

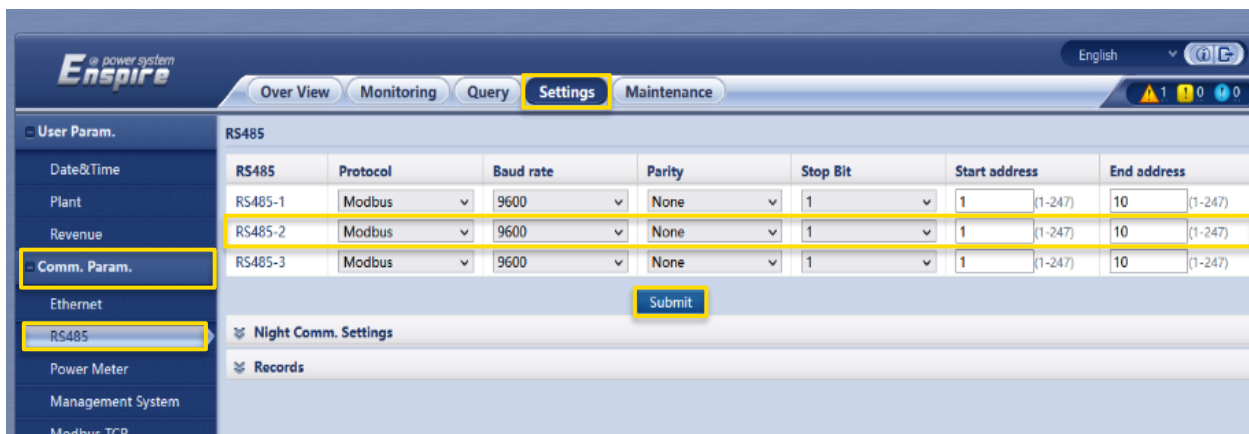
Set-up guide for IMT Modbus Sensors with Huawei Smartlogger

Requirements

- Logged in as „advanced user“
- Different Modbus addresses for each sensor when connected to the same bus, but same Data Format
- Sensor with Firmware version 1.53 or greater

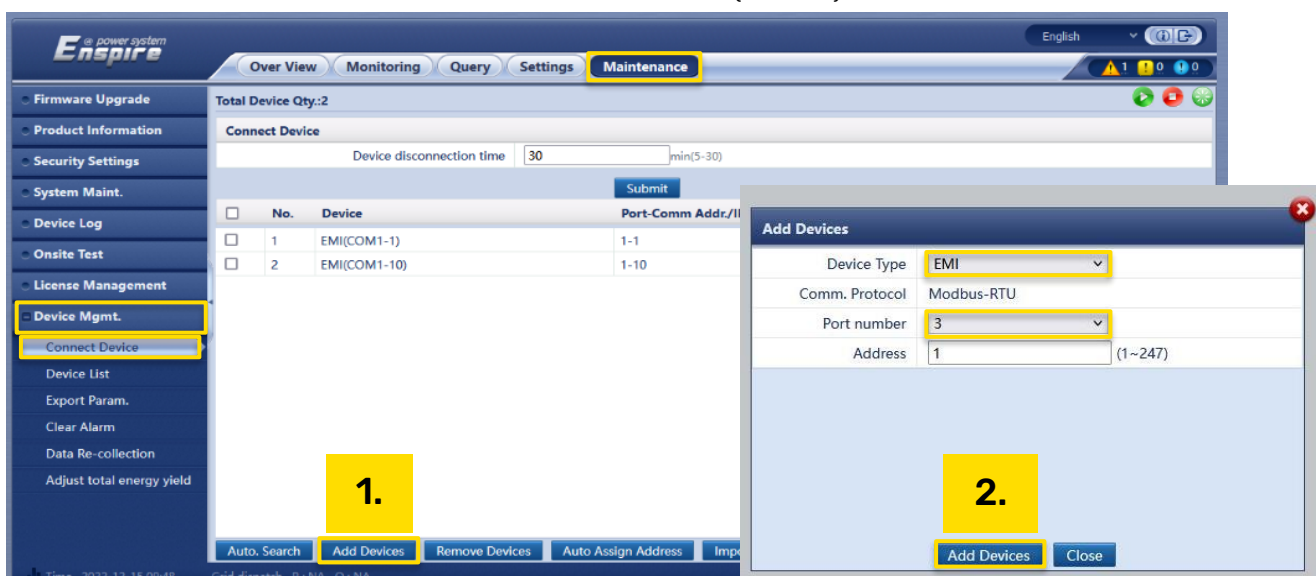
COM Port Settings

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**.



Connect Device

Navigate to **Maintenance** and from **Device Mgmt.** → **Connect Device**. Click **Add Device**. Choose the settings in the pop-up window, use **EMI** as **Device Type** and **Modbus-RTU** as **Connection Mode**. Choose the port where you have connected the sensor to. The default **Address** is **1**, individual settings are on the backside of the sensor. Click **Add Device**. Add a MODBUS device for each sensor. The device in the WebUI is now named EMI (COM 3-1).



Change of Running Parameters

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



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)	

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

Individual set-up for sensors

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 ≈ 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

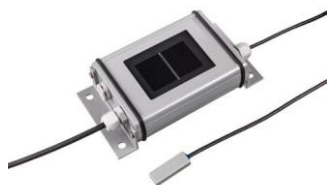


PV module temperature ≈ Cell temperature

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](#)

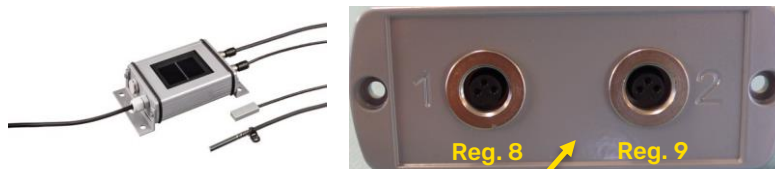
Si-RS485TC-2T-v-MB + Tmodul-Si + Vwind-Si



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	

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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	65535	10	0.0
3	PV module temperature	8	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](#)

Click Submit.

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