

Connection & Settings Instructions for SEVEN Sensors to Solplanet Ai Logger



1. Introduction

This document is prepared for Solplanet Ai Logger 1000 users. The steps are explained below to connect SEVEN Sensor Box to Solplanet Ai Logger 1000.

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/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 (°)

2. Cable Connection

RS485 isolator is used for connection of SEVEN Sensor Box with Ai Logger 1000. SEVEN Sensor Box is connected to the isolator. The data cables from the isolator are then connected to the Ai Logger 1000 COM port.

The green wire of the cable from the Sensor Box (RS485 A / Data (+)) is connected to section 9 of the RS485 isolator and the yellow wire of the cable from the sensor box (RS485 B / Data (-)) is connected to section 10 of the RS485 isolator.

The cable connected to the 1st part of the isolator is connected to the COM port (RS485 A/Data(+)) on the 1000 data logger, and the cable to the 2nd part of the isolator is connected to the COM port (RS485B/Data(-)) of the 1000 data logger.

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	lsolator (9) (RS485 A / Data (+))	
Yellow	lsolator (10) (RS485 B / Data (-))	

 Table 1: Communication and Power Cable Color Coding for SEVEN Sensor Box

Isolator (3)	Power (+)	
lsolator (4)	Power (-)	
lsolator (1)	Al Logger (RS485 A / Data (+))	
lsolator (2)	Al Logger (RS485 B / Data (-))	

Table 2: Communication and Power Cable Coding for Al Logger 1000-Isolator

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

SEVEN Sensors are supplied with a voltage of 12-30 VDC. The recommeded 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: Solplanet Weather Station



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



If your sensor model 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 configurating in Solplanet Monitoring System.

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3. Ai Logger Interface Address

Connect the PC and the Ai Logger LAN port to the network port of the router through the network cable or PC and Ai Logger 1000 LAN ports must be connected to each other so that they are in the same network.

To log in to the Ai Logger 1000 configuration interface, the address http://ailogger-XXX.local must be entered in your computer browser using the last 3 digits of the serial number of the data logger.



For example, if the last three digits of the serial number of the data logger are 013, this number should be entered instead of XXX and the address should be http://ailogger-013.local.



In order for the router to assing an IP address to the Solplanet, the automatically assignment (DHCP) must be enabled in the router.

4. Settings

Step 1 : To log in to the Solplanet Ai Logger 1000 interface, select the user type and enter the password.

	AiLogger
1	English ~ Ceneral user ~ General user Senter over ~ Senter over ~
	Log int

Figure 2: Solplanet Al Logger Interface



For the configuration interface you must select "Senior user" as User. Password should be "12345" by default.



Step 2 and 3 : After logging in, click on the "Maintain" tab and open the "Device Management" page. Step 4 : Click on "Add device".

AiLogger 1000		Advanced user			Language: 💠 Log Out (
A Overview	>				0
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Device management		3			
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Figure 3: Add Device Location

Step 5 and 6 : To add the SEVEN Sensor Box, select Weather Station from **"Device type"**. Select Modbus from the **"Communication Protocol"** section. Select SEVEN Sensor 3S-IS as **"Device Model"**. Select the RS485 port to which SEVEN Sensor is connected to from the **"Communication Port"** section. In the **"Communication address"** section, enter the ID address of the device and click the **"Submit"** button.

AlLogger 1000					Language: 📫 Log Out 🖯
A Overview	*				0
🔿 Device	>				
O System settings	~		Port-Address	Serial number	model name
User settings	>		Add device	×	C 2
Communication settings	>		Device type		
Energy scheduling	>	Auto search Add device Remove device Ch	Weather Station	~	
Maintain	×		Communication protocol		
Firmware upgrade	>		Modbus	~	
Security settings			Device model Seven Sensor 3S-IS	~	
Device management			Communication port		
			RS485 Port1	~	
			Communication address		
			1		
				6	
				Cancel	
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Figure 4: Add Device Settings



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.

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Step 7: After adding the sensor, the SEVEN Sensor Box will appear on the screen.

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System settings	×	7 0 1 Seven Sensor39-ISBC500H22000A 1-1 Seven Sensor39-ISBC500H22000A	model hame	
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Energy scheduling	>	Auto search Add device Remove devcie Change name		
Maintain	~			
Firmware upgrade	>			
Security settings				
Device management				
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Figure 5: Seven Sensor Status

Step 8 and 9: Click on the "Device" tab and open the "Weather station" page.

Step 10 : By clicking on the **"Weather station"** menu, you can see the meteorological data provided by SEVEN Sensors.

	Ail.ogger 1000		Advanced user			Language: 🌐 Log Out B
	Overview	•				
8	E Device	~	Running data	Performance data		
_	Ailogger	_ 1	0	Field	Values	Unit
	Inverters		1	Mode	Seven Sensor 3S-IS	
	Smart meter		2	Port-address	1-1	-4-
9	Weather station		3	Status	Online	
	Surtem entiting		4	Irradiation today	98	wim*2
	or and an and a second a secon		5	Module temperature	29.8	degC
			6	Enviroment temperature	29.8	degC
			7	Wind speed	2.7	m/s
			8	Wind direction	110	*
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Contact Informations:

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

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