



APPLICATION NOTE

FRONIUS GEN24 – SAPN FLEXIBLE EXPORT TRIAL COMMISSIONING SETUP

Application Note
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Gender-specific wording refers equally to female and male form.



1. CHANGE LOG

Date	Version	Comments	Author
19/08/2022	1.0	First release	Fronius Australia
14/02/2023	1.1	Amended screenshots, INV SW version change, editorial clean up	RD

2. SCOPE

This document outlines the necessary procedure required to enable the *GEN24 series* inverters to function and received commands on the SAPN Flexible Export Trial. These are “additional” steps required on top of the standard inverter commissioning process. Please consult our other documentation for information on how to perform the standard commissioning steps.

The following Fronius Inverter series are relevant to this document:

- / **Fronius Primo GEN24 (Plus) series**
- / **Fronius Symo GEN24 (Plus) series**

For more information on the Flexible Export Trial installers are encouraged to visit the following websites:

<https://www.sapowernetworks.com.au/industry/flexible-exports/>

<https://www.sapowernetworks.com.au/future-energy/projects-and-trials/flexible-exports-for-solar-pv-trial/>

3. GENERAL REQUIREMENTS

The SAPN Flexible Export Trial uses the IEEE 2030.5 communication protocol to communicate from a Utility Server (SAPN) to the Fronius Cloud Aggregator. The Utility Server publishes varying “export limits” which the Fronius Aggregator retrieves and forwards to the relevant inverter (Client). For identification of the correct inverter, the protocol requires an LFDI (Long Form Device Identifier) to be created/issued to SAPN.

In order for the above mechanism to function, the system **MUST** have the following processes applied:

- / Inverter model must be listed on the SAPN compatible inverter list
<https://www.sapowernetworks.com.au/industry/flexible-exports/compatible-equipment/>
- / Inverter is loaded with a min. firmware version \geq **1.23.5-1**.
- / Remote Control activated on the inverter WebUI
- / An LFDI number created and supplied to SAPN
- / PV System created in Solarweb for the inverter

4. SYSTEM INSTALLATION & COMMISSIONING

Carry out the installation & commissioning process as per the standard process, for more information please consult with our online manuals [Primo GEN24](#), [Symo GEN24](#).

NOTE: After completion the inverter **MUST** be running the firmware version **1.23.5-1** or greater.

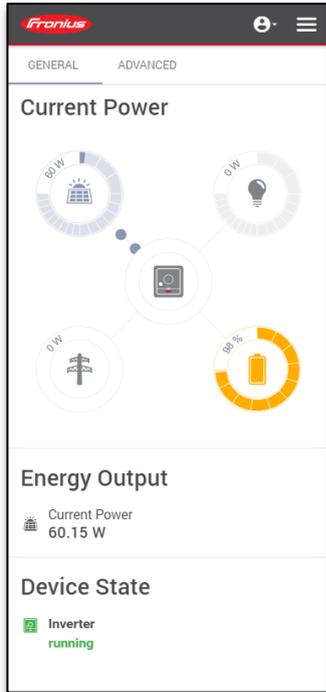
If the firmware is lower than **1.23.5-1**, please update the inverter via the Solar.Start App or via Solarweb.



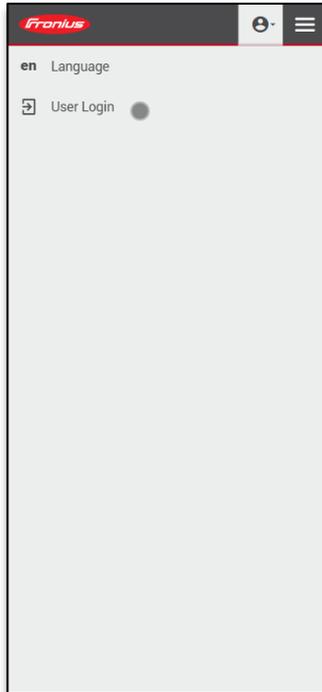
5. ONSITE INVERTER SETUP

5.1 Activate “Allow remote control”

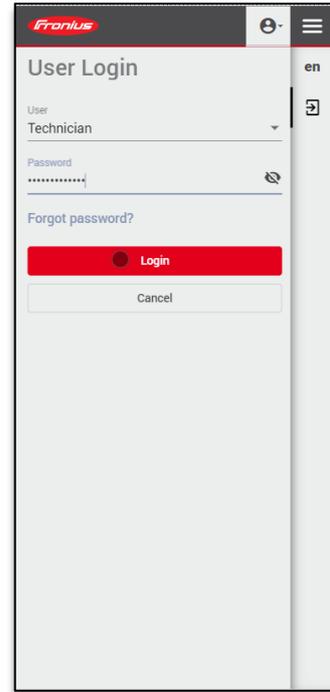
/ Connect to inverter
Wi-Fi Access Point



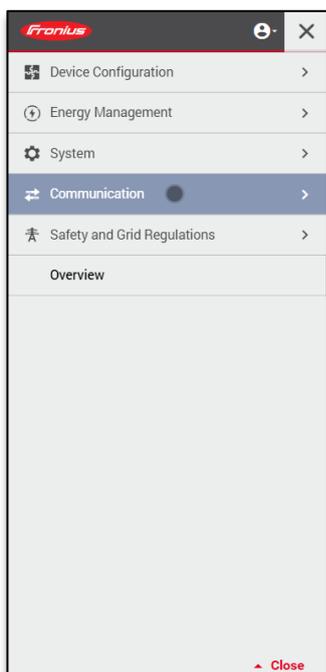
/ Select “User Login”



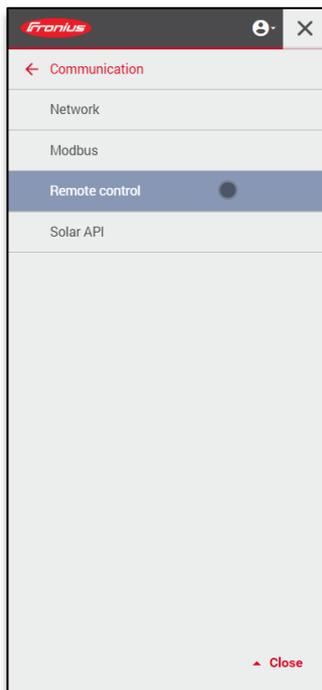
/ Log in as “Technician”



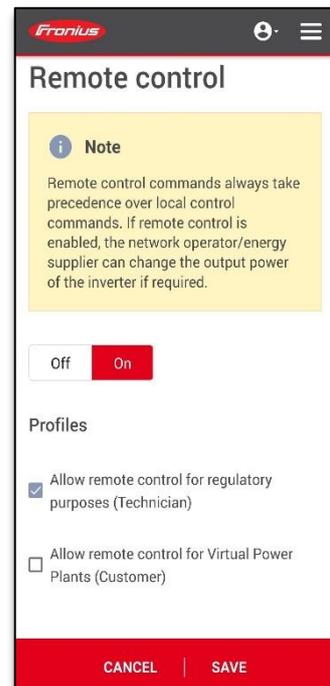
/ Navigate to “Communication”
(from top right icon)



/ Navigate to
“Remote Control”



/ Activate to “Allow remote control though Solar.web” and “SAVE”



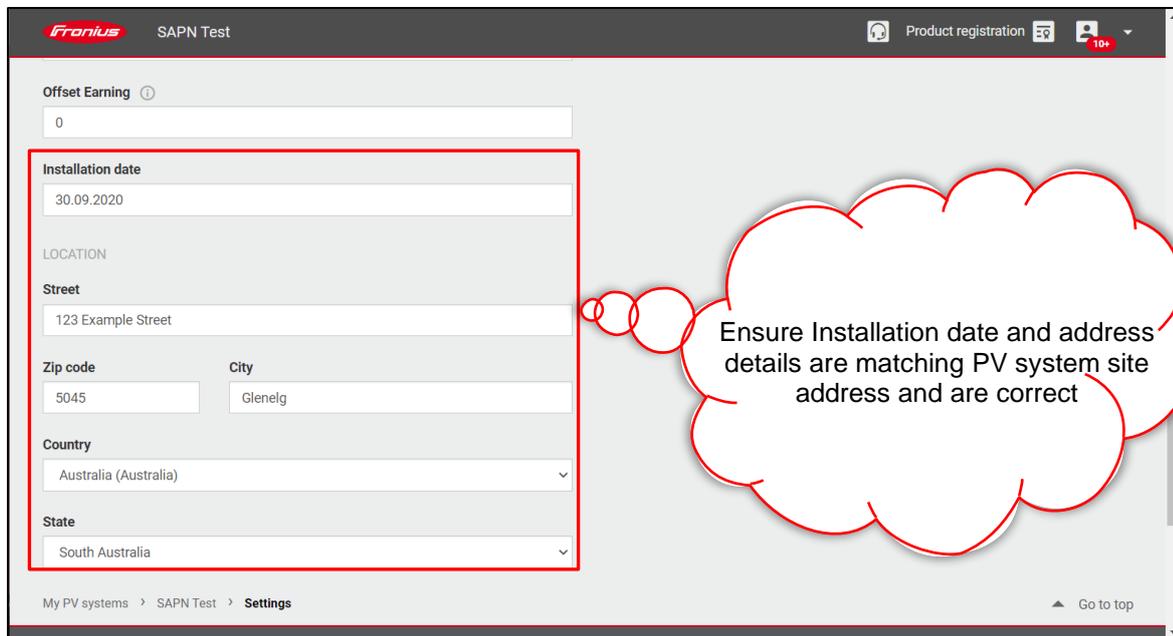
6. SOLAR.WEB CLOUD SETUP

6.1 Create system in Solar.web

Create a new system in Solar.web as per the standard process, see how [here](#).

6.2 Input correct site Address & Installation Date

For tracking of system performance it is essential that the correct address and installation date of the system is entered, see figure below for clarifications.



Offset Earning ⓘ

0

Installation date

30.09.2020

LOCATION

Street

123 Example Street

Zip code

5045

City

Glenelg

Country

Australia (Australia) ▾

State

South Australia ▾

My PV systems > SAPN Test > Settings

Product registration ⓘ 10+

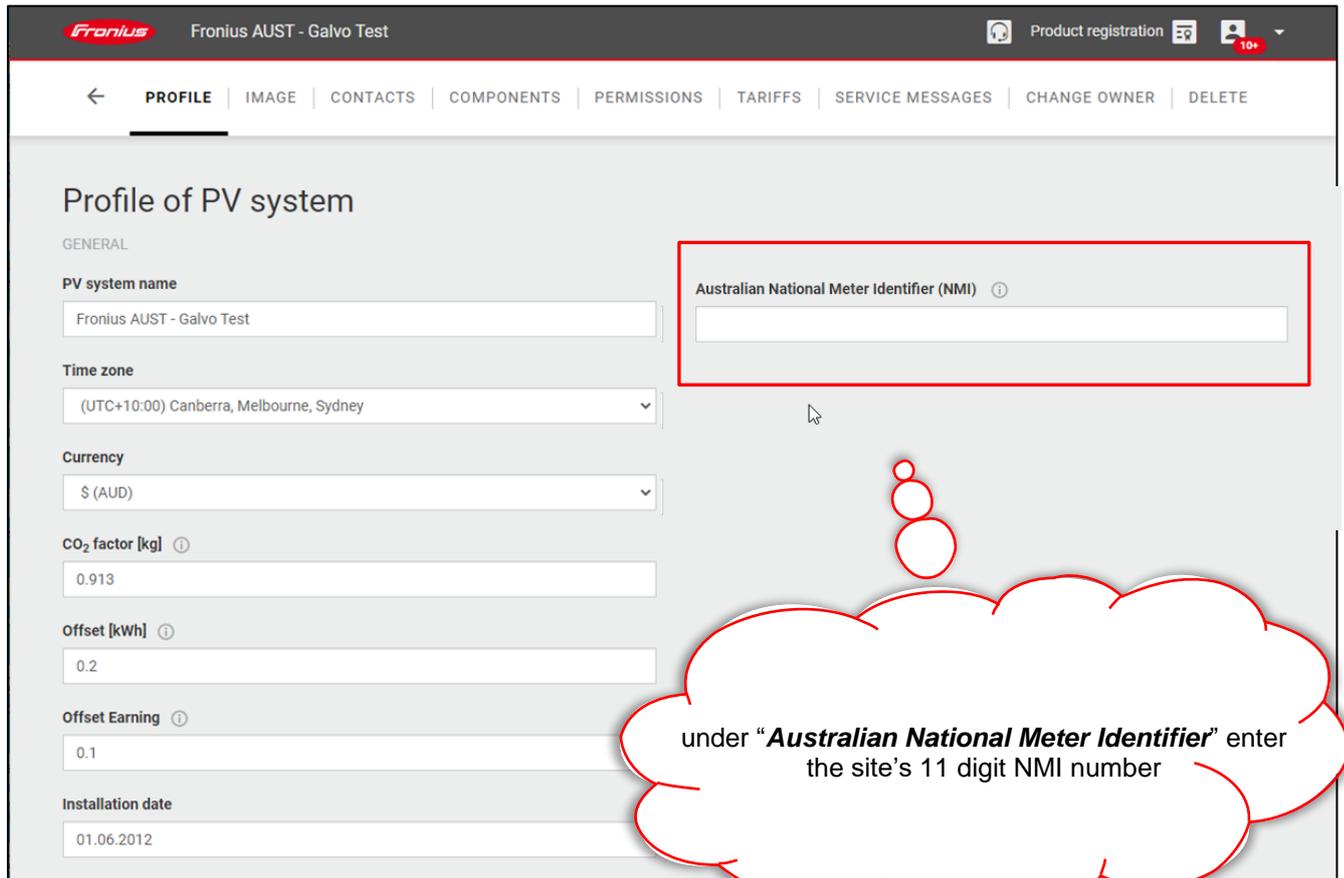
Go to top ▲

Ensure Installation date and address details are matching PV system site address and are correct

6.3 Enter site NMI number

Under “**SETTINGS**” → “**PROFILE**” do the following:

- / For “**Australian National Meter Identifier (NMI)**” enter site’s 11 x digit NMI number.



The screenshot shows the 'Profile of PV system' page for 'Fronius AUST - Galvo Test'. The page has a navigation bar with options: PROFILE, IMAGE, CONTACTS, COMPONENTS, PERMISSIONS, TARIFFS, SERVICE MESSAGES, CHANGE OWNER, and DELETE. The 'PROFILE' option is selected. The main content area is titled 'Profile of PV system' and is divided into a 'GENERAL' section. The fields in the 'GENERAL' section are: 'PV system name' (Fronius AUST - Galvo Test), 'Time zone' (UTC+10:00 Canberra, Melbourne, Sydney), 'Currency' (\$ (AUD)), 'CO₂ factor [kg]' (0.913), 'Offset [kWh]' (0.2), 'Offset Earning' (0.1), and 'Installation date' (01.06.2012). A red rectangular box highlights the 'Australian National Meter Identifier (NMI)' field, which is currently empty. A red callout bubble with a thought bubble icon above it points to this field and contains the text: 'under “**Australian National Meter Identifier**” enter the site’s 11 digit NMI number'.



7. INVERTER LFDI CREATION

7.1 Create an LFDI for the inverter

An LFDI (Long Form Device Identifier) is required to be created and provided to SAPN for device registration. To do this go to the dedicated Fronius LFDI Registration page/website: <https://flexible-export.solarweb.com/>

Select Utility - “SA Power Networks”, Enter the site “NMI” number, Under GEN24 Information enter the inverter **Serial Number & Vcode** found on the right-hand side of the inverter on the nameplate label. And click “Submit”.

www.fronius.com		
Model No. Primo GEN24 5.0 Part No. 4.210.144		
Ser. No. 12345678 V.code 2345		
AC parameters 1~NPE (ovc 3)		
UAC nom	220 V 230 V 240 V	
IAC nom	22.7 A 21.7 A 20.8 A	
IAC max	27.5 A	
fAC nom	50 / 60 Hz	
fAC nom full backup	53 / 63 Hz	
Snom / Smax	5000 VA / 5000 VA	
cos φ	0.8-1 ind./cap.	
Pmax (cosφ=0.9)	4500 W	
Pmax (cosφ=1)	5000 W	
DC parameters (ovc 2)		
UDC pv mpp	230 - 530 V	
UDC pv min - max	65 - 600 V	
IDC pv max 1 / 2	22.0 A / 12.0 A	
Isc pv 1 / 2	33.0 A / 18.0 A	
UDC bat min - max	150 V - 455 V	
IDC bat max	22.0 A	
Opportunity power socket 1~NPE (ovc 3)		
UAC	230 V	
IAC max	13.0 A	
Smax	3000 VA	
fAC	53 / 63 Hz	
cos φ	0-1 ind./cap.	
IP 66 Safety Class 1 VDE 0126-1-1 CEI 0-21 AS/NZS 4777.2 DRM 0 ready Non-isolated inverter VDE-AR-N 4105		



The result should appear with a number as per below:

Fronius Fdi Registration [Home](#) [Privacy](#)

IFdi: 2448-189A-6F1F-5E0A-A7DA-E1F4-9164-7B73-5C03-190C
sFdi: 973-927-466-25

© 2021 - Fronius DI Registration - [Privacy](#)

The **IFdi** number will need to be copy & pasted into the SAPN registration form...

NOTE: The **sFdi** will NOT be needed and does NOT need to be recorded

8. SAPN DEVICE REGSITRATION

8.1 Close out the LFDI in SmartInstall

Access [SmartInstall](#) and log in

Retrieve the site either through the EG number or using the NMI and meter number

SA Power Networks SmartInstall MK

Search by NMI / Application ID / Address / User ID

RETRIEVE SITE

All Pending Commissioned

SA Power Networks SmartInstall MK

Retrieve Site

NMI / Meter Application ID

EG Application ID:

EG1193226

Please note that retrieval via Application ID requires installation permission to be granted on the application (or ownership).

SEARCH



Confirm the address and click **"NEXT"**

The screenshot shows the 'Retrieve Site' form in the SmartInstall application. At the top, there is a header with the SA Power Networks logo and the text 'SmartInstall' and 'MK'. Below the header, the form has two radio buttons: 'NMI / Meter' (unselected) and 'Application ID' (selected). Underneath, there is a text input field for 'EG Application ID' containing the value 'EG1193226'. A note states: 'Please note that retrieval via Application ID requires installation permission to be granted on the application (or ownership)'. A 'SEARCH' button is located below the note. The 'Address:' field is highlighted with a red box and contains the text '13 Fake Street, Faketown'. Below the address, there is a question 'Are the address details correct?' with 'Yes' (selected) and 'No' radio buttons. At the bottom right, there are two buttons: 'EXIT' and 'NEXT >', with the 'NEXT >' button highlighted by a red box.

Expand the **LFDI** section

The screenshot shows the expanded 'LFDI' section of the SmartInstall application. The header includes the SA Power Networks logo, 'SmartInstall', and 'MK'. Below the header, the 'Application ID' is 'EG1193226' and the 'NMI' is '20010056405'. A 'SITE' section is expanded, showing details: 'Address: 13 Fake Street, Faketown', 'Connection Type: Single Phase', and 'Capacity: 8.23 kVA'. Below this, the 'LFDI' section is expanded, showing a right-pointing arrow icon highlighted with a red box, the text 'LFDI', and 'LFDI Required' with a warning icon. Below the 'LFDI' section, the 'EXPORT LIMITING' section is visible, showing a right-pointing arrow icon, the text 'EXPORT LIMITING', and 'Fixed (1.5kW / phase)' with a warning icon.



Enter the 40 digit LFDI generated using the Fronius LFDI Generation page and click **“COMMISSION”**
NOTE: without hyphens between the numbers

The screenshot shows the SmartInstall application interface. At the top, it displays 'SA Power Networks SmartInstall' and 'MK'. Below this, the 'Application ID: EG1193226' and 'NMI: 20010056405' are shown. The 'SITE' section is expanded, showing 'Address: 13 Fake Street, Faketown', 'Connection Type: Single Phase', and 'Capacity: 8.23 kVA'. The 'LFDI' section is also expanded, showing 'LFDI Required' with a warning icon. The LFDI value '1A23D9AF33A8A91223476BE233567AA2F4134B9F' is entered in a text box. Below the text box, the 'COMMISSION' button is highlighted with a red rectangle.

The status of the LFDI section shows as **Commissioned**. Notice you can change and update the LFDI here.

The screenshot shows the SmartInstall application interface after the LFDI has been commissioned. The 'LFDI' section now shows 'Commissioned' with a green checkmark icon, which is highlighted with a red rectangle. Below this, the LFDI value '1A23D9AF33A8A91223476BE233567AA2F4134B9F' is still entered in the text box, and the 'UPDATE' button is visible below it.

The Flexible Export registration is now complete, you can continue to close out each of the components of the installation in **SmartInstall**.



END OF DOCUMENT

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To access Technical articles, Quick guides, Whitepapers and other technical documents, please visit the [Tech Support Area for Installers on our website](#)