3S-CWS Configuration Tool v3.0

1. Introduction

3S-CWS Configuration Tool v3.0 is a software tool for setting Modbus parameters and for testing communication.

2. Cable Connection

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

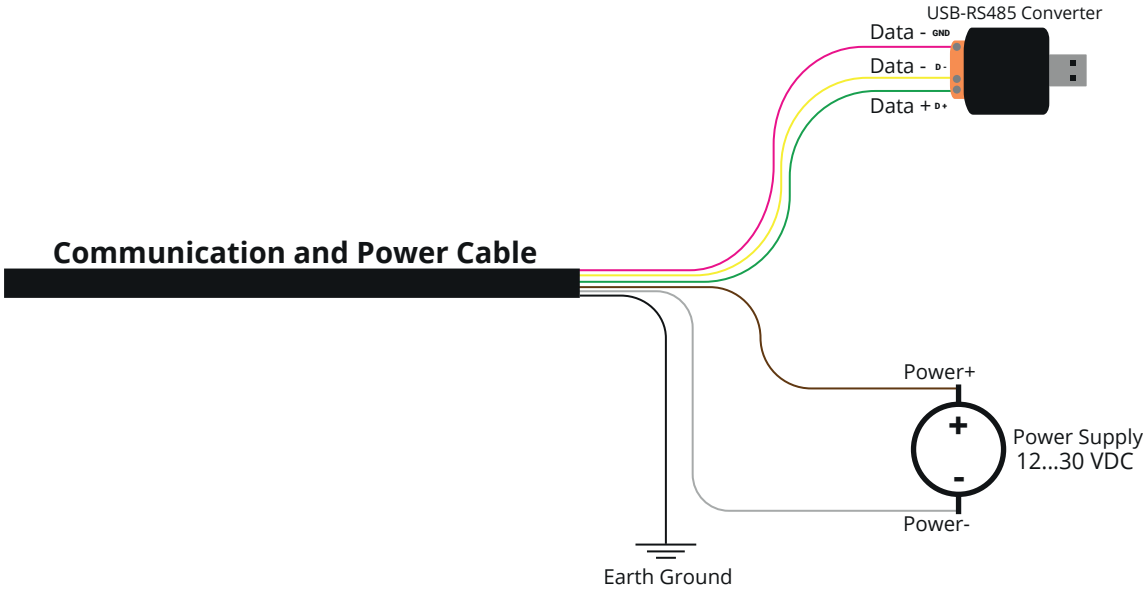

Figure 1: Cable Connections of the USB-RS485 Converter

White, brown and black wires power up the sensor as shown in Table- 1.

Brown	Power (+)
White	Power (-)
Black	Earth Ground
Green	RS485 A / Data (+)
Yellow	RS485 B / Data (-)
Pink	RS485 Data Ground

Table 1: 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-CWS_Configuration_Tool.zip

3.2. Hardware Setup

The PC system must 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, request it from SEVEN Sensor sales team.
- 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)"** list.

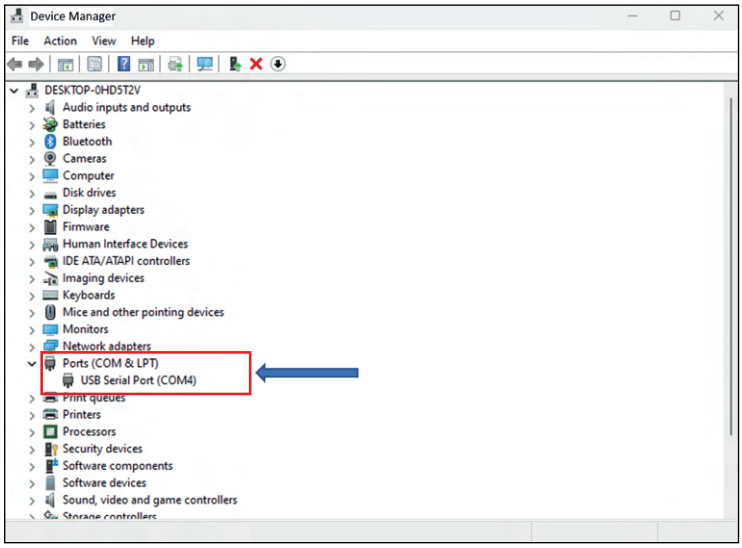

Figure 2: Ports (COM&LPT)

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

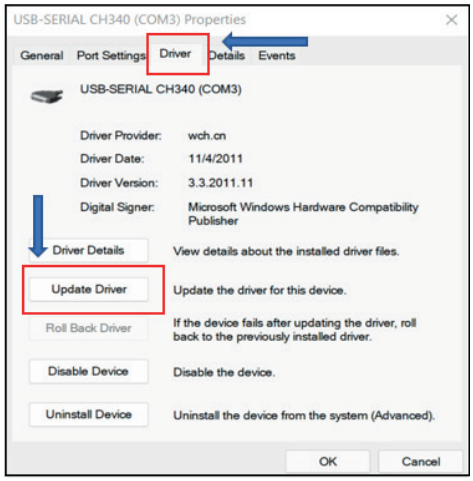

Figure 3: Update Driver

- Click on **“Browse my computer for drivers”**

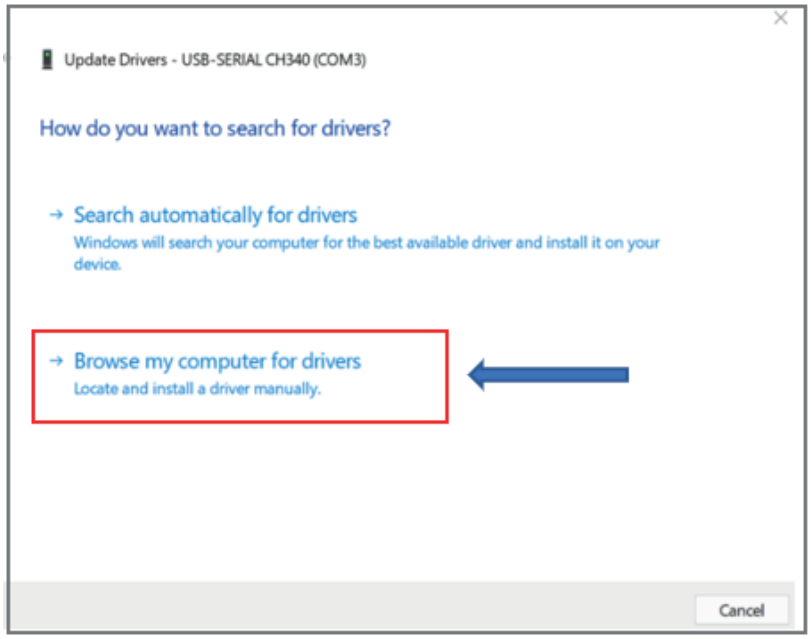

Figure 4: Search drivers in PC

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

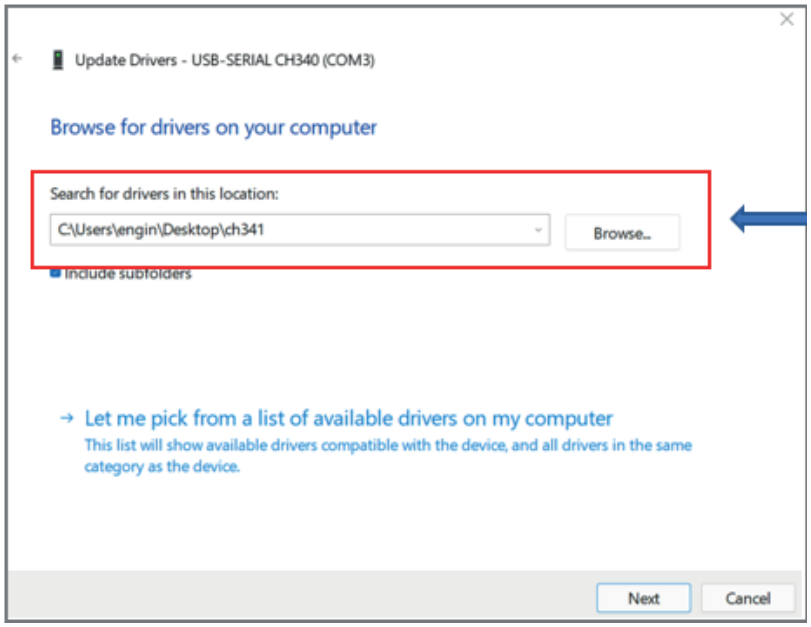

Figure 5: Completing the update driver

4. 3S-CWS Configuration Tool v3.0

After launching 3S-CWS Configuration Tool v3.0, the following screen appears.

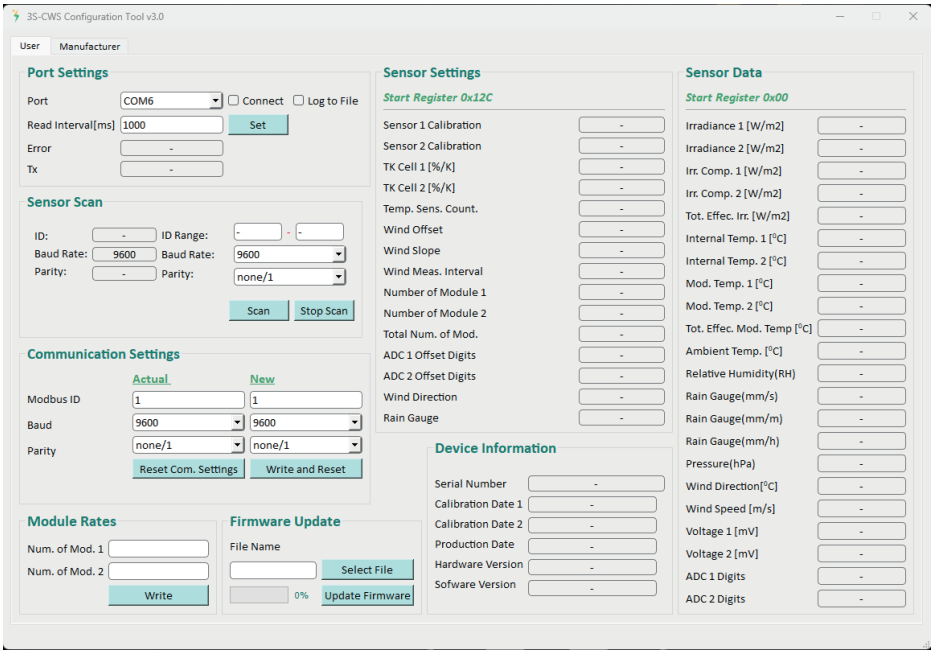

Figure 6: 3S-CWS Configuration Tool v3.0

4.1. 3S-CWS Configuration Tool v3.0 Connection

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

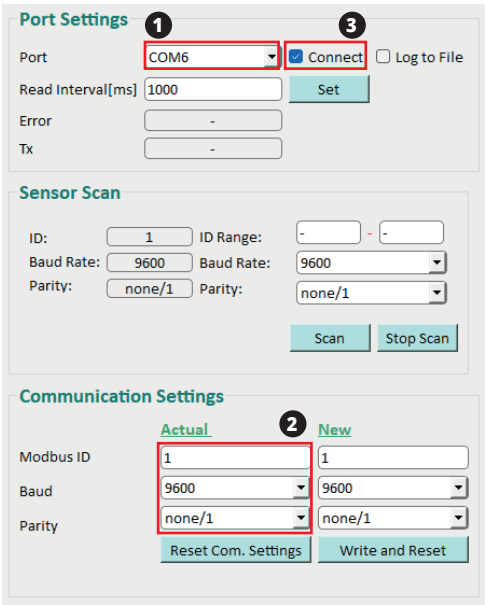

Figure 7: 3S-CWS Configuration Tool v3.0 Connection

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.

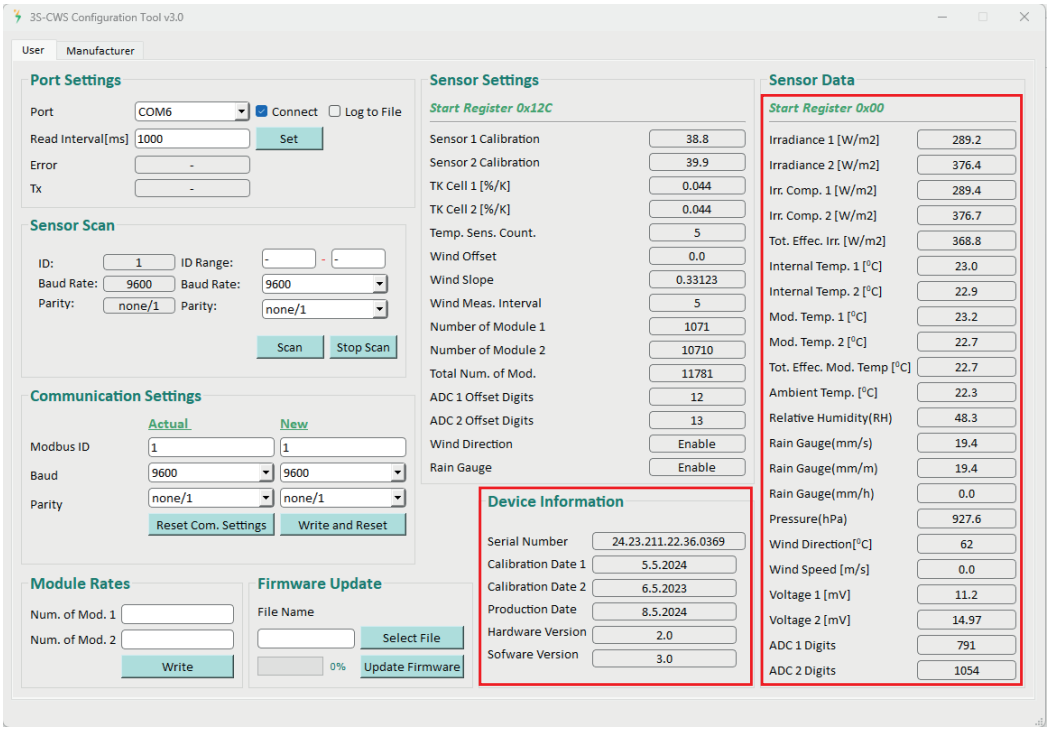

Figure 8: Display of sensor data received from the sensor

4.2. Change the Modbus Parameters

To change the Modbus parameters, such as Modbus ID, Baud Rate, 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.

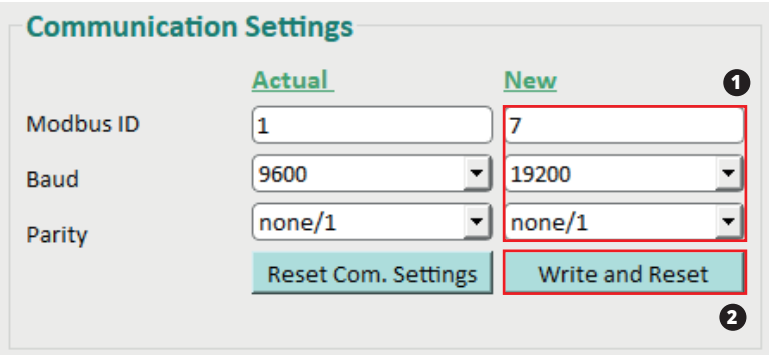

Figure 9: Changing the Modbus parameters

4.3. 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, Baud Rate and Parity values will be scanned.

Note: The **"Stop Scan"** button can stop the search process.

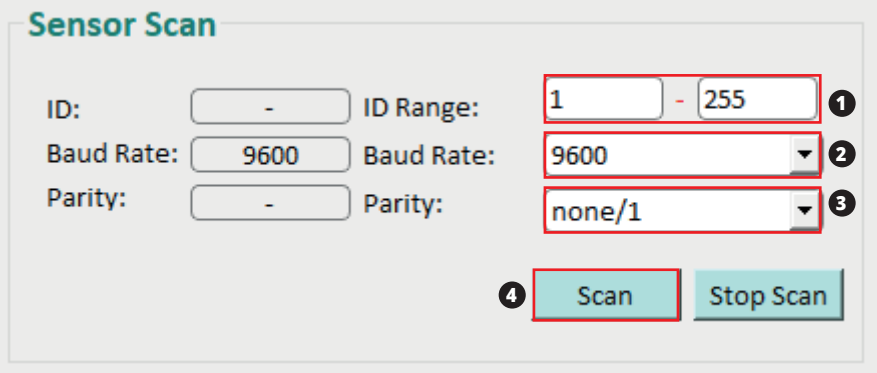

Figure 10: Sensor Scan parameter

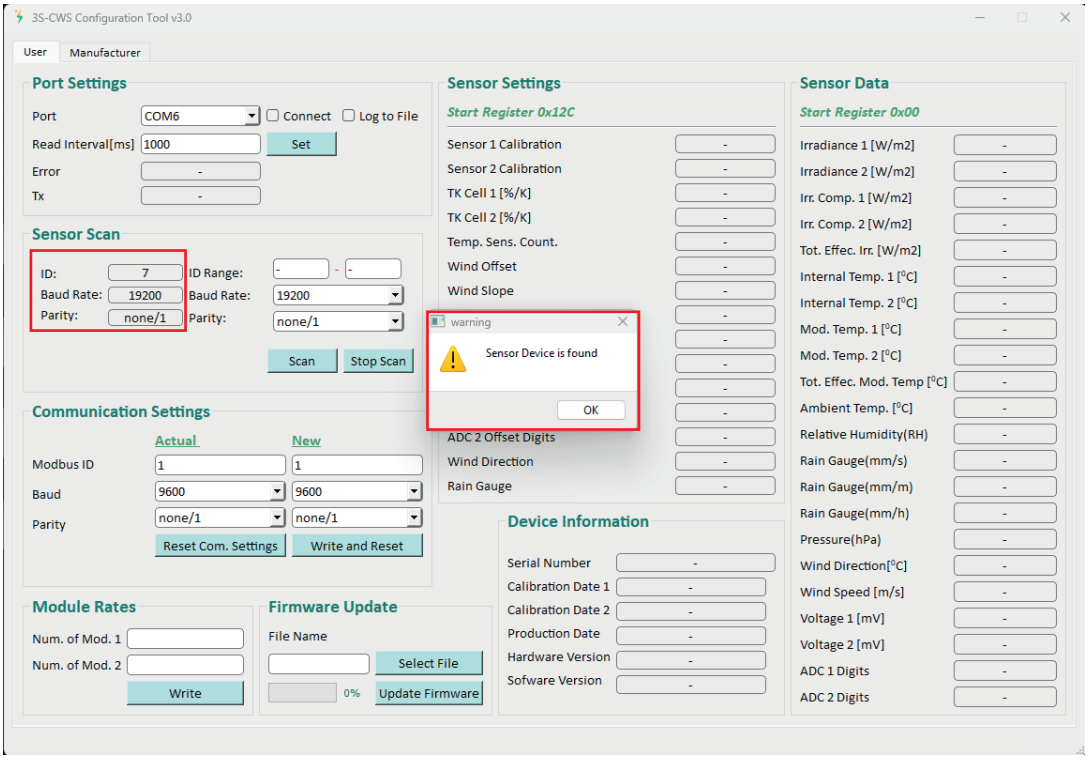

Figure 11: Sensor Found Message

4.4. Entering the Number of Panels in the Field

1. Enter the number of panels in each orientation.
2. Click the "**Write**" button.

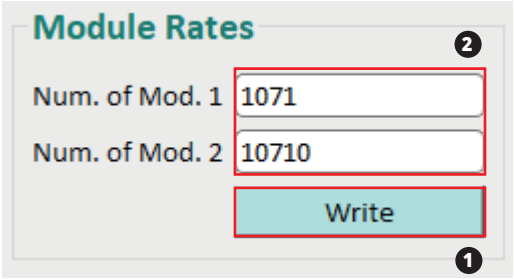

Figure 12: Remote Software Installation

4.5. Remote Software Update

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.

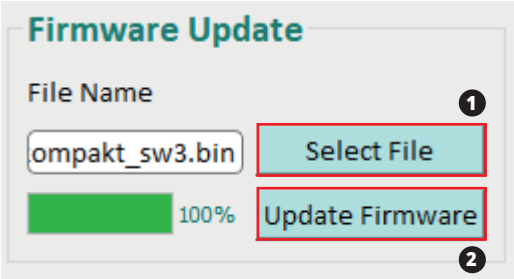

Figure 13: Remote Software Installation

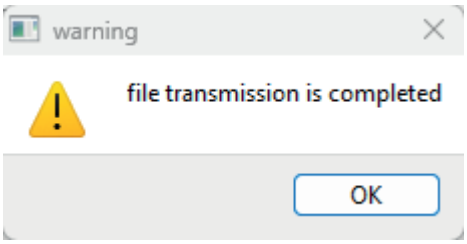

Figure 14: Remote Software Installation Message

4.6. 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.

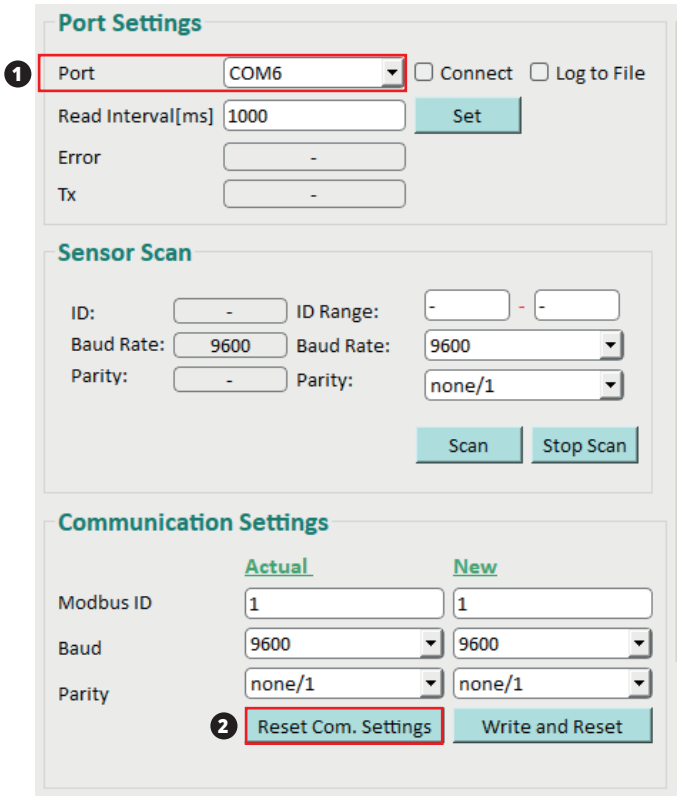

Figure 15: Resetting The Sensor Communication Parameters to Factory Settings

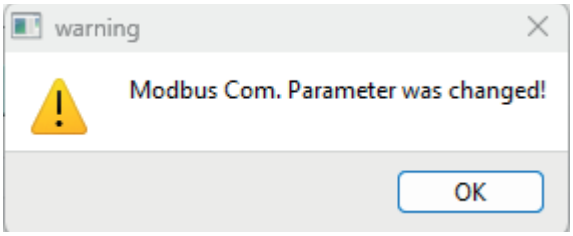

Figure 16: Sensor communication parameters were changed message

4.. 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.

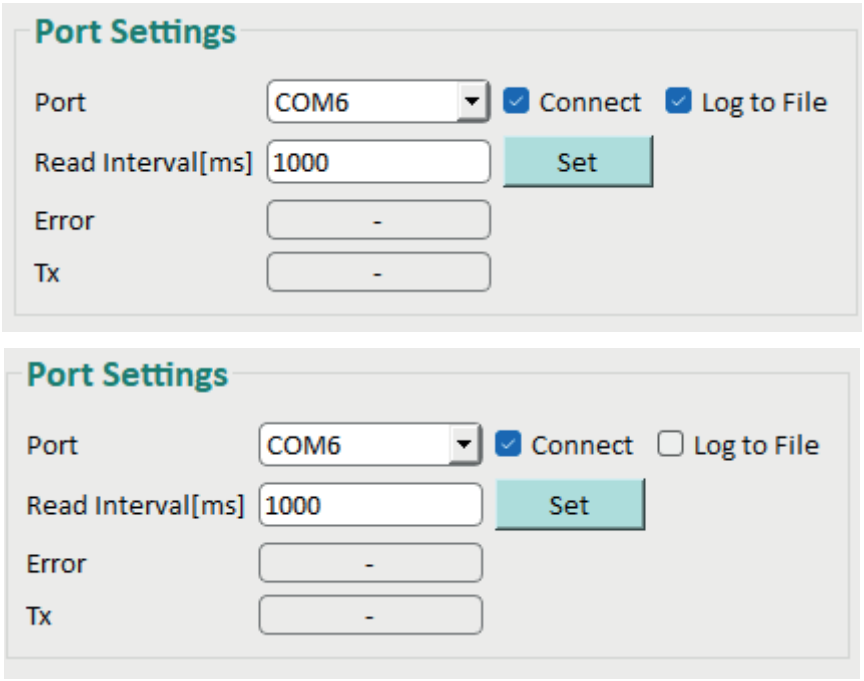

Figure 16: Data logging Process

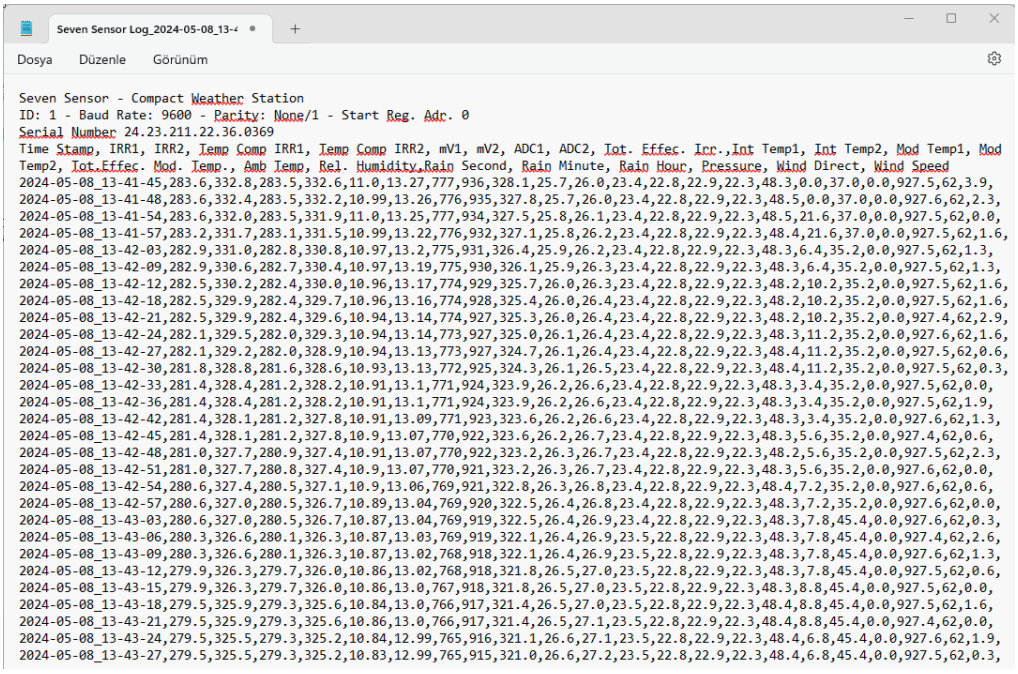

Figure 17: Log File

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 Rate) of the sensor have been correctly entered .
- ✔ Restart (Off/On) the Power Supply and disconnect the USB-RS485 Converter then connect it again.

Contact Informations:

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

Technical Support
Phone: +90 530 889 8019 / +90 544 919 8328
E-mail: teknik@sevensensor.com