

# **SOLARIMMERSION IV** **FAQs**

v1.3



## General FAQs

### **What are the typical savings I can expect to make by installing a SOLARIMMERSION IV?**

You could save up to £200 per year on your gas bill and about £300 if you use oil based heating. We estimate the system to pay itself back in approximately 2 years.

### **What minimum size of PV array would be regarded as viable?**

SOLARIMMERSION IV begins heating the water when as little as 20 W is being exported (surplus energy).

### **Does the SOLARIMMERSION IV divert all of the electricity generated for as long as it is available?**

Yes, the unit will begin heating water when as little as 20 W is being exported. The intelligent switch will correspondingly reduce the power sent to the immersion heater when there is a change in weather conditions, and if any other appliances are switched ON around the house. If the power used by the house decreases, even if it's only by a few watts, our system will automatically increase the power to the immersion heater to use all of the available surplus energy, rather than the excess going back to the grid.

### **What happens on a day when there isn't much sun?**

That's not a problem with SOLARIMMERSION IV, it has a built-in seasonal function – on a cloudy day and even when the sun is temporarily blocked by clouds, the immersion heater power is correspondingly reduced.

### **Will I still receive FIT payment?**

You will be paid the export part of your feed in tariff regardless of the amount of electricity you return to the grid (the export is deemed to be 50%).

### **Is there any major re-wiring required on installation process?**

If you have a dedicated circuit to your immersion heater (most houses do) our unit can be added to your system without major re-wiring.

### **Why is the neon light on my immersion heater ON at times where I would not expect the SOLARIMMERSION IV to be diverting power?**

This is common as the neon light will turn on with residual current of less than 10uA which is due to an open circuit because the immersion element's thermostat has cut off. If you are unsure about this, when the **ASTERISK** symbol (  ) is blinking, run hot water down in order to bring the thermostat back on, then check if the immersion heater neon light is still on. (if the unit is diverting power (**ASTERISK** symbol (  ) constantly ON), force the unit to stop diverting power (**ASTERISK** symbol (  ) blinking) by switching ON a load such as a kettle)

### **What is the warranty on the SOLARIMMERSION IV?**

All our products come with a 1 year repair or replacement warranty.

### **Can SOLARIMMERSION IV support multiple loads?**

Yes, SOLARIMMERSION IV can support multiple loads for example when the water is hot enough and the thermostat cuts off a second load can be activated. e.g. for auxiliary heating

### **Could the sensor cable be extended?**

Yes, the sensor cable can be extended up to 50m. Use twisted pair data cable for this purpose.

### **Will SOLARIMMERSION IV work with hydro and wind turbines?**

Yes, SOLARIMMERSION IV works with all sorts of grid-tied micro generation systems.

### **What is the minimum or maximum PV system size that SOLARIMMERSION IV supports?**

SOLARIMMERSION IV works on PV systems starting from 500W. There is no upper limit regarding the PV system however, for a large system (PV capacity of more than 4kW), several SOLARIMMERSION IV units could be attached together to utilize surplus power above 3kW.

## Installation FAQs

### **How long would a typical installation of a complete system take?**

The installation is a very simple and short process which should take about 1 hour, subject to site situation.

### **Do you have an installation manual?**

The standard installation instructions are provided with the unit, there is also a wiring diagram which should give the installer an idea where each element should go and how they should be connected.

**Please note that installation should only be carried out by a qualified electrician.**

For advance installation including; secondary load, relay mode & de-strat please refer to the advanced installation manual which can be downloaded from [www.solarimmersion.co.uk](http://www.solarimmersion.co.uk)

### **Do I need to buy or install anything else to make the SOLARIMMERSION IV work?**

No, everything that is required is included in the SOLARIMMERSION IV package.

### **Is it easy to install SOLARIMMERSION IV?**

Yes, installing SOLARIMMERSION IV is very easy. It works with the existing immersion heater element in your hot water tank and uses a clip on sensor to detect the generated power levels, it will only takes about 1 hour for your electrician to install it.

### **How does SOLARIMMERSION IV communicate with the immersion heater?**

SOLARIMMERSION IV uses the existing wiring from the consumer unit to your immersion heater to control and divert the surplus power.

### **Where does the SOLARIMMERSION IV need to be positioned?**

To keep the installation quick and easy, we recommend that SOLARIMMERSION IV is installed near the consumer unit as most of the connections required can usually be found there.

When choosing a suitable place to install SOLARIMMERSION IV, the following should be considered:

- Near to the main incoming mains supply of the property
- Access to the immersion heater supply cable (normally at the consumer unit)
- Access to suitable supply via 16A MCB or 13A fused outlet
- Ease of access and visibility of SOLARIMMERSION IV LCD Screen and control buttons
- Good ventilation to keep air flowing through the unit – at least 100mm around the unit.
- Suitable cable access point location – through the top or bottom of the unit.

### **Will SOLARIMMERSION IV affect my generation meter readings?**

No, SOLARIMMERSION IV control unit will not affect your generation meter reading and you will get your full FIT payment.

### **Do I need to change the existing immersion heater or hot water tank?**

No, SOLARIMMERSION IV works with your existing immersion heater/hot water tank. Please note that the proportionally controlled primary and secondary loads connected (alone or combined) should not exceed 3kW.

### **Do we need to install new wiring from the consumer unit to the immersion?**

No, SOLARIMMERSION IV uses the existing wiring from the consumer unit to the immersion heater. So no new wiring is required.

### **Is there any major re-wiring required on installation process?**

If you have a dedicated circuit to your immersion heater (most houses do) our unit can be added to your system without major re-wiring. In this case all of this installation is around your existing fuse board.

## Technical FAQs

### What is the dimensions of the SOLARIMMERSION IV?

**Width:** 150mm

**Height:** 200mm

**Depth:** 65mm

**Mounting holes centre:** 175mm

### Can a Economy 7 Timer be used to bypass SOLARIMMERSION IV?

We wouldn't advise you to do so with a standard Economy 7 timer. But this would be possible on an Advanced Economy 7 timer with change over contacts. If you do have an Advanced Economy 7 timer then the change over contacts should be wired in the following way:

- Normally closed to SOLARIMMERSION IV
- Common to Immersion heater
- Normally open to Live mains

### What type of thermostat is suitable?

2 wire installation thermostat are suitable. E.g. Siemens RAA20 Room Thermostat 2-Wire installation. Screwfix product code 81184

### Why is my SOLARIMMERSION IV diverting power when there is no PV generation?

This will indicate that the clip on sensor is the wrong way around. Please follow the instructions below in order to ensure that the clip on sensor is correctly positioned.

Turn on a high load like a kettle or a 2kW heater to make sure power is imported and wait for 5 seconds.

**a:** If the sensor clip is installed correctly, the display will be as below with the **ASTERISK** symbol (  ) blinking.



**b:** If the display is as below, then you have to swap the wiring on the CT sensor terminals. Once the terminals are swapped, restart the switch and make sure the display is as picture 3a.



### Do I need to change the existing immersion heater or hot water tank?

SOLARIMMERSION IV works with your existing immersion heater/hot water tank. This means no immersion heater change to divert the surplus power.

### Can I wire the SOLARIMMERSION IV myself?

**Electrical connection should only be made by a qualified competent person.**

Please do not attempt to install SOLARIMMERSION IV unless you hold such qualifications or are an experienced electrician.

### How do I enter the main menu/general settings?

To activate the main menu, press the "ENT" button for approximately 4 seconds.

### How do I navigate through the menu settings?

Use "UP" and "DOWN" buttons to move between the menu options. To select a menu setting option to change, press "ENT" button. To change an option within a menu setting select the option to change then press "ENT", once the correct value has been selected press "ENT" to save the new value. Use the "ESC" button at any time to return to the home screen and retain normal operation settings.

### How do I turn the override function ON/OFF?

Press the "OVR" button to manually turn ON the override function, press it again to cancel the operation.

### How do I set the settings back to the factory default?

To reset all the settings back to factory default scroll through the main menu options to "Fact. Reset". Then press "ENT", you will be asked to press "UP" for Yes or "ESC" for No - press "UP". The display should show "Loading Factory Default Settings" then it will do back to the home screen.

For further assistance contact us via - <http://solarimmersion.co.uk/solarimmersion-support/technical-support/>