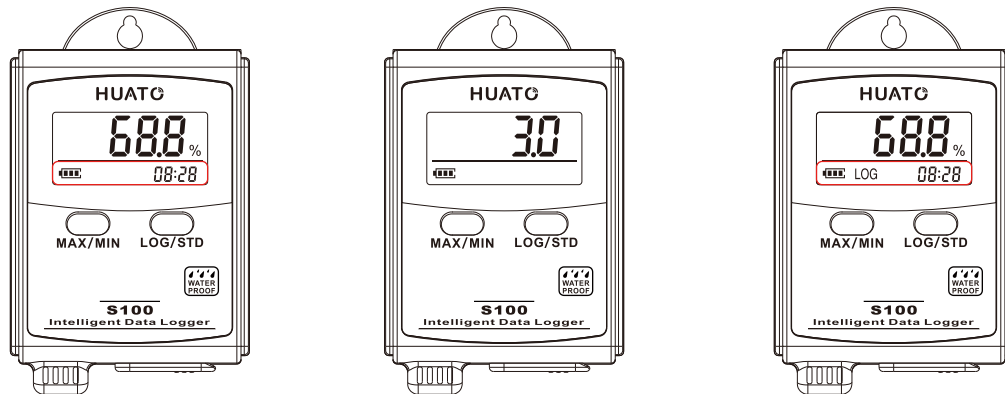
Calibrate the logger: The logger is factory calibrated to an accuracy given in the device specifications. However, there may be times when you wish to adjust the calibration of your logger. Logpro provides you with the ability to perform a single point offset calibration. This calibration can be used to increase the accuracy of the logger for a restricted data range.

Section 2.3 - Turn On/Off Logger & Start/Stop Logging Under Button to Start Mode

Turn On the Logger - Push "LOG/STD" Button for 5 Secs then LCD display is on.



Start Logging - When the Logger is on and on stand-by(LCD does not have "LOG" logo display), press "LOG/STD" for 3 seconds, LCD display time, loosen "LOG/STD" button when the LCD display "3.0", now the logger start logging and storing data(LCD has "LOG" logo display).



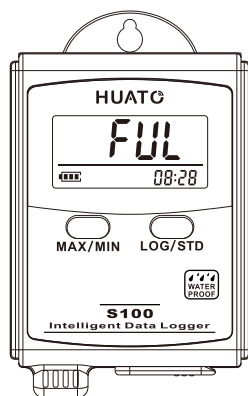
Stop Logging - When the logger is on logging, press "LOG/STD" for 3 seconds, LCD display time, loosen "LOG/STD" button when the LCD display "3.0", LCD does not have LOG logo display, then the logger will be on stand-by.



Turn Off the Logger - Push the“LOG/STD” Button for 5 Secs then LCD display is off.

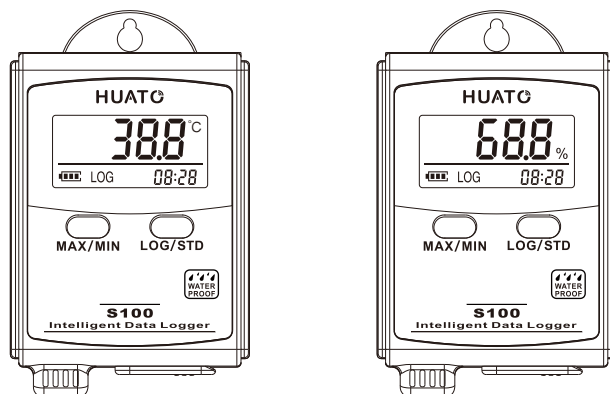


LOG Full - The device won't record data while the memory is full, that you have to download the data and delete it by Logpro software, then device can record again.



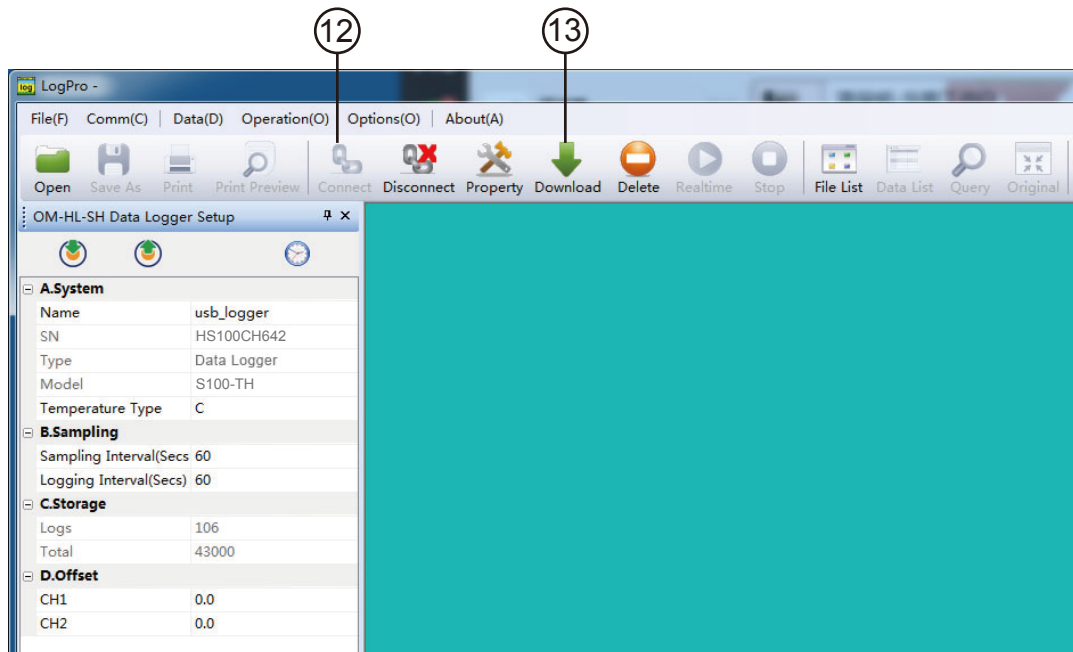
S100 LOG Full

S100-TH/S100-EX LCD Display- Display temperature and humidity recurrently, each display time is 5S.

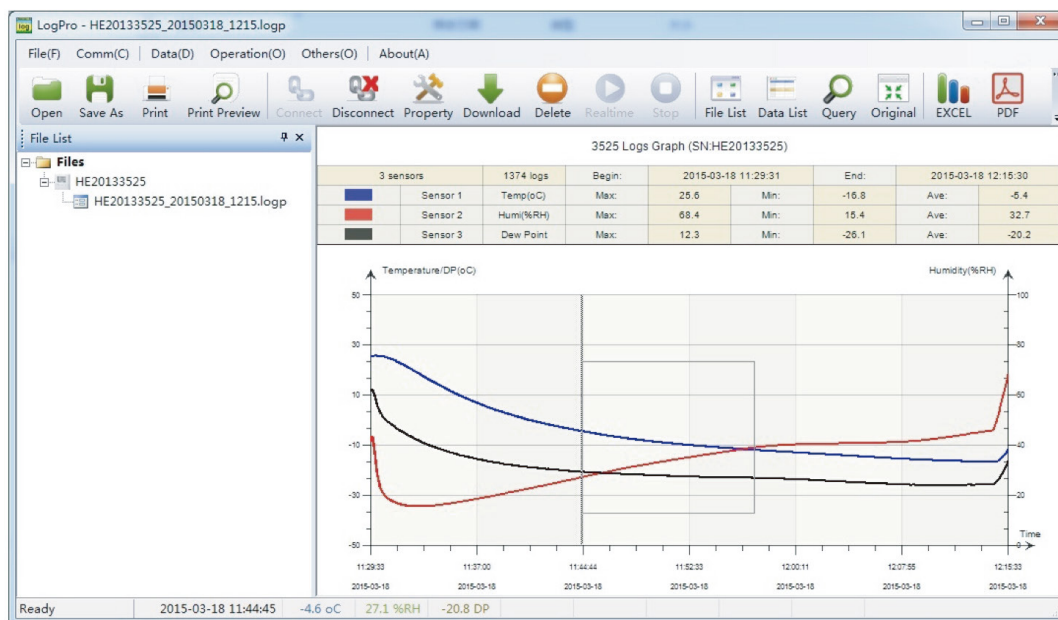


Section 2.4 - Download the Logging Data

10. Insert the data logger to the computer.
11. Start LogPro software on the PC.
12. From the toolbar select Connect.
13. From the toolbar select Download.



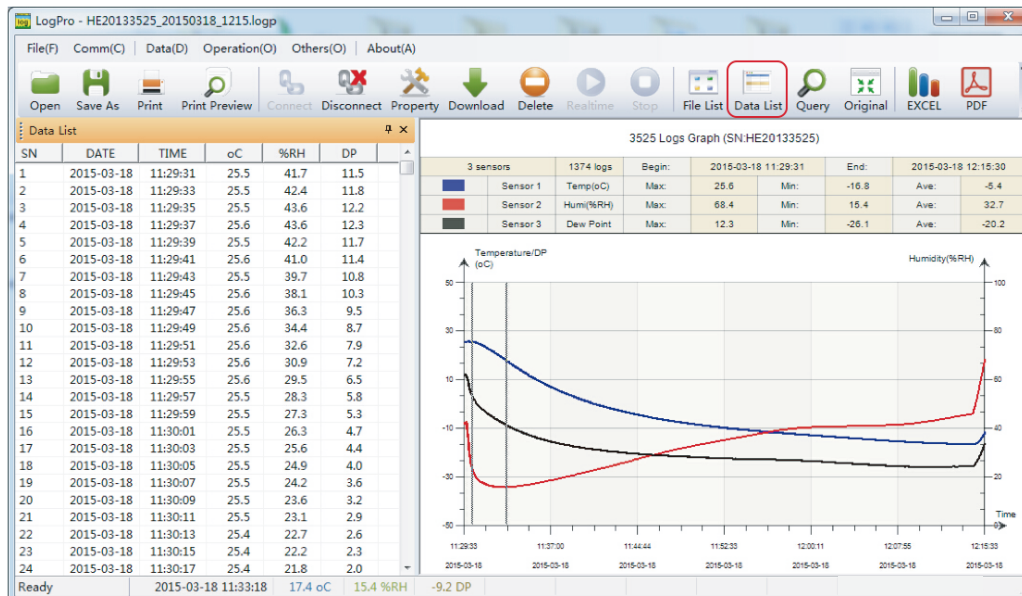
Once the data is downloaded from the logger to the PC, the log graph will be displayed.



Tips: Press and hold the left mouse button to drag a box, when the left mouse button is released, the graph will be redraw with the data in the selected rectangle area. Click right button, then the graph will be redrawing with all the data in the logs file.



Section 2.5 - View Data Sheet

Click “Data List” button on the toolbar, and then the data listing window is shown below. Channel 3 unit is Dew Point. The Value is calculated from temperature & humidity.



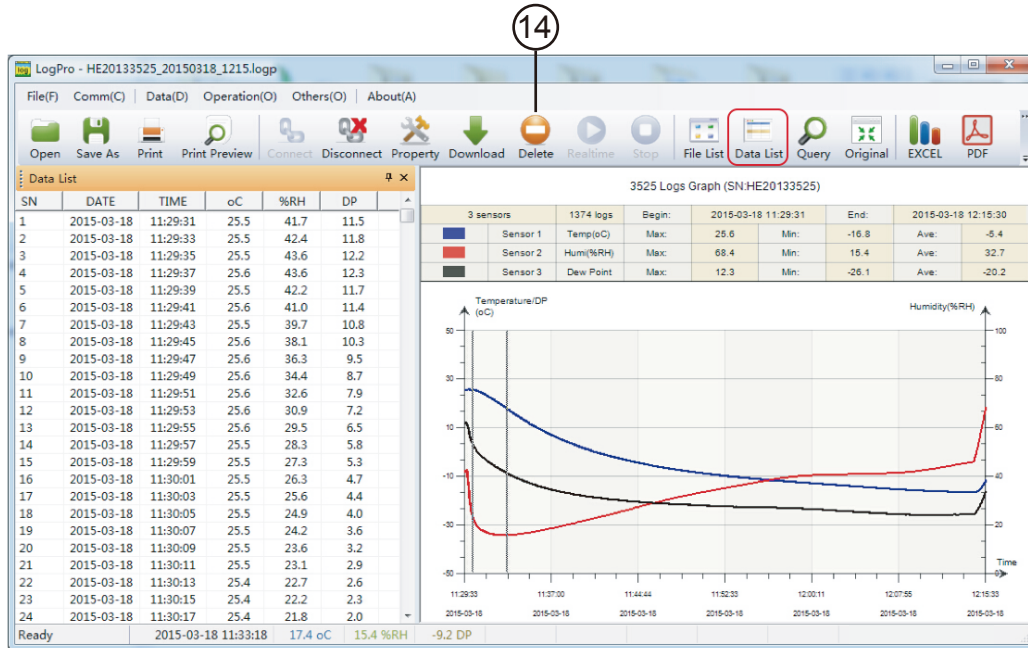
The data pane lists the data samples collected by the logging device. The column width of each column is adjustable by using the left mouse button and dragging the column the desired width.

Section 2.6 - Exporting Logs from LogPro

-  Export data list to an Excel file.
-  Export data list to a PDF file.
-  Export graph to a BMP file.

Section 2.7 - Delete Records in the Logger

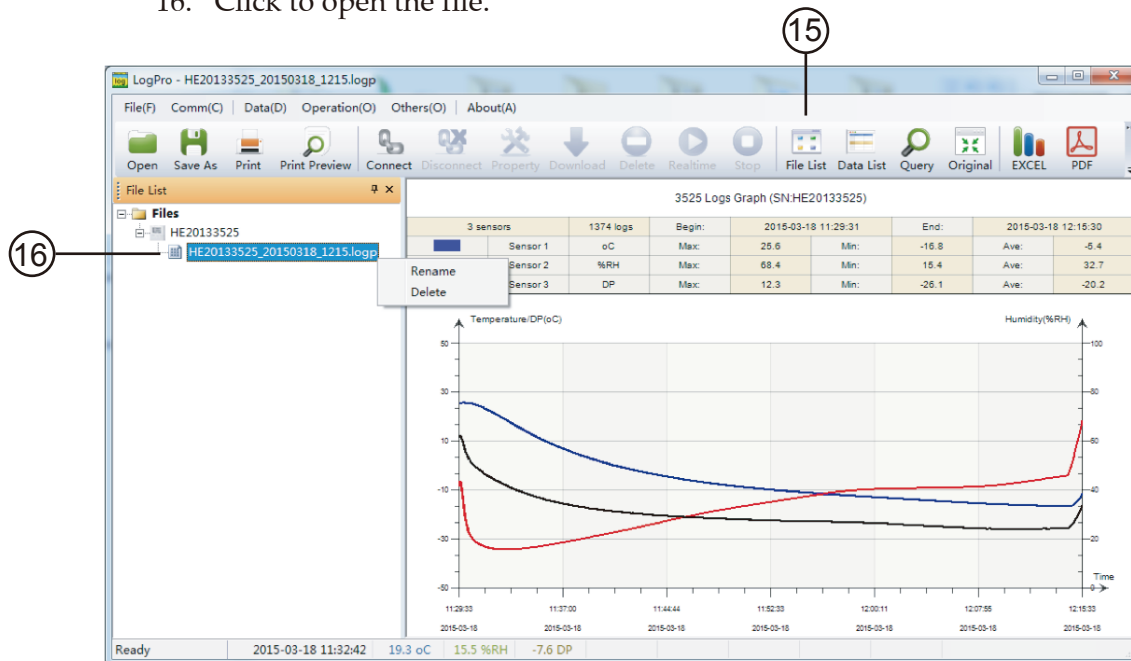
14. From the toolbar select Delete.



Section 2.8 - Check the Save File in File list

15. From the toolbar select File List.

16. Click to open the file.



- Double click left mouse button, then the selected file is opened.
- Click right mouse button, a popup menu is shown as below, you can rename or delete or log file.
- The save file is saved in the LogPro software's installation path in the PC's hard driver.

- Plastic shell is ABS, flame retardant, not resistant to acid and alkali.
- If repair is needed, only authorized technician can do the repair.
- The instrument configuration by 2 x AAA Battery (1.5V) is not rechargeable.
- USB power supply (2.7V) cannot let the Data Logger work.

Section 4.1 - LCD Screen Dim

Insufficient battery or the environment temperature is too low or too high.

Solution : In the case of insufficient battery, please replace the battery. If results from environment temperature, please immediately take the logger out of the environment.

Section 4.2 - Data & Time Error

Reason:

- The Battery level is low.
- The Data Logger is not synchronous properties, before start recording.

Solution:

- Replace the battery.
- Please sync the properties, before start recording.

Section 4.3 - Software “Runtime Error”

Reason:

- OS forbid software creating files.

Solution:

- Run the program (software) as an administrator.
- Install software in D or E drive if available.
- A data logger name cannot contain any of the following characters: \ / : * ? " < > |
- Software's installation path cannot include Chinese character or garbage character.

Section 4.4 - Check COM Port Number

Press “Win” + “R” in keyboard -> Run “devmgmt.msc” to Open “Device Manager” in Windows-> Expand “Ports (COM & LPT)” -> “USB-serial CH340 (COM No.)” is the Data Logger.