



# switchDin

## Quick Reference Guide

### Droplet + SMA Sunny Tripower for Flexible Exports (SA)

For SA Power Networks  
Flexible Exports

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## 1. Required Hardware & Software Checklist

- SMA Sunny Tripower 3.0–10.0
- Any Compatible Smart Meter
- SwitchDin Residential Droplet
- GPO for SwitchDin Droplet
- Sets of cables (ethernet & ethernet to USB adaptor)
- SwitchDin App:  
[www.switchdin.com/app](http://www.switchdin.com/app)



## 2. Onsite, wire up Smart Meter on grid or load configuration. Refer [OTR Wiring Information and Diagram](#)

## 3. Enable Modbus TCP and port 502 as follows:

1. Establish a connection to the user interface.
2. Log into the user interface as an **Installer**.
3. Select the **Device Parameters** tab.
4. Select **[Edit parameters]**.
5. Select the Parameter group **External Communication**
6. Select **Modbus>TCP Server**.
7. In the drop-down list **Activated**, select the entry **Yes**.
8. If necessary, change the port in the field **Port**. (required setting: 502)
9. Select **[Save all]**.

A screenshot of the SMA Sunny Boy 3.6 web interface. The interface is in German and shows the 'Device parameters' tab. The 'Save all' button is highlighted with a red box and a circled '9'. The 'External Communication' section is expanded, and the 'Modbus' section is also expanded. The 'TCP server' section is highlighted with a red box and a circled '6'. The 'Activated' dropdown menu is set to 'Yes' (highlighted with a red box and a circled '7'). The 'Port' field is set to '502' (highlighted with a red box and a circled '8'). The 'Unit ID' is set to '3' and the 'P-settings at input 2' is set to 'Off'. The SMA logo is visible in the top right corner.

#### 4. Wiring the droplet to the inverter

Follow one of the processes below

##### 4.1. SMA Energy Meter

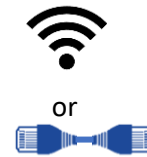
###### OPTION 1 : Direct connect between inverter and meter



Connect the SMA Energy Meter to the inverter via ethernet cable



Connect the inverter to the droplet via wifi



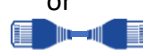
Connect the droplet to the router via ethernet or WiFi

OR

###### OPTION 2 : Connect meter to the router



Connect the inverter to the droplet via an ethernet to USB converter



or



Connect the droplet to the router via ethernet or WiFi

Connect the meter to the router via ethernet cable

OR

###### OPTION 3 : Connect inverter, meter and droplet to router



Connect the inverter to the router via ethernet cable



Connect the meter to the router via ethernet cable



or



Connect the droplet to the router via ethernet or WiFi

## 4.2. Eastron Meter



Connect the inverter to the droplet via an ethernet to USB converter

Connect the droplet to the router via ethernet or WiFi

Connect the meter to the droplet via two options below

### Serial Connection: Eastron RJ45 cable + RS485 to USB converter

1. Use the cable provided by Eastron meter
2. Match and connect the pin between the Eastron Meter and the RS485 to USB converter.

DB9	Output Signal	Full Duplex connection	Half-Duplex connection
1	T/R+	TXD(A+)	RS485(A+)
2	T/R-	TXD(B-)	RS485(B-)

3. Connect the USB adaptor to any of the USB ports on the droplet

### Examples of RS485 to USB converter



DTECH 0.5m USB to RS422 RS485 Serial Port Converter



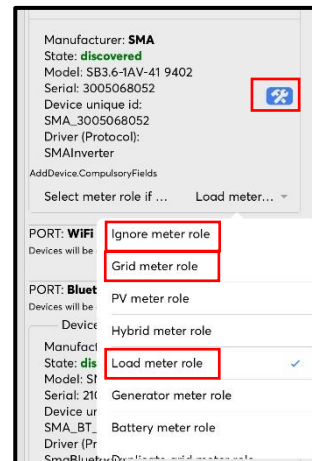
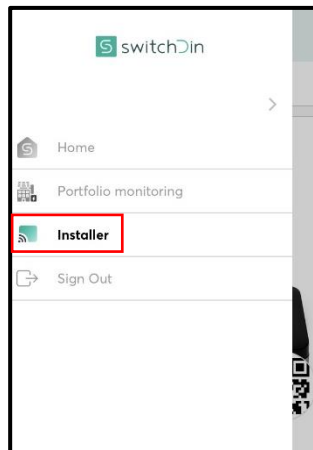
USB Port to RS-485/422 Converter



Industrial USB to RS485 Converter

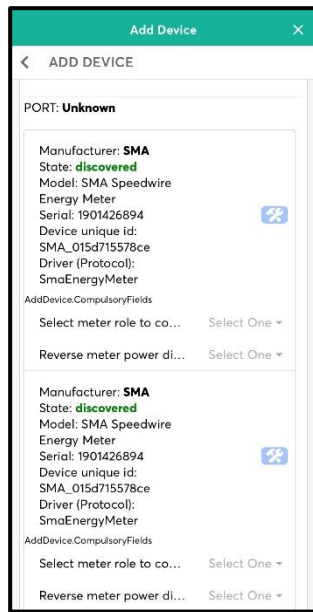
## 5. Commissioning

### 5.1. Commission the inverter

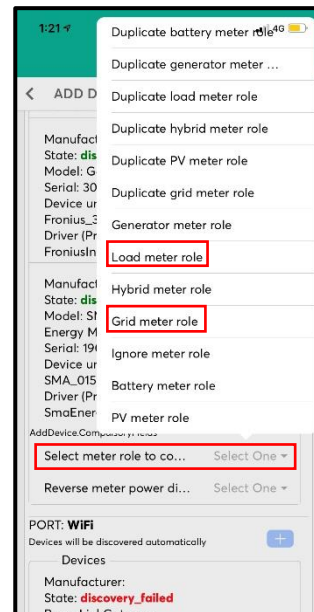


1. In the Installer app, select installer from the side menu, the scanner will start
2. Scan the QR code on the side of the droplet, follow the prompts and select to connect via ethernet or Wi-Fi
3. Add a device by clicking the "+" icon on the bottom right of the screen
4. Select the discovery option
5. Click "Select meter role if..." dropdown list and select
  - For Option 1
  - 5.1. Grid meter role – for grid meter configuration (proceed to step 5.4)
  - 5.2. Load meter role – for load meter configuration (proceed to step 5.3.7)
  - For Option 2 and 3
  - 5.3. Ignore meter role – if the meter is connected to the router

## 5.2. SMA Energy Meter (ONLY FOR OPTION 2 and 3)



6. Scroll down and look for SMA Speedwire Energy Meter



7. Click "Select meter role to..." dropdown list and select
  - 7.1. Grid meter role – for grid meter configuration
  - 7.2. Load meter role – for load meter configuration
8. Click the configure button (blue hammer and spanner)

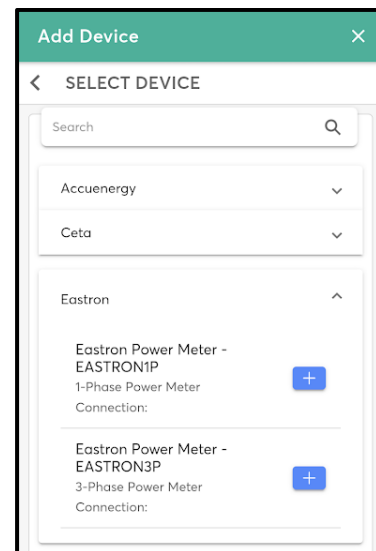
For Load meter role - proceed to step 5.3.7

## 5.3. Eastron Meter

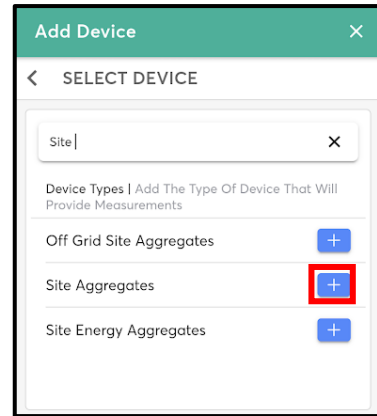
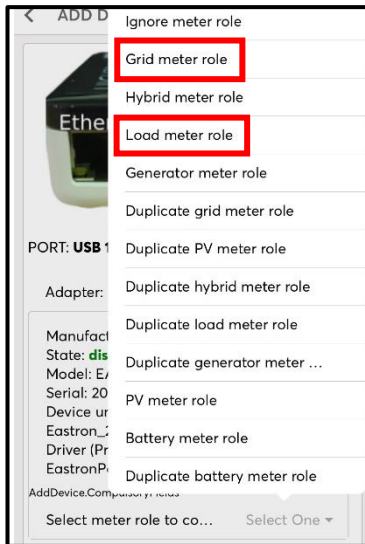
Complete the following steps to configure the meter.



1. Click "+" on the USB port number where the meter comms cable is connected.
2. Then select "Eastron" from the device list.

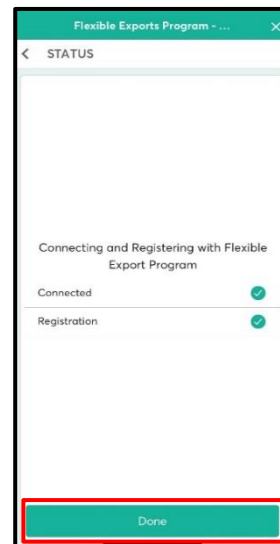
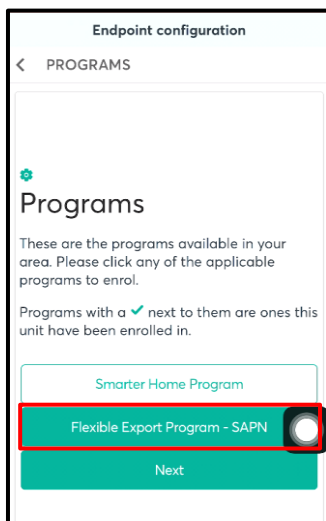


3. Select the correct Eastron meter for your installation (single or three-phase)
4. Click back in the top left corner



5. Click the "Select meter role to connect" drop down and select "Grid meter role" or "Load meter role"
6. Click the configure button (blue hammer and spanner)
7. Click back on the top left corner and select "Manual" discovery
8. Search "Site Aggregates", and click '+'

#### 5.4. Register device for Flexible Exports



1. Close the "Add device" window, click next.
2. Select the option "Flexible Exports Program - SAPN"
3. Enter NMI, click next
4. The screen indicates if the connection and registration is successful. Click done

## 6. Troubleshooting

### 6.1. Droplet status indicator meanings



	Indication	Red	Green	Blue
PWR	Power	N/A	Power	N/A
WiFi	WiFi	No Wi-Fi	Wi-Fi connected	Weak Wi-Fi signal
iNet	Internet	No Internet	Internet connected	Configure via SwitchDin app
SDin	SwitchDin comms	Cannot see SwitchDin	Connected to SwitchDin	N/A
Devs	Devices attached	No devices	Devices detected	N/A

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