



switchDin

Quick Reference Guide

**Droplet + Growatt for Flexible
Exports (SA)**

Prepared by:

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v1.3

1. Required Hardware & Software Checklist

- Growatt MIN TL-X 2.5-6.0
- Eastron SDM230-Modbus
- SwitchDin Residential Droplet
- Power Cord for SwitchDin Droplet
- Ethernet & RS485 to USB converter
- SwitchDin Application Downloaded
- DTECH 0.5m USB to RS422/485 Serial Port Converter.



Growatt



Droplet



Eastron Meter



RS485 to USB Adaptor



(Optional, for wired internet)
Ethernet Cable

2. Onsite, wire up Eastron Meter in a grid or load configuration.

If the meter is measuring the load, the meter must be connected to the Droplet via a second RS-485 to USB converter rather than via the Growatt.

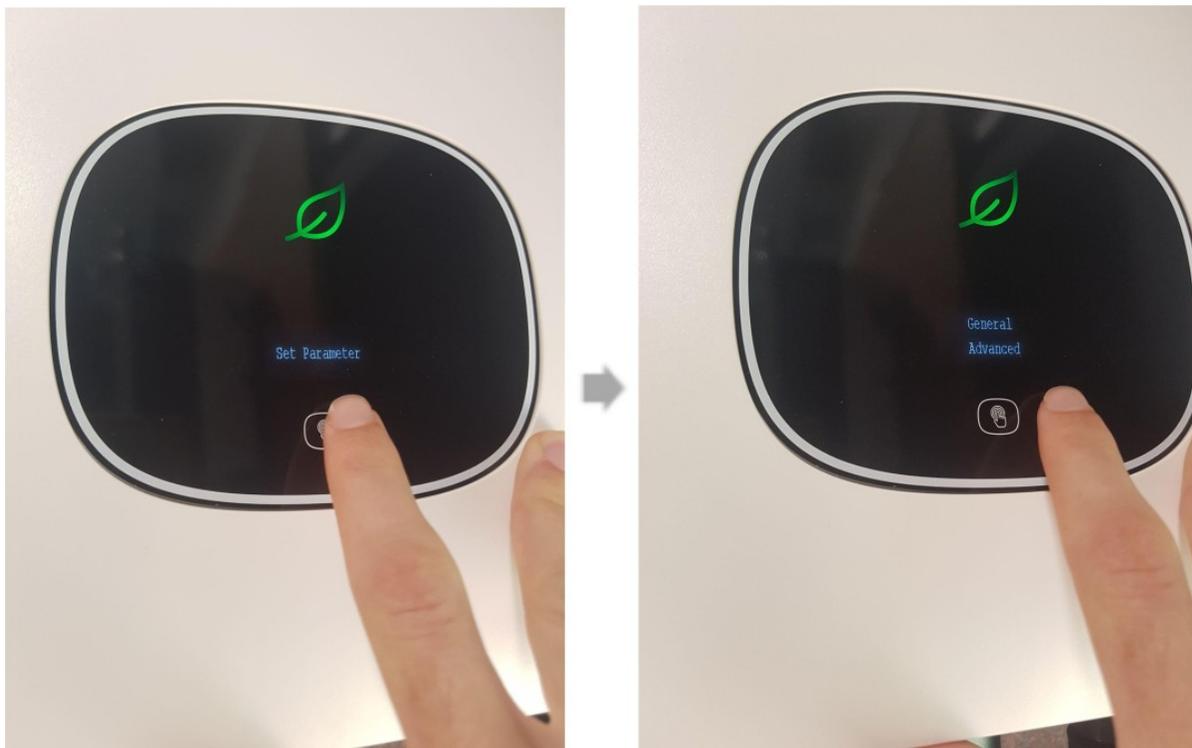
Only connect the meter to the Growatt if it is measuring the grid power.

The RS485 wires from the meter should connect to pins 7 and 8 of the Growatt comms socket.

Easton SDM120-CT Port	Easton SDM230 Port	Growatt 8-Pin SYS - COM Port Pin Number
10	5 (RS485A)	7
9	6 (RS485B)	8

3. Growatt Inverter Settings

a) Use the control button on the front screen of the inverter to set the export limit settings as show below. NOTE: Failure to complete this step will result in no grid visibility to DNSPs.



b) Click the control button until “Set parameter” is displayed in the window. Then Double click

c) Click the control button once to highlight “advanced” then double click.



- d) Enter the password "123" by clicking and double clicking till all 3 digits are showing then double click.
- e) Click the control button until the export limit shows in in the display window. Click once to highlight "On". Then double click.



- f) Click the control button until "CT" is highlighted. Double Click
- g) Click the control button until 100% shows for the export limit rate. Double Click.

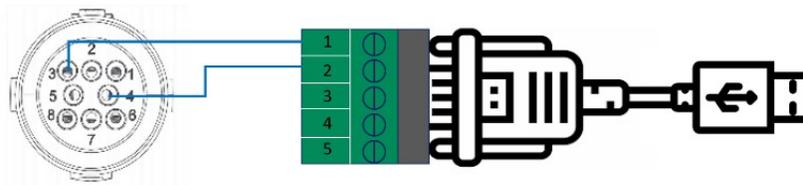
4. Wiring the Droplet to the inverter

RS485 to USB converter

An RS485 to USB adaptor **MUST** be used to ensure the RS485 signal from the Growatt is converted to a USB signal that is readable by the Droplet.

1. Connect the USB end into any of the Droplet's USB ports.
2. Pick a set of wires, connect **PIN 3** of the 8-pin Growatt comms port (from the inverter) to **PIN 1 (T/R+)** on the RS485 to USB converter breakout board.
3. Connect **PIN 4** of the 8-pin Growatt comms port (from the inverter) to **PIN 2 (T/R-)** on RS485 to the USB converter.

DB9	RS485 to USB Socket	Growatt 8-Pin SYS - Com Port Pin Number
1	T/R+	3
2	T/R-	4



Growatt 8-Pin
SYS-Comm
Port

RS-485 to USB
converter
breakout board

RS422/
RS485
Converter

USB
Connector

NO.	Definition	Description
1	Enable-	Connect BDC enable signal port negative
2	Enable+	Connect BDC enable signal port positive
3	485A2	Connect Min ShineBus
4	485B2	
5	AntiReFlux_A	Connect smart meter RS485A or External CT signal positive
6	AntiReFlux_B	Connect smart meter RS485B or External CT signal negative
7	BAT-B	Connect BDC communication RS485B or CANL
8	BAT-A	Connect BDC communication RS485A or CANH



SYS COM Port

Ensuring that the RS485 d-tech connection is connected to pin 3 / 4 is essential



Example of RS485 to USB converter



DTECH 0.5m USB to RS422 RS485
Serial Port Converter

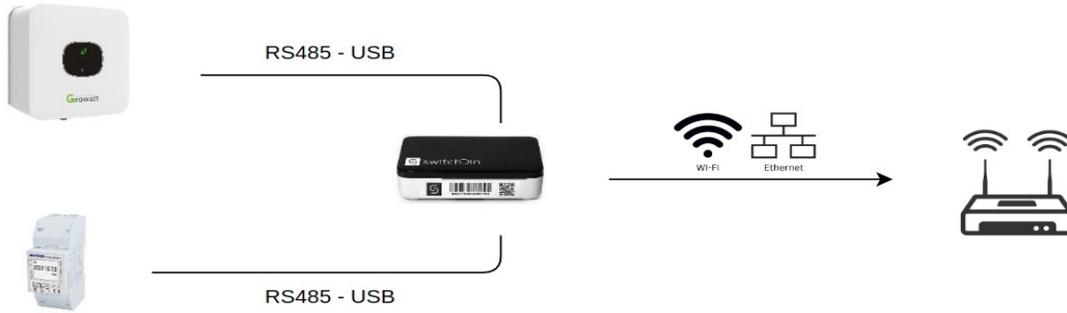
Most RS485 to USB adaptors will work, and can be readily found from Jaycar and most electronics distributors. SwitchDin recommends the **DTECH 0.5m USB to RS422 RS485 Serial Port Converter** which can be ordered online or the **USB Port to RS-485/422 Converter** which can be bought from Jaycar (CAT.NO: XC4136)

Full Connection Diagram



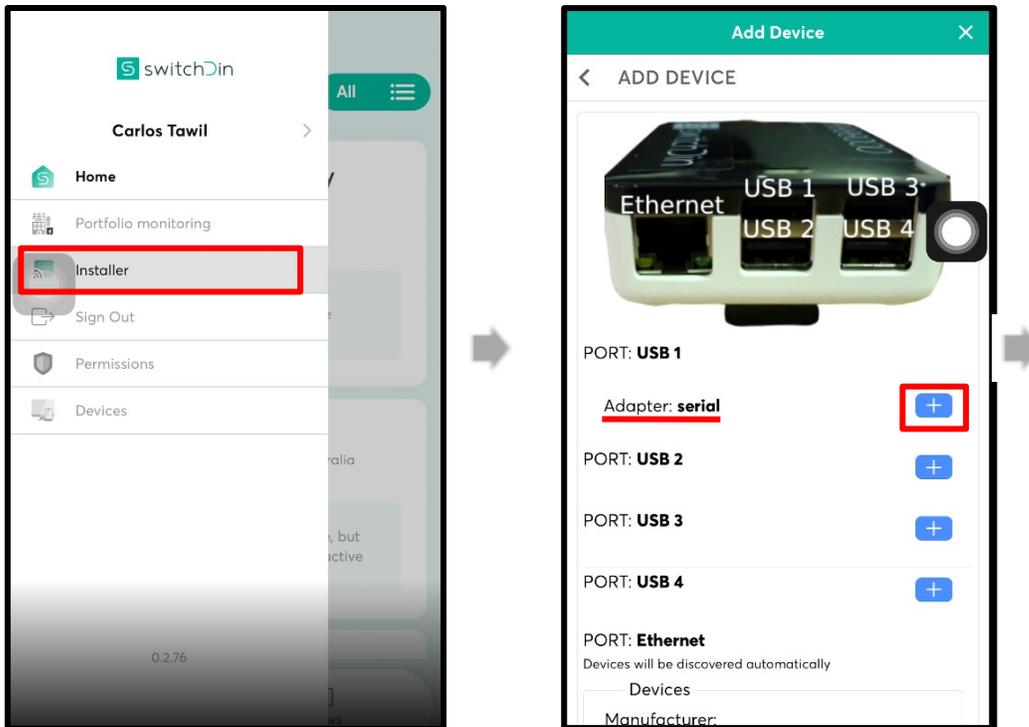
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If no grid measurements can be read via the inverter, the Eastron Meter can also be connected directly to the Droplet instead of the inverter. This requires another RS485 to USB converter.

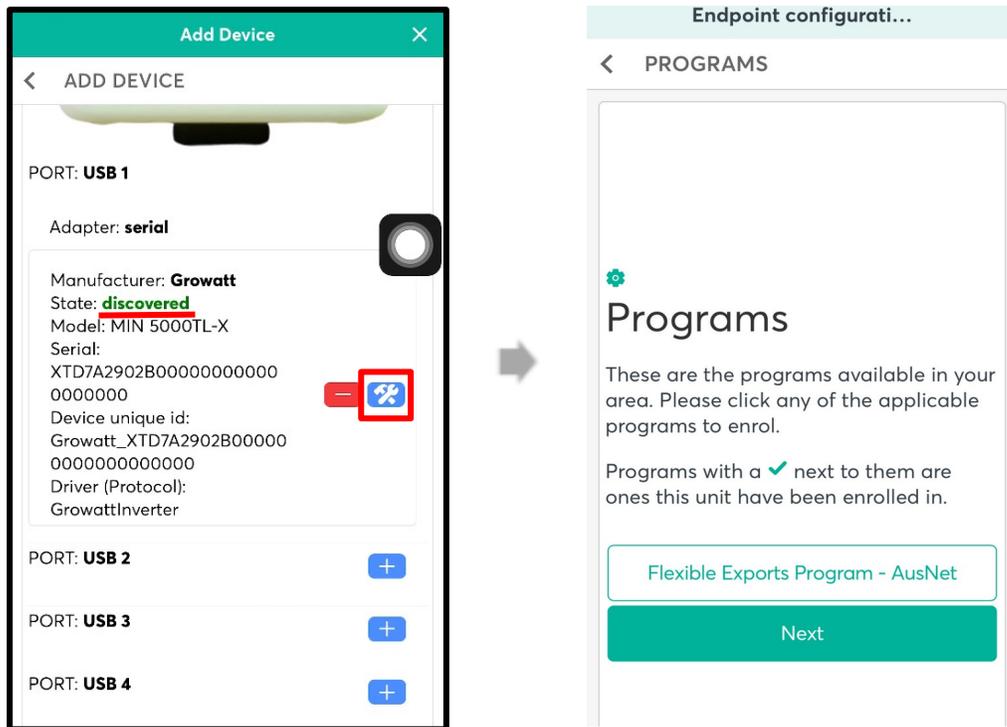


5. Commissioning

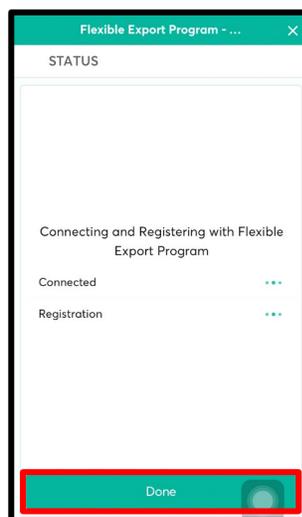
To commission the unit using SwitchDin Installer App, do the following steps;



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 “+” on the USB port number where the cable is plugged.
6. Then select “Growatt” from the device list.
7. Click back on the top left corner



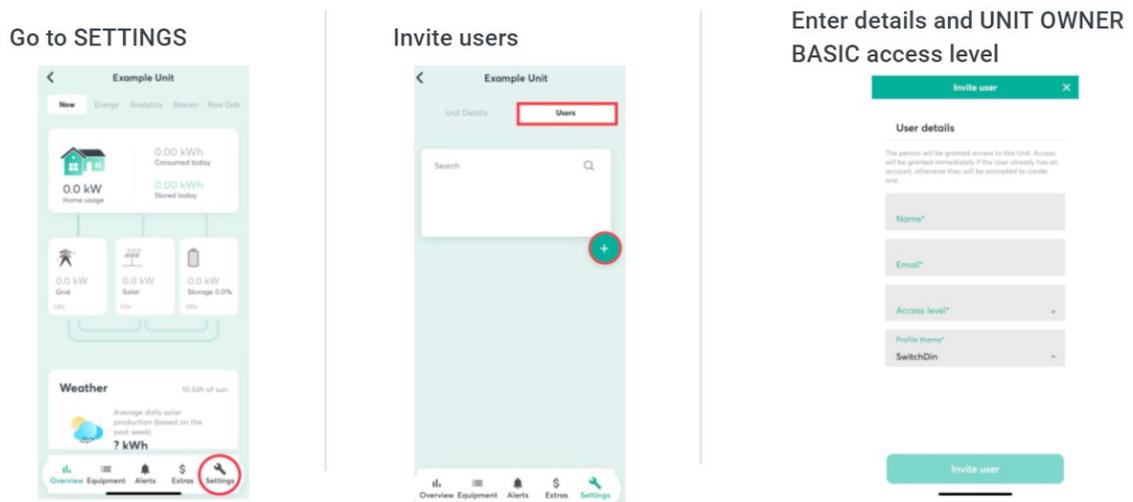
8. Click the configuration button for the inverter, the message “Configured” appears
9. Close the “Add device” window and click next to go to the programs screen.
10. (If applicable) Select the appropriate plan if one is needed.
11. Enter NMI, click next
12. The screen indicates if the connection and registration is successful.



Note: Please make sure that you get two green tick marks for connection and registration.

It is important that the Droplet, inverter and any meters have been properly installed and configured before leaving the site. Please check the live data on the overview page to ensure that the data correlates with what is expected on site.

Add/Invite End Customers



6. Troubleshooting

For further information or troubleshooting please refer to our dedicated helpdesk at <https://support.switchdin.com/hc/en-us> with any questions that might present themselves.

Warranty claims & support: support@switchdin.com

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SwitchDin Support: +61 (0) 2 4786 0426 (Extension +1)