

Connection & Settings Instructions for SEVEN Sensors to Khuatech E-Manager Pro

TECHNICAL DOCUMENT - KEHUA TECH E-MANAGER PRO CONNECTION & SETTING

1. Introduction

This document is prepared for Kehua Tech E-Manager Pro users. The steps are explained below to connect SEVEN Sensor Box to Kehua Tech E-Manager Pro.

The following meteorological data are 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 (°)
- 6. 3S-RH&AT, Relative Humidity Sensor (%)

2. Cable Connection

Connect the green wire of the output cable of the Sensor Box to 485-1/A (RS485 A / Data (+)) on the E-Manager Pro RS485 port, and connect the yellow wire of the output cable of the Sensor Box to 485-1/B (RS485 B / Data (-)) on the E-Manager Pro RS485 port. Another free port also can be used 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.

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

Table 1: Communication and Power Cable Color Coding



A communication and power cable with magnetic field protection must be used between sensor and 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 modification on this documentations without notice.



Ambient Temperature Sensor

Figure 1: Kehua Tech 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 KehuaTech Monitoring System.

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3. E-Manager Pro IP Address

Connect the PC and the E-Manager Pro LAN port to the network port of the router through the network cable or PC and E-Manager Pro LAN ports must be connected to each other so that they are in the same network.

Go to the router management page and check the **"Internet host list"** to request the IP address of the E-Manager Pro. This IP address is the one assigned by the router to the E-Manager Pro.



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

Enter the E-Manager Pro IP address in the browser to log in to the configuration interface.

4. Settings

Step 1 and 2 : The port to be used by SEVEN Sensor should be active in the **"Smart Device Setting"** section. Values to be entered for the port to be active:

- Model Code: 9001
- Protocol Code: 2
- Protocol Ver: 1

Then select the port where the sensor box is connected. After entering the values, click on **"Save"** button.

Device Information Serial Number: E4C092280185 Register Key: CRGTGWDC Hardware Version: AEM4-0021-00 Software Version: 4870723609R_0722811R Cloud Information Connection Status: OK Firmware Upgrade Dosys Seg Dosys segimed Image: Smart Device Setting Model Code Protocol Ver. Address Port Operation 9001 2 V1.00 1 485-1 ~		English 中攻:
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Figure 2: Device Configuration Page

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.

3

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Step 3 : To log in to the monitoring system, go to https://energy.kehua.com and log in by entering your username and password.



Figure 3: Login Screen

Step 4 and 5 : After logging in, click on the **"Operation and Maintenance Mgr."** tab. From the tab, click on the **"User Mgr."** button.

TECH	ENERGY		4	Agent User Mgr.	Plant Mgr. Logger Mgr.	Inverter Mgr. Inverter Control	
gent Pl	ease select	Key word User nar	ne v Please input	Create time Please select	er Mgr.		
	No.	User name	Agent	Email	Telephone	Op	erate
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	2	and determined	170 Seej	and distances in		Details Disable	Delete Reset PW
	3	infot@ip employee.	Al Souji	inful@by-armij.com		Details Disable	Delete Reset PW
	4	analoge#10pral.com	the low-go int	anadogait@grad.com		Details Disable	Delete Reset PW
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	6	teristeri.alasatori@g	MPG2 Evaluational	Resident also also (Digmail.com		Details Disable	Delete Reset PW
	7	endrogide@hotmail.co	Paint Dougi	rologide@totral.com		Details Disable	Delete Reset PW
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Step 6 : Click on "Add"

Figure 4: Site Installation

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Step 7 and 8 : Select the site and enter the e-mail address. Then click on **"Save and continue creating the plant".**

KEHUA			e é	<mark>※</mark> & 🗐			🗘 🙎 Seven Sensor 🛩
Agent		Key word	User name 👻 Please Input	Create time Please select	Search		
Q	No.	User name	Agent	Email	Telephone		Operate
0		info3@ky-enerji.com	KY Enerji	info3@ky-enerji.com			
		emre@vtn.com.tr	VIN Enerii	emre@vtn.com.tr		Details	
		info4@ky-enerji.com	Add			× Details.	
0	4	omerkrgz46@gmail.com	1 Create a new user	2 Create plant 3	Electricity price Add	device Details	
		abcsolar.sevket@hotm		0		Details	
0	6	fenisleri.alacabel@g	Agent Elin Energy Ltd			Details	
		rodosgida@hotmail.co	Pagistas tuna 🔿 Email 🔿 Talankana			Details	
0	8	ecemdgnn2@gmail.com	register type Strian Cheephone			Details	
	9	monitoring@drk-enerj	* Email seven@sevensensor.co	m		Details	
0		muhasebe@bronzotomot			8	Details	
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	14	5444712924	KY Enerji		5444712924		
		5528049577	Ramak Enerji		5528049577		
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	> 30 /page ~	Goto 1 total 26 iter	Bo Bury			(Laboratory)	Add
							Platform new event: 33

Figure 5: Site Installation

Step 9 and 10: Enter site information in the relevant fields. Then click on "Save and continue electricity price setting".

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- 120					
Agent		Key word	Add	×	
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		emre@vtn.com.tr	Plant name Please input * Time zone GMT+3 ·	Details Disable Delete .	
		info4@ky-enerji.com	Belong area Please select an area	Details Disable Delete .	
	4	omerkrgz46@gmail.com		Details Disable Delete .	
		abcsolar.sevket@hotm	Plant type Please select the type of plant Inclination angle(") Please input	Details Disable Delete .	
	6	fenisleri.alacabel@g	Grid-tied type Please select the grid type	Details Disable Delete .	
		rodosgida@hotmail.co	Consult (MMA)	Details Disable Delete .	
	8	ecemdgnn2@gmail.com	a Cabachykwab) Please input	Details Enable Delete	
	9	monitoring@drk-enerj	Plant addr.	Details Disable Delete .	
		muhasebe@bronzotomot	Google Man	Details Disable Delete .	
				Details Disable Delete .	
		mesut_dogan1@hotmail	Broadway Sydiey	Details Enable Delete .	
		ecem.dogan@sunspectr	down of Sydney Chippendale Surry Hills Paddington Cooper Park	Details Disable Delete .	
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Figure 6: Site Installation

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Step 11 and 12 : Click the "Edit" button for adjustments related to electricity fee. Then click on "Save and continue adding devices".

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- IECO				
Agent		Key word	Add ×	
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				Platform new event: 33

Figure 7: Site Installation

Step 13 and 14: Click on the "Monitoring center" tab and click on the "Monitoring" button.

Step 15 and 16 : Select the site where the sensor box is installed from the tab on the left and select the site on the screen.

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		🗘 🔎 Leven Sensor 🛩
<i>≥</i> TECH	Monitor Overview Monitoring Current Event	
Clobal search	Image: Second	All v Q List mode
		Platform new event: 30

Figure 8: Monitoring System

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Step 17 : On the screen that opens, click on the box with the E-Manager Pro serial number in the **"Inverter Details"** section below.

	Image: Constraint Monitor Constraint Current Funct	🗘 🔷 💄 Seven Sensor 🛩
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 A manual many A many A	Total: 1 • Online 100.0% 1 • Offline 0.0% 0 • Normal 100.0% 1 • Abnormal 0.0% 0	Total • impor 0.0% 0 • less 10.0% 0 • point 10.0% 0
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		Platform new event: 30

Figure 9: Monitoring System

Step 18 : You can see the meteorological data provided by SEVEN Sensors in the "Device Data" section.

Clin Energy LM	Daily power generation		< 2023-06-23 □ > Wee	ek generated	Week Month	Year Total C 20	023-06-18 - 2023-06-24
A default	Unit: kW			Unit: kWh			
Powerup Energi	0.8			1			
VTN Energi	0.6			0.6			
AT Energi	0.4			0.4			
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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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