SMA Data Manager M – Sensor Settings for Si-RS485TC…-MB
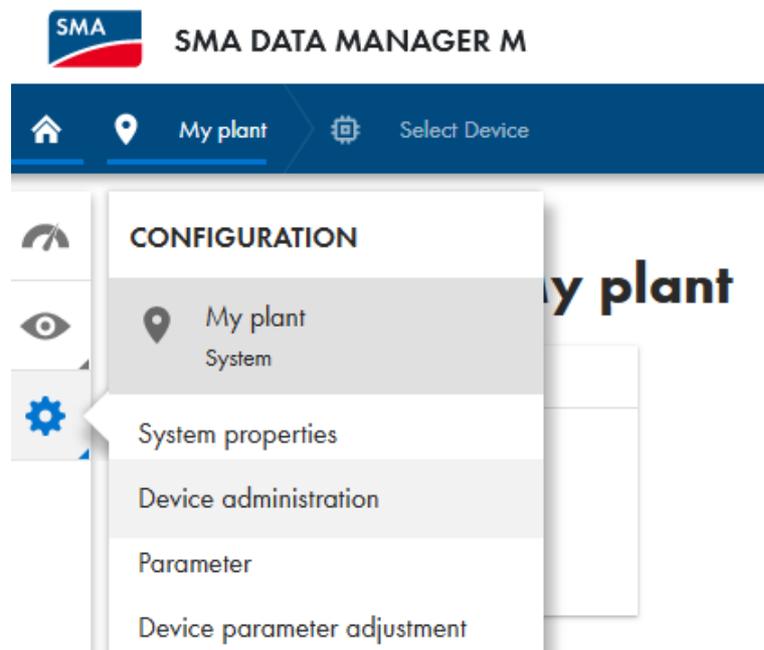
Important Note:

➢ The Si-RS485TC…-MB sensors can only operate on the RS485 Bus if no SMA inverter with SMAData protocol is connected to the RS485 Bus. This could comply to SMA inverters Sunny Boy 3.0-6.0, Sunny Tripower 3.0-10.0. To avoid this issue, connect these SMA inverters via Ethernet or Wlan.

➢ For MODBUS/RTU mode the SMA Data Manager M does allow MODBUS address / Unit ID between 03 and 126 for this sensor. As the factory default for Si-RS485 and Tx-RS485 sensors is address 01, you have to change the MODBUS address / Unit ID of the sensors by using the Si-MODBUS-configurator software (download at www.imt-solar.com). Or you can order your sensor with a pre-configurated MODBUS address / Unit ID.

How to configure the SMA Data Manager M for your Si-RS485 sensor:

1. Login into your SMA Data Manager M with your web browser
2. Select "Configuration – Device administration"

3. Add a new device

4. Select "Modbus devices" and continue

Device registration

| **1. STEP** | 2. STEP | 3. STEP |

Protocol selection

Here you can add devices to your system. Select the protocol of your device first.

🔘 **Modbus devices**   Add Modbus devices.

⭕ **SMA Speedwire devices**   Add Speedwire devices (e.g. SMA inverter or SMA
                                    Energy Meter).

⭕ **SMA FLX/TLX devices**   Add SMA FLX/TLX devices.

⭕ **SMA data devices**   Add SMA data devices.

Cancel   Continue

5. Select "Managing Modbus profiles"

Device registration

	1. STEP	2. STEP	3. STEP

Modbus devices

Here you can search Modbus devices according to certain criteria and add them to your system.

Interface* ⓘ

Ethernet Modbus TCP ▾

Modbus profile* ⓘ

SunSpec ▾   Managing Modbus profiles

IP address* ⓘ   Port* ⓘ

192.168.101.[1-254]   502

Unit ID* ⓘ   Device name* ⓘ

1   Modbus

[Cancel]   [Previous] [Continue]

6. Create a new Modbus profile

7. Fill the table as shown below, the channel destinations do depend on the sensor type. Please refer to the Modbus specification of your sensor

Configuring Modbus profile ⓘ

Process your own Modbus profiles or create new Modbus profiles. Corresponding register values must be configured depending on the Modbus device.

Saved Modbus profiles

| New Profile ▼ |

⬇ Import

Name of Modbus profile*

| Si-RS485 Sensor Profile | 🗑 |

Device manufacturer*

| Ingenieurbüro Mencke & Tegtmeyer GmbH |

Model designation*

| Si-RS485TC-2T-v-MB |

Device type*

| Sensor System in General ▼ |

Mapping template*

| Monitoring |

Byte sequence*

| Big-Endian ▼ |

Channel designation	Register address	Register type	Function code	Scaling factor	➕

Channel designation	Register address	Register type	Function code	Scaling factor	➕
Insolation [1] ▼	0	uint16 ▼	(0x04) … ▼	0.1	🗑
Temperature [1] ▼	7	int16 ▼	(0x04) … ▼	0.1	🗑
Temperature [2] ▼	8	int16 ▼	(0x04) … ▼	0.1	🗑
Speed [1] ▼	3	uint16 ▼	(0x04) … ▼	0.1	🗑

Cancel   Save

8. Fill the device registration an shown below, select the Modbus profile you created before. For "Device address" enter the address you set your sensor with Si-MODUS-configurator software. After pressing "Continue" the SMA Data Manager M starts searching your Sensor. Make sure that the sensor is connected to the RS485 port and to the power supply.

9. The SMA Data Manager M should detect the sensor. Select the sensor, enter the sensor's serial number and press "save"
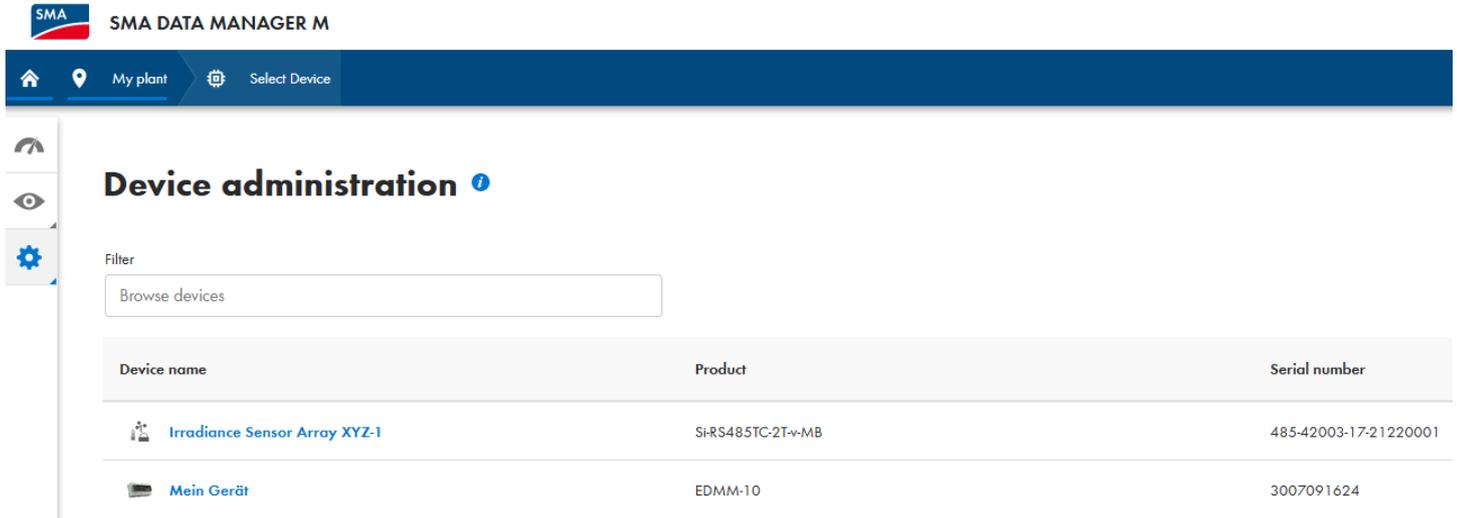
Device registration

| | 1. STEP | 2. STEP | 3. STEP |

① Devices detected

Select the devices that you would like to add to your system.

☑	Product Manufacturer	Serial number	Device name
☑	Si-RS485TC-2T-v-MB Ingenieurbüro Mencke & Te... COM1, 9600, Unit ID 10	485-42003-17-21220001	Irradiance Sensor Array XYZ-1

You have added **1** out of **50** devices to the system.

Cancel   Previous   Save

Version: November 2021   Errors and changes suspected

10. After selecting the sensor in the Device administration, you can check the Dashboard and Instantaneous values for proper device integration and measurement.
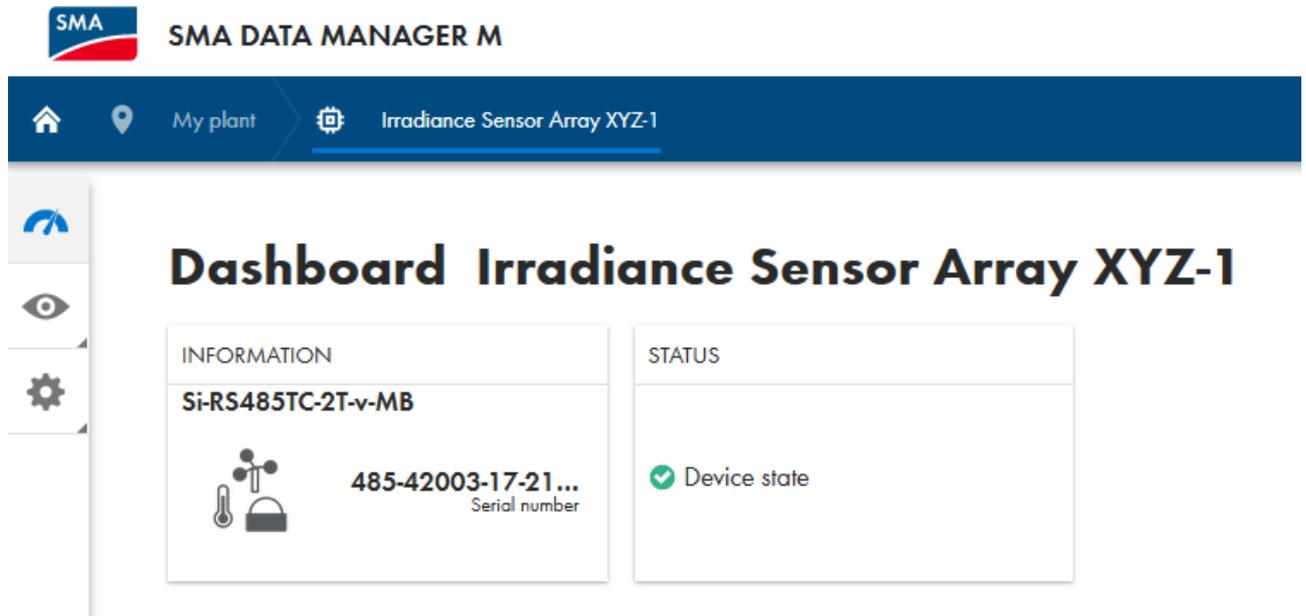
SMA DATA MANAGER M

My plant › Irradiance Sensor Array XYZ-1

Instantaneous values

Filter

Enter group, name or channel...

Group	Name	Value
Further Applications	Speed [1]	0.00 m/s
Further Applications	Temperature [1]	29.4 °C
Further Applications	Temperature [2]	28.5 °C
Further Applications	Insolation [1]	17.1 W/m²
Status	Condition	Ok