SUNGROW

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Connection & Settings of SEVEN Sensors to Sungrow Dataloggers

1.Introduction

This document is prepared for Sungrow Smart Communication Box COM100D, COM100E and Logger1000A, Logger1000B users. The steps are explained below to connect SEVEN Sensor Box to Sungrow Logger1000A.

The following meteorological data are provided by SEVEN the Sensor Box. The communication is provided via RS485 with Modbus RTU protocol.

1. 3S-IS, Solar Irradiance Sensor (W/m²)
2. 3S-MT-PT1000, Module Temperature Sensor (°C)
3. 3S-AT-PT1000, Ambient Temperature Sensor (°C)
4. 3S-WS-PLS, Wind Speed Sensor (m/s)
5. 3S-WD, Wind Direction Sensor(°)
6. 3S-RH&AT, Relative Humidity Sensor (%)

- *SEVEN has the right to make modifications without notice.*

2. Cable Connections

Connect the green wire (RS485 A / Data(+)) of the output cable of the Sensor Box to COM1 (A1) port of the Logger1000A and connect the yellow wire (RS485 B / Data(-)) of the output cable of the Sensor Box to COM1 (B1) port of the Logger1000A. Another free port also can be used for connection (COM2/COM3) in the same way.

White and brown wires of the output cable of the Sensor Box power up the Sensor Box as shown in Table 1.

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

Table 1: Communication and Power Cable Color Coding

A cable with magnetic field protection must be used as communication and power cable between the sensor and datalogger. Please don't use CAT 6 cable.

SEVEN sensors are supplied with a voltage of 12-30 VDC. The recommended voltage value is 24 VDC. A high quality power supply must be used for the sensor supply. If the datalogger used has 12 or 24V output, it can be used as a power source.

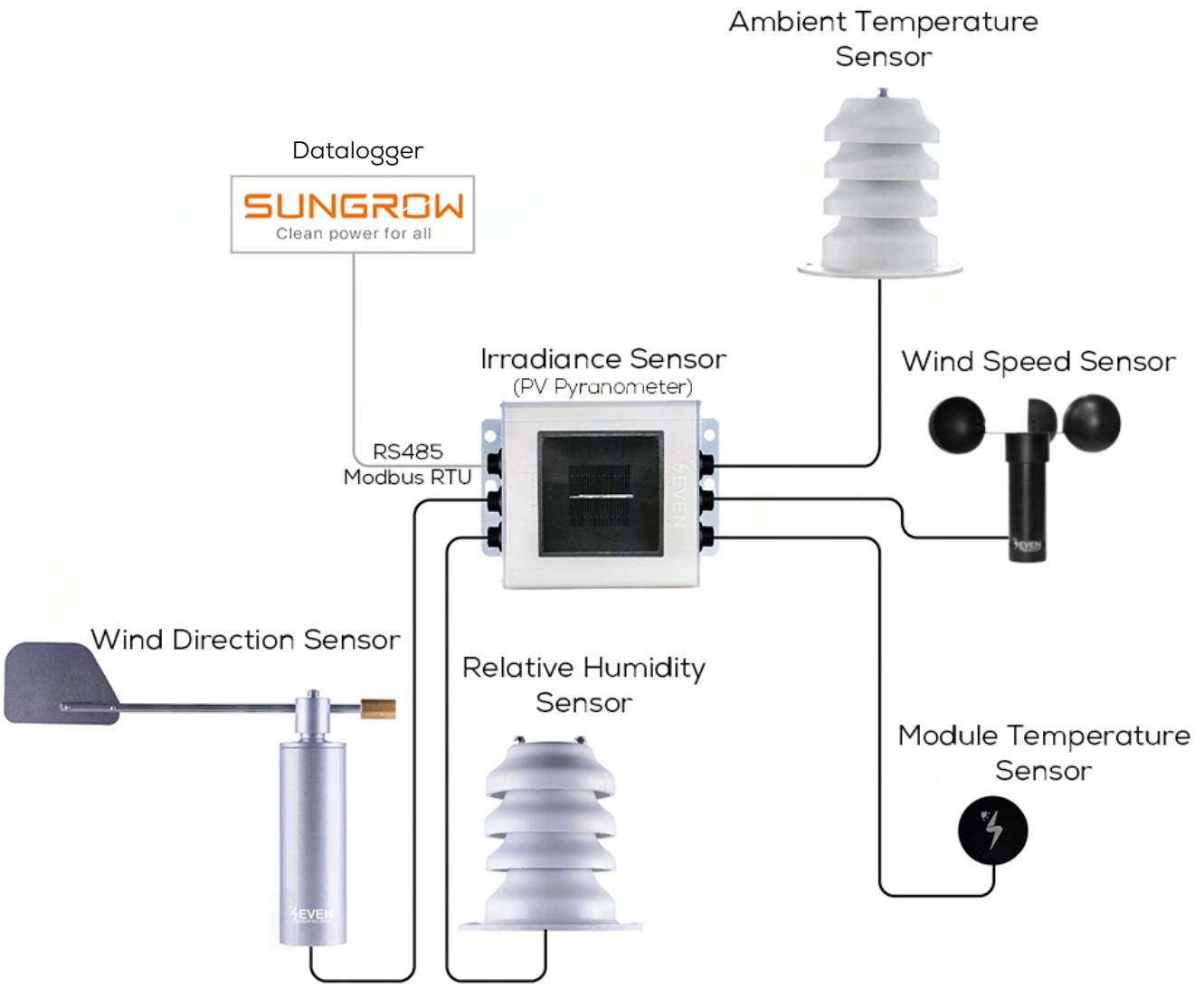

Figure 1: Sungrow Weather Station

3. Configuration of PC Network Parameters

The datalogger and the PC can communicate via the Ethernet cable or Wi-Fi. Corresponding configuration of network parameters is as follows.

Communication	Configuration	WEB adress
(ETH) Ethernet	Set the IP address of the PC and datalogger to the same network segment. The IP address of the datalogger is 12.12.12.12. Therefore, the IP address of the PC may be set to 12.12.12.125, and the subnet mask is 255.255.255.0.	12.12.12.12
Wi-Fi	Turn on the wireless network setting of the PC. Search for the wireless network name of the internal Logger1000A and connect to it.	11.11.11.1

Table 2: PC Network Parameters

The format of the wireless network name is SG-X. "**X**" represents the serial number of the Logger1000A and can be obtained from the outer surface of the Logger1000A which is installed inside the main box. Wireless network can be connected without password.

4. Settings

Step 1 and 2 : Enter the IP address (11.11.11.1) of the datalogger in the web browser address bar to access user interface. Click on the button "**Login**" in the upper right corner.

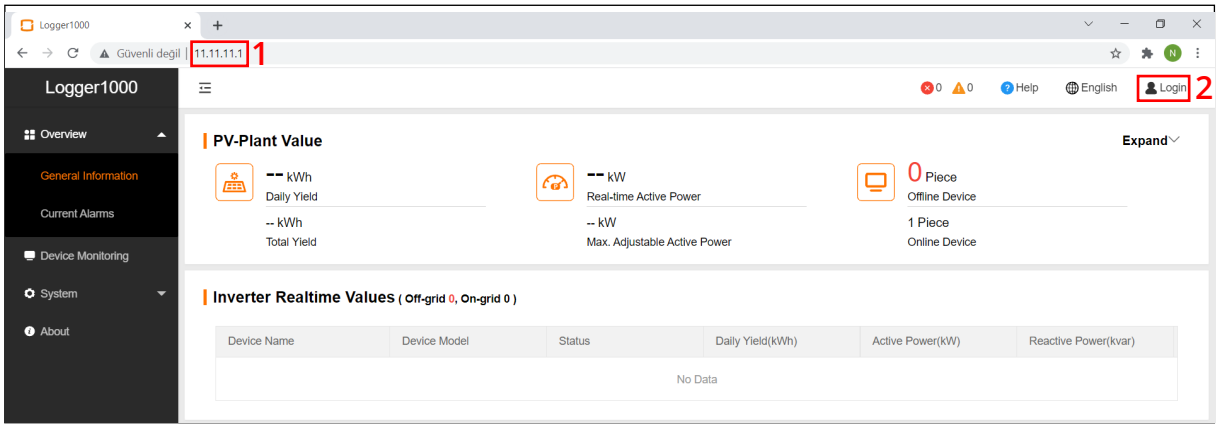

Figure 2: Logger1000 User Interface

Step 3 : Enter the password, and click on "**Login**" button. (Factory default password is pw1111).

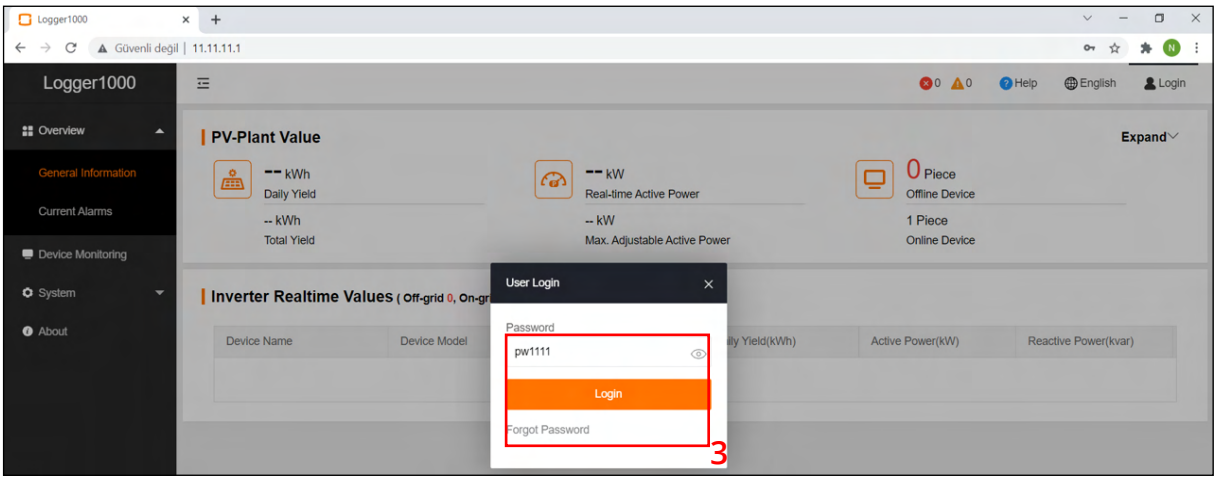

Figure 3: Logger1000 user login screen

SEVEN Sensor Box will not be detected automatically. Settings shall be done manually. Follow the steps below to add SEVEN Sensor Box, after logging into the O&M user interface:

Step 4 and 5 : Click on "**Device List**" in the menu "**Device**".

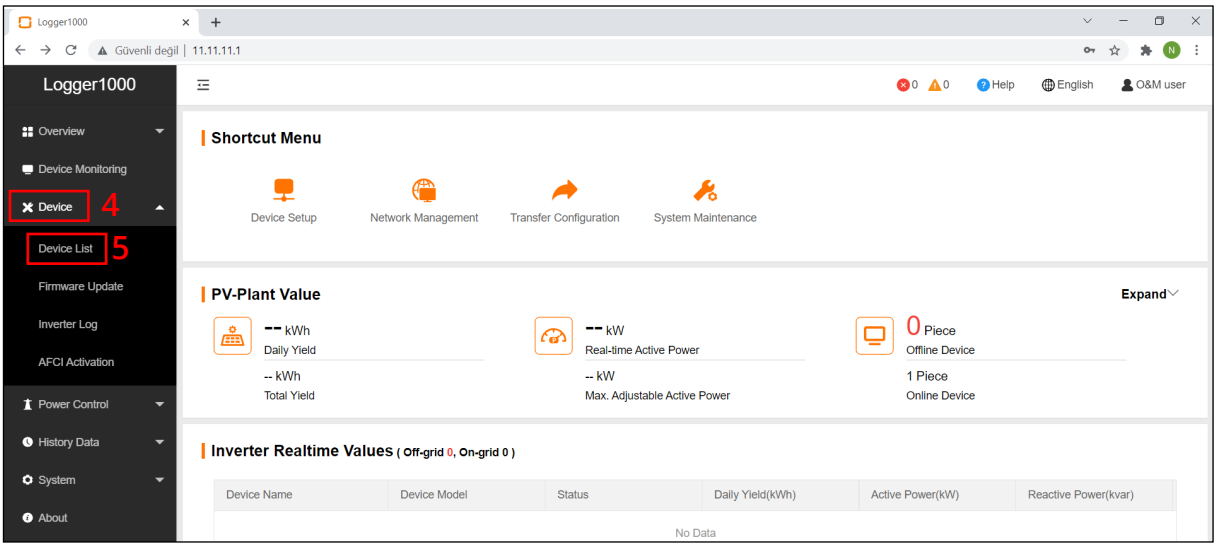

Figure 4: User Interface

Step 6 : Click on "**Add Device**".

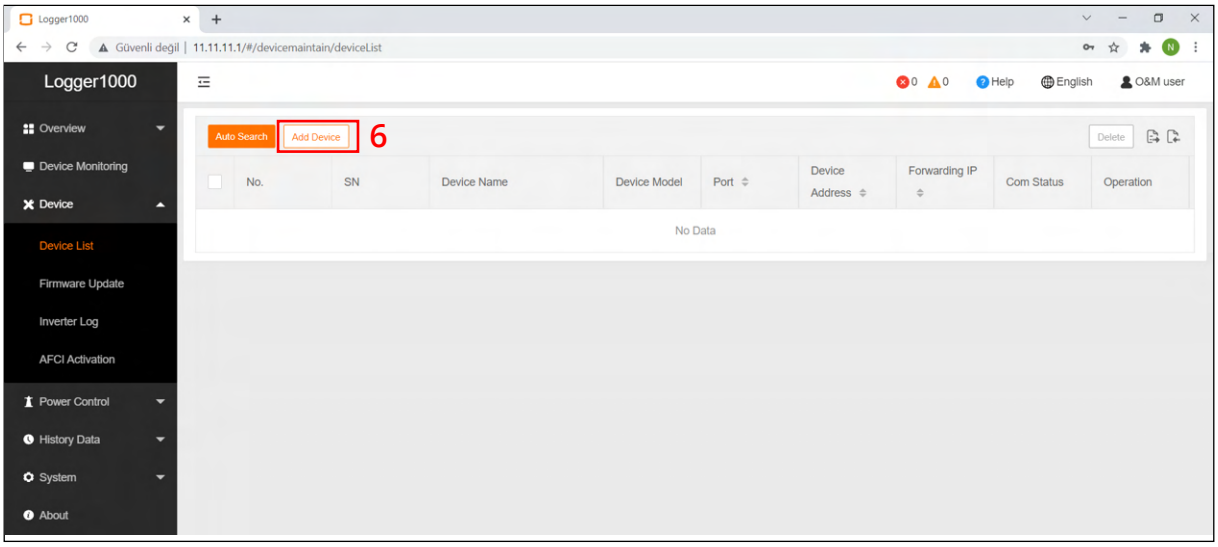

Figure 5: Device List

Step 7 : Make the following definitions in the opened window.

- *Device : Meteo Station*
- *Port : COM 1 (or another port which the sensor is connected).*
- *Device Model : Others*
- *Configuration Method : Custom*

Step 8 : Then click on "**Next**" button.

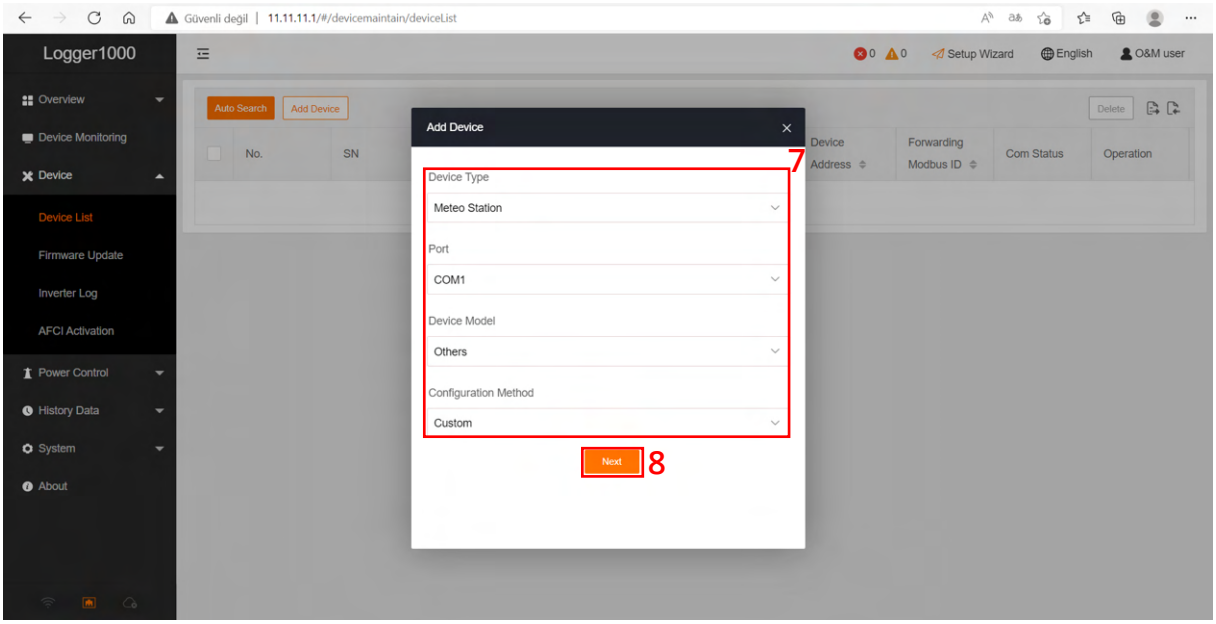

Figure 6: Seven Sensor Box Settings

Step 9,10 and 11 : Choose the sensors which data will be followed and make definitions of sensors.

Step 12 : Click on "**Confirm**" button.

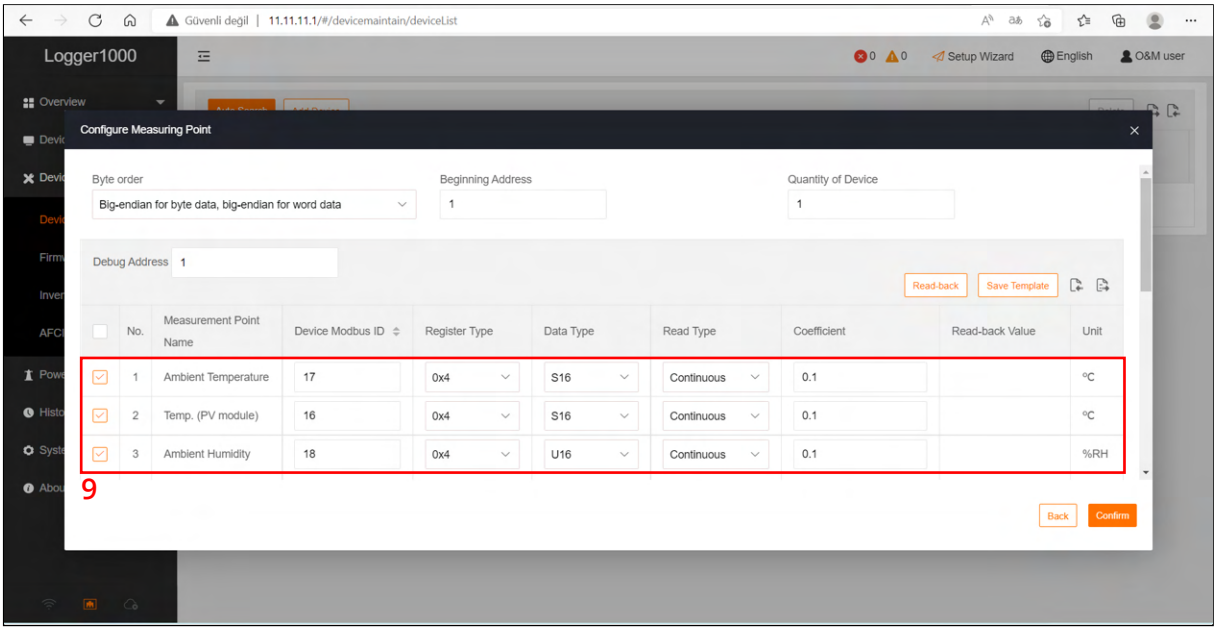

Figure 7: Logger1000 Sensor Configuration Tool

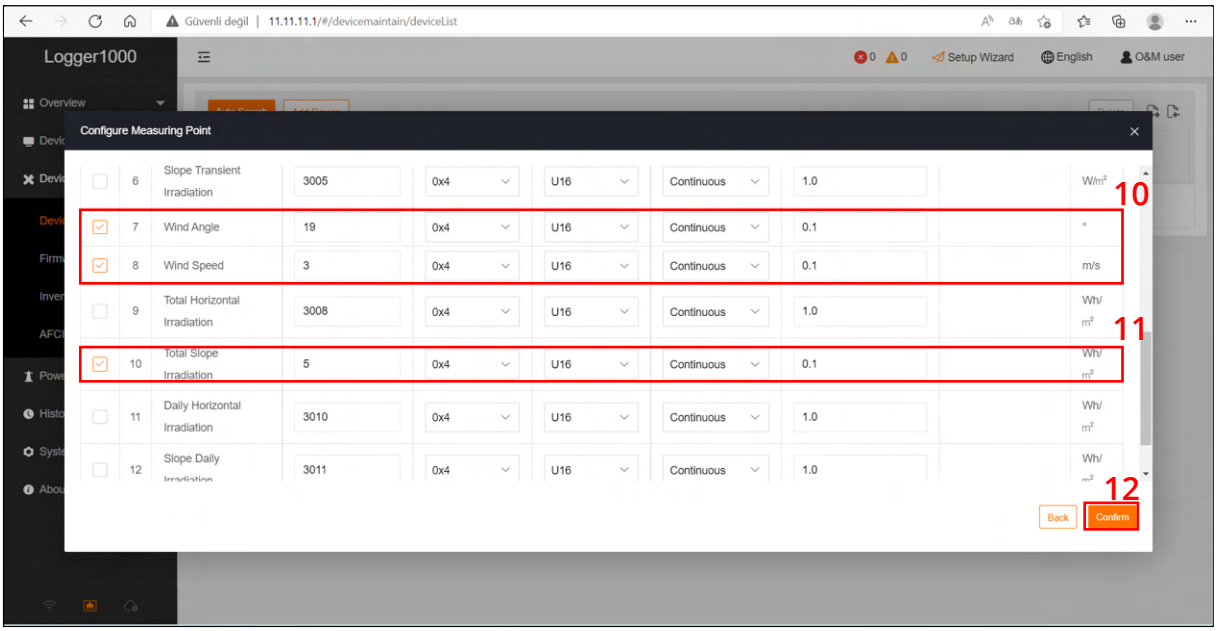

Figure 8: Logger1000 Sensor Configuration Screen

Step 13 and 14 : After completing all settings, the meteorological data will be shown in the "**Device Monitoring**" page.

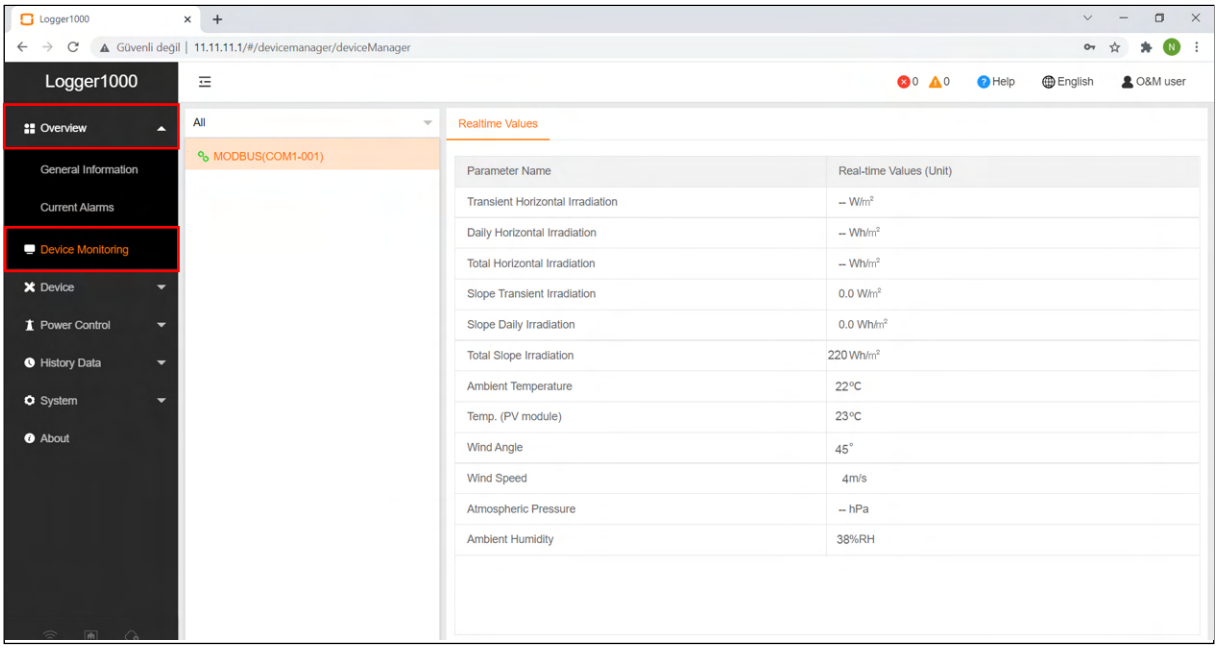

Figure 9: Device Monitoring

Contact Information:

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

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