

# SunStash v 1.0



## Installation Instructions

(NOTE: Installation must be performed by a registered electrician, solar installer etc)

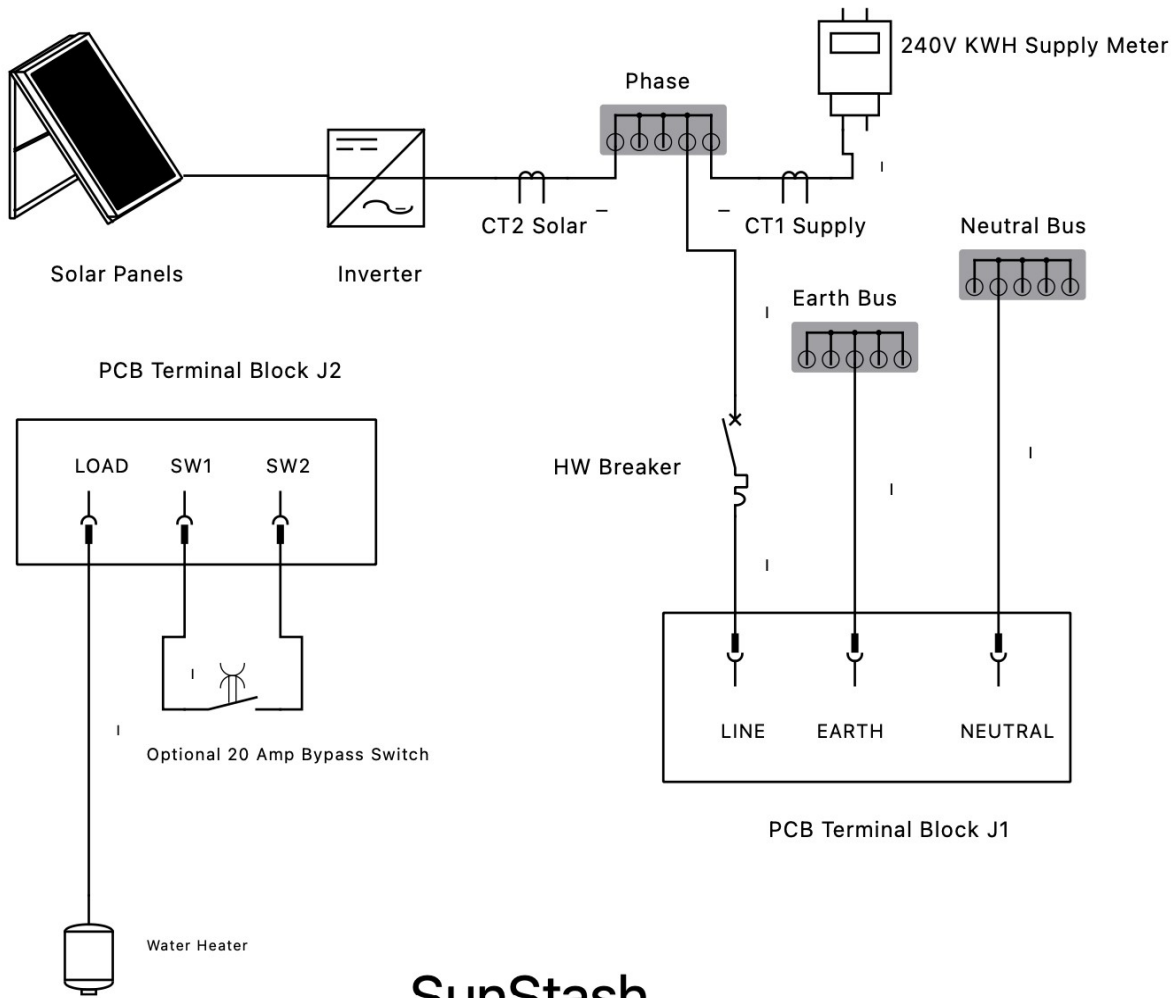
### Specifications:

Operational Voltage	240VAC
Operational Frequency	50Hz
Maximum AC Load	4.8KW (20Amp)
Load Types	Resistive Only (e.g HW Element)
Control Technology	Zero-Cross, Phase-Locked-Loop
Power Control	Continuous Automatic Control of Power
Diversion Start	<1W
Boost	Automatic nightly boost if required
User Controls	Web page monitoring only.
Operating Temperature range	-10°C to +45°C
Size	150W x 150H x 90D (mm)
Standards Conformity	IEC 60730-1

### Inside the package

- One **SunStash** Solar diverter.
- 2 x CT (current transformers)
- 2 x 20A wiring plugs.
- One lock and key.

## 240v Wiring:

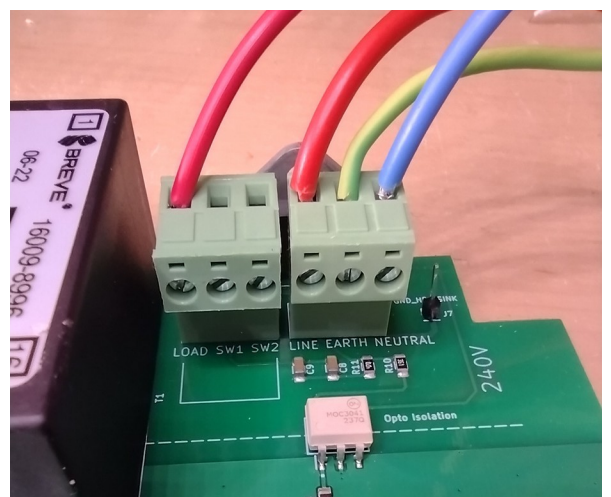


**SunStash**

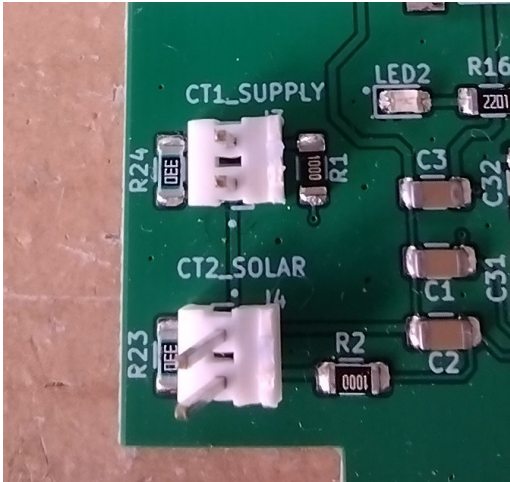
Wire up as follows: (Using 20A 4-core cable)

1. Connect EARTH and NEUTRAL to switchboard respective bus's.
2. Connect LINE to Hot Water Circuit Breaker.
4. Connect LOAD to Hot Water Element.

(SW1 and SW2 are optional connections to a 20A switch that can be used to by-pass the Diverter in case of failure, electrician to install)



## CT Wiring:



Wire these up as follows:

There are two CT clamps included:

1. The first one is clamped around the solar panel phase from the Inverter. This gets connected to CT2\_SOLAR in the picture.
2. The second CT is clamped around the main feed from the switchboard to the Meter.. and is connected to CT1\_SUPPLY

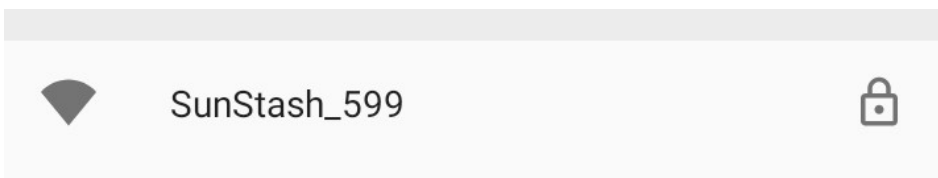
**(WARNING! Please do not connect/disconnect plugs to CT1\_SUPPLY or CT2\_SOLAR connectors with the CT clamps under load, this could result in damage to the board, the connections to the board should be made first, then clamps made around cables.)**

## Connecting to WiFi:

After the unit has been connected to the supply with at least (LINE, EARTH, NEUTRAL)

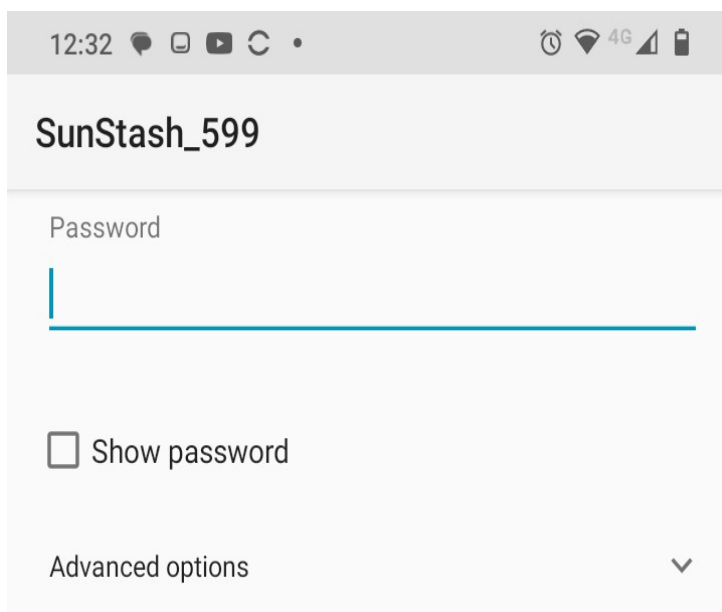
Using a Phone or Tablet etc, go to the WiFi Settings and look for an Access Point (AP) Labeled

**SunStash\_nnn** Where (nnn) is a random number. This may take up to a minute to appear, as it tries



to connect to a valid network. Finding none, it will launch the AP.

When it does appear, it will look similar to the above, clicking on it will show:



Enter the password **12345678**

Once that is done, you should be presented with the captive portal web page as shown below:

(It may look different depending on the type of Android/Apple etc device)

# SunStash v1.0 - Update Wi

SSID:

Password:

NETGEAR30\_EXT  
GWN3D4E1C  
Ash2001123  
SPARK-XNSZJ9  
SPARK-B618-4DF1

The Captive Portal page shows the available networks at your location. Example above.

Once you have identified your network, you can cut/paste the name into the SSID field, then add your network password, and you once done, that page will go away (may take a 20..30 seconds as the device logs into your network) Note: The two LED's inside the box will flash in unison, when device is connected.

After the page has closed, or both LED's flash, you then can open the devices web page by either typing **http://toit:1234/start** into your browser address bar, or you may have to see what name the device has been given by your router, then add: 1234/start i.e **http://yourname:1234/start**

**You should then see the following page:**

## SunStash v1.0 - Solar Diverter



Element\_size:

Note: Element size must be watts, input as a 4 digit number, i.e 2000 (for a 2kW element)

Enter the size of the water heater element in watts, as above. You will then be taken to the default web page: (<http://toit:1234/>) below:

## SunStash v1.0 - Solar Diverter



Solar Power	1810.82 W
	2504.39 W (Max)
Total Solar today	6.95 kWh
Total Diverted today	2.65 kWh
Mains Supply	391.36 W <= Importing
Total Exported today	1.04 kWh
Self Consumption	85.01 %

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### A brief description of key fields:

1. Solar Power current power produced by the panels. (Real power)
2. Total Solar Today Accumulated power in kWh for the day.
3. Total Diverted today Accumulated power in kWh for the day.
4. Mains Supply Power being drawn from the grid (pos) or exported to grid (neg)
5. Exported Power Power exported to the grid, in kWh, for the day.
6. Self Consumption Percentage of Solar power you used, i.e not Exported.

NOTE: This page will be auto-refreshed every 5 seconds.