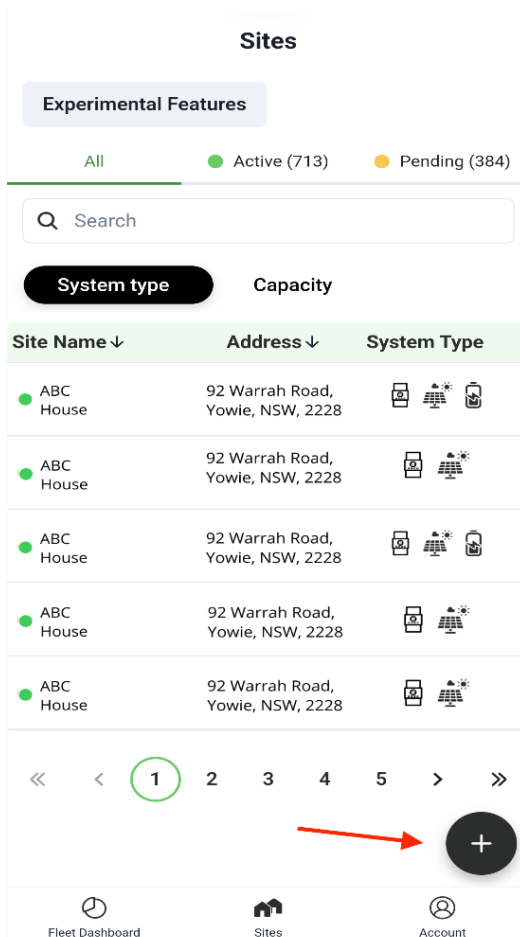


Cortex Meter Commissioning Guide

Entering site details

To begin, open the Cortex Fleet App. Tap the **Plus** icon on your screen as shown below:

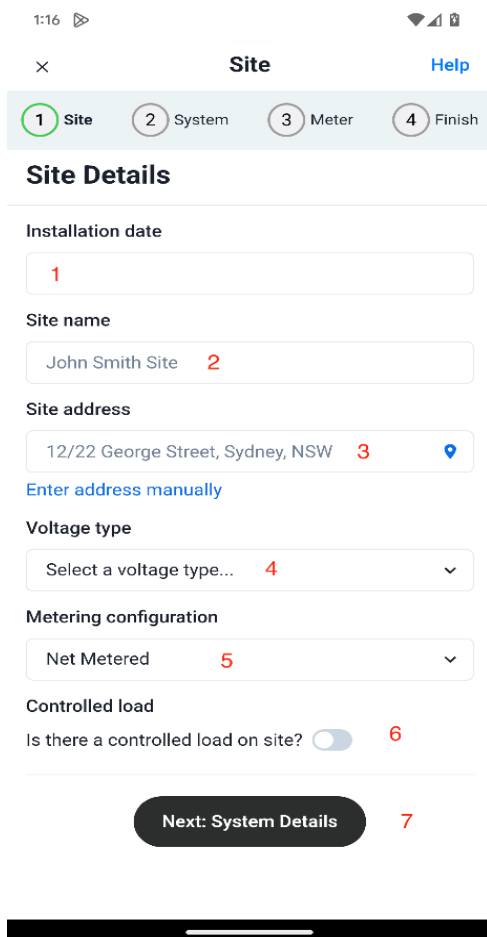


This will then lead you to the next page where you need to enter site specific details. Follow the steps below and ensure that you type in accurate details to setup the site properly.

To add a site:

1. Select the **Installation date**.
2. Enter the **Site name**. Input the customer's name in the field as this will be the site name shown in your fleet.
3. Enter and choose the suggested **Site address**. If the site does not show up on the suggested list, enter the whole address manually.

4. Next, tap on **Voltage type** dropdown and select how many supply phases the site has. This could either be single phase, three phase, or two (poly) phases.
Note: Please make sure you double check that you have chosen the correct number of supply phases as this will affect the current transformer allocations in the later steps in the site setup.
5. Then, tap on the **Metering configuration** dropdown and choose if it is **Net Metered** or **Gross Metered** according to the site metering setup. Normally, sites use the Net Metered configuration.
6. Turn the toggle switch on (green) if there is a **Controlled load** on site such as hot water circuit on an off peak or controlled load metering.
7. This completes the Site Details page. Click the **Next: System Details** button to proceed to the System details page.



1:16

Site Help

1 Site 2 System 3 Meter 4 Finish

Site Details

Installation date

1

Site name

John Smith Site 2

Site address

12/22 George Street, Sydney, NSW 3

[Enter address manually](#)

Voltage type

Select a voltage type... 4

Metering configuration

Net Metered 5

Controlled load

Is there a controlled load on site? 6

Next: System Details 7



Entering system details

After you've entered the site details, when you tap next, you are presented with the System Details page. This is where you will **input inverter and battery details** of the site. Inputting the right system details ensures that the customers can monitor all the equipment that they have and see how their entire solar system is performing.

To add system details:

1. Input how many **Inverter(s)** are in the site.
2. Select the **Manufacturer** name and **Model** number for each of the inverters added.
3. For selected inverters, we require additional information such as API key, site ID, etc. Please input it accordingly whenever applicable. This is so that we can integrate data (battery power flow, battery percentage/state of charge (SOC), etc.) from the inverter monitoring portal into our platform.
4. If an **inverter is connected to solar panels**, turn the toggle switch **on** (green) for the respective inverter and input the panel power in the field provided.
5. Next, input the number of different **Orientations** the panels connected to the inverter have followed.
6. Input the **Number of panels** and select **Tilt type** for each orientation. If pitched, then select the facing from below.
7. If the inverter has **DC coupled battery** connected to it, turn the toggle switch **on** (green).
If the site has **AC coupled battery**, then keep the toggle switch **Off**.
8. After you have added the inverter(s), proceed to **adding a Battery** (DC or AC coupled) if applicable for that site. Specify the battery manufacturer, model number and if applicable the serial number.
9. Click the **Next: Meter Setup** button to proceed to setup the Cortex meter.



Site



System



3 Meter



4 Finish

Inverter

How many inverters do you want to add in this site?

– 1 +

Inverter 1

Remove ^

Manufacturer

Select a manufacturer...



Model

Select a manufacturer to view models.



[Can't find your inverter?](#)

Does the inverter have solar panels connected?

Yes ☒

Panel Power (W)

0

Total Panels

0

Total power: 0.00 kW

How many orientations does inverter 1 have?

– 1 +

Orientation 1

Remove ^

No of Panels

0

Total power: 0.00 kW

Select Tilt Type



Does the inverter have a DC coupled battery connected?

No ☐

Battery

How many batteries do you want to add in this site?

– 0 +

Next: Meter Setup

Battery

How many batteries do you want to add in this site?

– 1 +

Battery 1

Remove ^

Manufacturer

Select a manufacturer...



Model

Select a manufacturer to view models.



[Can't find your battery?](#)

Next: Meter Setup

Note: If the site does not have an inverter and battery (i.e. "consumption-only" site), leave the numbers to be zero and then click the "Next: Meter Setup" button.



John Smith Site

[Help](#)



Site



System



Meter



Finish

Inverter

How many inverters do you want to add in this site?

– 0 +

Battery

How many batteries do you want to add in this site?

– 0 +

Next: Meter Setup

Meter setup

To add meter(s)

1. Choose how many Cortex meters are installed on the site.
2. In each meter section, keep the default meter name or rename as desired.
3. Next, enter the meter serial number by typing it directly or by scanning the barcode of the serial number on the device box.
4. Once the serial number(s) is(are) added, tap the "Get Meter Data" button. If the meter(s) is(are) added successfully, the signal strength indicator will appear right under the serial number field(s).
5. After you've added all the meter(s), proceed to the Channel configuration step.

× **John Smith Site** [Help](#)

✓ Site

✓ System

3 Meter

4 Finish

Meter Setup

[Reset Tests](#)

How many meters do you want to add in this site?

– 1 +

Meter 1 [Remove](#) ^

Meter Name

John Smith Site - Meter 1

Serial Number



Get Meter Data



Channel configuration

Once you've added the Cortex meters successfully, you can now proceed to the Channel Configuration step where you can select and map the respective current transformers (CTs) for each circuit to be monitored

Note: The following circuits must be monitored if they are on the site

- Grid or Mains Supply
- Controlled loads - e.g. off-peak hot water system
- All solar circuits with one CT per phase per inverter- e.g. grid-tied inverters, hybrid Inverters
- AC coupled batteries - e.g. Tesla Powerwall2

Please note that for a multi-phase circuit, you are required to use CT for each phase of the circuit. E.g. 3 CTs are required for 3-phase Mains Supply and 2 CTs are required for 2-phase Mains. 3 CTs for 3-phase Solar Inverter, etc.

Depending on the site and system details entered in previous steps, CT assignment will be grouped into the following tabs at the bottom of the page:

- Grid
- Solar
- Hybrid
- Battery (AC-coupled)
- Load

Grid and Load tabs will be visible for every site, but Solar, Hybrid and Battery tabs will only be visible if they are configured in the System Details step.

×John Smith SiteHelp

 Site

 System

 Meter

4

 Finish

<

 Channel Configuration

Configure sources and loads for the site

Grid

Select which CT's are measuring the grid

John Smith Site - Meter 1

CT1

CT2

CT3

CT4

CT5

CT6



No CT's Added

You should first select the CT's from the Meters above

Next →

Grid

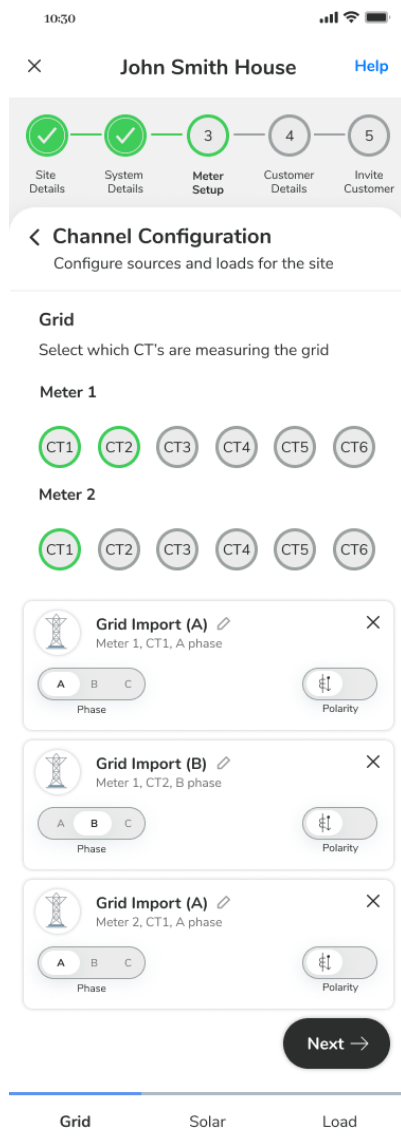
Solar

Load

Assigning CT(s)

1. Tap on the Grid at the bottom of the page to select and assign CT(s) for grid.
2. If the site is single phase, select the CT used for grid. Once assigned the CT will have a green circle.
3. If the site is 2 or 3-phase, you will need to select 2 or 3 CTs for grid respectively. Once selected, also select the corresponding phase for the circuit/CT as well.
4. There is a "Polarity" toggle button for every CT as well.
5. The default toggle position is "left".

- If a CT is installed but its arrow (direction) is facing the wrong way (refer to CT direction in the detailed installation guide), change the "Polarity" toggle position to "right".



10:50

John Smith House [Help](#)

Site Details System Details **Meter Setup** Customer Details Invite Customer

< **Channel Configuration**
Configure sources and loads for the site

Grid
Select which CT's are measuring the grid

Meter 1

CT1 CT2 CT3 CT4 CT5 CT6

Meter 2

CT1 CT2 CT3 CT4 CT5 CT6

Grid Import (A) [✎](#)
Meter 1, CT1, A phase

A B C Phase

⬅ ➡ Polarity

Grid Import (B) [✎](#)
Meter 1, CT2, B phase

A B C Phase

⬅ ➡ Polarity

Grid Import (A) [✎](#)
Meter 2, CT1, A phase

A B C Phase

⬅ ➡ Polarity

Next ➡

Grid Solar Load

- The **next step** is to assign CT(s) for the solar inverters.

10:30

×
John Smith House
Help

✓

✓

3

4

5

Site Details
System Details
Meter Setup
Customer Details
Invite Customer

←
Channel Configuration

Configure sources and loads for the site

Solar 1

Select witch CT's are measuring solar

Meter 1

Grid
Grid
CT3
CT4
CT5
CT6

Meter 2

Grid
CT2
CT3
CT4
CT5
CT6

Solar (A)
✕

Meter 1, CT3, A phase

A
B
C

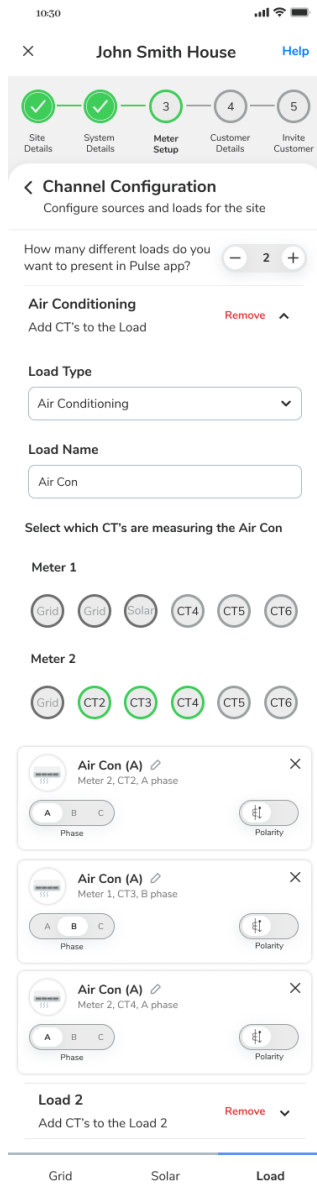
Phase

Polarity

Next →

Grid
Solar
Load

- Finally, proceed to the CT configuration for all the loads present on the site. Specify the number of loads that wish to be monitored, then select the load types and we will autofill the load names for you. Please note that the load names entered is what the site owner will be seeing on their Cortex app.



10:30

John Smith House [Help](#)

Site Details System Details Meter Setup Customer Details Invite Customer

< Channel Configuration
Configure sources and loads for the site

How many different loads do you want to present in Pulse app? - 2 +

Air Conditioning Remove ^
Add CT's to the Load

Load Type
Air Conditioning

Load Name
Air Con

Select which CT's are measuring the Air Con

Meter 1
Grid Grid Solar CT4 CT5 CT6

Meter 2
Grid CT2 CT3 CT4 CT5 CT6

Air Con (A) Meter 2, CT2, A phase
Phase: A B C Polarity: [Toggle]

Air Con (A) Meter 1, CT3, B phase
Phase: A B C Polarity: [Toggle]

Air Con (A) Meter 2, CT4, A phase
Phase: A B C Polarity: [Toggle]

Load 2 Remove v
Add CT's to the Load 2

Grid Solar Load

9. For hot water and underfloor heating, please use the toggle switch provided to specify whether it is a controlled load or not.
10. For each individual CTs, you can remotely configure the phasing and polarity even if you are not present on the site.
11. Once you've assigned all the CTs, proceed to the Source and Load Tests section.

Source and load tests

This section of the meter setup checks if all solar, loads and grids are configured properly.

1. Tap on Run All Tests.
2. It might take up to a minute to run all tests, once you've passed all the tests, proceed to the Customer Details step.


Site
Details


System
Details


**Meter
Setup**


Customer
Details


Invite
Customer

 **Source and Load Test**


Solar
Test passed




Loads
Needs attention




Grid
Test passed

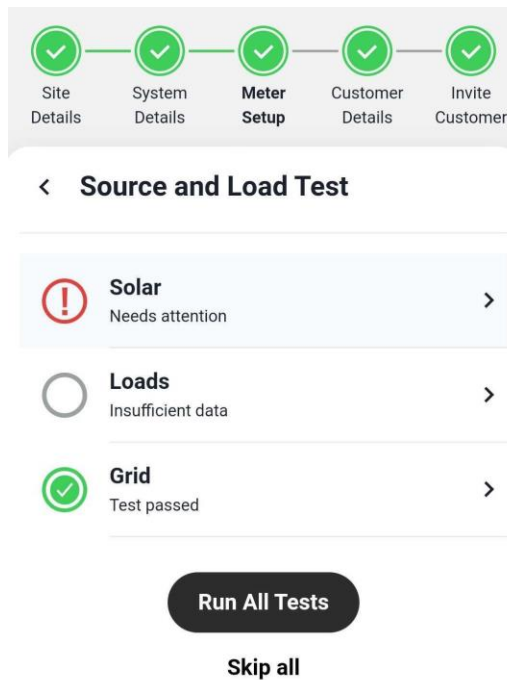


Run All Tests

Skip all

- If any of your tests fail, tap on the relevant tests section to view a further breakdown of why the test has failed. Update Phasing and/or Polarity and run the specific test again. You may also choose to skip the tests to proceed to the next

step.



Site Details System Details **Meter Setup** Customer Details Invite Customer

< **Source and Load Test**

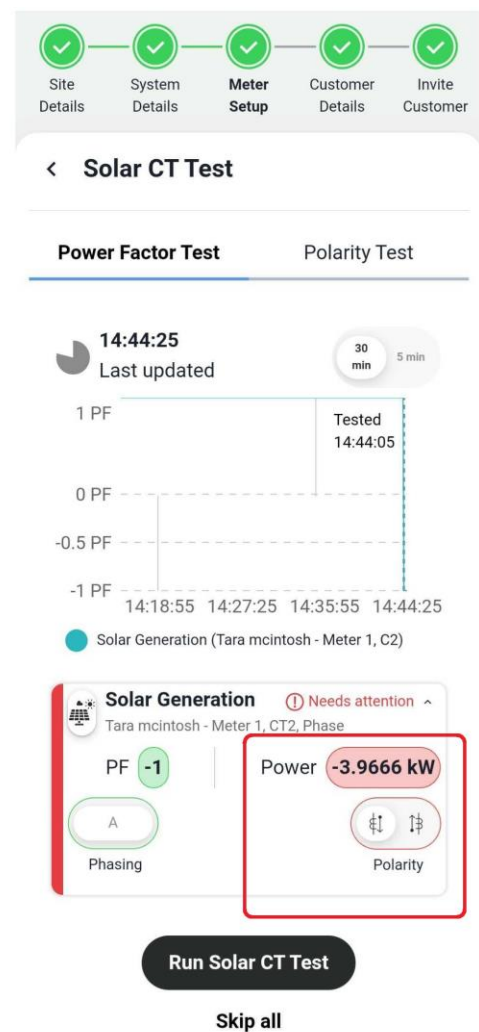
Solar
Needs attention >

Loads
Insufficient data >

Grid
Test passed >

Run All Tests

[Skip all](#)



Site Details System Details **Meter Setup** Customer Details Invite Customer

< **Solar CT Test**

Power Factor Test Polarity Test

14:44:25
Last updated 30 min 5 min

1 PF Tested 14:44:05

0 PF

-0.5 PF

-1 PF 14:18:55 14:27:25 14:35:55 14:44:25

Solar Generation (Tara mcintosh - Meter 1, C2)

Solar Generation Needs attention ^
Tara mcintosh - Meter 1, CT2, Phase

PF **-1**

Power -3.9666 kW

A Polarity

Run Solar CT Test

[Skip all](#)

Inviting the customer to the Cortex app

Once you're done with the Meter Setup step, you can now proceed to inviting the customers to the Cortex app.

1. Once all fields are completed, click on "Invite" and a customer email invitation to the Cortex app will be sent automatically.
2. More than one user can be invited by increasing the number of customers. Each user should have a unique email address.

This is the last step of the commissioning the Cortex meter. The customer will get an email to set up their Cortex account once this final step is completed.



Site



System



Meter

**4** Finish

Invite Customers

How many customers do you want to add in this site?

– 1 +

Customer 1

[Remove](#) ^

Is this an existing customer? ☐

First name

John

Last name

Smith

Email

 user@domain.com

Phone number

 +61

Invitation Status

☐ Not invited

Photos Uploaded:



Please upload photos of the wiring or the board. They will help us in providing better assistance to you if needed.

Invite