



SOLAR RELAY

INVERTER CONTROL with SMA



Model: SB

CATCH Power
A trademark of Project H Pty Ltd
180 Dumaresq Street
Glen Innes
NSW 2370
Australia
Ph: +64 2 5700 5717
W: www.Catchpower.com.au
E: sales@catchpower.com.au

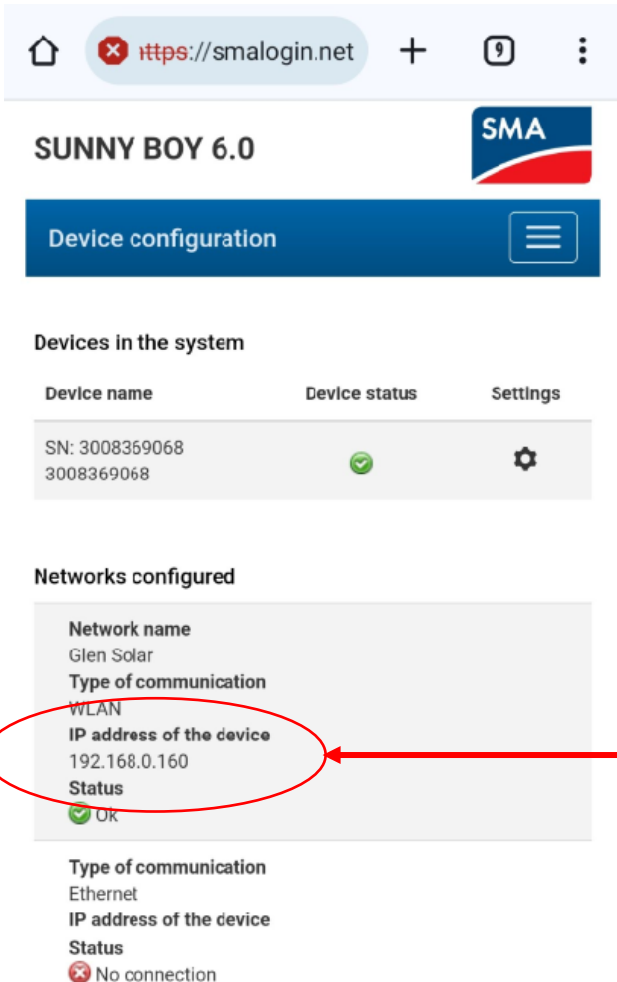
Overview

- The CATCH Solar Relay can be used instead of the SMA Energy meter.
- There is no RS485 wiring required, the inverter management occurs through SUNSPEC
- The SMA inverter and the CATCH Solar Relay must be connected to the same network.



Inverter Setup

Connect to the inverter and perform the usual commissioning. The details below outline the changes to the usual commissioning process.


Once the network has been configured for the inverter, not down its IP address as shown below. You will need this later.




The screenshot shows the SMA Sunny Boy 6.0 web interface. At the top, the browser address bar displays `https://smalogin.net`. Below the header, there is a "Device configuration" button. The main content area is divided into two sections: "Devices in the system" and "Networks configured".

Device name	Device status	Settings
SN: 3008369068 3008369068		

Networks configured

- Network name**
Glen Solar
- Type of communication**
WLAN
- IP address of the device**
192.168.0.160
- Status**
 OK

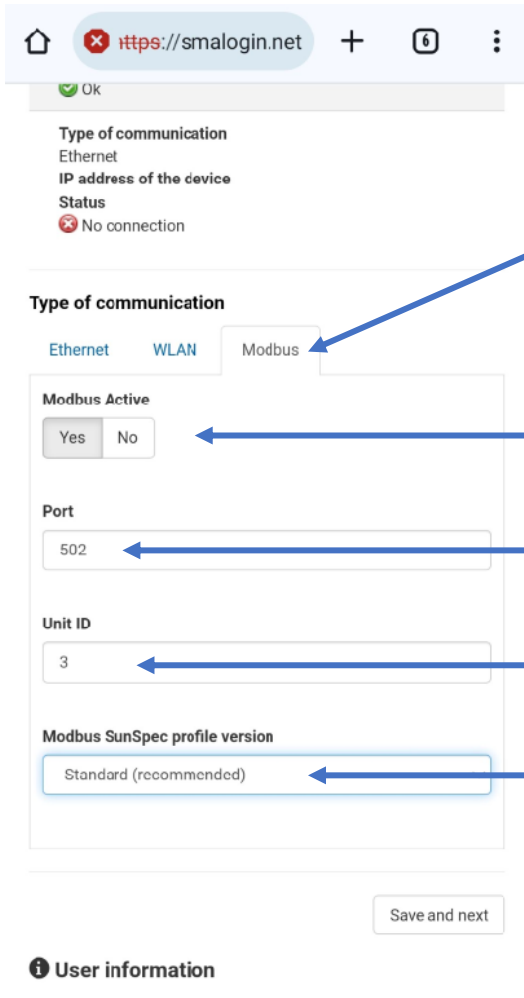
Type of communication
Ethernet

- IP address of the device**
- Status**
 No connection

IP Address of inverter

Inverter Setup

Connect to the inverter and perform the usual commissioning. The details below outline the changes to the usual commissioning process.



1. After setting up the inverters network connection. Turn ON the Modbus interface and set the parameters as shown below.

Activate the interface

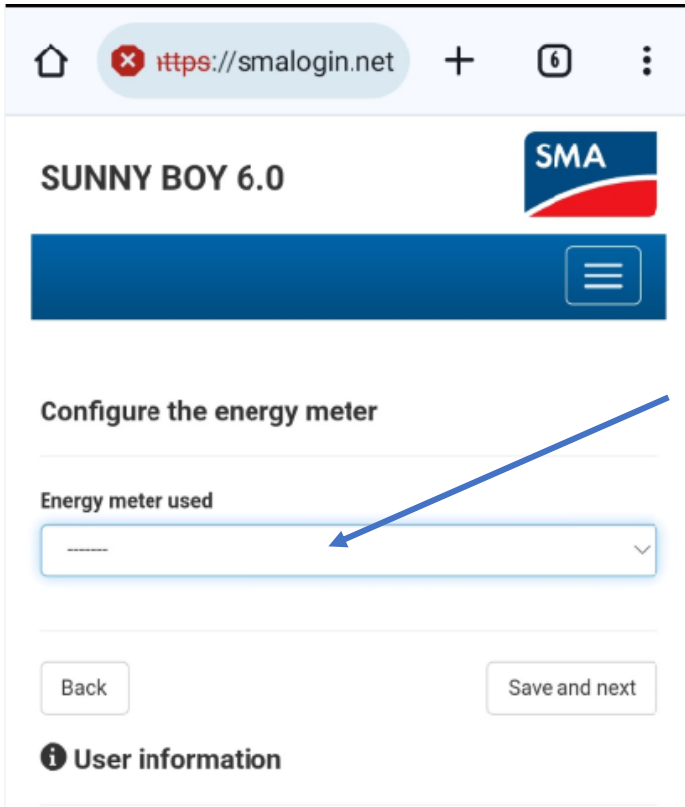
Ensure port number is 502

Set unit ID to 3

Choose "Standard"

Inverter Setup..continued

Do not select an energy meter.



The screenshot shows the SMA Sunny Boy 6.0 inverter setup interface. At the top, the browser address bar shows 'https://smalogin.net'. Below the browser, the page title is 'SUNNY BOY 6.0' next to the SMA logo. A blue navigation bar contains a menu icon. The main section is titled 'Configure the energy meter'. Underneath, there is a label 'Energy meter used' followed by a dropdown menu that is currently empty. Below the dropdown are two buttons: 'Back' and 'Save and next'. At the bottom, there is a section header 'User information' with an information icon.

Do not choose an energy meter. CATCH Solar Relay will control the inverter via sunspec

SOLAR RELAY Setup

Navigate to the Configuration page, and under the Modbus configuration set the parameters as shown.

IMPORTANT

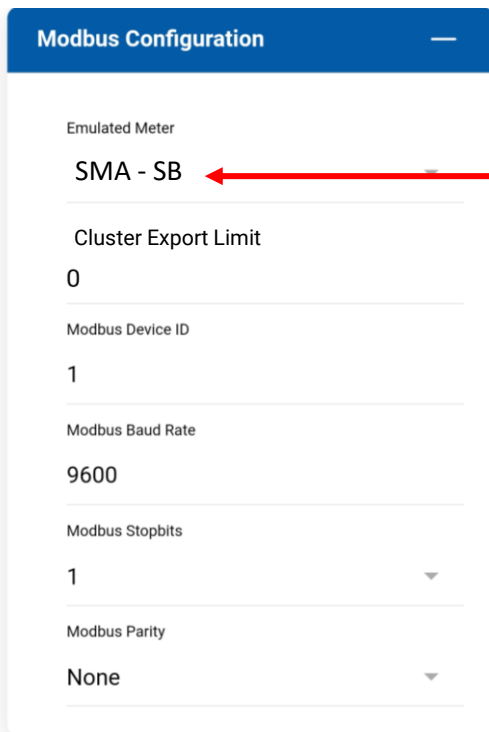


Follow the Solar Relay Electricians Guide for detailed step on how to set the Solar Relay up. The steps below are specific to setup for the SMA inverter.

- The Solar CT (W2) does not need to be put onto the solar circuit. Solar production gets pulled directly from the inverter. You can use W2 to monitor another circuit.
- Go to the **Device Settings** screen and make the changes outlined below:

Set SMA-SB in the modbus Configuration.

You don't need to connect the RS485 interface. This is telling the relay we are talking with SMA



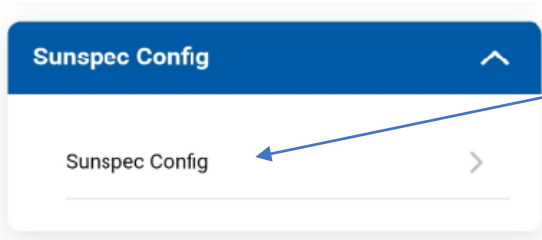
The screenshot shows the 'Modbus Configuration' screen with the following settings:

- Emulated Meter: SMA - SB
- Cluster Export Limit: 0
- Modbus Device ID: 1
- Modbus Baud Rate: 9600
- Modbus Stopbits: 1
- Modbus Parity: None

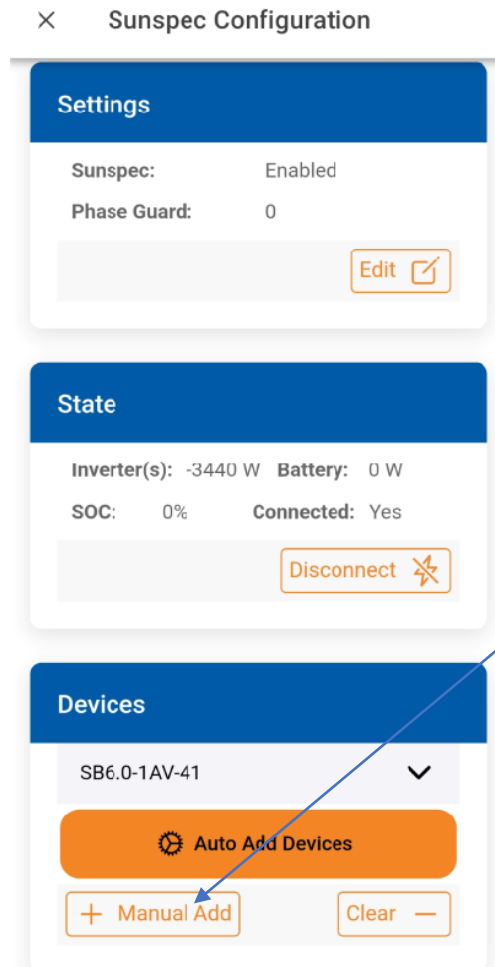
Choose **SMA-SB** as the emulated meter.

SOLAR RELAY Setup

Connect the relay to the inverter using SUNSPEC



1. Click here..and be a bit patient, this can take a few seconds to open the next screen.

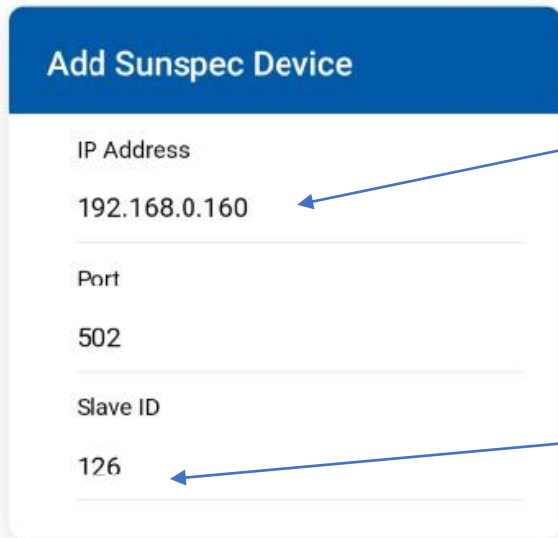


2. Click on **Manual Add**.

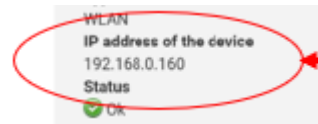
Do not attempt the auto scan for the inverter. It will not find it.

SOLAR RELAY Setup

Connect the relay to the inverter using SUNSPEC



Type in the IP address you noted down from the inverter setup



Set the Slave ID to 126.

If for some reason you did not set the unit ID to 3 in the inverter you will need to recalculate this value.

Slave ID = Unit ID + 123

If communicate was successful a message will say 1 device added. When you close the dialog box the new unit should appear here.

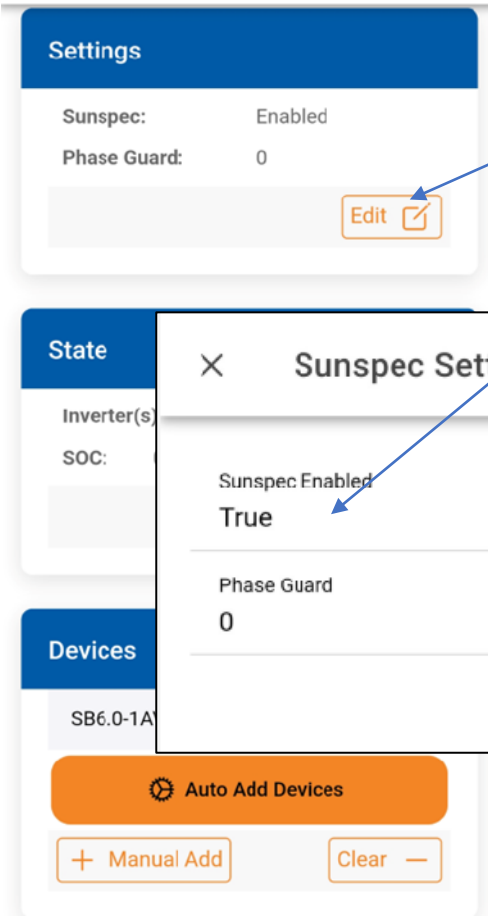


The new device added

SOLAR RELAY Setup

Now the inverter and relay are connected. TURN SUNSPEC ON.

× Sunspec Configuration



The image shows a web interface for Sunspec Configuration. The main panel has a 'Settings' section with 'Sunspec: Enabled' and 'Phase Guard: 0'. An 'Edit' button is visible. A modal window titled 'Sunspec Settings' is open, showing 'Sunspec Enabled' set to 'True' and 'Phase Guard' set to '0'. The background interface also shows 'State' and 'Devices' sections.

Click here

Enable Sunspec Here..and press save.

SOLAR RELAY Setup

Export Limiting the inverter.

There are two types of export limiting. You can define a static export limit, or you can connect the inverter to the Dynamic Exports system.

Static Export

Go to the device settings page to set the export limit as shown below



Turn on static exports

Set the export limit. In this export the export limit is 2500W



Press Save

Dynamic Exports

Follow the Configuration steps in the Electricians Guide to register the site for the MONOCLE, and for Dynamic / Flexible Exports.

Note you can set a static export and still participate in the Dynamic / Flexible Exports.