

SUNNY TRIPOWER CORE1 Technical Information

## STP50-40 Settings for Australia

 Please consider the environment before you print this document

# Contents

1	Inverter Settings.....	3
1.1	Commissioning of the inverter .....	3
1.2	Settings - Ausnet Services, Jemena, Citipower, Powercor, United Energy.....	7
1.3	Settings - Energex, Ergon, Essential Energy, NT Power and Water, TasNetworks.....	8
1.4	Settings - SA Power Networks.....	9
1.5	Settings - Ausgrid .....	10
1.6	Settings - Endeavour Energy.....	11
1.7	Settings - Horizon Power .....	12
1.8	Settings - Western Power.....	13
1.9	Settings - Evoenergy.....	14
2	Earth Fault Alarm .....	15
2.1	Notification through Sunny Portal classic.....	15
2.2	Notification through Sunny Portal powered by ennexOS.....	15
2.3	Connecting an external alarm .....	15
3	Demand Response Modes (DRM).....	16
4	30mA RCD.....	17

# 1 Inverter Settings

Different grid operators in Australia require changes to the default AS/NZS 4777.2:2015 inverter settings. Commonly adjusted settings are:

- Active power as a function of AC voltage (Volt-Watt)
- Reactive power as a function of AC voltage (Volt-VAR)
- 10 minute average overvoltage value ( $V_{\text{nommax}}$ )

It is recommended to consult your grid operator's relevant technical standard or connection approval to confirm required settings.

**Please note, the country standard should always be set first before making any adjustments to inverter settings. Follow the procedure below in order.**

## 1.1 Commissioning of the inverter

The setting changes can be made manually, as described in this document, or using a configuration file.

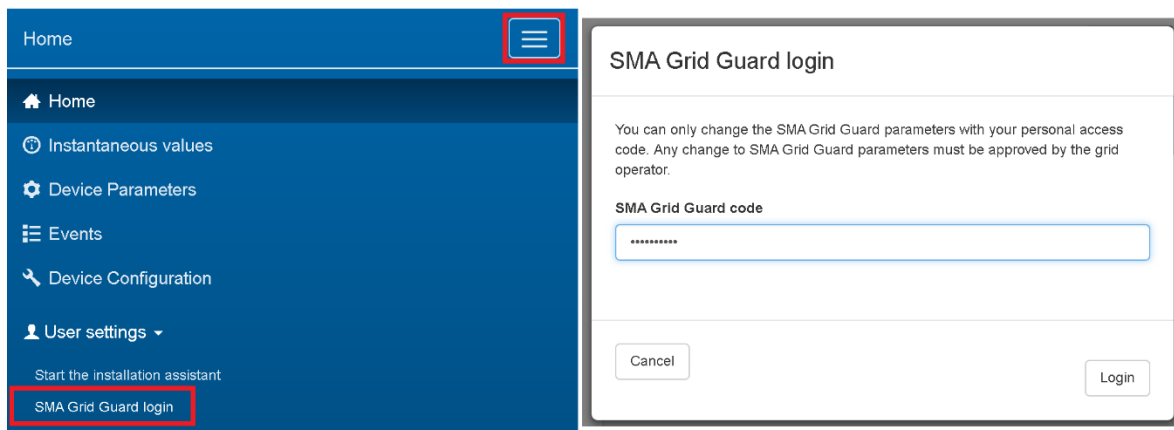
### Requirements

- Wireless enabled smart device e.g Smart Phone, Tablet or a laptop with ethernet port and an ethernet cable
- If your inverter has been operating for more than 10 hours, a valid SMA GRID GUARD CODE is required. To apply for an SMA Grid Guard Code fill out an application and return to SMA. You can find the application form by searching "[SMA Grid Guard code application](#)"
- Instructions valid for STP50-40 inverters with Firmware  $\geq 3.00.xR$ .

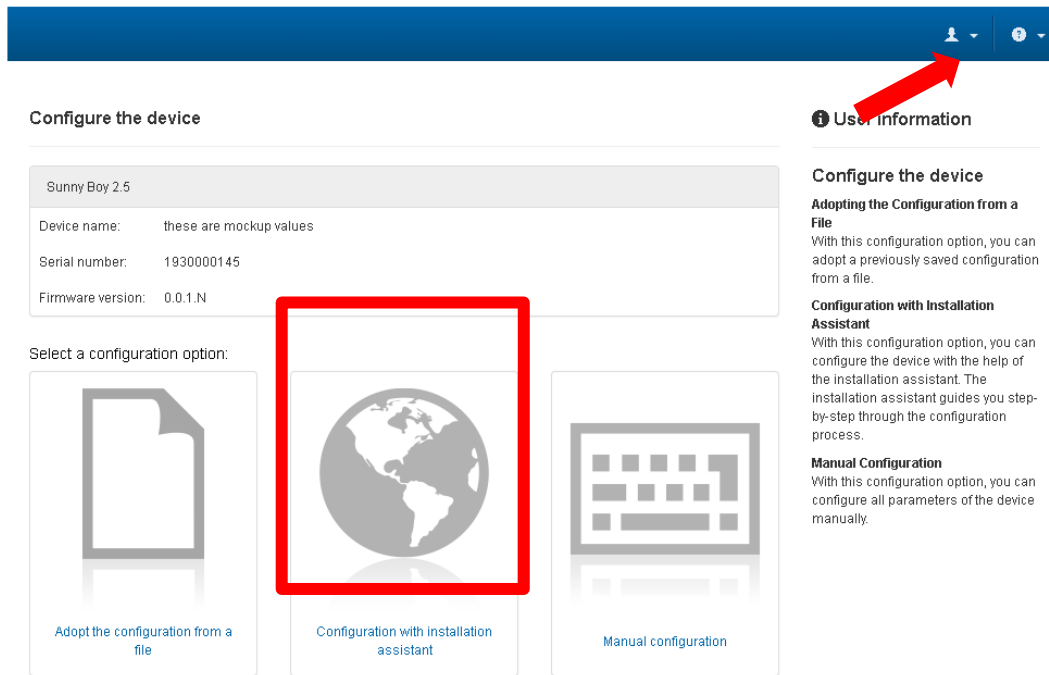
A YouTube instructional video is available, you can find this in the SMA Australia Playlist <https://ti-nyurl.com/smayoutube>

## Instructions

1. Connect to your inverter's user interface through WLAN or an ethernet cable.  
An instructional video for WLAN is available - <https://youtu.be/3XFqFOnVv3U>
2. Log onto the inverter as an **Installer**. If the inverter already has an unknown installer password set, contact the original installer or SMA Service for a PUK.
3. If the inverter was previously commissioned or has been operating for more than 10 hours, you need to enter a SMA Grid-guard code. Skip this step if this is the first-time inverter is turned on.  
Once logged in to the WebUI as an installer navigate to the top right menu and under **User settings**, select **SMA Grid Guard login** as shown following.



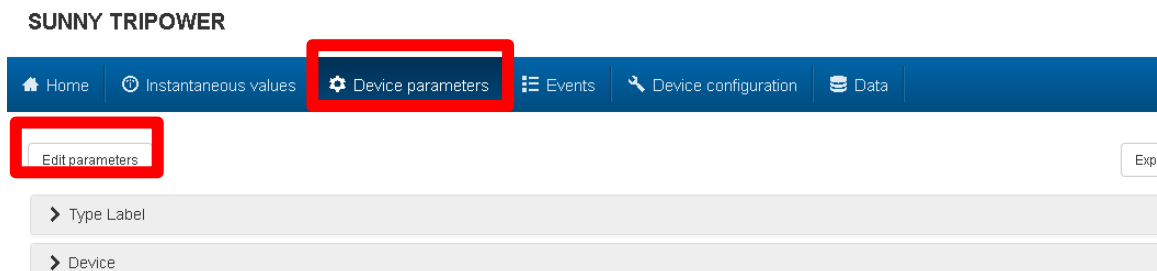
4. Select **Configuration using Installation Assistant** if the inverter has not been commissioned. Otherwise skip to step 7.



5. Follow the setup procedure as guided in the steps of the assistant. You should set up the following steps for this inverter properly:
  - o Network configuration: how the inverter connects to the internet
  - o Timezone
  - o Country standard = AS4777.2\_2015
  - o Setup export control (if applicable)

6. After the Configuration Assistant is complete, the inverter homepage will be displayed.

7. Select **Device parameters** from the top menu, then select **Edit parameters**



8. Under **Grid Monitoring** → **Grid monitoring** → **Country standard**, ensure the underlying country standard is AS4777.2\_2015. If it is not this value, change the **Set country standard** to

AS4777.2\_2015 as shown in the screenshot below

Grid Monitoring

Grid monitoring

Country standard Special setting

Set country standard [AU] AS4777.2\_2015

Underlying country standard [AU] AS4777.2\_2015

- 9. Settings for each grid operator have been tabulated at the end of this document. Find the appropriate table and adjusted the inverter settings.
- 10. Once all inverter setting changes have been made, scroll to the top of the page and click **Save All**

**SUNNY TRIPOWER**

Home Instantaneous values Device parameters Events Device configuration Data

Discard all **Save all**

Unsaved changes (1)

Parameter name	Old value	New value
Grid Monitoring - Grid monitoring - Set country standard	-----	[AU] AS4777.2_2015

- 11. The setup is now complete.



## 1.2 Settings – Ausnet Services, Jemena, Citipower, Powercor, United Energy

Category	Parameter	Value
Grid monitoring > Set country standard >	Country Standard	[AU] AS4777.2_2015
Grid monitoring > Country standard > Voltage monitoring	Voltage increase protection	258V
System and device control > Inverter > Reactive power mode	Operating mode of static voltage stabilization	Reactive power charact. curve
Inverter > Conf. of the grid integr. characteristic curves > Supporting points of the characteristic curve 1	X value A	207
Inverter > Conf. of the grid integr. characteristic curves > Supporting points of the characteristic curve 1	X value B	220
Inverter > Conf. of the grid integr. characteristic curves > Supporting points of the characteristic curve 1	X value C	253
Inverter > Conf. of the grid integr. characteristic curves > Supporting points of the characteristic curve 1	X value D	259
Inverter > Conf. of the grid integr. characteristic curves > Supporting points of the characteristic curve 1	Y value A	100
Inverter > Conf. of the grid integr. characteristic curves > Supporting points of the characteristic curve 1	Y value B	100
Inverter > Conf. of the grid integr. characteristic curves > Supporting points of the characteristic curve 1	Y value C	100
Inverter > Conf. of the grid integr. characteristic curves > Supporting points of the characteristic curve 1	Y value D	20
Inverter > Conf. of the grid integr. characteristic curves > Supporting points of the characteristic curve 2	X value A	208
Inverter > Conf. of the grid integr. characteristic curves > Supporting points of the characteristic curve 2	X value B	220
Inverter > Conf. of the grid integr. characteristic curves > Supporting points of the characteristic curve 2	X value C	241
Inverter > Conf. of the grid integr. characteristic curves > Supporting points of the characteristic curve 2	X value D	253
Inverter > Conf. of the grid integr. characteristic curves > Supporting points of the characteristic curve 2	Y value A	44
Inverter > Conf. of the grid integr. characteristic curves > Supporting points of the characteristic curve 2	Y value B	0
Inverter > Conf. of the grid integr. characteristic curves > Supporting points of the characteristic curve 2	Y value C	0
Inverter > Conf. of the grid integr. characteristic curves > Supporting points of the characteristic curve 2	Y value D	-44
Inverter > Conf. of the grid integr. characteristic curves > Configuration of characteristic curve mode	Activation of the characteristic curve [B]	On
Inverter > Conf. of the grid integr. characteristic curves > Characteristic curve	Number of support points to be used [A]	4

Table 1: Inverter Settings for Ausnet Services, Jemena, Citipower, Powercor, United Energy

## 1.3 Settings – Energex, Ergon, Essential Energy, NT Power and Water, TasNetworks

Category	Parameter	Value
Grid monitoring > Set country standard >	Country Standard	[AU] AS4777.2_2015
Grid monitoring > Country standard > Voltage monitoring	Voltage increase protection	258V
System and device control > Inverter > Reactive power mode	Operating mode of static voltage stabilization	Reactive power charact. curve
Inverter > Conf. of the grid integr. characteristic curves > Supporting points of the characteristic curve 1	X value A	207
Inverter > Conf. of the grid integr. characteristic curves > Supporting points of the characteristic curve 1	X value B	220
Inverter > Conf. of the grid integr. characteristic curves > Supporting points of the characteristic curve 1	X value C	253
Inverter > Conf. of the grid integr. characteristic curves > Supporting points of the characteristic curve 1	X value D	260
Inverter > Conf. of the grid integr. characteristic curves > Supporting points of the characteristic curve 1	Y value A	100
Inverter > Conf. of the grid integr. characteristic curves > Supporting points of the characteristic curve 1	Y value B	100
Inverter > Conf. of the grid integr. characteristic curves > Supporting points of the characteristic curve 1	Y value C	100
Inverter > Conf. of the grid integr. characteristic curves > Supporting points of the characteristic curve 1	Y value D	20
Inverter > Conf. of the grid integr. characteristic curves > Supporting points of the characteristic curve 2	X value A	207
Inverter > Conf. of the grid integr. characteristic curves > Supporting points of the characteristic curve 2	X value B	220
Inverter > Conf. of the grid integr. characteristic curves > Supporting points of the characteristic curve 2	X value C	240
Inverter > Conf. of the grid integr. characteristic curves > Supporting points of the characteristic curve 2	X value D	258
Inverter > Conf. of the grid integr. characteristic curves > Supporting points of the characteristic curve 2	Y value A	44
Inverter > Conf. of the grid integr. characteristic curves > Supporting points of the characteristic curve 2	Y value B	0
Inverter > Conf. of the grid integr. characteristic curves > Supporting points of the characteristic curve 2	Y value C	0
Inverter > Conf. of the grid integr. characteristic curves > Supporting points of the characteristic curve 2	Y value D	-60
Inverter > Conf. of the grid integr. characteristic curves > Configuration of characteristic curve mode	Activation of the characteristic curve [B]	On
Inverter > Conf. of the grid integr. characteristic curves > Characteristic curve	Number of support points to be used [A]	4

Table 2: Inverter Settings for Energex, Ergon, Essential Energy, NT Power and Water, TasNetworks



## 1.4 Settings – SA Power Networks

Category	Parameter	Value
Grid monitoring > Set country standard >	Country Standard	[AU] AS4777.2_2015
Grid monitoring > Country standard > Voltage monitoring	Voltage increase protection	258V
System and device control > Inverter > Reactive power mode	Operating mode of static voltage stabilization	Reactive power charact. curve
Inverter > Conf. of the grid integr. characteristic curves > Supporting points of the characteristic curve 1	X value A	207
Inverter > Conf. of the grid integr. characteristic curves > Supporting points of the characteristic curve 1	X value B	220
Inverter > Conf. of the grid integr. characteristic curves > Supporting points of the characteristic curve 1	X value C	250
Inverter > Conf. of the grid integr. characteristic curves > Supporting points of the characteristic curve 1	X value D	265
Inverter > Conf. of the grid integr. characteristic curves > Supporting points of the characteristic curve 1	Y value A	100
Inverter > Conf. of the grid integr. characteristic curves > Supporting points of the characteristic curve 1	Y value B	100
Inverter > Conf. of the grid integr. characteristic curves > Supporting points of the characteristic curve 1	Y value C	100
Inverter > Conf. of the grid integr. characteristic curves > Supporting points of the characteristic curve 1	Y value D	20
Inverter > Conf. of the grid integr. characteristic curves > Supporting points of the characteristic curve 2	X value A	207
Inverter > Conf. of the grid integr. characteristic curves > Supporting points of the characteristic curve 2	X value B	220
Inverter > Conf. of the grid integr. characteristic curves > Supporting points of the characteristic curve 2	X value C	248
Inverter > Conf. of the grid integr. characteristic curves > Supporting points of the characteristic curve 2	X value D	253
Inverter > Conf. of the grid integr. characteristic curves > Supporting points of the characteristic curve 2	Y value A	31
Inverter > Conf. of the grid integr. characteristic curves > Supporting points of the characteristic curve 2	Y value B	0
Inverter > Conf. of the grid integr. characteristic curves > Supporting points of the characteristic curve 2	Y value C	0
Inverter > Conf. of the grid integr. characteristic curves > Supporting points of the characteristic curve 2	Y value D	-44
Inverter > Conf. of the grid integr. characteristic curves > Configuration of characteristic curve mode	Activation of the characteristic curve [B]	On
Inverter > Conf. of the grid integr. characteristic curves > Characteristic curve	Number of support points to be used [A]	4

Table 3: Inverter Settings for SA Power Networks,

## 1.5 Settings – Ausgrid

Category	Parameter	Value
Grid monitoring > Set country standard >	Country Standard	[AU] AS4777.2_2015
Grid monitoring > Country standard > Voltage monitoring	Voltage increase protection	258V
System and device control > Inverter > Reactive power mode	Operating mode of static voltage stabilization	Reactive power charact. curve
Inverter > Conf. of the grid integr. characteristic curves > Supporting points of the characteristic curve 1	X value A	207
Inverter > Conf. of the grid integr. characteristic curves > Supporting points of the characteristic curve 1	X value B	220
Inverter > Conf. of the grid integr. characteristic curves > Supporting points of the characteristic curve 1	X value C	248
Inverter > Conf. of the grid integr. characteristic curves > Supporting points of the characteristic curve 1	X value D	258
Inverter > Conf. of the grid integr. characteristic curves > Supporting points of the characteristic curve 1	Y value A	100
Inverter > Conf. of the grid integr. characteristic curves > Supporting points of the characteristic curve 1	Y value B	100
Inverter > Conf. of the grid integr. characteristic curves > Supporting points of the characteristic curve 1	Y value C	100
Inverter > Conf. of the grid integr. characteristic curves > Supporting points of the characteristic curve 1	Y value D	20
Inverter > Conf. of the grid integr. characteristic curves > Supporting points of the characteristic curve 2	X value A	207
Inverter > Conf. of the grid integr. characteristic curves > Supporting points of the characteristic curve 2	X value B	220
Inverter > Conf. of the grid integr. characteristic curves > Supporting points of the characteristic curve 2	X value C	248
Inverter > Conf. of the grid integr. characteristic curves > Supporting points of the characteristic curve 2	X value D	258
Inverter > Conf. of the grid integr. characteristic curves > Supporting points of the characteristic curve 2	Y value A	60
Inverter > Conf. of the grid integr. characteristic curves > Supporting points of the characteristic curve 2	Y value B	0
Inverter > Conf. of the grid integr. characteristic curves > Supporting points of the characteristic curve 2	Y value C	0
Inverter > Conf. of the grid integr. characteristic curves > Supporting points of the characteristic curve 2	Y value D	-60
Inverter > Conf. of the grid integr. characteristic curves > Configuration of characteristic curve mode	Activation of the characteristic curve [B]	On
Inverter > Conf. of the grid integr. characteristic curves > Characteristic curve	Number of support points to be used [A]	4

Table 4: Inverter Settings for Ausgrid

## 1.6 Settings – Endeavour Energy

Category	Parameter	Value
Grid monitoring > Set country standard >	Country Standard	[AU] AS4777.2_2015
Grid monitoring > Country standard > Voltage monitoring	Voltage increase protection	258V
System and device control > Inverter > Reactive power mode	Operating mode of static voltage stabilization	Reactive power charact. curve
Inverter > Conf. of the grid integr. characteristic curves > Supporting points of the characteristic curve 1	X value A	207
Inverter > Conf. of the grid integr. characteristic curves > Supporting points of the characteristic curve 1	X value B	220
Inverter > Conf. of the grid integr. characteristic curves > Supporting points of the characteristic curve 1	X value C	255
Inverter > Conf. of the grid integr. characteristic curves > Supporting points of the characteristic curve 1	X value D	265
Inverter > Conf. of the grid integr. characteristic curves > Supporting points of the characteristic curve 1	Y value A	100
Inverter > Conf. of the grid integr. characteristic curves > Supporting points of the characteristic curve 1	Y value B	100
Inverter > Conf. of the grid integr. characteristic curves > Supporting points of the characteristic curve 1	Y value C	100
Inverter > Conf. of the grid integr. characteristic curves > Supporting points of the characteristic curve 1	Y value D	20
Inverter > Conf. of the grid integr. characteristic curves > Supporting points of the characteristic curve 2	X value A	207
Inverter > Conf. of the grid integr. characteristic curves > Supporting points of the characteristic curve 2	X value B	220
Inverter > Conf. of the grid integr. characteristic curves > Supporting points of the characteristic curve 2	X value C	248
Inverter > Conf. of the grid integr. characteristic curves > Supporting points of the characteristic curve 2	X value D	260
Inverter > Conf. of the grid integr. characteristic curves > Supporting points of the characteristic curve 2	Y value A	60
Inverter > Conf. of the grid integr. characteristic curves > Supporting points of the characteristic curve 2	Y value B	0
Inverter > Conf. of the grid integr. characteristic curves > Supporting points of the characteristic curve 2	Y value C	0
Inverter > Conf. of the grid integr. characteristic curves > Supporting points of the characteristic curve 2	Y value D	-60
Inverter > Conf. of the grid integr. characteristic curves > Configuration of characteristic curve mode	Activation of the characteristic curve [B]	On
Inverter > Conf. of the grid integr. characteristic curves > Characteristic curve	Number of support points to be used [A]	4

Table 5: Inverter Settings for Endeavour Energy

## 1.7 Settings – Horizon Power

Category	Parameter	Value
Grid monitoring > Set country standard >	Country Standard	[AU] AS4777.2_2015
Grid monitoring > Country standard > Voltage monitoring	Voltage increase protection	258V
System and device control > Inverter > Reactive power mode	Operating mode of static voltage stabilization	Reactive power charact. curve
Inverter > Conf. of the grid integr. characteristic curves > Supporting points of the characteristic curve 1	X value A	207
Inverter > Conf. of the grid integr. characteristic curves > Supporting points of the characteristic curve 1	X value B	220
Inverter > Conf. of the grid integr. characteristic curves > Supporting points of the characteristic curve 1	X value C	254
Inverter > Conf. of the grid integr. characteristic curves > Supporting points of the characteristic curve 1	X value D	265
Inverter > Conf. of the grid integr. characteristic curves > Supporting points of the characteristic curve 1	Y value A	100
Inverter > Conf. of the grid integr. characteristic curves > Supporting points of the characteristic curve 1	Y value B	100
Inverter > Conf. of the grid integr. characteristic curves > Supporting points of the characteristic curve 1	Y value C	100
Inverter > Conf. of the grid integr. characteristic curves > Supporting points of the characteristic curve 1	Y value D	20
Inverter > Conf. of the grid integr. characteristic curves > Supporting points of the characteristic curve 2	X value A	207
Inverter > Conf. of the grid integr. characteristic curves > Supporting points of the characteristic curve 2	X value B	220
Inverter > Conf. of the grid integr. characteristic curves > Supporting points of the characteristic curve 2	X value C	240
Inverter > Conf. of the grid integr. characteristic curves > Supporting points of the characteristic curve 2	X value D	265
Inverter > Conf. of the grid integr. characteristic curves > Supporting points of the characteristic curve 2	Y value A	60
Inverter > Conf. of the grid integr. characteristic curves > Supporting points of the characteristic curve 2	Y value B	0
Inverter > Conf. of the grid integr. characteristic curves > Supporting points of the characteristic curve 2	Y value C	0
Inverter > Conf. of the grid integr. characteristic curves > Supporting points of the characteristic curve 2	Y value D	-60
Inverter > Conf. of the grid integr. characteristic curves > Configuration of characteristic curve mode	Activation of the characteristic curve [B]	On
Inverter > Conf. of the grid integr. characteristic curves > Characteristic curve	Number of support points to be used [A]	4

Table 6: Inverter Settings for Horizon Power

## 1.8 Settings – Western Power

Category	Parameter	Value
Grid monitoring > Set country standard >	Country Standard	[AU] AS4777.2_2015
Grid monitoring > Country standard > Voltage monitoring	Voltage increase protection	258V
System and device control > Inverter > Reactive power mode	Operating mode of static voltage stabilization	Reactive power charact. curve
Inverter > Conf. of the grid integr. characteristic curves > Supporting points of the characteristic curve 1	X value A	207
Inverter > Conf. of the grid integr. characteristic curves > Supporting points of the characteristic curve 1	X value B	220
Inverter > Conf. of the grid integr. characteristic curves > Supporting points of the characteristic curve 1	X value C	250
Inverter > Conf. of the grid integr. characteristic curves > Supporting points of the characteristic curve 1	X value D	265
Inverter > Conf. of the grid integr. characteristic curves > Supporting points of the characteristic curve 1	Y value A	100
Inverter > Conf. of the grid integr. characteristic curves > Supporting points of the characteristic curve 1	Y value B	100
Inverter > Conf. of the grid integr. characteristic curves > Supporting points of the characteristic curve 1	Y value C	100
Inverter > Conf. of the grid integr. characteristic curves > Supporting points of the characteristic curve 1	Y value D	20
Inverter > Conf. of the grid integr. characteristic curves > Supporting points of the characteristic curve 2	X value A	205
Inverter > Conf. of the grid integr. characteristic curves > Supporting points of the characteristic curve 2	X value B	220
Inverter > Conf. of the grid integr. characteristic curves > Supporting points of the characteristic curve 2	X value C	235
Inverter > Conf. of the grid integr. characteristic curves > Supporting points of the characteristic curve 2	X value D	250
Inverter > Conf. of the grid integr. characteristic curves > Supporting points of the characteristic curve 2	Y value A	30
Inverter > Conf. of the grid integr. characteristic curves > Supporting points of the characteristic curve 2	Y value B	0
Inverter > Conf. of the grid integr. characteristic curves > Supporting points of the characteristic curve 2	Y value C	0
Inverter > Conf. of the grid integr. characteristic curves > Supporting points of the characteristic curve 2	Y value D	-30
Inverter > Conf. of the grid integr. characteristic curves > Configuration of characteristic curve mode	Activation of the characteristic curve [B]	On
Inverter > Conf. of the grid integr. characteristic curves > Characteristic curve	Number of support points to be used [A]	4

Table 7: Inverter Settings for Western Power

## 1.9 Settings – Evoenergy

Category	Parameter	Value
Grid monitoring > Set country standard >	Country Standard	[AU] AS4777.2_2015
Grid monitoring > Country standard > Voltage monitoring	Voltage increase protection	258V
System and device control > Inverter > Reactive power mode	Operating mode of static voltage stabilization	Reactive power charact. curve
Inverter > Conf. of the grid integr. characteristic curves > Supporting points of the characteristic curve 1	X value A	207
Inverter > Conf. of the grid integr. characteristic curves > Supporting points of the characteristic curve 1	X value B	220
Inverter > Conf. of the grid integr. characteristic curves > Supporting points of the characteristic curve 1	X value C	250
Inverter > Conf. of the grid integr. characteristic curves > Supporting points of the characteristic curve 1	X value D	258
Inverter > Conf. of the grid integr. characteristic curves > Supporting points of the characteristic curve 1	Y value A	100
Inverter > Conf. of the grid integr. characteristic curves > Supporting points of the characteristic curve 1	Y value B	100
Inverter > Conf. of the grid integr. characteristic curves > Supporting points of the characteristic curve 1	Y value C	100
Inverter > Conf. of the grid integr. characteristic curves > Supporting points of the characteristic curve 1	Y value D	20
Inverter > Conf. of the grid integr. characteristic curves > Supporting points of the characteristic curve 2	X value A	207
Inverter > Conf. of the grid integr. characteristic curves > Supporting points of the characteristic curve 2	X value B	220
Inverter > Conf. of the grid integr. characteristic curves > Supporting points of the characteristic curve 2	X value C	250
Inverter > Conf. of the grid integr. characteristic curves > Supporting points of the characteristic curve 2	X value D	258
Inverter > Conf. of the grid integr. characteristic curves > Supporting points of the characteristic curve 2	Y value A	30
Inverter > Conf. of the grid integr. characteristic curves > Supporting points of the characteristic curve 2	Y value B	0
Inverter > Conf. of the grid integr. characteristic curves > Supporting points of the characteristic curve 2	Y value C	0
Inverter > Conf. of the grid integr. characteristic curves > Supporting points of the characteristic curve 2	Y value D	-30
Inverter > Conf. of the grid integr. characteristic curves > Configuration of characteristic curve mode	Activation of the characteristic curve [B]	On
Inverter > Conf. of the grid integr. characteristic curves > Characteristic curve	Number of support points to be used [A]	4

Table 8: Inverter Settings for Evo Ener

## 2 Earth Fault Alarm


The SUNNY TRIPOWER CORE1 complies with AS4777.2:2015, IEC 62109-1 and IEC 62109-2 including the requirements for ground/earth fault detection and alarm. The inverter detects earth faults by the measurement of insulation resistance between the DC side and ground. Earth faults (and other faults) trigger the inverter's front LED to glow red as a visual indication. Additional external alarms are supported as described below.

### 2.1 Notification through Sunny Portal classic

If the country code is set to AS/NZS4777.2:2015 and the inverter registered in Sunny Portal (sunnyportal.com) a notification report will be automatically configured to notify the owner of the plant hourly of an earth fault via the owners registered email.

### 2.2 Notification through Sunny Portal powered by ennexOS

In PV systems with a Data Manager M, event monitoring and notification is possible through ennexos.sunnyportal.com. To enable notification emails to the nominated email address, setup the following:

1. Commission the Data Manager M including registration of CORE1 inverter(s)
2. Select **Notifications** in the menu **Configuration**
3. Select [ : ] button
4. Select **Event report**
5. For the newly created Event report, click the  icon
6. Configure the report with
  - **Cycle:** Hourly,
  - **Event type:**  Fault,
  - Only reports with events

### 2.3 Connecting an external alarm

The CORE1 has a multifunction relay that can be used to trigger an external alarm. When any fault occurs, the relay labelled ALARM will change state. Refer to the operation manual section 6.4 for more details on the multifunction relay and section 8.16 for adjusting the operating mode of the relay.

### **3 Demand Response Modes (DRM)**

CORE1 (STP50-40) supports DRM0 in accordance with AS/NZ 4777.2:2015.

DRM0 (Operate the disconnection device) is asserted by the inverter when an external SMA Compatible DRED is installed and configured to communicate to the STP50-40 via Modbus TCP.



## 4 30mA RCD

The Electrical installation wiring rules AS/NZS 3000:2018 requires a 30mA Residual current device (RCD) to be installed on a final sub circuit. Even though solar inverters are not considered to be final sub circuit, 30mA RCD's are often used to reduce cable mechanical protection requirements. The STP50-40 however is not currently suitable for installation on a 30mA RCD. **The STP50-40 must not be installed on a 30mA RCD or RCBO.**