



Sunsynk and Red Pole Vital Battery Range - Install Guide

General information about the Red Pole Energy Vital battery range can be found in Red Pole Energy's supplied documentation.

This manual is intended to be used in conjunction with the product manual supplied by Red Pole Energy. It provides additional and specific information regarding integration with Sunsynk inverters.

Red Pole Energy Vital 5 Lithium batteries are fully compatible with Sunsynk. The Red Pole batteries' include a Battery Management System (BMS) with each battery module which interfaces directly with Sunsynk inverters to set up charging parameters and communicate the battery's state of charge.

The following field guide will assist with the correct battery settings and cable connections you should use. Please also ensure that you have read the installation manual of the Vital 5 battery.

1. Connect the Red Pole Energy Battery

If you are using multiple Vital-5 batteries, then link up all your extra batteries as per the Vital 5 user manual and the batteries will set the addresses between themselves automatically. The first or master battery is the one that will connect to and communicate with the inverter.

The battery should be connected to your Sunsynk inverter using the communications cable supplied with the battery. The cable supplied is a straight cable, that means the two ends of the cable are identical.

The Sunsynk inverter requires pin 4 to be CANH, and pin 5 to be CANL.
Our RP-Vital5 battery requires pin 4 to be CANH, and pin 5 to be CANL.

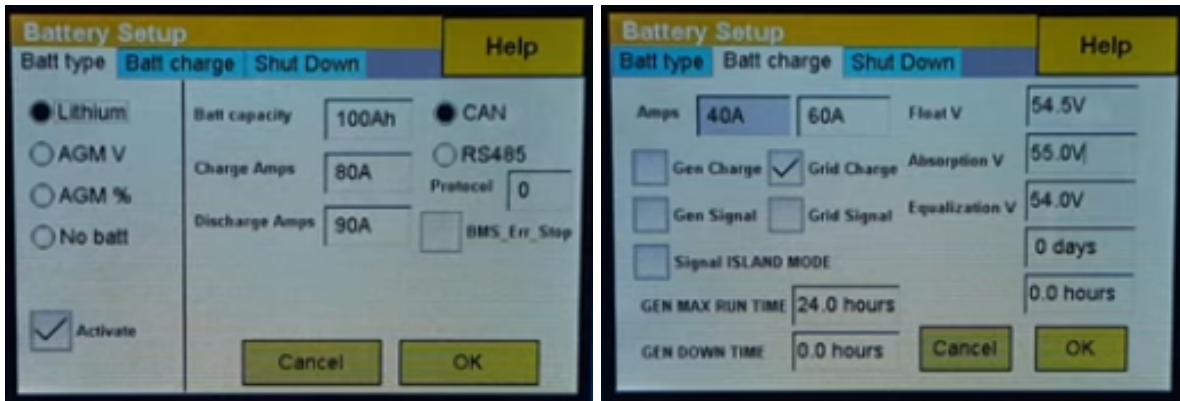
Hence the straight cable works perfectly for CAN communication between the units.



Sunsynk 8kw installed with 2 x Vital 5 batteries

2. Change the Battery Settings

On the Sunsynk inverter, navigate to the Battery Setting screen. The settings as seen on the Sunsynk display below are the recommended settings to use for the Red Pole Energy Vital 5 Lithium battery.



Example of the Battery Setup screens

Screen1 : Batt Type

Set the battery type to “Lithium”, check that “Activate” is ticked, CAN is selected as communications protocol, the maximum charge, and the maximum discharge settings.

Batt Capacity : #batteries x 100Ah

Max A Charge : #batteries x 1 x 100A (Max is 1C)(Recommended continuous <= 0.5C)

Max A Discharge : #batteries x 1 x 100A (Max is 1C)(Recommended continuous <= 0.5C)

Screen2 : Batt Charge

These settings determine at what rate the inverter can charge the battery from the grid, and what the charge voltages should be for charging the battery.

Check that the voltage settings are:

Float voltage	: 56v
Absorption voltage	: 55.2v
Equalization voltage	: 55.2v

Set the charge amps to the limit you want it to draw from the grid.

Screen3 : Shutdown / Low Battery Settings

These settings determine how the inverter should act once the battery is at a low state of charge.

Shutdown : The state of charge % that the inverter should switch off at.

Low Battery : The state of charge % that the inverter should trigger a low battery alarm to indicate that the inverter is close to switching off.

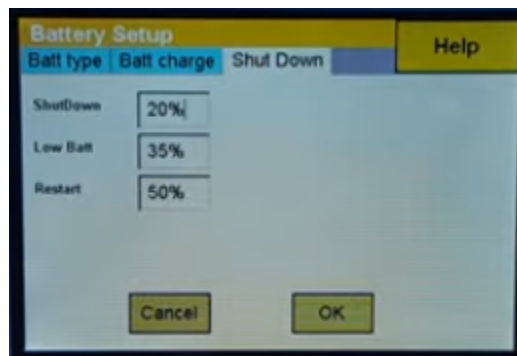
Restart : In the event that the inverter did switch off, but the battery has since been charged from solar or the grid, this is the state of charge % that the inverter should switch on and function normally again.

The exact % chosen here is a matter of preference.

Recommended is to have shutdown set to 20% so the battery does not drain more than 80%.

Recommended low battery alarm level should be 10-15% above the shutdown state of charge.

The recommended state of charge % at which the inverter switches on again should be set 5% to 15% above the low battery alarm level.



Example of low battery settings