

# blue'Log

X - Series

## Connection & Settings Instructions for SEVEN Sensor to Blue'Log Series



## 1. Introduction

This document is prepared for Blue'Log Series users. The steps are explained below to connect SEVEN Sensor Box to Blue'Log.

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

1. 3S-IS, Irradiance Sensor (W/m<sup>2</sup>)
2. Internal Temperature (°C)
3. 3S-MT-PT1000, Module Temperature Sensor (°C)
4. 3S-AT-PT1000, Ambient Temperature Sensor (°C)
5. 3S-WS-PLS, Wind Speed Sensor (m/s)
6. 3S-WD, Wind Direction Sensor (°)
7. 3S-RH&AT, Relative Humidity Sensor (%)

## 2. Cable Connection

Connect the green wire of the output cable of the Sensor Box to (A) (RS485 A / Data (+)) on the Blue'Log RS485-1 port and connect the yellow wire of the output cable of the Sensor Box to (B) (RS485 B / Data (+)) on the Blue'Log RS485-1 port. RS485-2 port can be selected instead of RS485-1 for the same purpose.

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

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

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 the datalogger. Please don't use CAT6 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.



SEVEN has the right to make modifications on this documentation without notice.

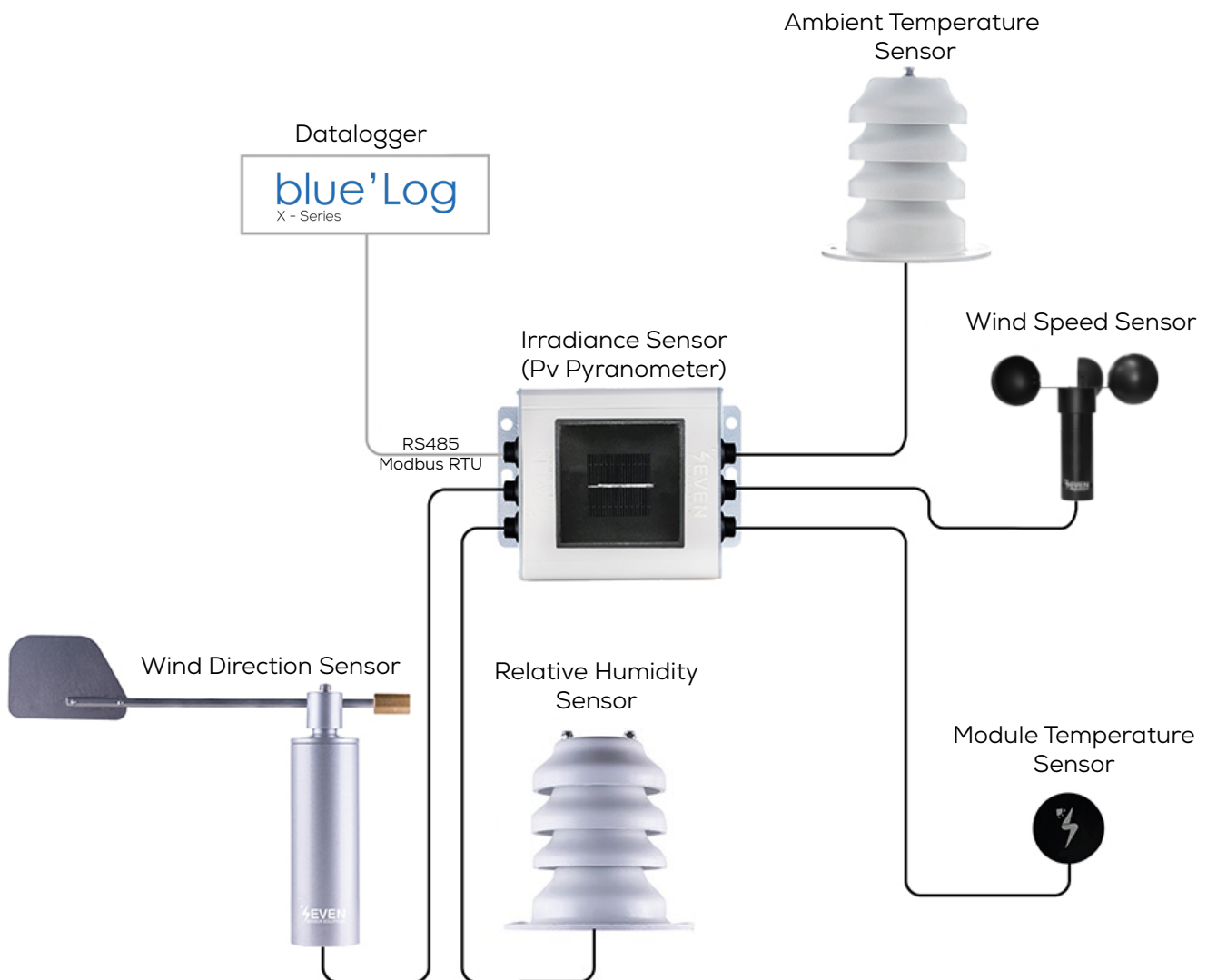


Figure 1: Blue'Log Series Weather Station



The sensor model can be different as per the customer's request.



If your sensor model is 3S-2IS, 3S-3IS, 3S-4IS or 3S-CWS, enter each orientation's module number to the configuration tool to monitor the total effective irradiance and total effective module temperature before configuring in BlueLog Monitoring System.

### 3. Blue'Log Network Configuration

Blue'Log's IP address and the other parameters are automatically obtained from the DHCP server. For this, the router's automatic assignment must be enabled.

To access the Blue'Log interface, enter the Blue'Log IP address in your PC browser.

### 4. Settings

**Step 1 :** Enter the Username and the Password to log in to the interface. Then click on **"Sign in"** button.

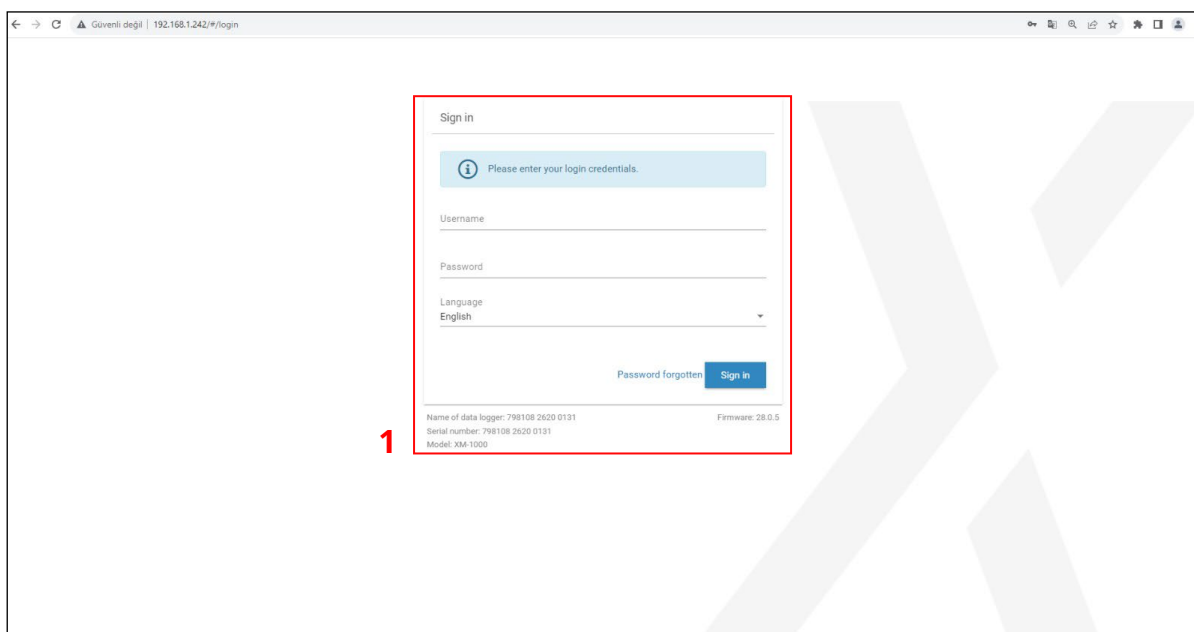


Figure 2: Interface Enter Page

## TECHNICAL DOCUMENT - BLUE'LOG SERIES CONNECTION & SETTINGS

**Step 2 and 3 :** Click on **"Sensors"** in the **"DEVICE"** menu.

**Step 4 :** Select **"SEVEN Sensor Solutions"** from the **"All Vendors"** list. **"3S-IS"** option will be selected automatically from the **"Series"** list.

**Step 5 :** Select the communication parameters of the sensor in the **"Interface Setting"** section.

Factory default settings for SEVEN Sensor Box :

- Addres : 1
- Baudrate : 9600
- Parity : None
- Stop Bit : 1
- Data Bit : 8



In case more than one device is connected to the port you have connected the sensor to, device ID's must be different while baudrate and parity values must be the same. You can change the device ID via SEVEN configuration tool.

**Step 6 :** Click on **"Start Scan"** button.

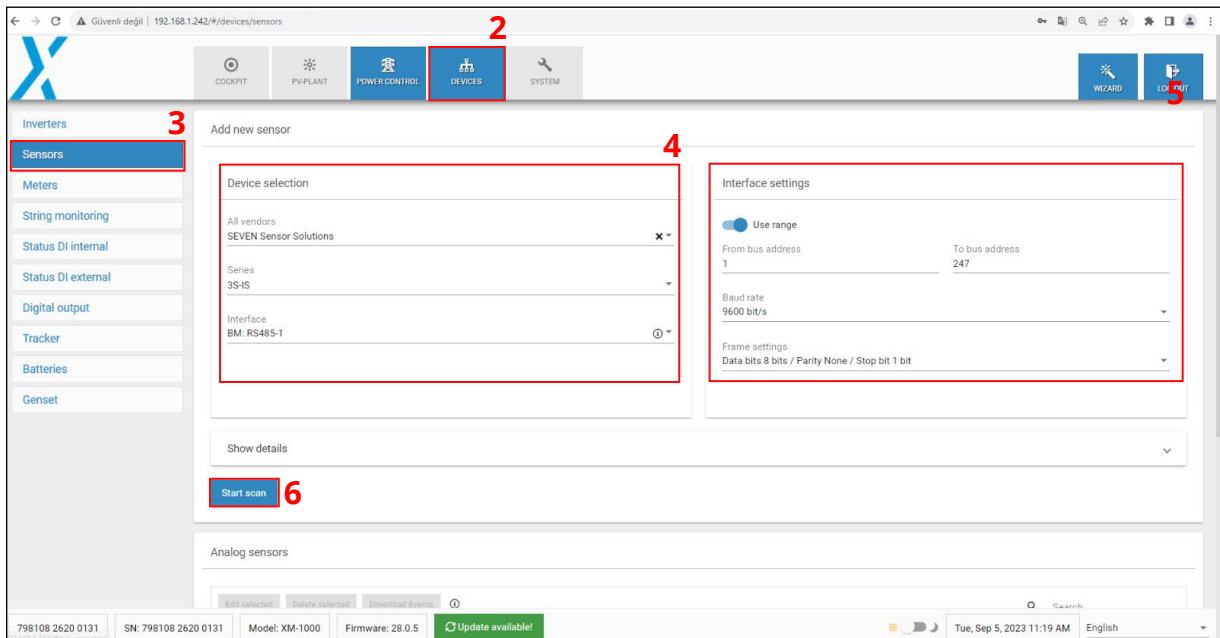


Figure 3: Seven Sensor Box Settings

**Step 7 :** When the connection with SEVEN Sensor Box is established, it will be displayed in the **"Bus Sensors"** section as shown in Figure 4.



If the communication parameters of SEVEN Sensor have been changed by the user, enter the new values in the **"Interface Settings"** section.

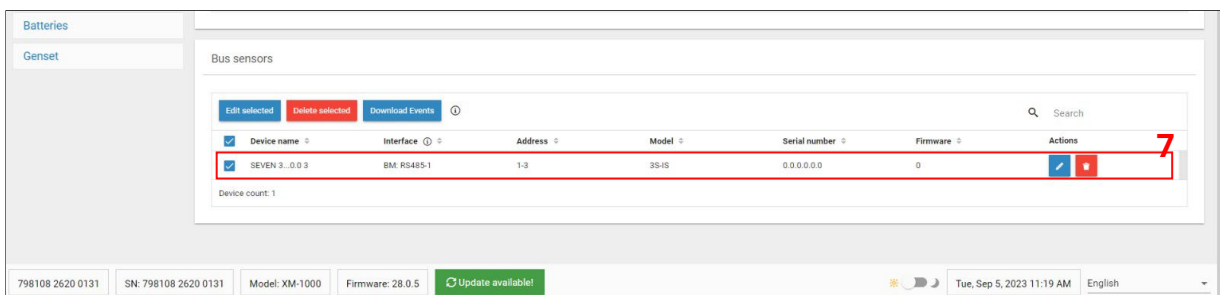


Figure 4: Found Sensors

**Step 8 ve 9 :** Click on **"Realtime Values "** in the **"COCKPIT"** menu.

**Step 10 :** On the page that opens, select SEVEN Sensors defined in the Sensors section.

**Step 11 :** In the Values section, select the data to be obtained from SEVEN Sensor Box. You can check below which data in Blue'Log system will be obtained from each sensor.

- *Irradiance 4 (W/m<sup>2</sup>) : Irradiance Sensor (W/m<sup>2</sup>)*
- *Temperature (°C) : Internal Temperature Sensor (°C)*
- *Temperature 1 (°C) : Module Temperature Sensor (°C)*
- *Temperature 2 (°C) : Ambient Temperature Sensor (°C)*
- *Humidity (%) : Relative Humidity Sensor (%)*
- *Wind Speed (m/s) : Wind Speed Sensor (m/s)*
- *Wind Direction (°) : Wind Direction Sensor (°)*

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

**Step 13 :** The data from the sensor will be displayed in the **"Realtime Values"** section as shown in Figure 5.

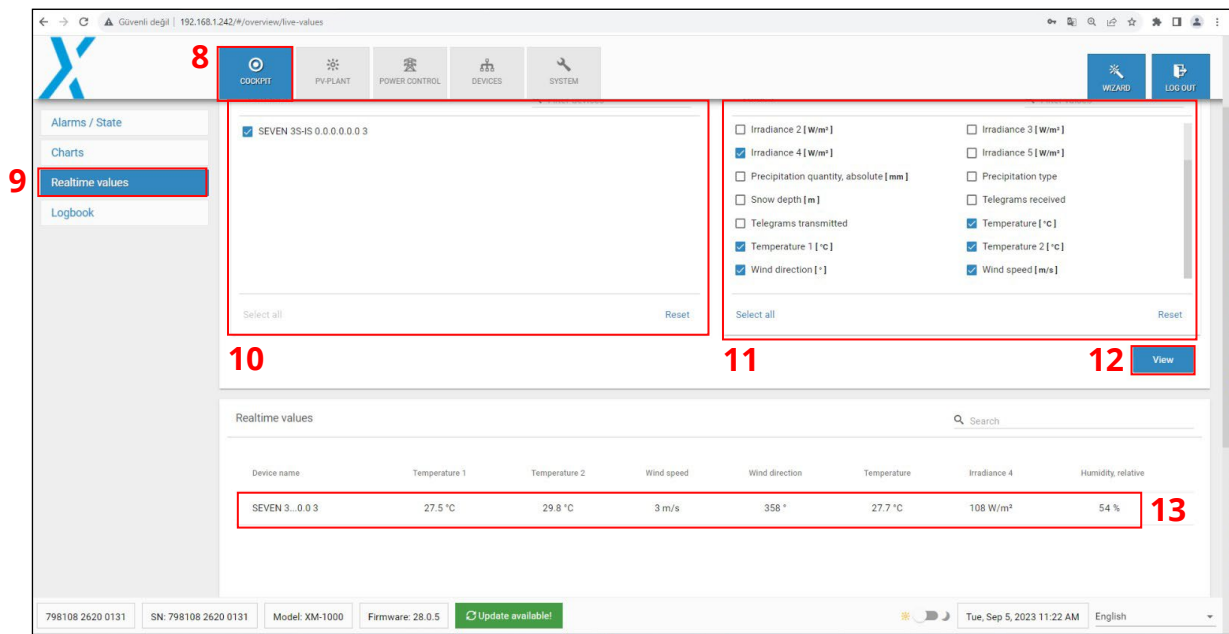


Figure 5: The Data of Seven Sensor Box

## TECHNICAL DOCUMENT - BLUE'LOG SERIES CONNECTION & SETTINGS

**Step 14 :** The data can also be displayed as a graph with the **"Charts"** option from the **"COCKPIT"** menu.



Figure 6: Data Graph

After completing all the settings, the meteorological data will appear on VCOM monitoring system screen as shown in Figure 7.

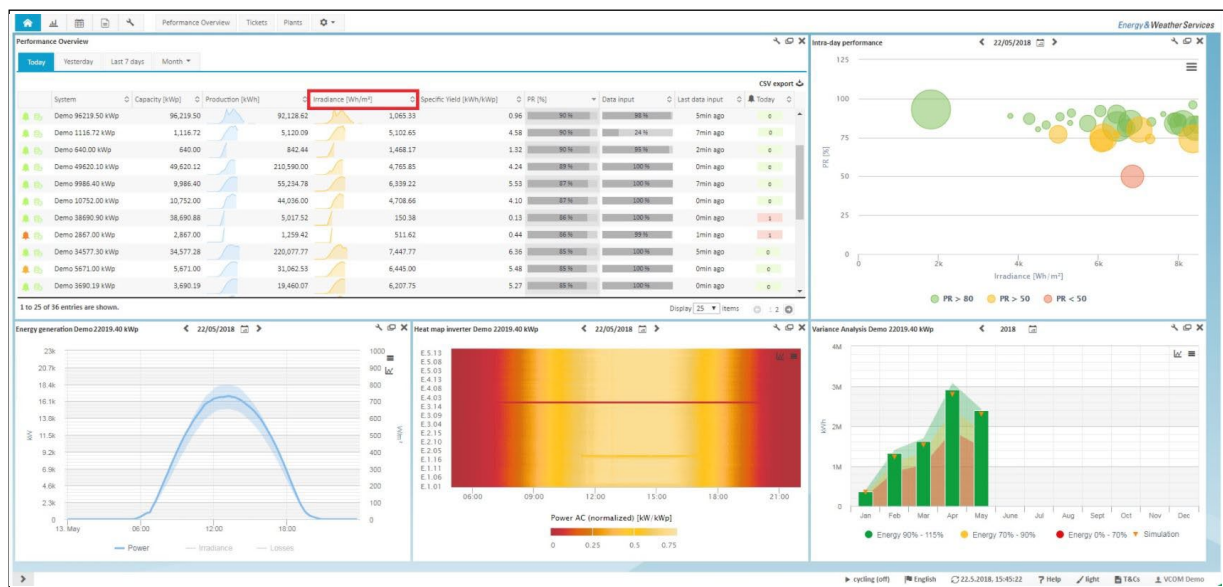


Figure 7: Vcom Monitoring System

### Contact Information:

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

**Can GÜNDÜZ**

**Cep:** +90 530 425 33 19

**E-mail:** teknik@sevensensor.com