Quick Reference Guide

Droplet + GoodWe for Flexible Exports (SA)

For SA Power Networks
Flexible Exports

Prepared by:

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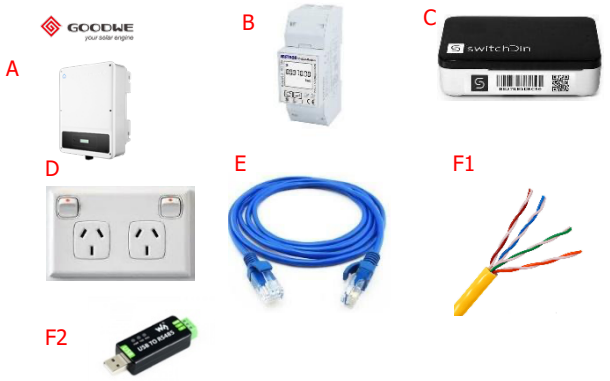
91 Parry Street
Newcastle West 2302

1. Required Hardware & Software Checklist

A. GoodWe inverter.
B. Any compatible meter
C. SwitchDin Residential Droplet
D. General Purpose Outlet (GPO) for SwitchDin Droplet
E. Ethernet cable
F. Equipment for serial connection -

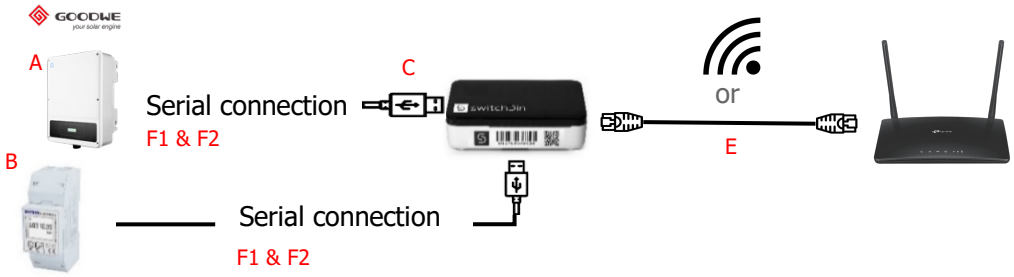
F1. Any serial/twisted pair (including RJ45) cable
F2. RS485 to USB converter
(Please refer page 3 for recommended buy link)



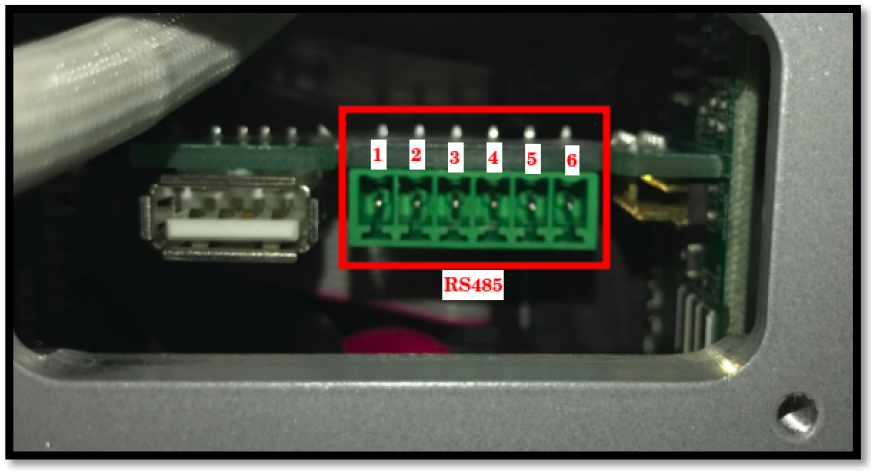
G. SwitchDin App www.switchdin.com/app

2. Onsite, wire up the Eastron Meter (or selected meter) either using the grid or load configuration. Refer OTR Wiring Information and Diagram or Appendix A: Load and Grid Meter Arrangements

Meter configuration

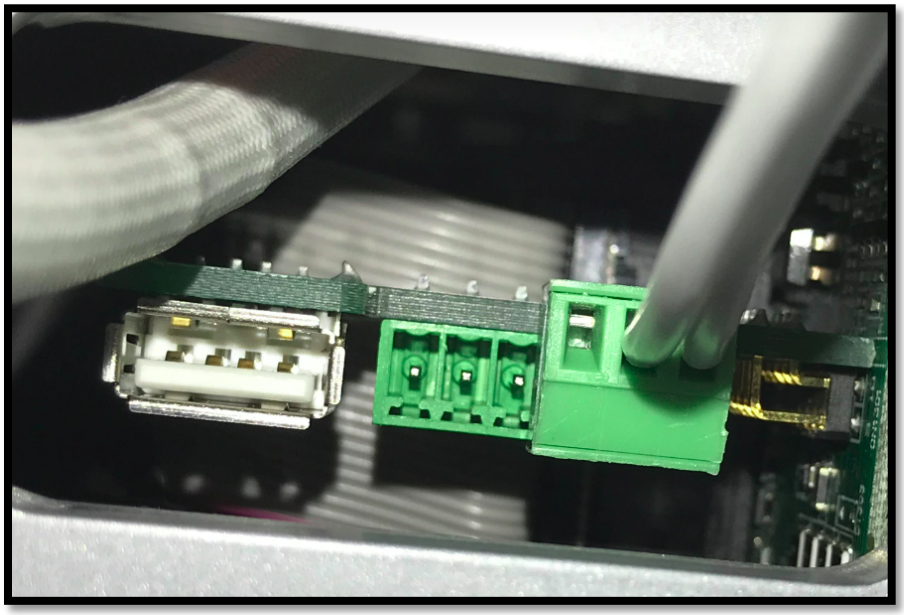


Inverter Model: GoodWe DNS



*Note: Please make sure that Inverter's **ARM** and **DSP** firmware versions are up to date.*

1. The above image shows the RS485 connection point for the GoodWe DNS inverter.
2. The wires should be connected to the RS485 port as follows:



3. Pick a set of wires and connect pin 6 to the -ve port of the RS 485 connector and pin 5 to the +ve port of the RS 485 connector.
4. Connect the USB adaptor to any of the USB ports on the droplet
5. Connect the droplet to the internet via ethernet cable (preferred) or WiFi.

Examples of RS485 to USB converter

DTECH 0.5m USB to RS422 RS485 Serial Port Converter

USB Port to RS-485/422 Converter

Recommended To-Buy Link:

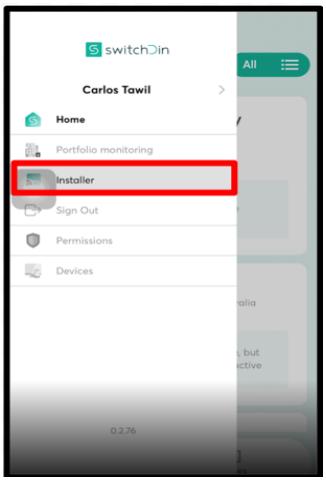
1. Industrial USB to RS485 Converter

2. USB Port to RS-485/422 Converter

5. Commissioning

5.1 Commission the inverter:

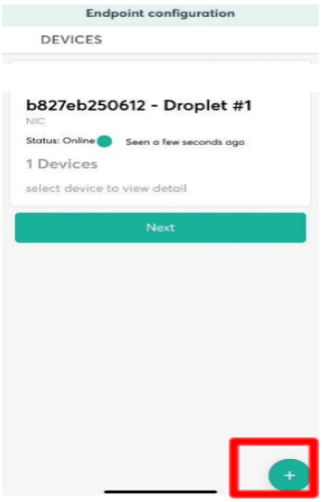
Note: *You need to be **SwitchDin Accredited** to have Installer permissions. If while login to SwitchDin app you see "Missing Permissions" error, please confirm that you have completed the SwitchDin accreditation course. (Refer page 8 for more info)*



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. Create a new portfolio or select an existing one and create a new unit in that portfolio.

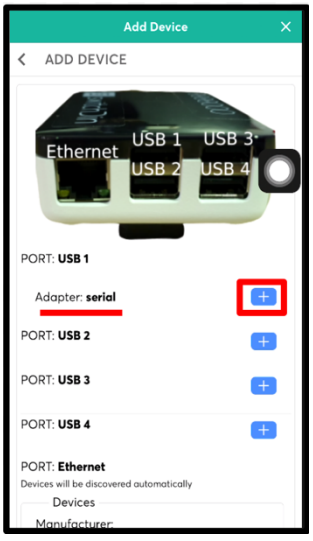


4. Add a device by clicking the "+" icon on the bottom right of the screen.

5. Select the discovery option to allow the droplet to detect connected devices

6. Click "+" on the USB port number where the GoodWe serial cable is connected.

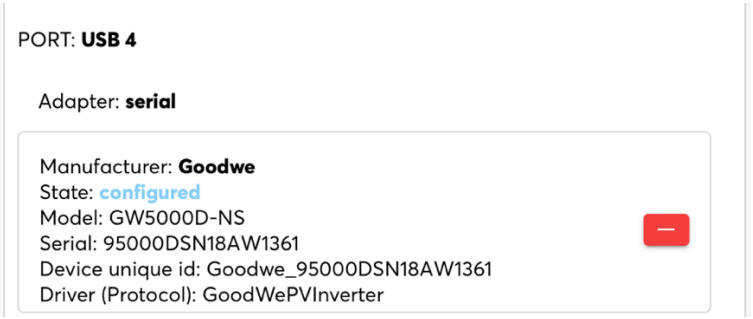
7. Then select the correct GoodWe inverter model from the device lists.



8. Click back on the top left corner.

9. Click the configure button (blue hammer and spanner)

10. Device state will change to "configured" once this is complete



5.2 GoodWe Solar App Settings

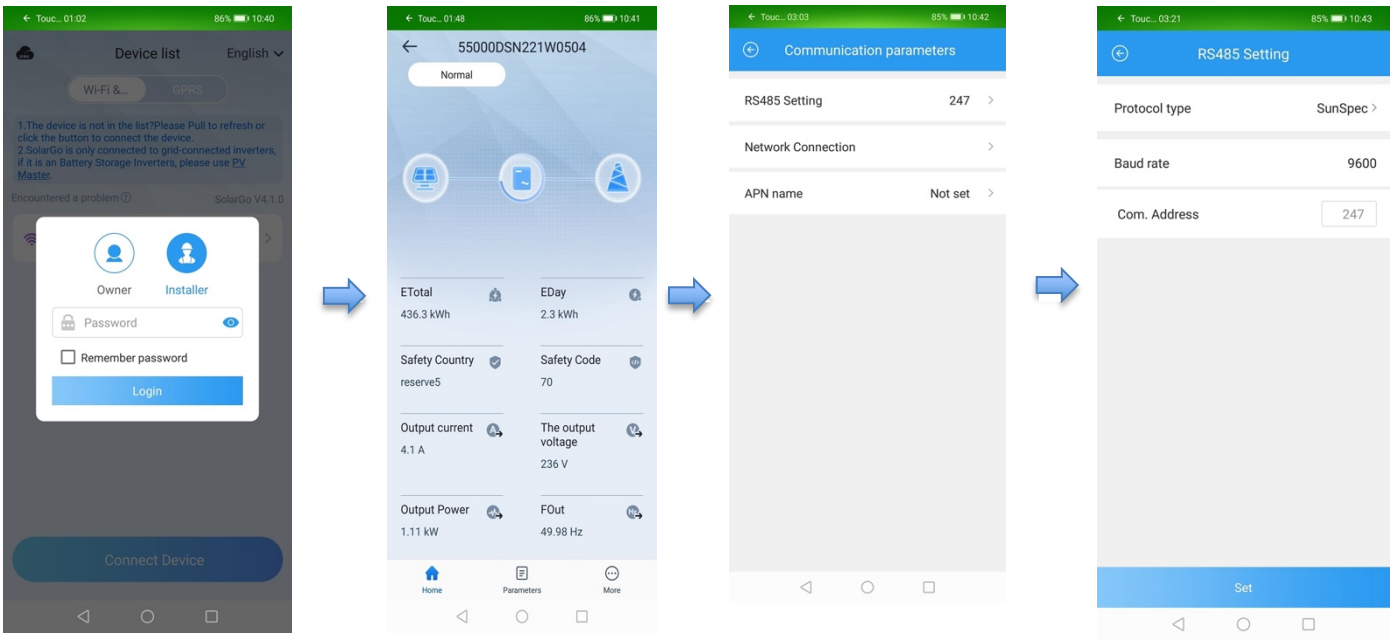
1. Login to GoodWe Solar App as an Installer.

2. Add the inverter to the App.

3. Navigate to communication parameters under “More”.

4. Select “RS485 Setting”.

5. Select Protocol type as “Sunspec”.

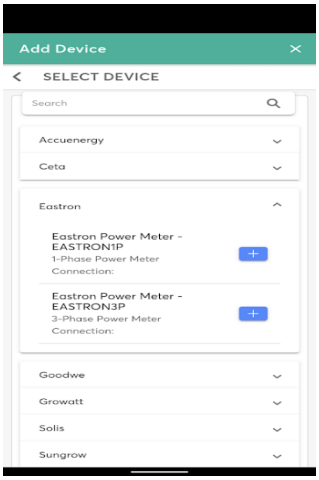


5.3 Configure load/grid meter

Click "+" on the USB port number where the meter comms cable is connected (should be having a "serial" tag under that USB port.

Note: If you are seeing this "Adapter: serial" tag under the respected USB port to which the meter is connected this confirms that the droplet can read the serial connector attached to it.

1. Select "Eastron" from the device list

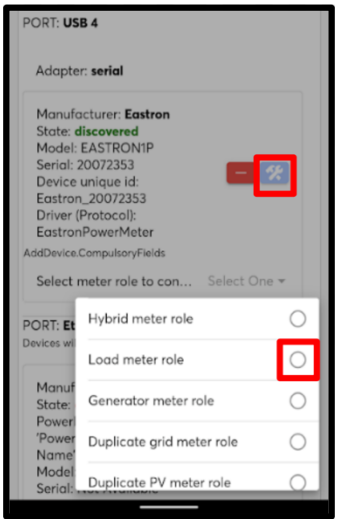


2. Select the correct Eastron meter for your installation (single or three-phase)

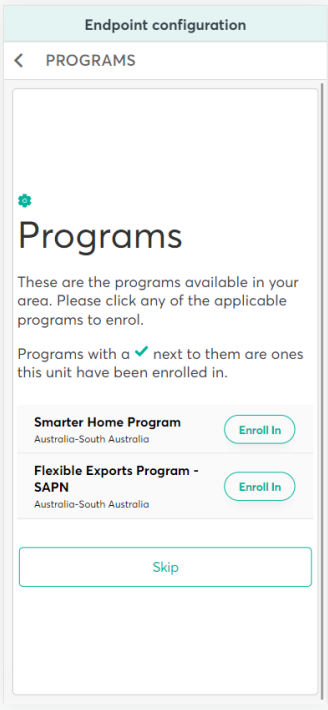
3. Click back in the top left corner

4. Click the "Select meter role to." drop down and select the meter role corresponding to the site configuration (Load/Grid meter role).

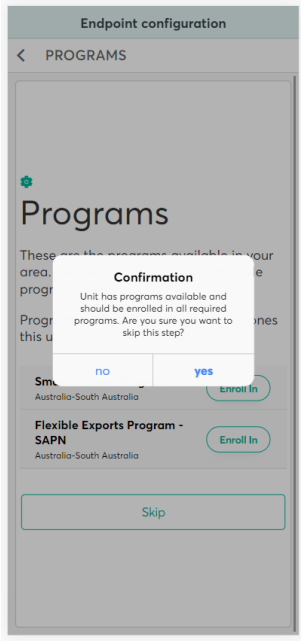
5. Click the configure button (blue hammer and spanner)

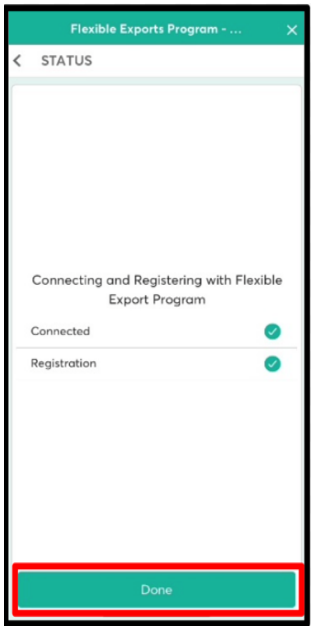


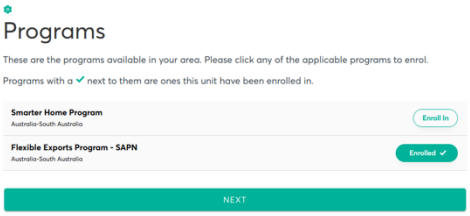
5.4 Register Device for Flexible Exports (VERY IMPORTANT):



1. Close the “Add device” window, click next.
2. Select the option to enrol in “Flexible Exports Program – SAPN” program.
3. If the program is available in your area and you choose to skip, you’ll see the “Confirmation” pop-up window.
4. Enter NMI, click next
5. Next status screen indicates if the connection and registration is successful (please make sure it’s connected and registered). Click done







Note: *Please confirm that the controller is connected **AND** registered.*

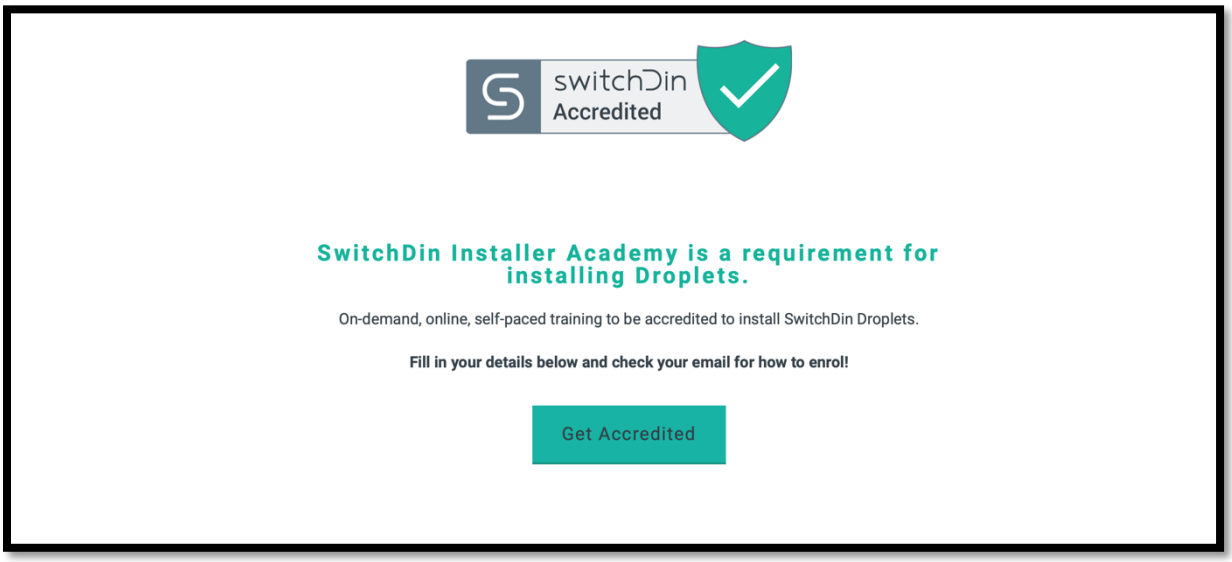
a. *In case, the controller is not getting connected it could be missing proper certificates for the program, please contact SwitcDin support staff for help.*
b. *In case, the controller is connected, but not getting registered, please check the NMI again otherwise contact SwitchDin support staff for help.*
c. *If the controller is not getting connected/registered SAPN will not be able to receive required metrics.*

Troubleshooting

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

SwitchDin Accreditation: www.switchdin.com/academy

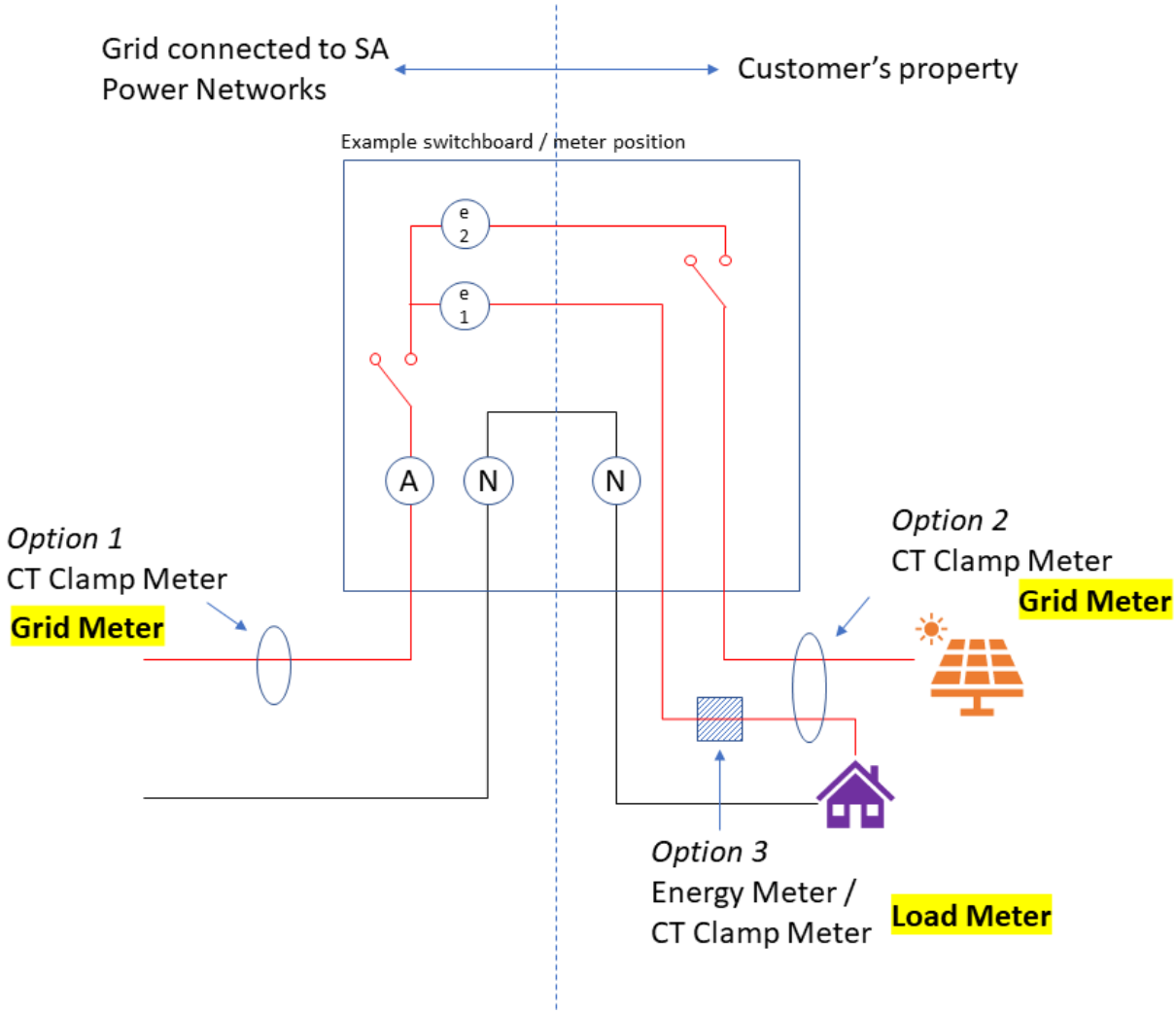


Warranty claims & support: support@switchdin.com

General enquiries: info@switchdin.com,

Support: +61 (0) 2 4786 0426

Appendix A: Load and Grid Meter Arrangements

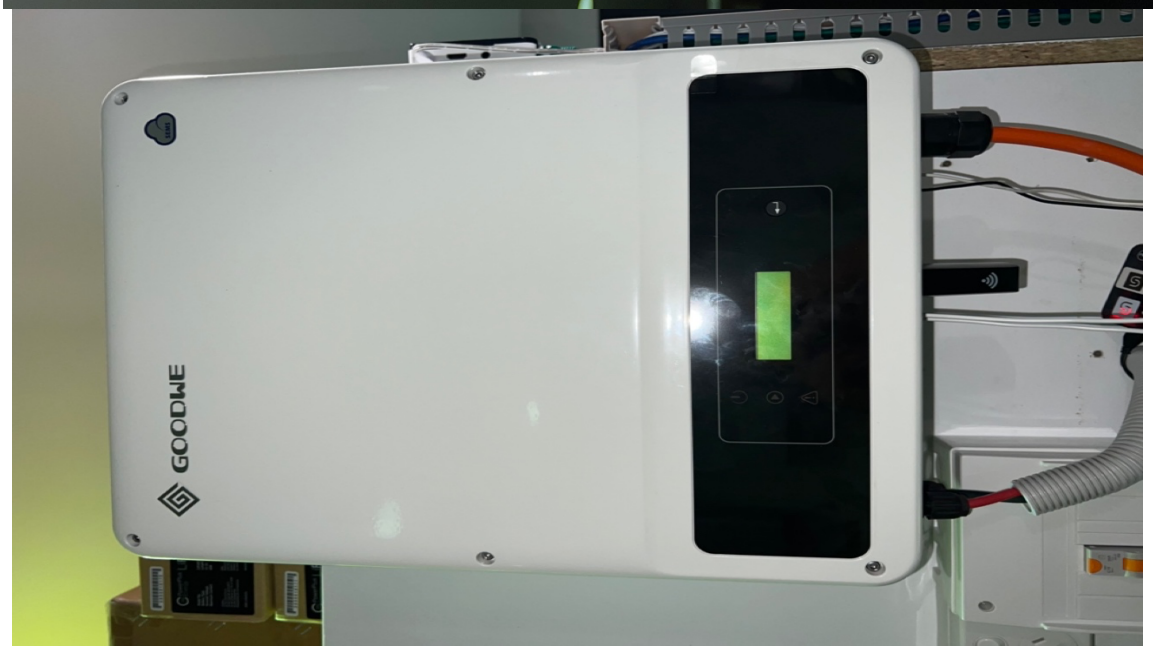


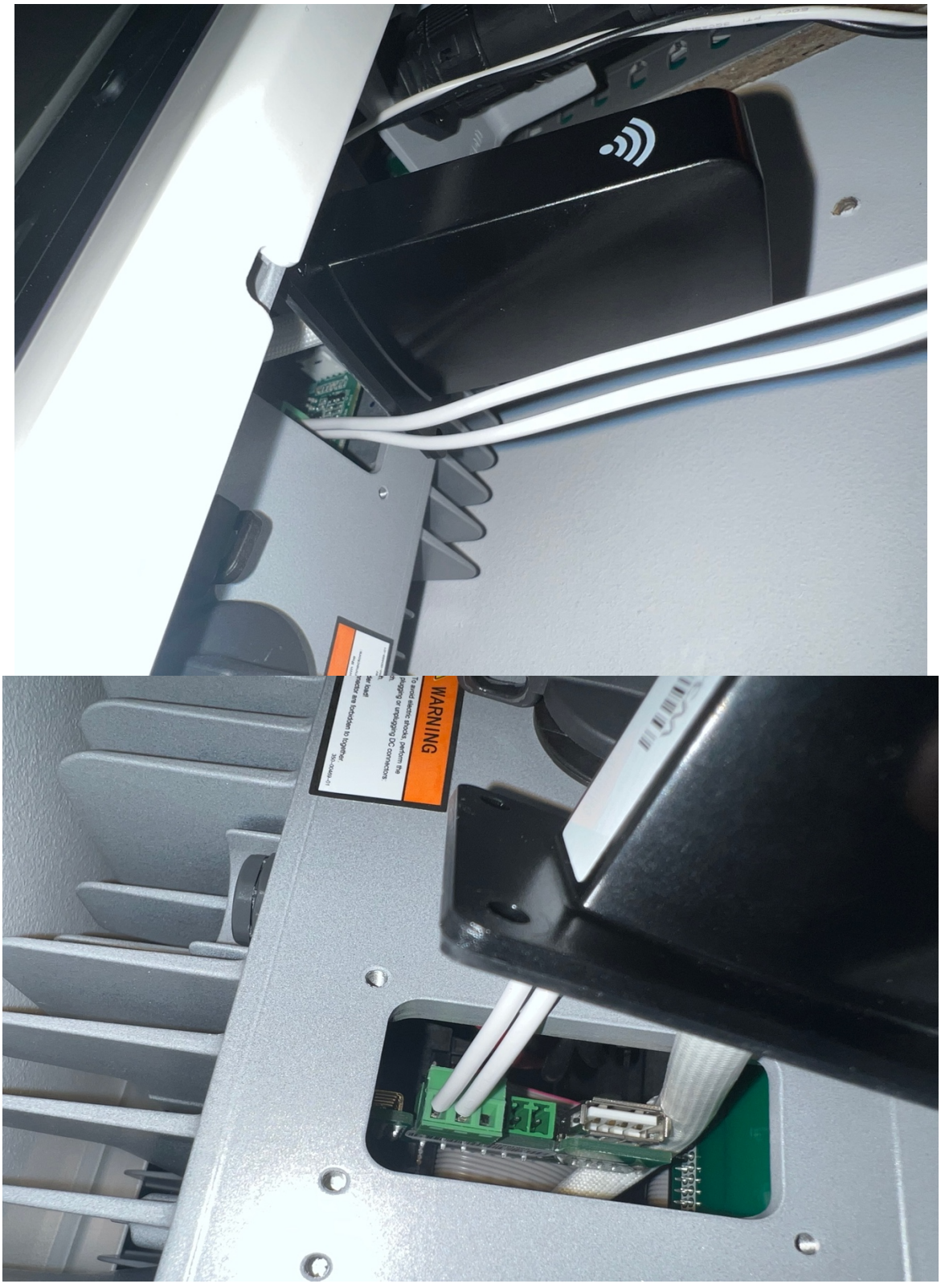
The aim for each site is to have visibility of grid imports/exports to enable export control via the SwitchDin Droplet. There are three methods of determining total site imports/exports.

Option 1 Grid Meter	Meter is monitoring the grid import/export directly on the SA Power Networks side of the retail meter.
Option 2 Grid Meter	Meter is monitoring the grid import/export directly by clamping around both the load active and inverter active on the customer side of the retail meter.
Option 3 Load Meter	Meter is monitoring the load. Total grid import/export is calculated using the load meter and the inverter metering: Grid = Load – PV.

Appendix B: Inverter Connections

A. Connection for GoodWe D-NS Series




WARNING

PWR
WiFi
Inet
SDin
Devs
switchDin
USB
PWR TXD RXD
USB TO RS485
GND
A+
B-