

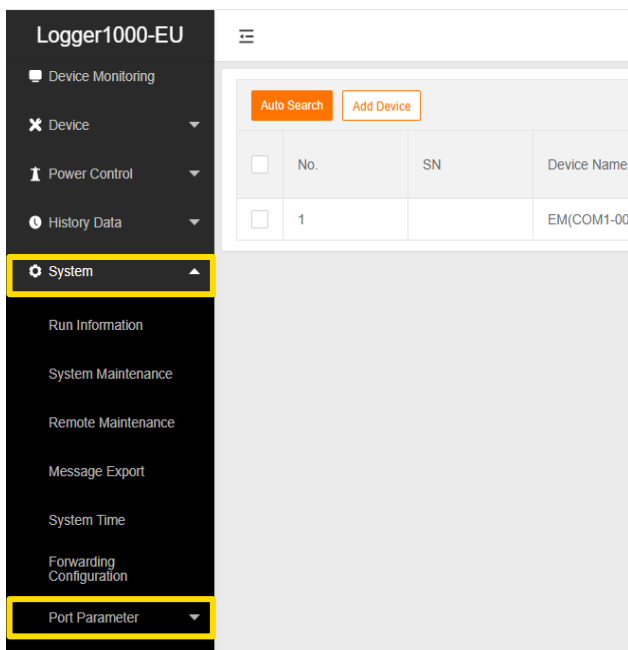
# Set-up guide for IMT Modbus Sensors with Sungrow Logger

## Requirements

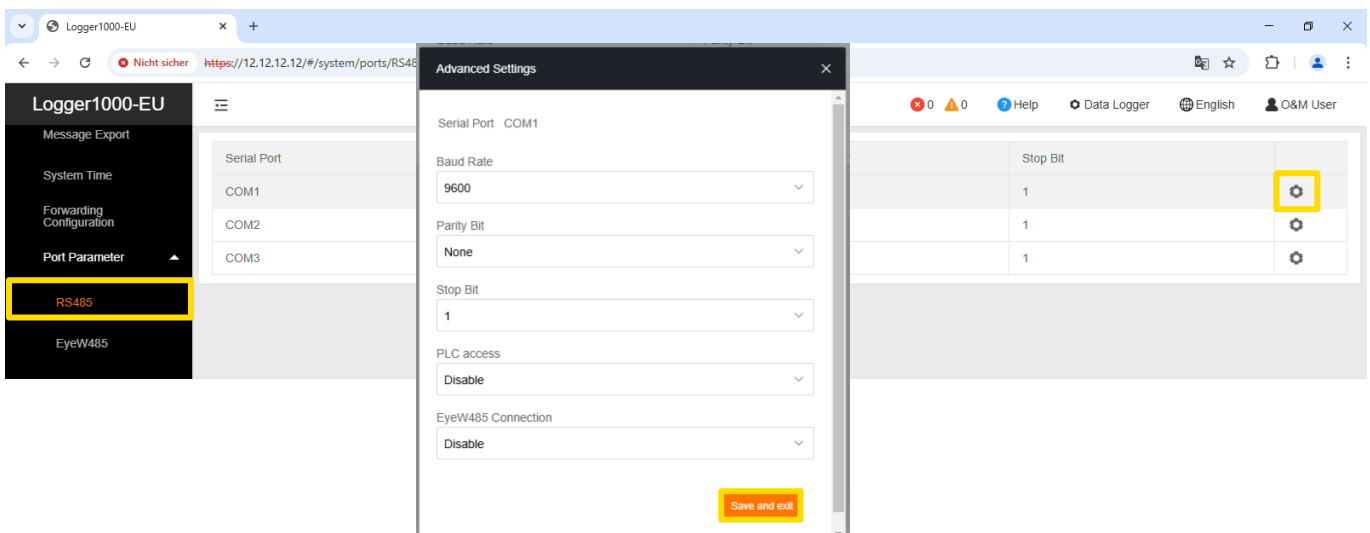
- Logger updated to latest Firmware
- Language changed to english

## COM Port Settings

Choose **System** on the left and **Port Parameter**.

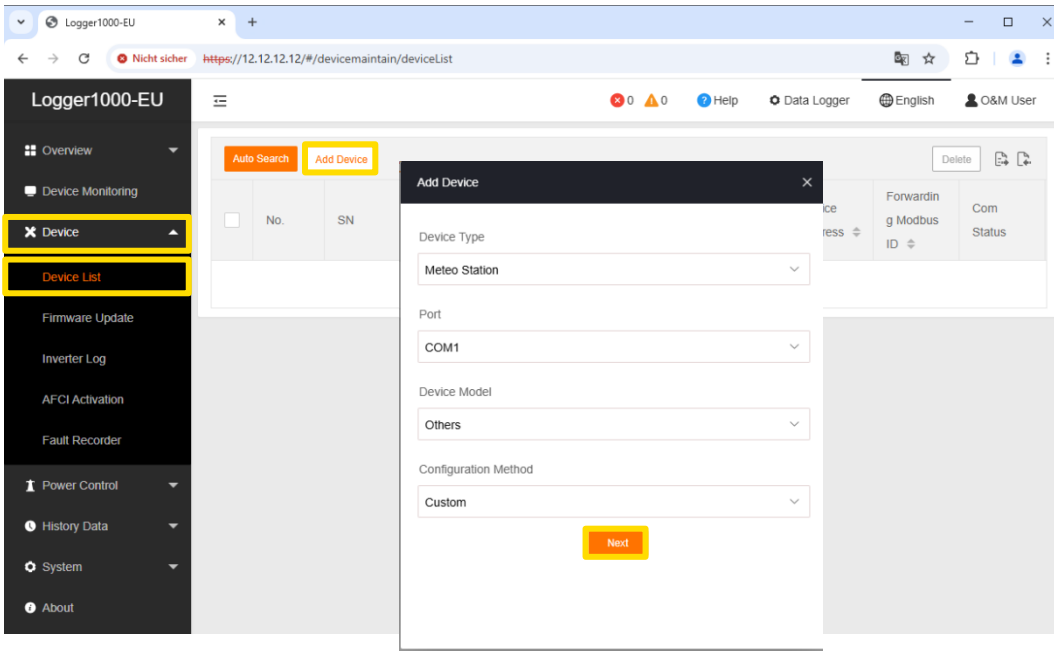


Select **RS485** and then click the setting wheel from the Port which is used. A Pop-up window will appear. Change the Port Parameters. The factory default settings from the sensor are **9600 Baud / Parity: None / Stop Bit:1**. For individual settings see the backside of the sensor.



**Connect Device**

Navigate to **Device** and click **Device List**. Click **Add Device**. Choose the **Device Type** as **Meteo Station** in the pop-up window. Choose the port where you have connected the sensor to. Select the **Device Model** as **Other** and choose the **Configuration Method** as **Custom**. Click **Next**.



Select the **Byte Order Big-endian**. Type in the Modbus address into the **Beginning Address** and **Debug Address**. Factory default is Modbus Address 1. For individual settings see the label on the backside of the sensor. Uncheck all measuring points at first.

Byte Order:

Beginning Address:

Quantity of Device:

Debug Address:

<input type="checkbox"/>	No.	Measuring Point Name	Device Modbus ID	Register Type	Data Type	Read Type	Coefficient	Read-back Value	Unit
<input type="checkbox"/>	1	Ambient Temperature	<input type="text" value="3000"/>	<input type="text" value="0x4"/>	<input type="text" value="U16"/>	<input type="text" value="Continuous"/>	<input type="text" value="1.0"/>		°C
<input type="checkbox"/>	2	Temp. (PV module)	<input type="text" value="3001"/>	<input type="text" value="0x4"/>	<input type="text" value="U16"/>	<input type="text" value="Continuous"/>	<input type="text" value="1.0"/>		°C
<input type="checkbox"/>	3	Ambient Humidity	<input type="text" value="3002"/>	<input type="text" value="0x4"/>	<input type="text" value="U16"/>	<input type="text" value="Continuous"/>	<input type="text" value="1.0"/>		%RH
<input type="checkbox"/>	4	Atmospheric Pressure	<input type="text" value="3003"/>	<input type="text" value="0x4"/>	<input type="text" value="U16"/>	<input type="text" value="Continuous"/>	<input type="text" value="1.0"/>		hPa
<input type="checkbox"/>	5	Transient Horizontal Irradiation	<input type="text" value="3004"/>	<input type="text" value="0x4"/>	<input type="text" value="U16"/>	<input type="text" value="Continuous"/>	<input type="text" value="1.0"/>		Wh/m²
<input type="checkbox"/>	6	Slope Transient Irradiation	<input type="text" value="3005"/>	<input type="text" value="0x4"/>	<input type="text" value="U16"/>	<input type="text" value="Continuous"/>	<input type="text" value="1.0"/>		Wh/m²
<input type="checkbox"/>	7	Wind Angle	<input type="text" value="3006"/>	<input type="text" value="0x4"/>	<input type="text" value="U16"/>	<input type="text" value="Continuous"/>	<input type="text" value="1.0"/>		°
<input type="checkbox"/>	8	Wind Speed	<input type="text" value="3007"/>	<input type="text" value="0x4"/>	<input type="text" value="U16"/>	<input type="text" value="Continuous"/>	<input type="text" value="1.0"/>		m/s

**Individual set-up for sensors**

Change the following data according to the sensor type connected. To check the communication, click **Read-back**. After the settings are made, click **Confirm**.

**The cell temperature is a roughly approximation for the PV module temperature when using signal address 7.**

Si-RS485TC-T-MB



PV module temperature ≈ Cell temperature

<input type="checkbox"/>	No.	Measuring Point Name	Device Modbus ID	Register Type	Data Type	Read Type	Coefficient	Read-back Value	Unit
<input type="checkbox"/>	1	Ambient Temperature	3000	0x4	U16	Continuous	1.0		°C
<input checked="" type="checkbox"/>	2	Temp. (PV module)	7	0x4	S16	Continuous	0.1	24.8	°C
<input type="checkbox"/>	3	Ambient Humidity	3002	0x4	U16	Continuous	1.0		%RH
<input type="checkbox"/>	4	Atmospheric Pressure	3003	0x4	U16	Continuous	1.0		hPa
<input type="checkbox"/>	5	Transient Horizontal Irradiation	3004	0x4	U16	Continuous	1.0		W/m <sup>2</sup>
<input checked="" type="checkbox"/>	6	Slope Transient	0	0x4	U16	Continuous	0.1	6.9	W/m <sup>2</sup>

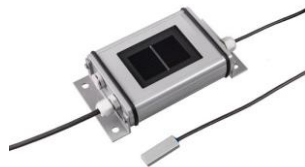
Si-RS485TC-2T-MB



PV module temperature ≈ Cell temperature

<input type="checkbox"/>	No.	Measuring Point Name	Device Modbus ID	Register Type	Data Type	Read Type	Coefficient	Read-back Value	Unit
<input checked="" type="checkbox"/>	1	Ambient Temperature	8	0x4	S16	Continuous	0.1	33.5	°C
<input checked="" type="checkbox"/>	2	Temp. (PV module)	7	0x4	S16	Continuous	0.1	24.9	°C
<input type="checkbox"/>	3	Ambient Humidity	3002	0x4	U16	Continuous	1.0		%RH
<input type="checkbox"/>	4	Atmospheric Pressure	3003	0x4	U16	Continuous	1.0		hPa
<input type="checkbox"/>	5	Transient Horizontal Irradiation	3004	0x4	U16	Continuous	1.0		W/m <sup>2</sup>
<input checked="" type="checkbox"/>	6	Slope Transient	0	0x4	U16	Continuous	0.1	7.1	W/m <sup>2</sup>

Si-RS485TC-T-Tm-MB



<input type="checkbox"/>	No.	Measuring Point Name	Device Modbus ID	Register Type	Data Type	Read Type	Coefficient	Read-back Value	Unit
<input type="checkbox"/>	1	Ambient Temperature	3000	0x4	S16	Continuous	0.1		°C
<input checked="" type="checkbox"/>	2	Temp. (PV module)	8	0x4	S16	Continuous	0.1	33.5	°C
<input type="checkbox"/>	3	Ambient Humidity	3002	0x4	U16	Continuous	1.0		%RH
<input type="checkbox"/>	4	Atmospheric Pressure	3003	0x4	U16	Continuous	1.0		hPa
<input type="checkbox"/>	5	Transient Horizontal Irradiation	3004	0x4	U16	Continuous	1.0		W/m <sup>2</sup>
<input checked="" type="checkbox"/>	6	Slope Transient Irradiation	0	0x4	U16	Continuous	0.1	6.9	W/m <sup>2</sup>

Si-RS485TC-2T-v-MB + Tamb-Si + Vwind-Si  
 PV module temperature ≈ Cell temperature



<input type="checkbox"/>	ID	Measuring Unit Name	Device Module ID	Register type	Unit type	Read type	Resolution	Scale factor	Unit
<input checked="" type="checkbox"/>	1	Ambient Temperature	8	0x4	S16	Continuous	0.1	33.4	°C
<input checked="" type="checkbox"/>	2	Temp. (PV module)	7	0x4	S16	Continuous	0.1	24.8	°C
<input type="checkbox"/>	3	Ambient Humidity	3002	0x4	U16	Continuous	1.0		%RH
<input type="checkbox"/>	4	Atmospheric Pressure	3003	0x4	U16	Continuous	1.0		hPa
<input type="checkbox"/>	5	Transient Horizontal Irradiation	3004	0x4	U16	Continuous	1.0		Wh/m <sup>2</sup>
<input checked="" type="checkbox"/>	6	Slope Transient Irradiation	0	0x4	U16	Continuous	0.1	6.6	Wh/m <sup>2</sup>
<input type="checkbox"/>	7	Wind Angle	3006	0x4	U16	Continuous	1.0		°
<input checked="" type="checkbox"/>	8	Wind Speed	3	0x4	U16	Continuous	0.1	0.0	m/s
<input type="checkbox"/>	9	Total Horizontal Irradiation	3008	0x4	U16	Continuous	1.0		Wh/m <sup>2</sup>
<input type="checkbox"/>	10	Total Slope Irradiation	3009	0x4	U16	Continuous	1.0		Wh/m <sup>2</sup>
		Daily Horizontal							Wh/m <sup>2</sup>

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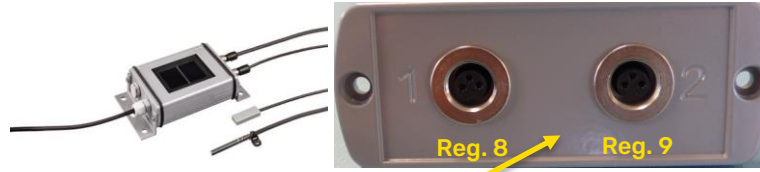
Si-RS485TC-2T-v-MB + Tmodul-Si + Vwind-Si



<input type="checkbox"/>	ID	Measuring Unit Name	Device Module ID	Register type	Unit type	Read type	Resolution	Scale factor	Unit
<input type="checkbox"/>	1	Ambient Temperature	3000	0x4	S16	Continuous	0.1		°C
<input checked="" type="checkbox"/>	2	Temp. (PV module)	8	0x4	S16	Continuous	0.1	33.5	°C
<input type="checkbox"/>	3	Ambient Humidity	3002	0x4	U16	Continuous	1.0		%RH
<input type="checkbox"/>	4	Atmospheric Pressure	3003	0x4	U16	Continuous	1.0		hPa
<input type="checkbox"/>	5	Transient Horizontal Irradiation	3004	0x4	U16	Continuous	1.0		Wh/m <sup>2</sup>
<input checked="" type="checkbox"/>	6	Slope Transient Irradiation	0	0x4	U16	Continuous	0.1	6.9	Wh/m <sup>2</sup>
<input type="checkbox"/>	7	Wind Angle	3006	0x4	U16	Continuous	1.0		°
<input checked="" type="checkbox"/>	8	Wind Speed	3	0x4	U16	Continuous	0.1	0.0	m/s
<input type="checkbox"/>	9	Total Horizontal Irradiation	3008	0x4	U16	Continuous	1.0		Wh/m <sup>2</sup>
<input type="checkbox"/>	10	Total Slope Irradiation	3009	0x4	U16	Continuous	1.0		Wh/m <sup>2</sup>
		Daily Horizontal							Wh/m <sup>2</sup>

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Si-RS485TC-3T-MB



If **Tamb-Si** is connected to **socket 2** and **Tmodul-Si** connected to **socket 1**

<input type="checkbox"/>	No.	Measuring Point Name	Device Modbus ID	Register Type	Data Type	Read Type	Coefficient	Read-back Value	Unit
<input checked="" type="checkbox"/>	1	Ambient Temperature	9	0x4	S16	Continuous	0.1		°C
<input checked="" type="checkbox"/>	2	Temp. (PV module)	8	0x4	S16	Continuous	0.1	33.5	°C
<input type="checkbox"/>	3	Ambient Humidity	3002	0x4	U16	Continuous	1.0		%RH
<input type="checkbox"/>	4	Atmospheric Pressure	3003	0x4	U16	Continuous	1.0		hPa
<input type="checkbox"/>	5	Transient Horizontal Irradiation	3004	0x4	U16	Continuous	1.0		W/m <sup>2</sup>
<input checked="" type="checkbox"/>	6	Slope Transient Irradiation	0	0x4	U16	Continuous	0.1	6.9	W/m <sup>2</sup>
<input type="checkbox"/>	7	Wind Angle	3006	0x4	U16	Continuous	1.0		°

If **Tamb-Si** is connected to **socket 1** and **Tmodul-Si** connected to **socket 2**

<input type="checkbox"/>	No.	Measuring Point Name	Device Modbus ID	Register Type	Data Type	Read Type	Coefficient	Read-back Value	Unit
<input checked="" type="checkbox"/>	1	Ambient Temperature	8	0x4	S16	Continuous	0.1		°C
<input checked="" type="checkbox"/>	2	Temp. (PV module)	9	0x4	S16	Continuous	0.1	33.5	°C
<input type="checkbox"/>	3	Ambient Humidity	3002	0x4	U16	Continuous	1.0		%RH
<input type="checkbox"/>	4	Atmospheric Pressure	3003	0x4	U16	Continuous	1.0		hPa
<input type="checkbox"/>	5	Transient Horizontal Irradiation	3004	0x4	U16	Continuous	1.0		W/m <sup>2</sup>
<input checked="" type="checkbox"/>	6	Slope Transient Irradiation	0	0x4	U16	Continuous	0.1	6.9	W/m <sup>2</sup>
<input type="checkbox"/>	7	Wind Angle	3006	0x4	U16	Continuous	1.0		°

Ta-ext-RS485-MB



<a href="#">Read-back</a> <a href="#">Save Template</a>									
<input type="checkbox"/>	No.	Measuring Point Name	Device Modbus ID	Register Type	Data Type	Read Type	Coefficient	Read-back Value	Unit
<input checked="" type="checkbox"/>	1	Ambient Temperature	8	0x4	S16	Continuous	0.1	33.6	°C
<input type="checkbox"/>	2	Temp. (PV module)	3001	0x4	S16	Continuous	0.1		°C
<input type="checkbox"/>	3	Ambient Humidity	3002	0x4	U16	Continuous	1.0		%RH
<input type="checkbox"/>	4	Atmospheric Pressure	3003	0x4	U16	Continuous	1.0		hPa
<input type="checkbox"/>	5	Transient Horizontal Irradiation	3004	0x4	U16	Continuous	1.0		W/m <sup>2</sup>
<input type="checkbox"/>	6	Slope Transient Irradiation	3005	0x4	U16	Continuous	0.1		W/m <sup>2</sup>
<input type="checkbox"/>	7	Wind Angle	3006	0x4	U16	Continuous	1.0		°

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Tm-RS485-MB



<a href="#">Read-back</a> <a href="#">Save Template</a>									
<input type="checkbox"/>	No.	Measuring Point Name	Device Modbus ID	Register Type	Data Type	Read Type	Coefficient	Read-back Value	Unit
<input type="checkbox"/>	1	Ambient Temperature	3000	0x4	S16	Continuous	0.1		°C
<input checked="" type="checkbox"/>	2	Temp. (PV module)	7	0x4	S16	Continuous	0.1	24.8	°C
<input type="checkbox"/>	3	Ambient Humidity	3002	0x4	U16	Continuous	1.0		%RH
<input type="checkbox"/>	4	Atmospheric Pressure	3003	0x4	U16	Continuous	1.0		hPa
<input type="checkbox"/>	5	Transient Horizontal Irradiation	3004	0x4	U16	Continuous	1.0		W/m <sup>2</sup>
<input type="checkbox"/>	6	Slope Transient Irradiation	3005	0x4	U16	Continuous	0.1		W/m <sup>2</sup>
<input type="checkbox"/>	7	Wind Angle	3006	0x4	U16	Continuous	1.0		°

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