HE17x Series
USB Data Logger User Manual
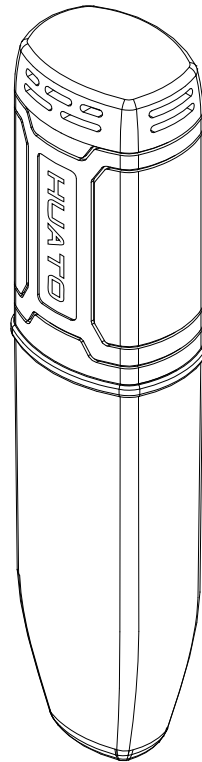
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Chapter 1. USB Data Logger Hardware

1.1 Introduction

HE170 USB series has USB interface, enjoying elegant appearance and compact construction, specially designed for refrigerator and cold-chain transportation as well as container transport applications. HE170 USB series adopts friendly USB interface, friendly mounting bracket and the screws. HE170 USB series can show temperature/temperature and humidity simultaneously as well as the battery indication. The OK key can help to check the Max/Min/Current value and the upper and lower limits.

1.2 Features

■ Waterproof and dustproof standard IP67, resisting moisture and dust.

■ Can set temperature and humidity limit value and LED lights will flash when the value being exceeded.

■ Lower consumption design, 1/2AA 3.6V Lithium battery, working for 12 months and easy to replace. (Logging Interval: 600s)

■ Transfer logging data to PC through software and can be saved as different types to ensure the existence.

■ Use high sensitivity sensor, fast reaction and high precision.

■ Size(L x H x D): 126mm x 34mm x 28mm

1.3 Application

Wildly use in cold chain Transportation, Containers.

1.4 USB Data Logger Model

Model	Temperature Range	Humidity Range	Temperature Accuracy	Humidity Accuracy	Capacity of Records
HE170	-30~70℃	(None)	±1.0℃	(None)	43,000
HE171			±0.5℃		
HE172			±0.3℃		
HE173		0~100%RH	±0.5℃	±5%RH	
HE174			±0.3℃	±3%RH	

1.5 USB Temperature Data Logger Appearance (HE170/HE171/HE172)
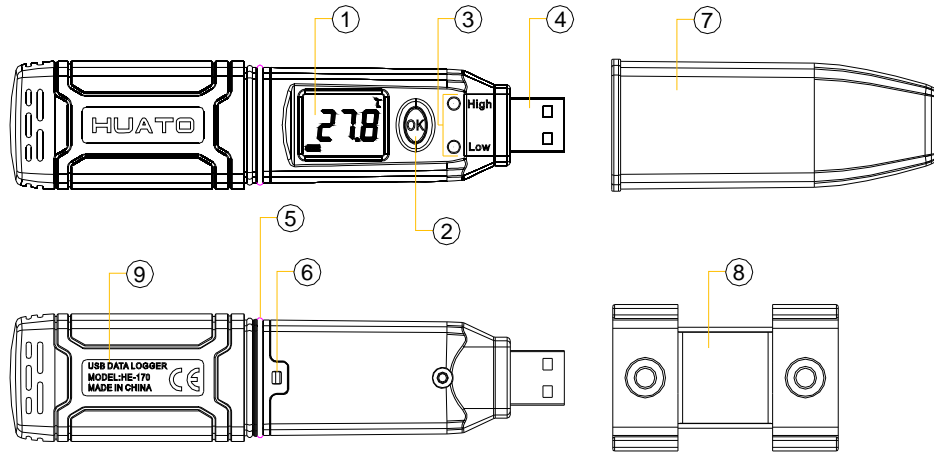
①	LCD Screen	⑥	Battery Replacement Position.
②	Button	⑦	Waterproof Transparent Cover
③	LED Warming Light When the Temperature Value Exceeds Setting Limits.	⑧	Fixed Bracket
④	USB Connection Port	⑨	Model Label
⑤	Waterproof Ring		

1.6 USB Temperature Data Logger Screen (HE170/HE171/HE172)

①	Display the High Limit	⑤	Display the Maximum Value in Records
②	Display the Low Limit	⑥	symbol display shows being the logging status.
③	Battery power indication.	⑦	Temperature Value
④	Display the Minimum Value in Records	⑧	Temperature Unit(℃ or ℉)

1.7 USB Temperature & Humidity Data Logger Appearance (HE173/HE174)

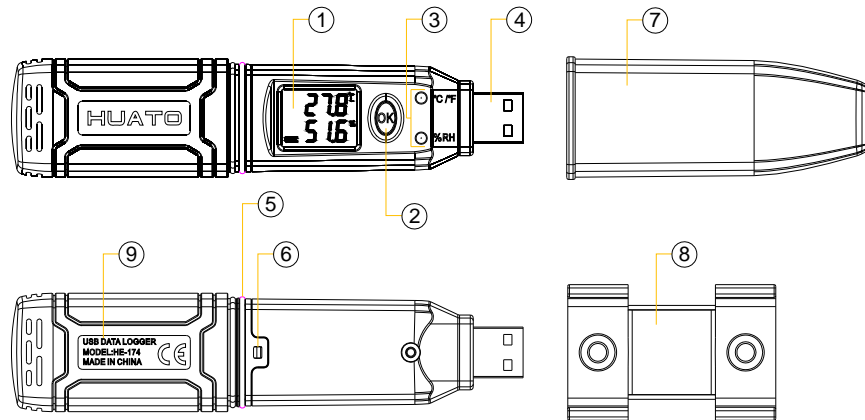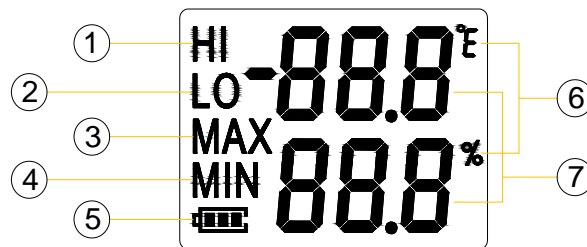

①	LCD Screen	⑥	Battery Replacement Position.
②	Button	⑦	Waterproof Transparent Cover
③	LED Warming light When the Temperature or Humidity Value Exceeds the Setting Limits.	⑧	Fixed Bracket
④	USB Connection Port	⑨	Model Label
⑤	Waterproof Ring		

1.8 USB Temperature & Humidity Data Logger Screen (HE173/HE174)

①	Display the High Limit	⑤	Battery power indication.
②	Display the Low Limit	⑥	Units symbol display ℃ or ℉, %RH
③	Display the Maximum Value in Records	⑦	Value
④	Display the Minimum Value in Records		

1.9 Button

$\overline{OK}$ OK Button
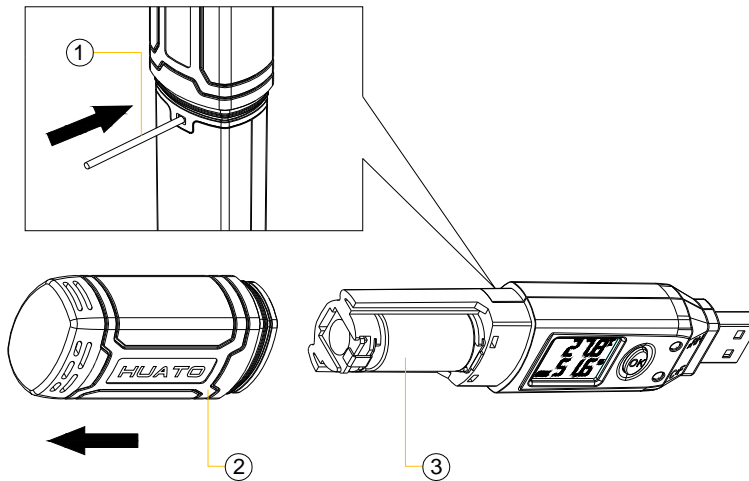
1. Press this button for long to 5seconds can turn on/off the logger.
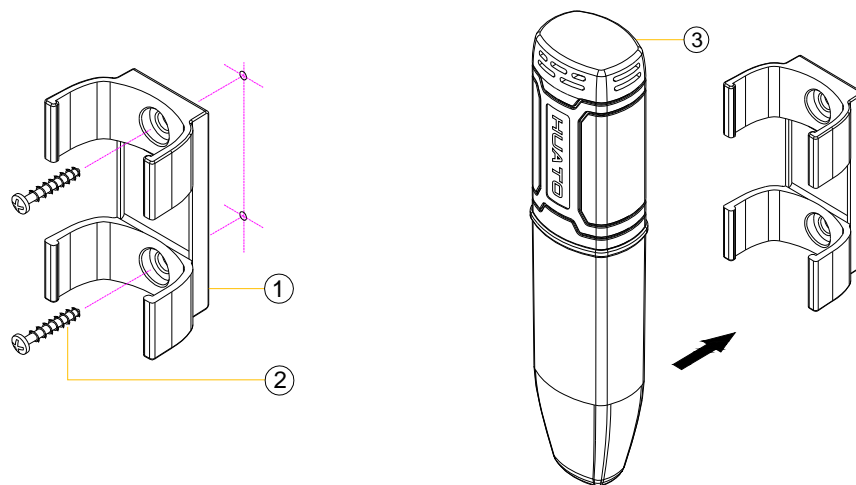2. Check the MAX; MIN; High & Low values as well as the current value in the working status.

1.10 Install Battery

1. Open the Battery Cover
2. Remove shell
3. Install Battery

1.11 Fix USB Data Logger

1. Use Screw to Fix the Bracket onto the Wall.
2. Install the Data Logger.

Chapter 2. Logpro Software

2.1 The Requirement of the Computer Hardware

1. OS: Windows2000/XP/Vista/Win7/Win8/Win10（32/64-bit）, nonsupport Linux/Unix OS.
2. CPU: 1.6GHz
3. Physical Memory: 512MB
4. Hard-drive Space: 4 GB
5. USB Port: 1

2.2 Install Driver & Software

1. Install Driver

    Put the assigned software disc into the computer driver and open the file to find
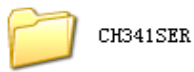
     CH341SER

    and select the driver based on the operating system.

    OS Win7/Win8/Win10-64 select "CH341SER[64bit]".

    OS Win XP; Vista; Win7-32 select "CH341SER[32bit]"

    (1) Click 【CH341SER】 ;

    (2) Click 【INSTALL】—【Confirm】

2. Install Logpro Software

    Notice: Please Install Logpro Software in D:\

2.3 Setting the logger's properties to start a new measurement.

1. Connect the data logger to the computer.[1]
2. Running Logpro software on the PC.
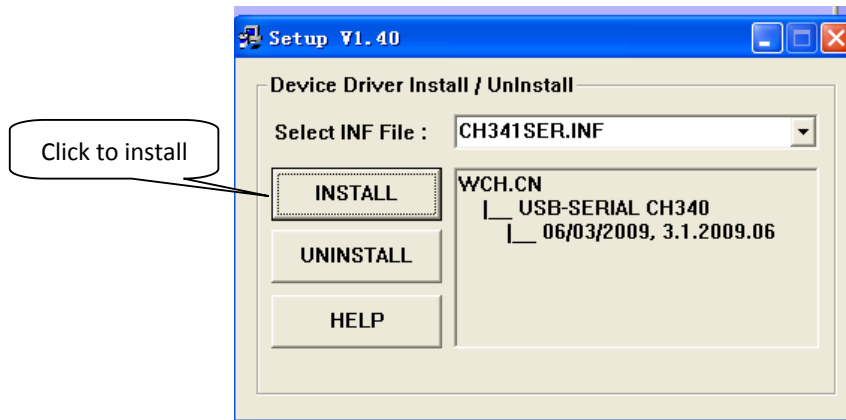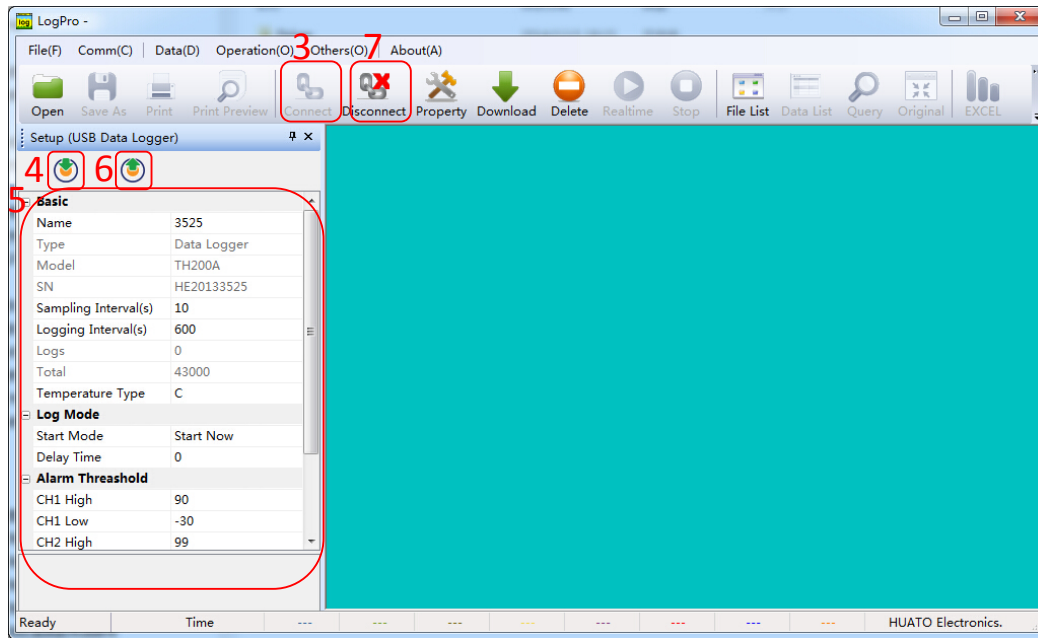3. From the toolbar select Connect.[2]
4. Read the logger's properties.
5. Set the properties.
6. Sync the properties & time. (The PC time will be synchronized to the logger as well.)
7. From the toolbar select Disconnect

8. Unplug the logger from the Computer, and then the logger is in Standby mode[3].
9. Press OK button on the logger, turn on the Data Logger and start recording.

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[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] If more than one logger is connected to your computer at the same time, the program will ask you to choose COM port manually.

[3] The logger has three modes: 1.LOG: In the mode, the logger samples and records data timely. 2.Standby: In the mode, the logger stops to sample and record, and the LCD display is OFF. 3.OFF: In the mode, the logger stops to sample and record, and the LCD display is off. Logpro cannot connect to the logger also.

2.4 Properties Description

Basic	
Name	3525
Type	Data Logger
Model	TH200A
SN	HE20133525
Sampling Interval(s)	10
Logging Interval(s)	600
Logs	0
Total	43000
Temperature Type	C
Log Mode	
Start Mode	Start Now
Delay Time	0
Alarm Threashold	
CH1 High	90
CH1 Low	-30
CH2 High	99
CH2 Low	0
Offset	
CH1	0.0
CH2	0.0

Property	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.
Sampling Interval (s)	Number from 1 to 240	Sampling frequency in LCD screen
Logging Interval (s)	Number from 2 to 86400	Logging frequency.
Logs		The count of records in the memory.
Capacity		The total capacity of the logger's storage.
Temperature type	℃	The unit of temperature is centigrade
	℉	The unit for Fahrenheit temperature
Start Mode	Start Now	Start log when the Logger was turn ON.
	Delay Start	Wait Delay Time then start log.
	Timing Start	Start log when Delay Time: HHMMSS e.g. 170000 means 17:00:00
Delay Time		Input a Delay Time or Timing Time.
High & Low Limit	CH1: Temperature CH2: Humidity	When the value over the limit, the buzz will sounds and alarm.
Offset[4]	CH1: Temperature CH2: Humidity	Input positive number to decrease the value. Input negative number to increase the value.

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[4] 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.

2.5Start record time description

1. Select the mode to start the record in the property bar:

Start Now: the recorder starts immediately to record the data.

Delay start: the recorder starts to record the data after the set delay time.

Timing start: the recorder starts recording data at the specified time point .(Note: the recorder will start at the turn on state and the recorder will not start the record automatically when the logger at the turn off state).

2, Entry delay time or timing time in the property bar.

Start Now: the default is 0.

Delay start : fill in the delay time, the unit is second. For example, fill in 120 indicates that the instrument starts to record the data after turn on logger two minutes

Timing start: fill in the timing time and fill in the format of HHMMSS. For example, fill 180000 indicates that the instrument starts to record the data at 6:00:00pm

3,Synchronization property and time(The PC time will also be synchronized to the recorder).
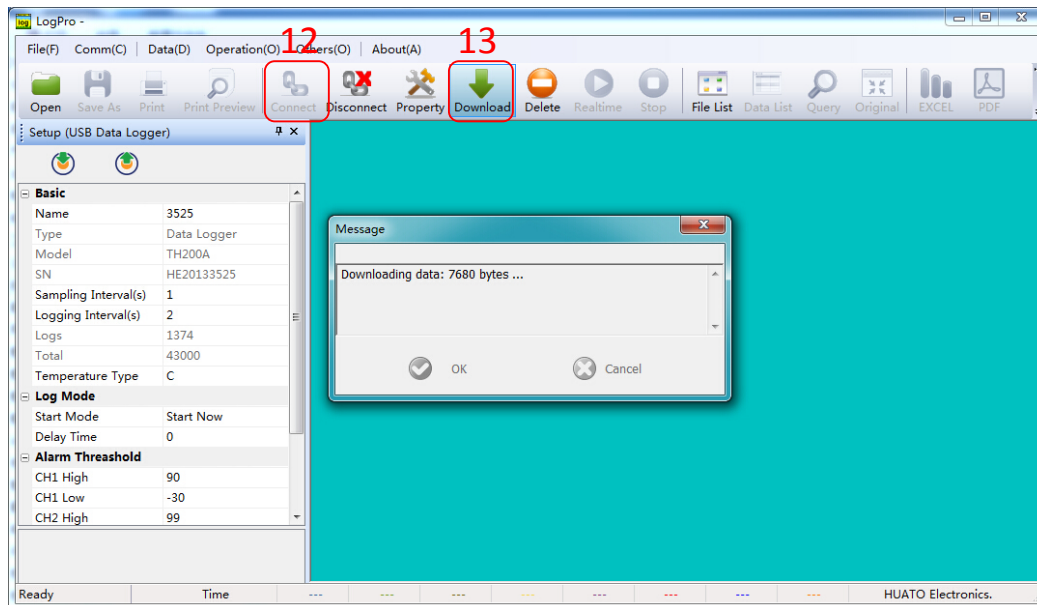
2.6 Download the Records after a Measurement.

10. Connect the data logger to a free USB port on the computer.
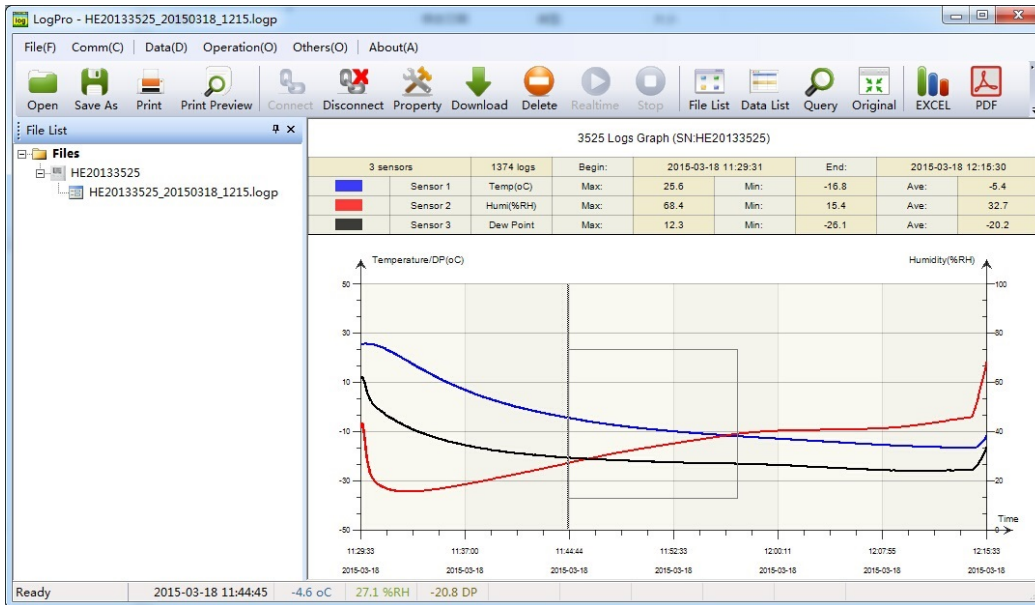
11. Running Logpro software on the PC.

12. From the toolbar select Connect.

13. From the toolbar select Download

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

The graph display will be blank if there are not any logs.

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(Magnified data table). Click right button, then the graph will be redrawing with all the data in the logs file.

2.7 Data Listing Window

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.
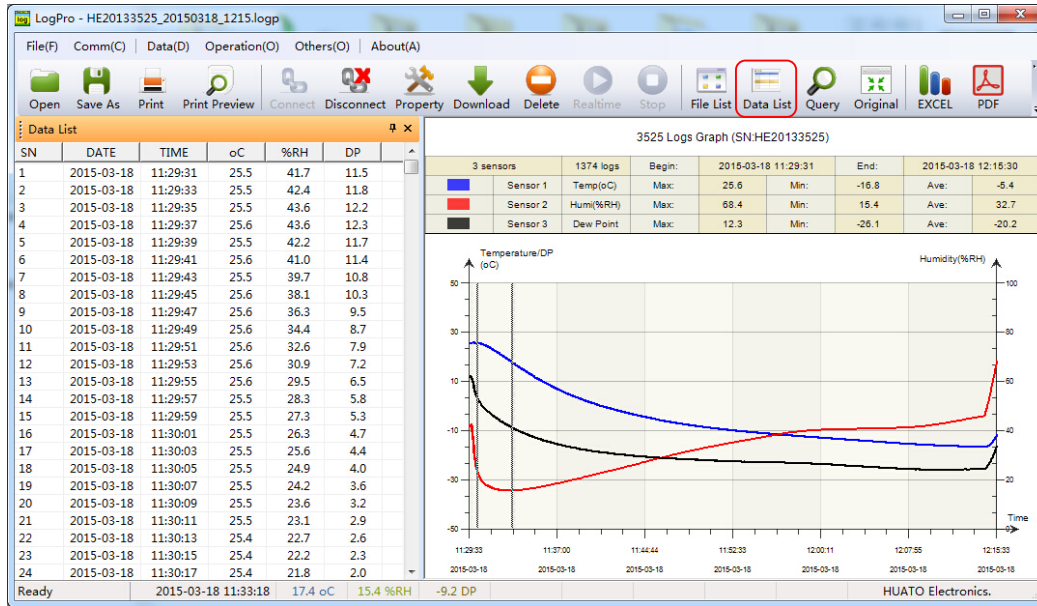
The data pane lists the data samples collected by the logging device.

The column width of each column is adjustable by using the left mouse button and dragging the column the desired width.

2.8 Exporting Logs from Logpro

- : Export data list to an Excel file.

- : Export data list to a PDF file.

- : Export graph to a BMP file.
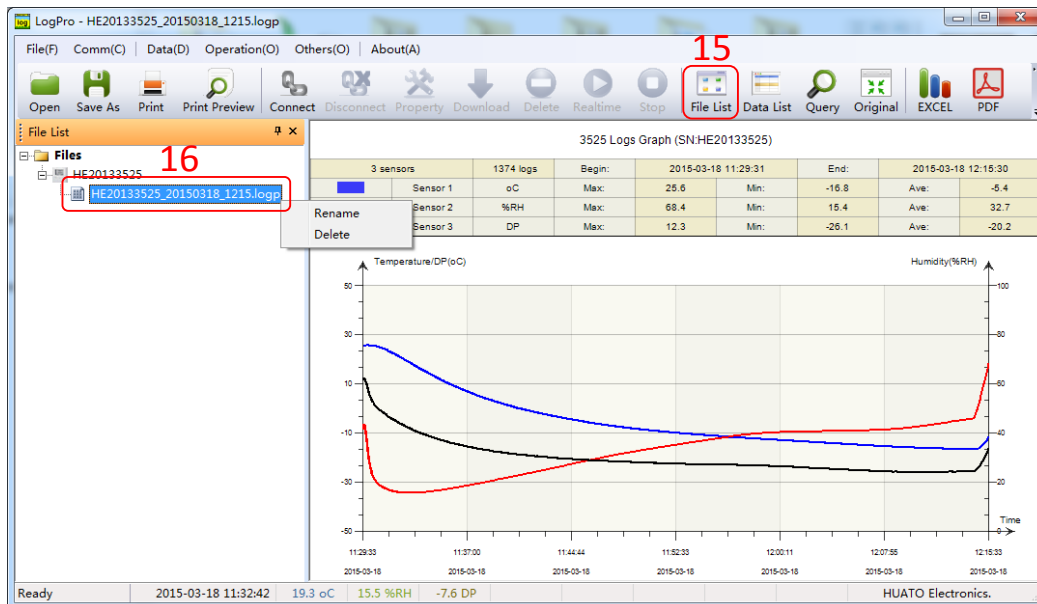
2.9 Delete Records in the Logger

14. From the toolbar select Delete[5]
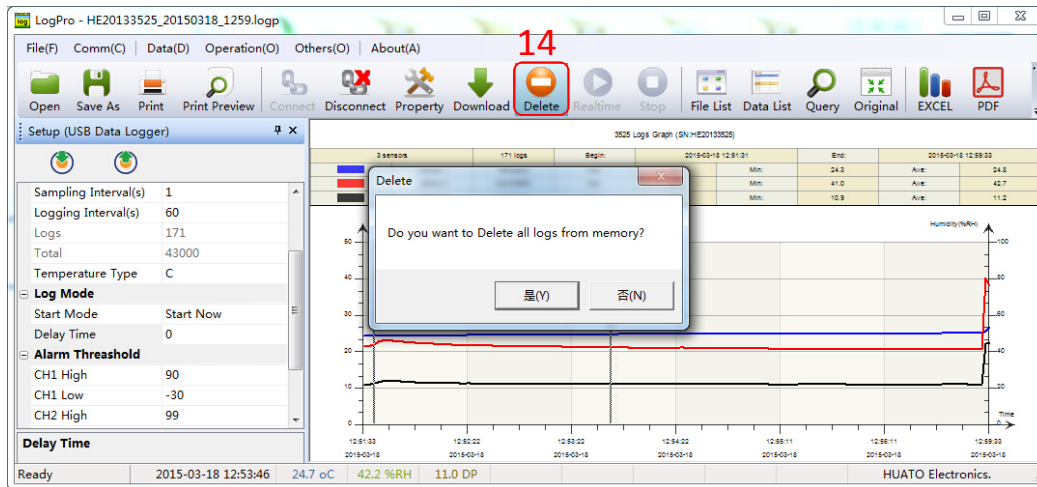
2.10 Check the Save File in File List

15. From the toolbar select Filelist.[6]

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.

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[5] Clear the logger's memory. It will not affect downloaded file.

[6] These files are located in the installed path of Logpro.

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Chapter 3. Attention

- HE17x water proof level is IP67. Do not put it into the water.
- HE17x plastic shell is ABS, flame retardant, not resistant to acid and alkali.
- If repair is needed, only authorized technician could do the repair.
- The instrument configuration by 1 x ER14250 lithium battery (3.7V) is not rechargeable.
- USB power supply (5V) cannot let the Data Logger work.

Chapter 4. FAQ

4.1 LCD Screen Dim

Reason:

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

Solution:

- In the case of insufficient battery, please replace the battery. If resulted from environment temperature, please immediately take the logger out of the environment.

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.

4.3 Software "Runtime Error"

Reason:

- OS forbid software creating files.

Solution:

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

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