3S-IS Configuration Tool v3.0

1. Introduction

3S-IS Configuration Tool v3.0 is a software tool used to test communication and set Modbus parameters of 3S-IS Irradiation Sensor.

2. Cable Connection

Connect the green wire (RS485 A) of the output cable of the Sensor Box to USB-RS485 Converter Data (+) and connect the yellow wire (RS485 B) of the output cable of the Sensor Box to USB-RS485 Converter Data (-) like shown at Figure 1.

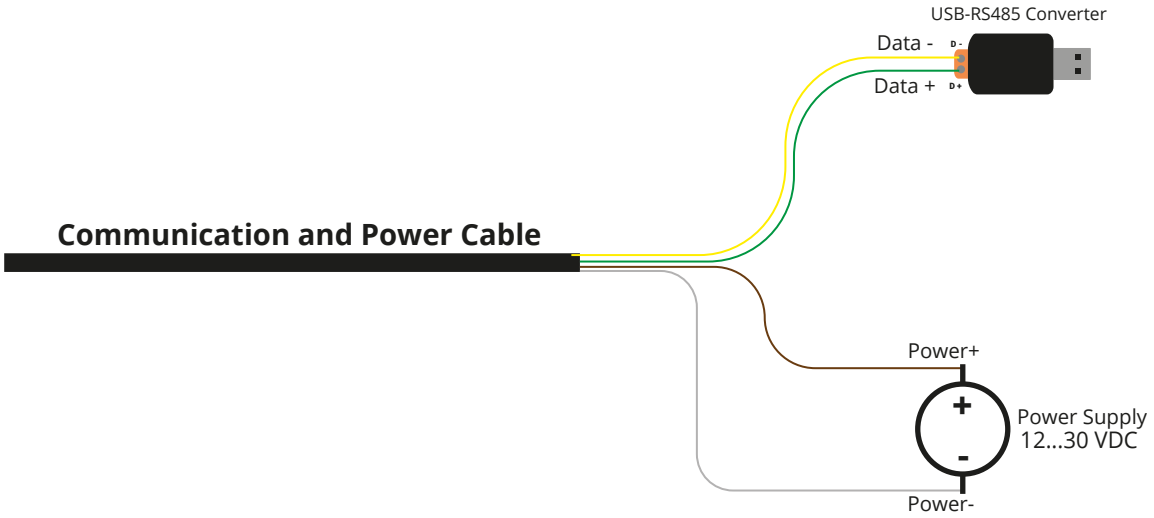


Figure 1: Cable Connections of the USB-RS485 Converter

White and brown wires power up the sensor as shown in Table- 2.

Brown	Power (+)
White	Power (-)
Green	RS485 A / Data (+)
Yellow	RS485 B / Data (-)

Table 2: Communication and power cable color coding

3. System Requirement

3.1. Software Installation

Download the configuration tool from the following link and set it in your PC:
https://www.sevensensor.com/files/d/s/v3.0_3S-IS_Configuration_Tool.zip

3.2. Hardware Setup

The PC system has to have an RS485 port set up as a serial COM port. If the PC system does not have this port, follow the steps below.

- Download the CH341 driver.
  Note: When this driver is required, Seven Sensor sales team will send 'CH341' file.
- Connect the USB-RS485 Converter to the PC. (as explained in section 2)
- Go to "Device Manager" in your PC.
- Double Click on the port to which the USB-RS485 converter is connected from the Ports. (COM and LPT)

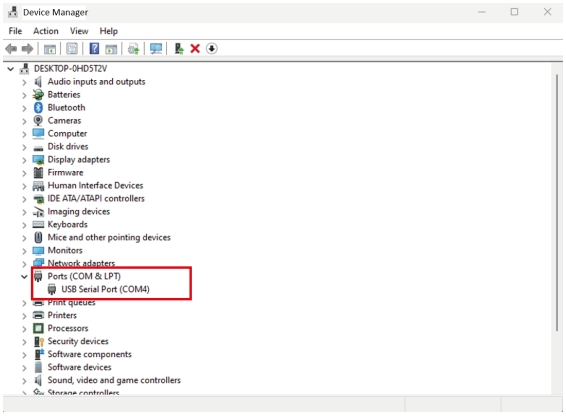


Figure 2: Ports (COM&LPT)

- In the window that is opened, go to "Driver" section and click on "Update Driver"

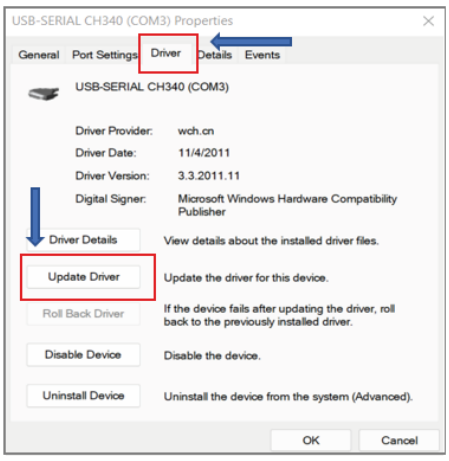


Figure 3: Update Driver

- Click on “Browse my computer for drivers”

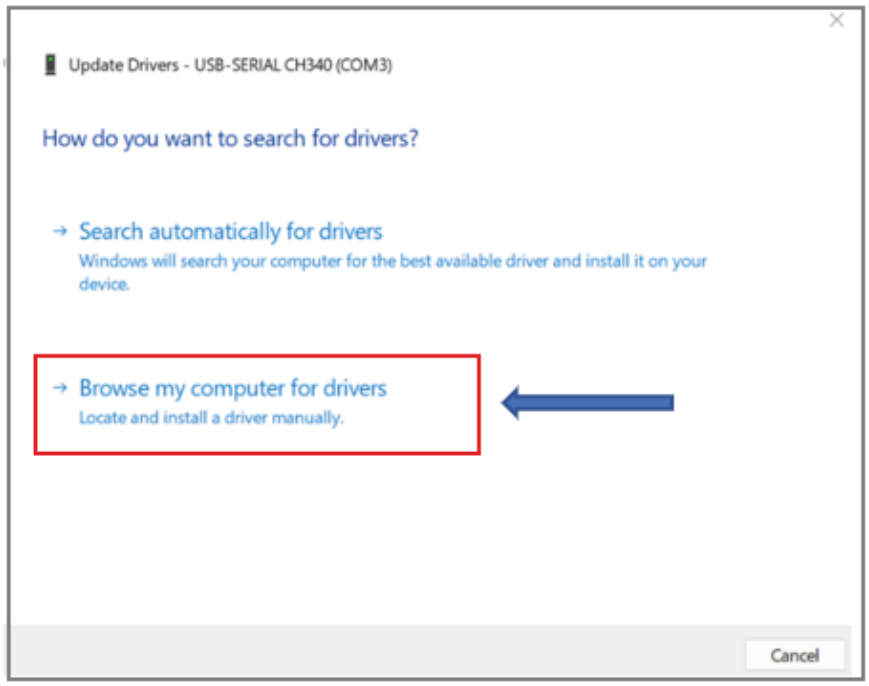


Figure 4: Search drivers in PC

- Click on “Browse” and Select the CH341 file. Finally, click on “Next” then the driver installation

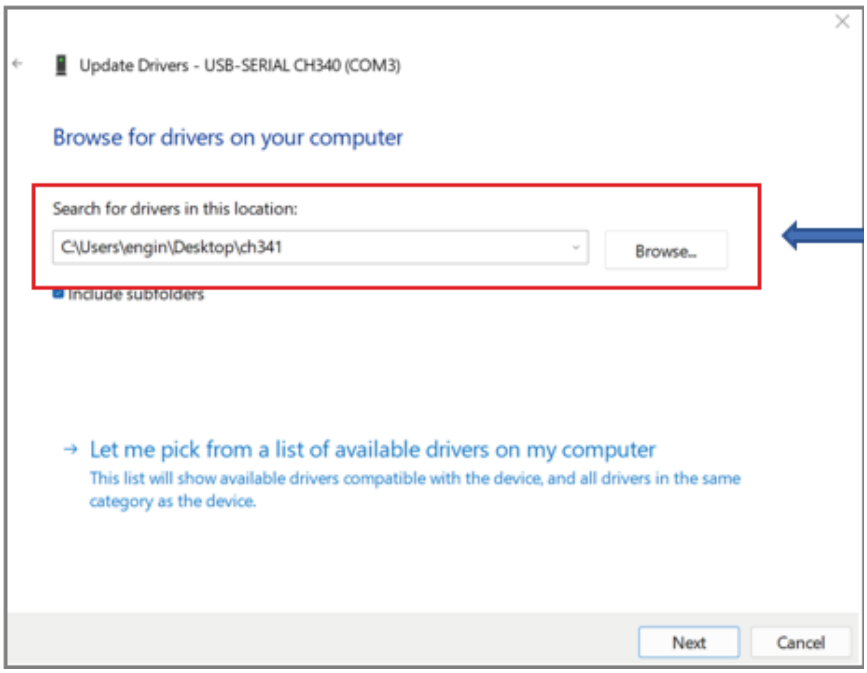


Figure 5: Completing the update driver

4. 3S-IS Configuration Tool v3.0

After lunching 3S-IS Configuration Tool v3.0, the following screen appears.

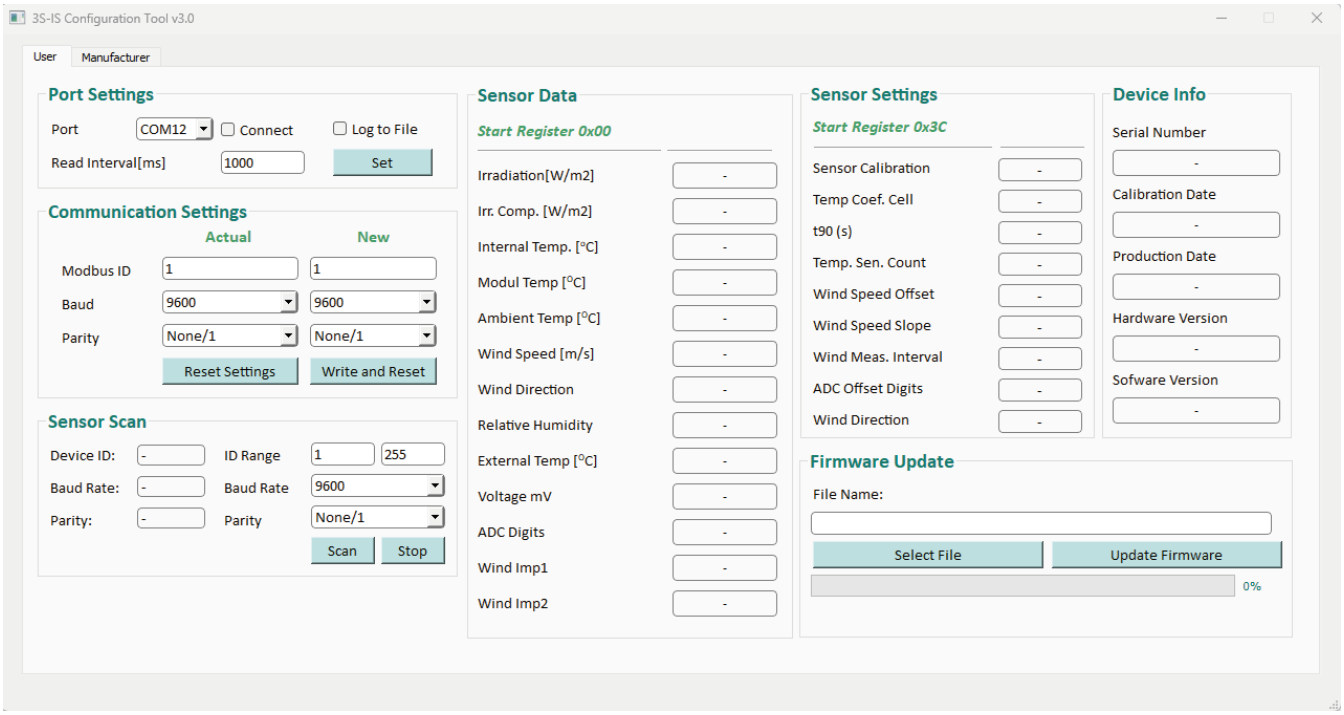


Figure 6 : 3S-IS Configuration Tool v3.0

4.1 3S-IS Configuration Tool v3.0 Connection

1. Select the Port that is connected to the USB-RS485 Converter.
2. Enter the Modbus ID and Baudrate of the Sensor in **"Communication Settings"** under the **"Actual"** heading..
   Note: At Factory Default: Modbus ID:1 Baud:9600 Parity: None/1.
3. Click the **"Connect".**

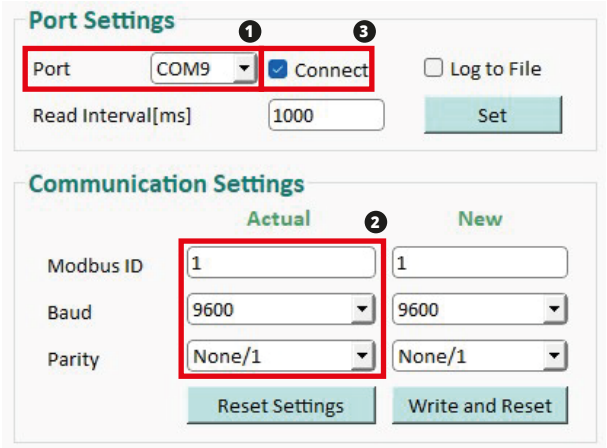


Figure 7: 3S-IS Configuration Tool v3.0 Connection

Once the sensor is connected successfully, the data will appear in the **"Sensor Data"** section and the **"Device Information"** section will display the sensor manufacturing information.

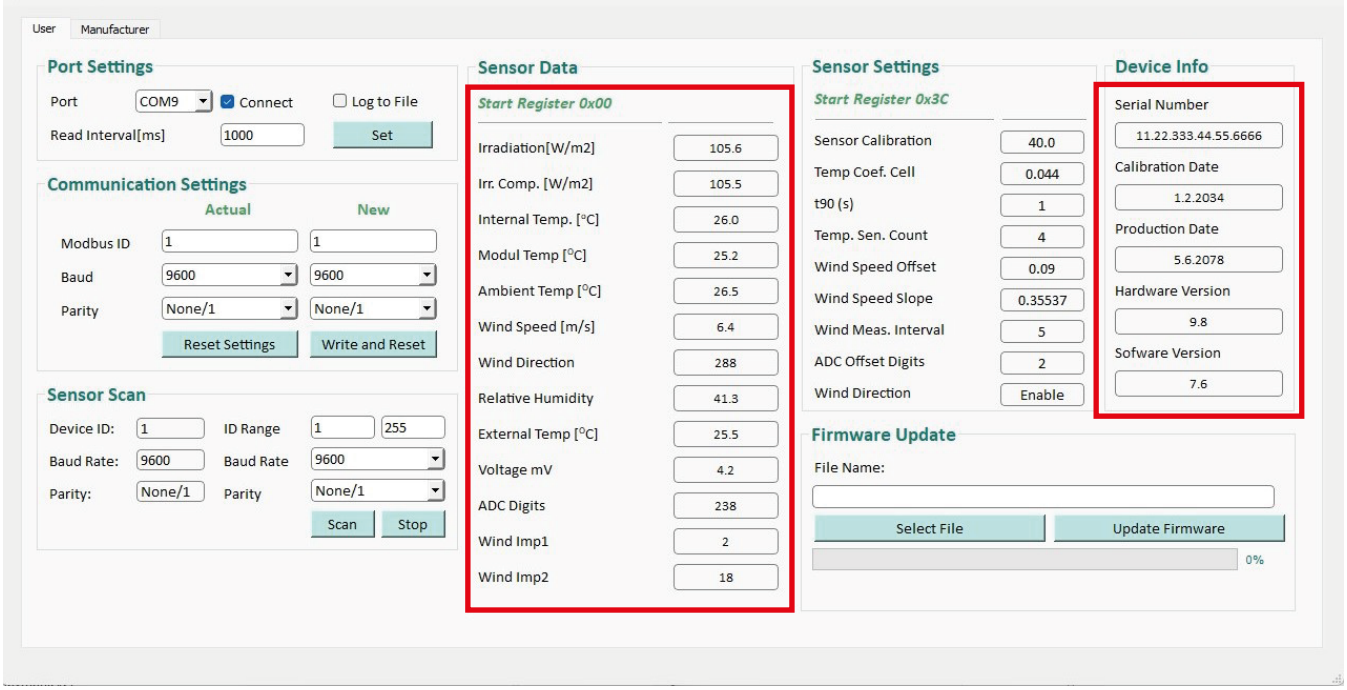


Figure 8: Display of sensor data received from the sensor

4.2 Find the Modbus Parameters

If you are unable to connect to the sensor after you changed the Modbus parameters, please follow these steps to resolve the issue;

1. Specify the ID range to be searched.
2. Enter the Baud Rate value to be searched.
3. Enter the Parity value to be searched.
4. Click on the **"Scan"** button to initiate the search process.

Note: If the ID Range text boxes are left empty, all ID, Baudrate and Parity values will be scanned.
Note: The **"Stop"** button can stop the search process.

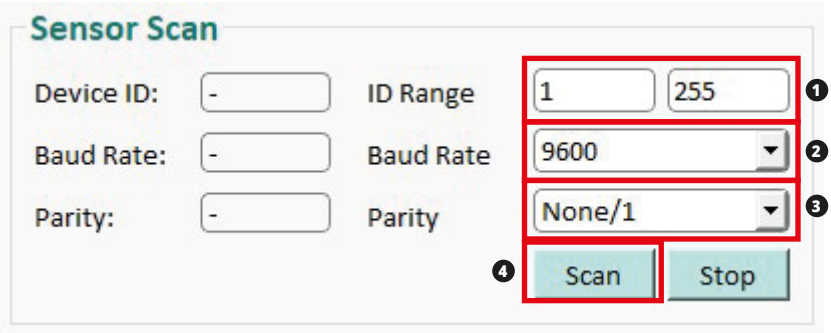


Figure 9: Sensor Scan

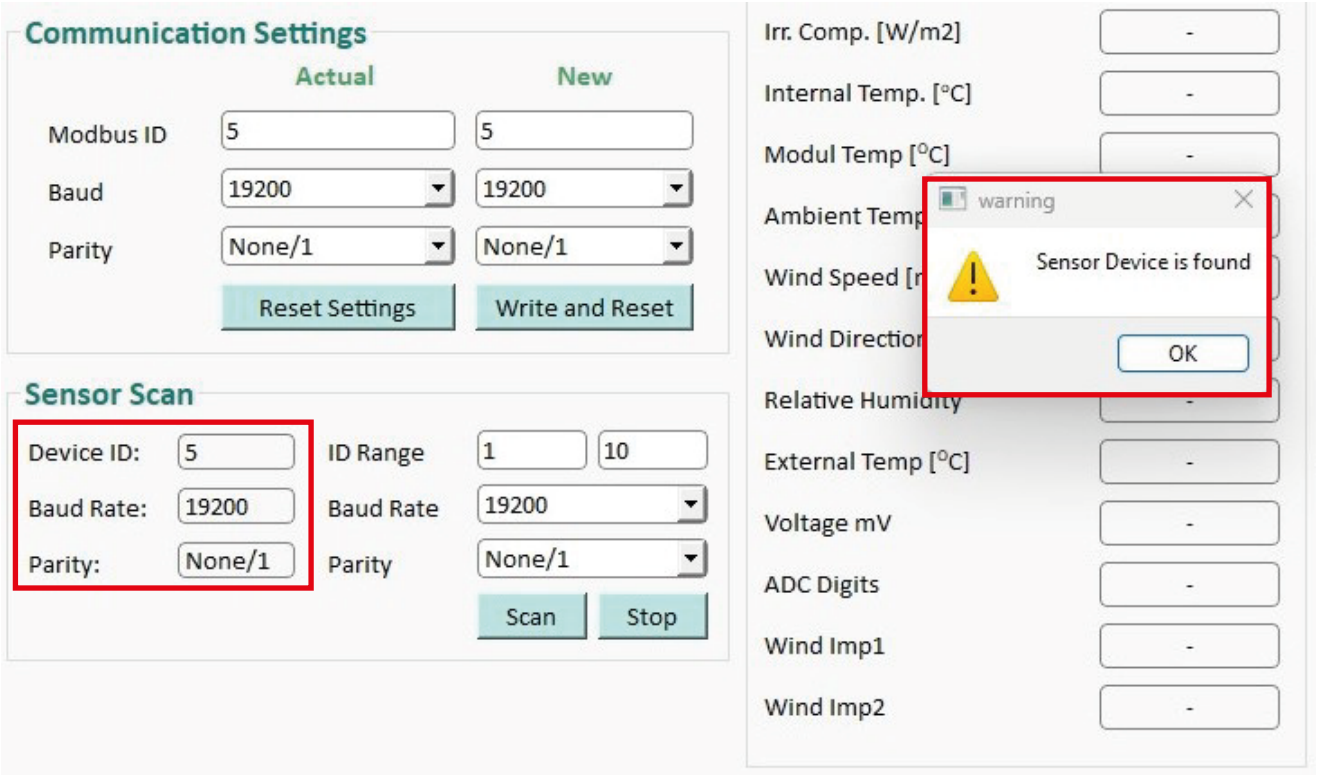


Figure 10: Sensor found message

4.3. Change the Modbus Parameters

To change the Modbus parameters such as Modbus ID, Baud, and Parity of the sensor, follow these steps;

1. First, enter the new values in the **"Communication Settings"** section under the **“New”** heading.
2. Then, click on the **"Write and Reset"** button to save the changes.

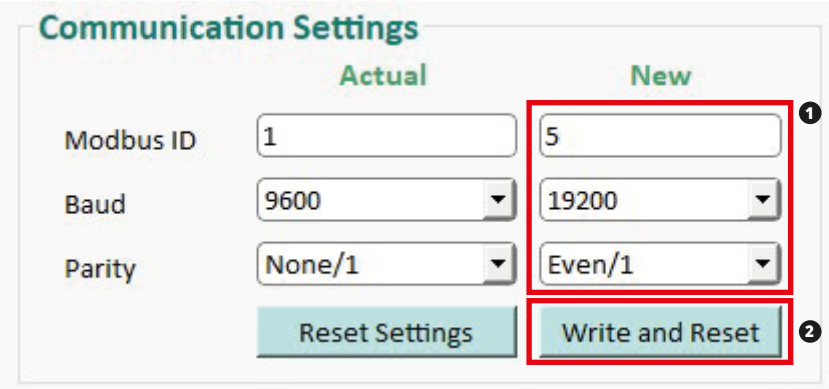


Figure 11: Changing the Modbus Parameters

4.4. Remote Software Installation Process

1. Select the (.bin) software update file by clicking on the **"Select File"** button.
2. Update the firmware by clicking on the **"Update Firmware"** button.



Figure 12: Remote software installation

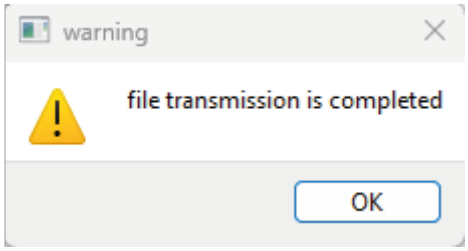


Figure 13: Remote Software Installation Message

4.5. Resetting Sensor Communication Parameters to Factory Settings

In order to reset the sensor Modbus communication parameters, the power of the sensor should be turned off.

1. Choose the Port to which the sensor is connected.
2. Turn on the power of the sensor and click on the **"Reset Settings"** button within 10 seconds.

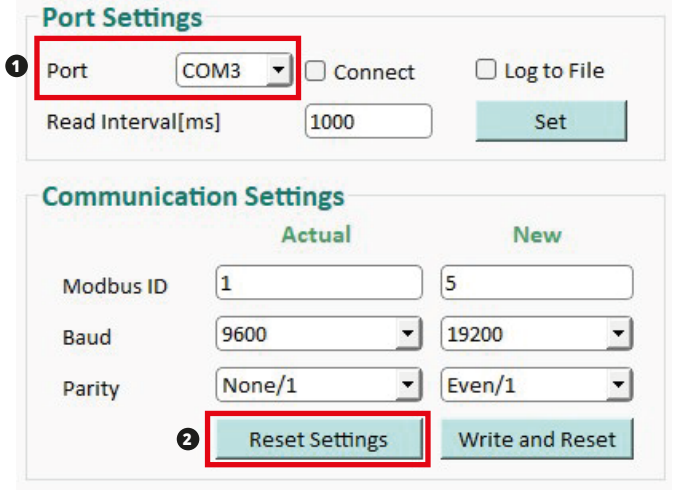


Figure 14: Resetting sensor communication parameters to factory settings

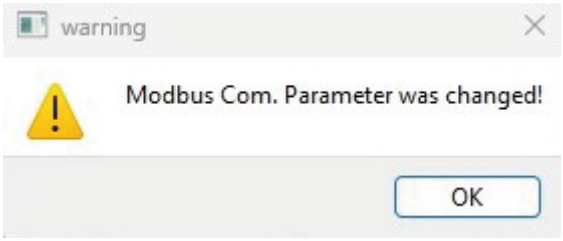


Figure 15: Sensor communication parameters was changed message

4.6. Log To File

To save the data to a (.txt) file, click on the "Log To File" button. Once you're done logging, simply click on the same button again to stop.

Note: You can find the (.txt) log file in the same directory as the GUI application.

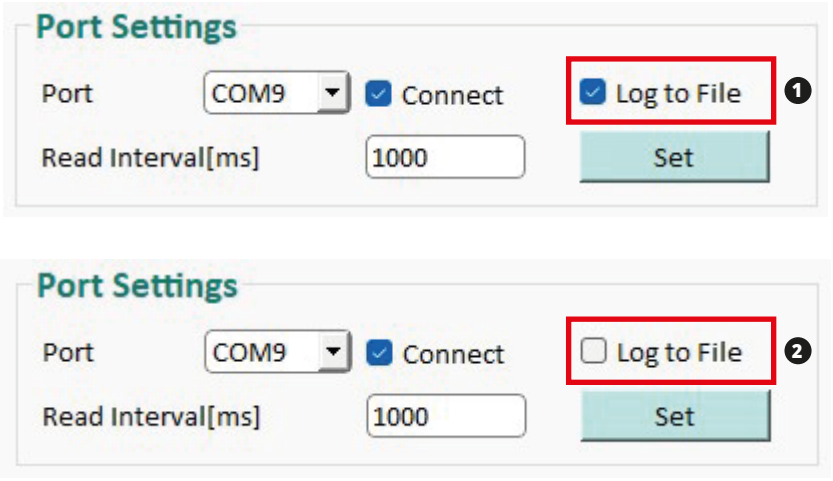


Figure 16: Data logging process

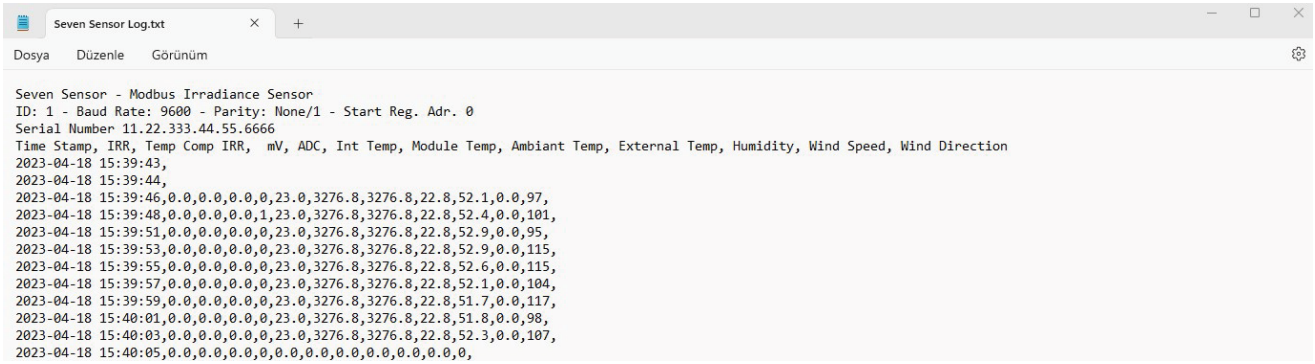


Figure 17: Log File

5. Trouble Shooting

In case you cannot establish a connection to the sensor, please check the steps below.

- ✔ The power supply has to be open. (12V....30V) the recommended power supply is 24 VDC.
- ✔ Cable connections must be done corretly (Data(+)...Green, Data(-)...Yellow) .
- ✔ Check that the CH341 file has been downloaded correctly .
- ✔ Check that you have selected the correct port .
- ✔ Check that the Modbus parameters (Modbus Id and Baud) of the sensor has been correctly entered .
- ✔ Restart (Off/On) the Power Supply and disconnect the USB-RS485 Converter then connect it again.

Contact Information:

Please feel free to contact our technical team if you face any difficulties during settings.

Technical Support
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