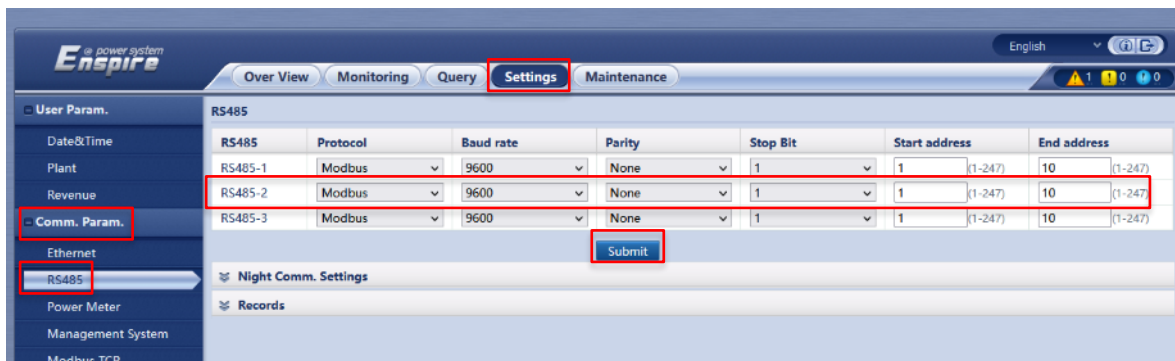


Huawei SmartLogger – EMI Settings for Si-RS485... and Tx-RS485... Sensors

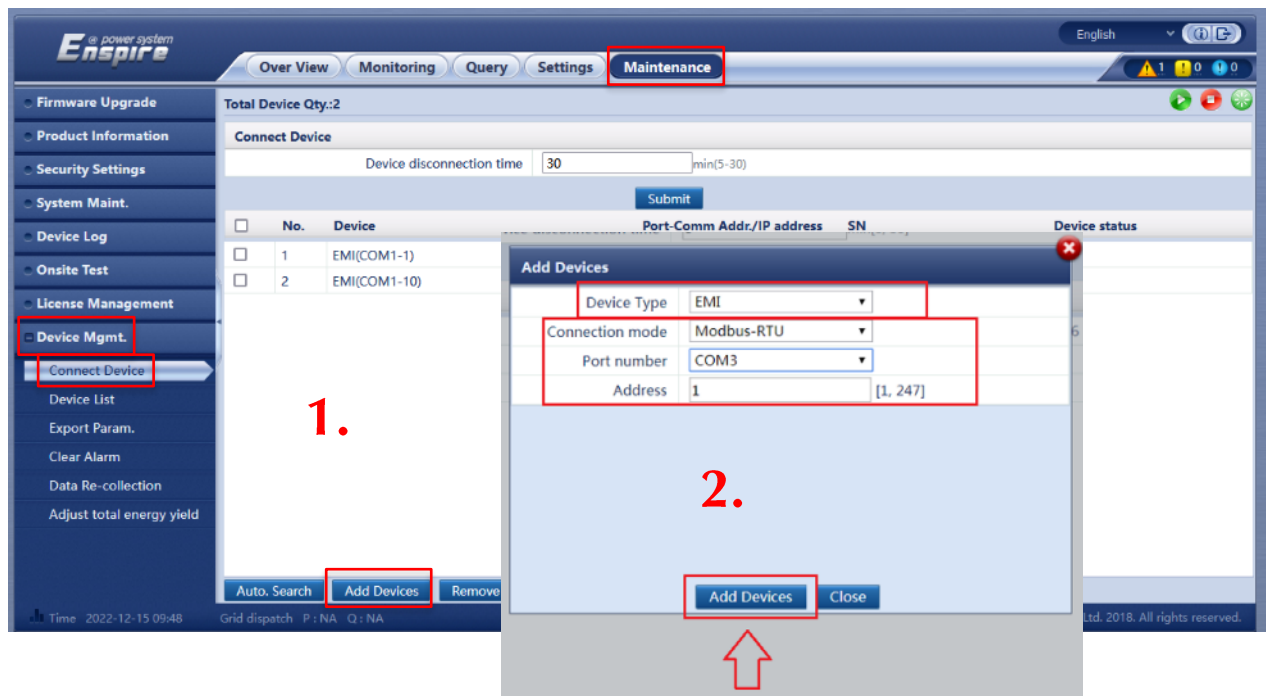
- ✓ Log in as “advanced user” to change all settings.
- ✓ Sensors on same bus (COM1, COM2 or COM3) must have different addresses but same Data Format (baud rate, parity and stop bit). Changes can be done with the Si-Modbus configurator (download from www.imt-solar.de).
- ✓ This document applies to all sensors with firmware version 1.53 or greater (see sensor label for firmware version).

1. COM Port Settings:

Choose **Settings** tab and from **Comm. Param.** → **RS485** and set the communication parameter for the EMI accordingly with instruction provided. The factory default settings are **9600 Baud / Parity: None / Stop Bit: 1**. For individual settings see the backside of the sensor. Click Submit.



2. Navigate to **Maintenance** and from **Device Mgmt.** → **Connect Device**. Click **Add Devices**. Add a MODBUS device for each sensor.

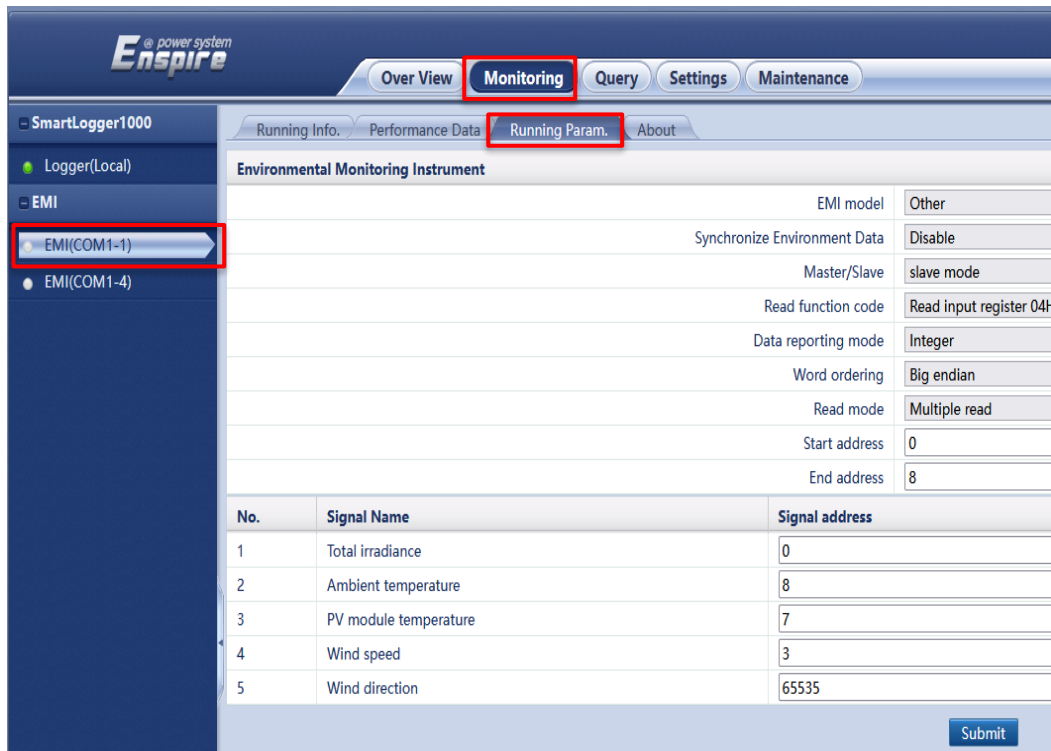


Choose the settings in the pop-up window, use **EMI** as **Device Type** and **Modbus-RTU** as **Connection Mode**.

Choose the port which you have connected the sensor to. The default **address** is **1**, individual settings are on the backside of the sensor.

The device in the WebUI is now named EMI (COM3-1).

- Change the running parameters.
Navigate to the **Monitoring** tab and select the device to change on the left side and click **Running Param.**



No.	Signal Name	Signal address
1	Total irradiance	0
2	Ambient temperature	8
3	PV module temperature	7
4	Wind speed	3
5	Wind direction	65535

Set-up the following data for all sensors:

EMI model	Other	Do not use the model Ingenieurbüro Si-RS485TC !
Synchronize Environment Data	Disable	
Master/Slave	slave mode	
Read function code	Read input register 04H	
Data reporting mode	Integer	
Word ordering	Big endian	
Read mode	Multiple read	
Start address	0	
End address	= highest signal address (7,8 or 9) used.	

The **End address** has to equal the highest **Signal address** (7,8 or 9, see page 3-5) used.

Change the following data according to the sensor type connected, whereas the signal address has to be understood as Modbus register (value 65535 means not available, offset stays 0.0):

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

Si-RS485TC-T-MB



PV module temperature \approx Cell temperature

No.	Signal Name	Signal address	Gain	Offset
1	Total irradiance	0	10	
2	Ambient temperature	65535	10	0.0
3	PV module temperature	7	10	0.0
4	Wind speed	65535	10	
5	Wind direction	65535	1	

[Submit](#)

Si-RS485TC-2T -MB



PV module temperature \approx Cell temperature

No.	Signal Name	Signal address	Gain	Offset
1	Total irradiance	0	10	
2	Ambient temperature	8	10	0.0
3	PV module temperature	7	10	0.0
4	Wind speed	65535	10	
5	Wind direction	65535	1	

[Submit](#)

Si-RS485TC-T-Tm-MB



No.	Signal Name	Signal address	Gain	Offset
1	Total irradiance	0	10	
2	Ambient temperature	65535	10	0.0
3	PV module temperature	8	10	0.0
4	Wind speed	65535	10	
5	Wind direction	65535	1	

[Submit](#)

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

PV module temperature ≈ Cell temperature



No.	Signal Name	Signal address	Gain	Offset
1	Total irradiance	0	10	
2	Ambient temperature	8	10	0.0
3	PV module temperature	7	10	0.0
4	Wind speed	3	10	
5	Wind direction	65535	1	

[Submit](#)

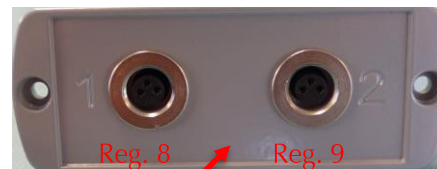
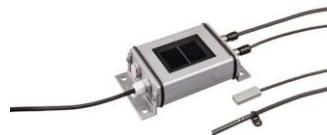
Si-RS485TC-2T-v-MB + Tmodul-Si + Vwind-Si



No.	Signal Name	Signal address	Gain	Offset
1	Total irradiance	0	10	
2	Ambient temperature	65535	10	0.0
3	PV module temperature	8	10	0.0
4	Wind speed	3	10	
5	Wind direction	65535	1	

[Submit](#)

Si-RS485TC-3T-MB



No.	Signal Name	Signal address	Gain	Offset
1	Total irradiance	0	10	
2	Ambient temperature	9 (when Tamb-Si at socket 2)	10	0.0
3	PV module temperature	8 (when Tmodul-Si at socket 1)	10	0.0
4	Wind speed	65535	10	
5	Wind direction	65535	1	

[Submit](#)

No.	Signal Name	Signal address	Gain	Offset
1	Total irradiance	0	10	
2	Ambient temperature	8 (when Tamb-Si at socket 1)	10	0.0
3	PV module temperature	9 (when Tmodul-Si at socket 2)	10	0.0
4	Wind speed	65535	10	
5	Wind direction	65535	1	

[Submit](#)

Ta-ext-RS485-MB



No.	Signal Name	Signal address	Gain	Offset
1	Total irradiance	65535	10	
2	Ambient temperature	8	10	0.0
3	PV module temperature	65535	10	0.0
4	Wind speed	65535	10	
5	Wind direction	65535	1	

[Submit](#)

Tm-RS485-MB



No.	Signal Name	Signal address	Gain	Offset
1	Total irradiance	65535	10	
2	Ambient temperature	65535	10	0.0
3	PV module temperature	7	10	0.0
4	Wind speed	65535	10	
5	Wind direction	65535	1	

[Submit](#)