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S300 Series

Temperature & Humidity Data Logger User Manual



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Chapter 1. S300 Series Data Logger Hardware

1.1 Features

- The sensor was produced by Switzerland, high accuracy.
- Built-in buzzer alarm, over-limit alarm function.
- Temperature & Humidity & Time shows at the same time
- 2 x ER14505 (3.6V) Li battery, working for 18 months. (Logging Interval: 600s)
- DC Power Supply: 9-12V, 5.5mm
- Host Size(L x H x D): 128mm x 121mm x 30mm
- LCD Screen Size: 67mm x 43mm
- Temperature & Humidity External Probe Diameter: 16mm
- Temperature External Probe Diameter: 6mm
- External Plug Diameter: 11mm

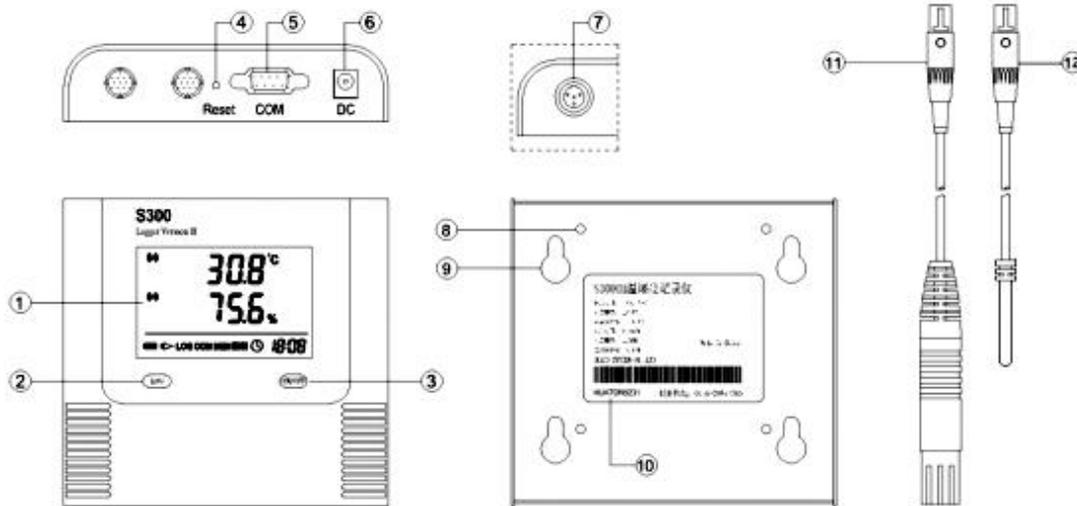
1.2 Applications

- Cold Chain Transportation
- Refrigeration Chamber
- Display Cabinets
- Supermarkets
- Working and Living Areas

1.3 S300 Series Data Logger Model

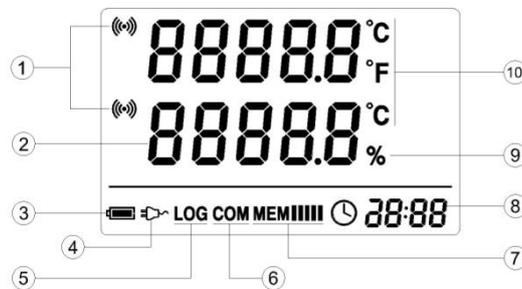
Model	Measurement Accuracy	Measurement Range	Probe Type (T:Temperatur; H:Humidity)	Capacity of Records
S300-TH	±0.5°C/±5%RH	-20~70°C 0~100%RH	T&H	43,000
S300-EX		-40~85°C 0~100%RH	T&H External	
S320-TH	±0.3°C/±3%RH	-20~70°C 0~100%RH	T&H	
S320-EX		-40~85°C 0~100%RH	T&H External	
S380-TH	±0.2°C/±2%RH	-20~70°C 0~100%RH	T&H	86,000
S380-EX		-40~85°C 0~100%RH	T&H External	
S300-T	±0.5°C	-20~70°C	T	43,000
S300-ET		-40~85°C	T External	
S300-DT		-40~85°C	Double T External	

1.4 Data Logger Appearance



- | | |
|-------------------------|--|
| ① LCD Screen | ⑦ External Probe Port |
| ② LOG Button | ⑧ The Screw Hole, Open the Back Cover can Replace the Battery. |
| ③ ON / OFF Button | ⑨ Hang Hole |
| ④ Reset | ⑩ Serial Number |
| ⑤ Communication Port | ⑪ Temperature & Humidity External Probe |
| ⑥ DC Power Jack (9-12V) | ⑫ Temperature External Probe |

1.5 Data Logger Screen



- | | |
|-------------------|---------------------------|
| ① Alarm Symbol | ⑥ Communication Symbol |
| ② Value | ⑦ Free Recording Capacity |
| ③ Battery Symbol | ⑧ Date & Time |
| ④ DC Power Symbol | ⑨ Humidity Unit |
| ⑤ LOG Symbol | ⑩ Temperature Unit |

1.6 Button

ON / OFF: Turn ON / OFF the Data Logger. Only after turning off the LOG, it works.

LOG: Press to enter into the logging mode, press again to exit the logging mode.

Reset: Reset the Data Logger. It does not affect the properties and records in the data logger.

Chapter 2 Logpro Software

2.1 The Requirement of the Computer Hardware

1. OS: Windows XP/Vista/7/8 (32/64bit)
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

Notice: Windows 64bit please install 64bit-driver.

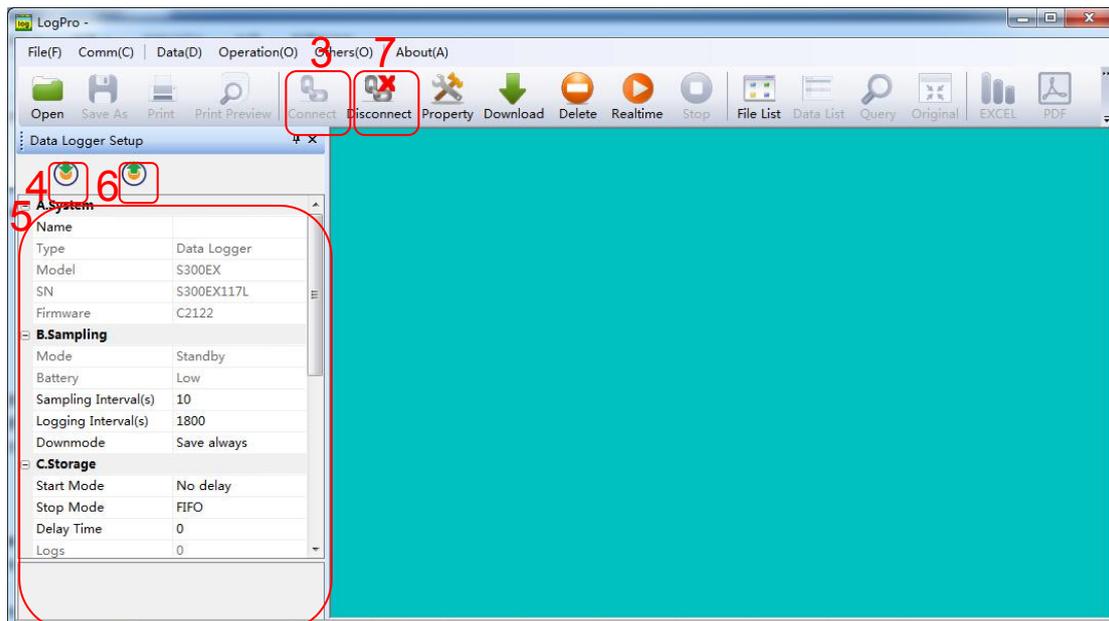


2. Install Logpro Software

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 mode³.
9. Press LOG button on the logger, start recording.

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 ON. 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

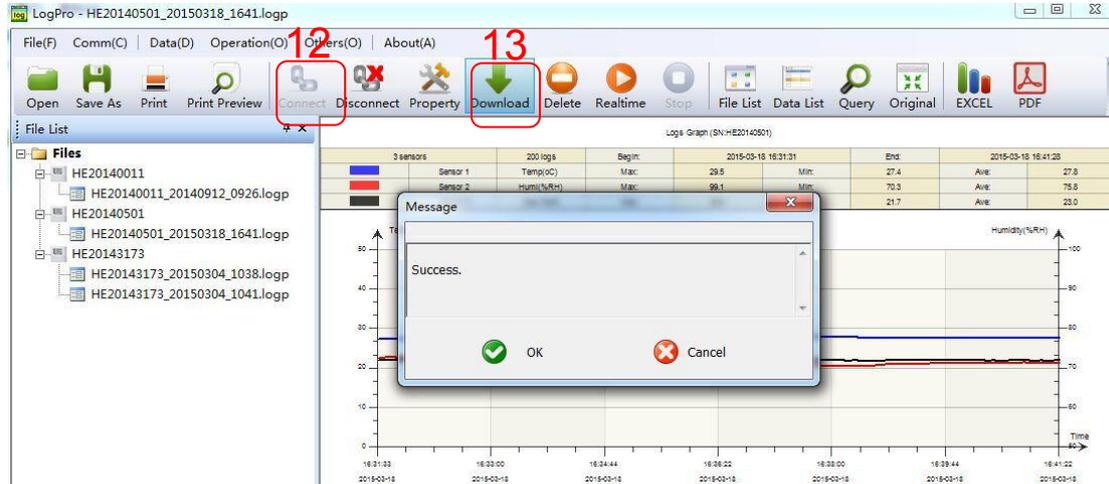
A.System	
Name	
Type	Data Logger
Model	S300EX
SN	S300EX117L
Firmware	C2122
B.Sampling	
Mode	Standby
Battery	Low
Sampling Interval(s)	10
Logging Interval(s)	1800
Downmode	Save always
C.Storage	
Start Mode	No delay
Stop Mode	FIFO

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.
Down Mode	Save Always	Do not clear the Logger's memory after download
	Delete after download	Clear the Logger's memory after download
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.
Stop Mode	First In First Out	When recording memory is full, the logger will delete the earliest data
	Stop When Full	When recording memory is full, the logger will stop record new data
Logs		The count of records in the memory.
Total		The total capacity of the logger's storage.
Alarm		Turn ON / OFF the Data Logger's Buzzer.
LCD		Please choose ON
Power		Please choose Normal
High & Low Limit	CH1: Temperature CH2: Humidity / Temperature2	When the value over the limit, the buzz will sounds an alarm.
Offset ⁴		Input positive number to decrease the value. Input negative number to increase the value.

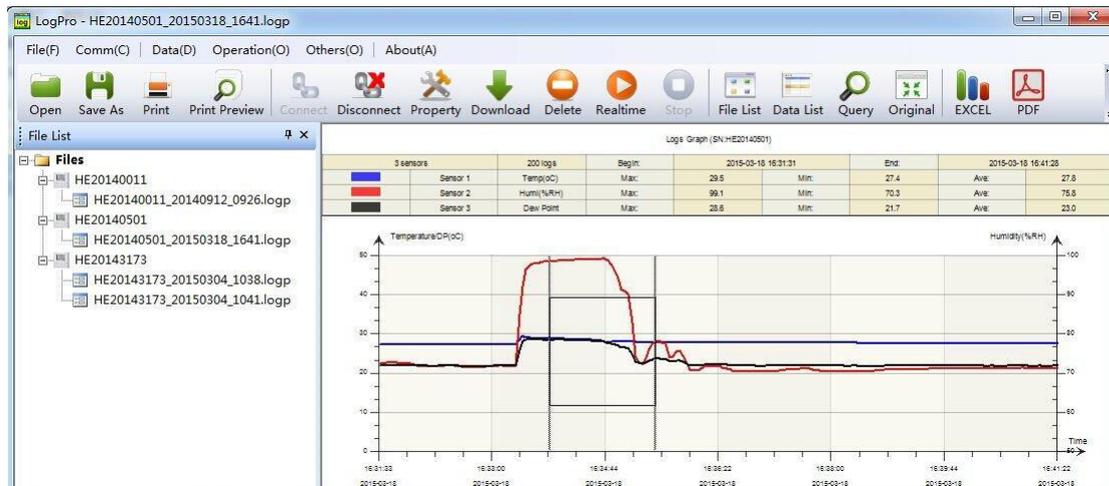
⁴ Calibrate the logger: The logger is factory calibrated to an accuracy given in the device specifications. However, there may be times when you wish to adjust the calibration of your logger. Logpro provides you with the ability to perform a single point offset calibration. This calibration can be used to increase the accuracy of the logger for a restricted data range.

2.5 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



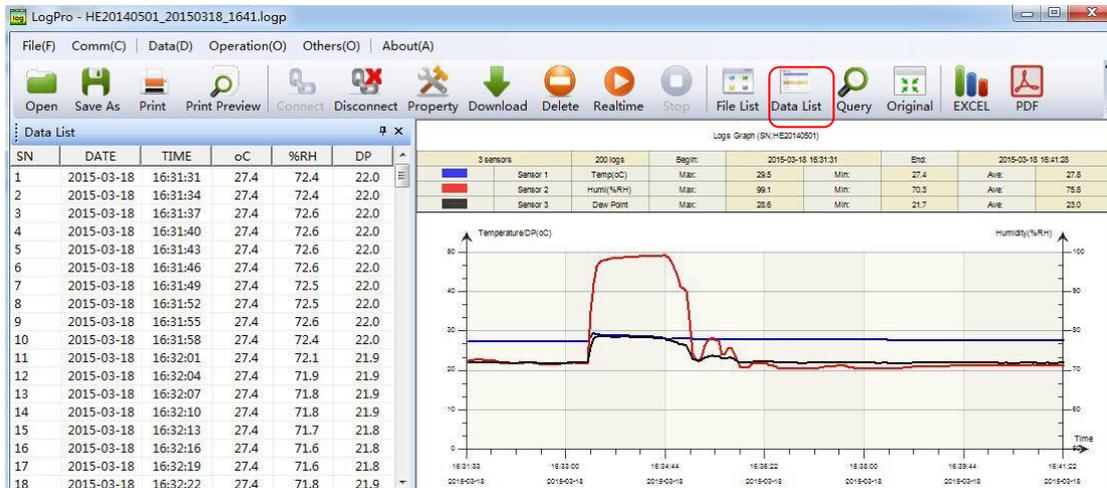
Once the data is transferred from the logger to the PC, the data graph will be displayed. The graph display will be blank if there are not any logs.



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

2.6 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.

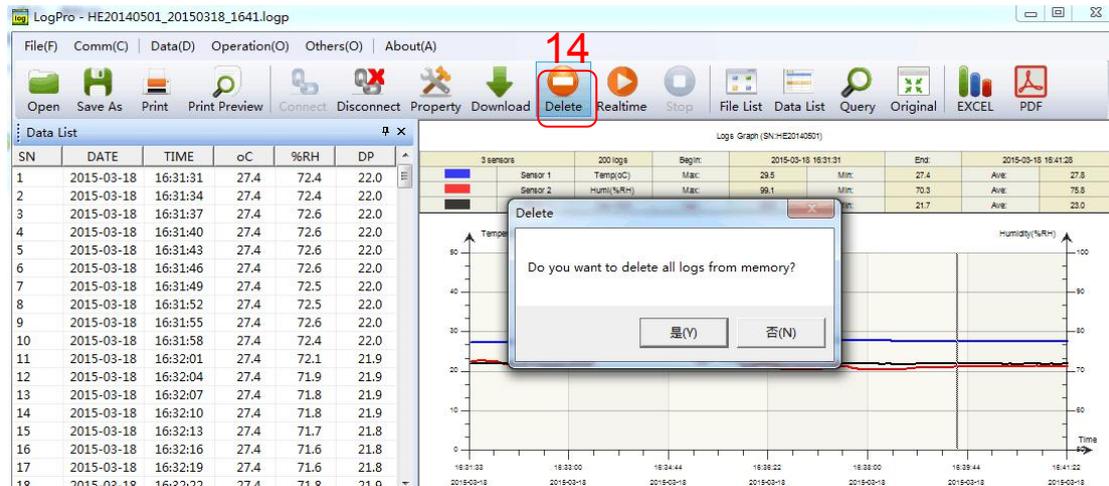
The column width of each column is adjustable by using the left mouse button and dragging the column the desired width.

2.7 Exporting Logs from Logpro

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

2.8 Delete Records in the Logger

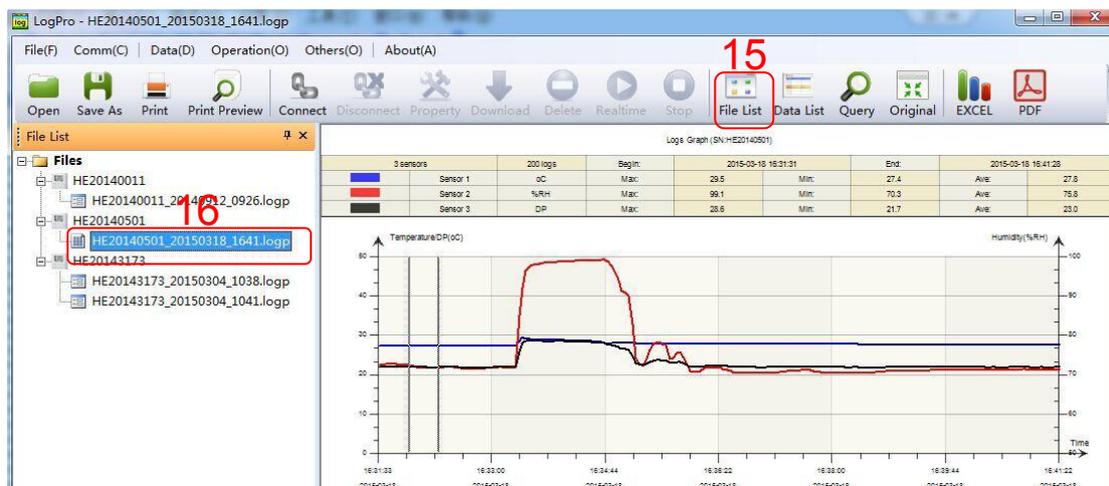
14. From the toolbar select Delete⁵



2.9 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.

⁵ Clear the logger's memory. It will not affect downloaded file in the computer.

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

Chapter 3. Attention

- S300 Series Data Logger are not waterproof. Do not connect loggers with computer when the logger is on water.
- S300 Series Data Logger 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 2 x ER14505 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 Recording (LOG) are Automatically Stop

Reason:

- When the battery level is low, there will not be sufficient power to support recording function of the logger.

Solution:

- Replace the battery.

4.3 Software "Runtime Error"

Reason:

- OS forbid software creating files.

Solution:

- Run the program (software) as an administrator.
- Install software in Disk D:\
- Data logger's 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

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