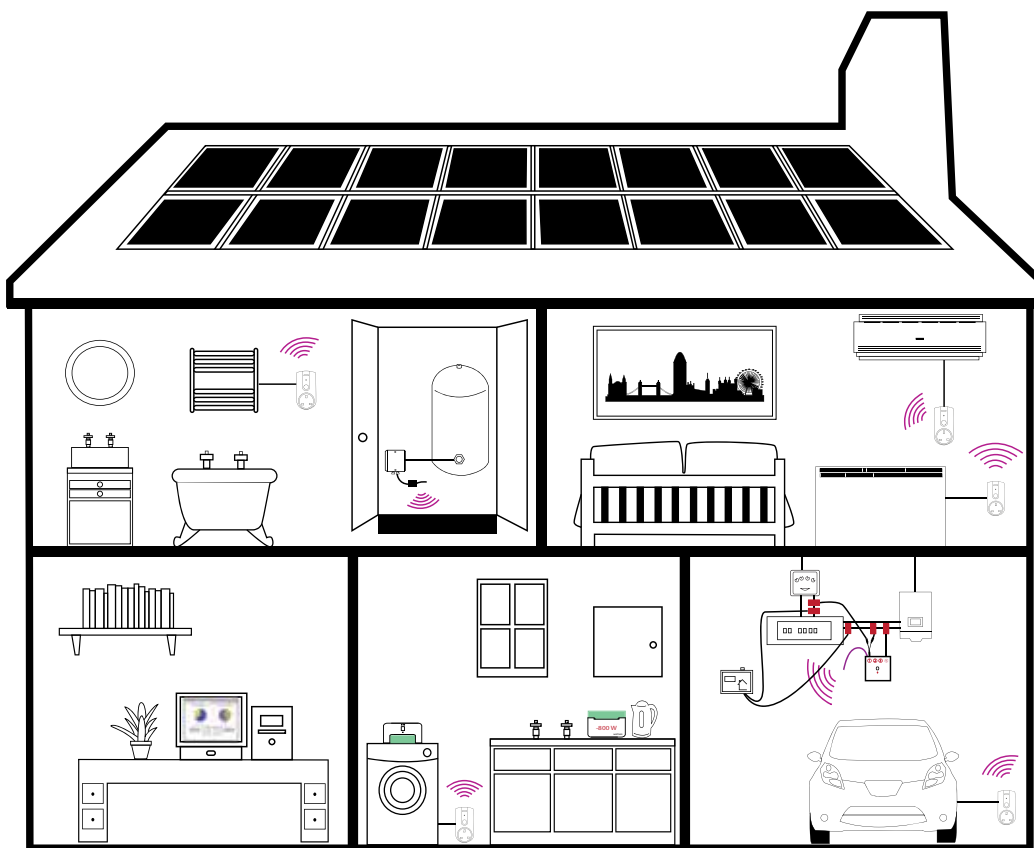


# Energeno Product Catalogue

Smart solutions for renewable energy



London-based, Energeno manufacture products that help people with renewable energy systems realise the full benefit of their generated power. Energeno products are designed, tested and approved in the UK.

The **Wattson** brand of energy monitoring products help people know when they have free electricity, and how much, identify energy savings and reduce their bills.

**Optismart** is a range of automatic switching devices that ensure free surplus electricity is used simply and smartly, making best use of home-grown electricity.



# wattson SOLAR Plus

The energy monitor showing electricity generation, usage and net usage. Wattson Solar Plus gives you the green light to use your own electricity.

## Save money on your bills.

Using your own energy effectively minimises the amount of electricity you need to buy from the grid, helping to reduce the payback time for your Solar PV system.

## Increase the efficiency of your home.

Wattson shows you how much power is being generated and in use at home, allowing you to understand your consumption and make more efficient use of the electricity your PV system produces.

## Maximise the return on your investment in Solar PV.

By knowing when your solar power is free and how much of it to use, you can increase your savings and increase your financial return.



- You have surplus electricity
- Below average usage
- Your average usage
- Above average usage



## Home-grown electricity.

Even though consumers may receive payment or assistance for Solar PV generated electricity, it always pays to use your home-grown electricity when possible rather than buying electricity from your energy supplier.

Wattson Solar Plus glows green when you have surplus energy, letting you know how much and when to use your own generated electricity.



Wattson Solar Plus is an energy monitor that uses simple numbers and colours to display electricity being generated and in use in your home in real time in cost, watts or kg carbon.

The Wattson uses sensors that clip around the outside of electricity cables to get its power data. The information is then sent wirelessly from the transmitter to the display.

With its easy to read display and distinct colours, Wattson encourages the entire household to take interest in saving electricity and learning about renewable energy.

Wattson Solar Plus gives you greater peace of mind as it comes with a 5 year warranty.

Ask your installer to fit a Wattson Solar Plus so you can start reducing your electricity bill today.



FEATURES	WATTSON SOLAR PLUS
Phases measured	Standard unit measures standard domestic supply and single phase generation. Accessories are available for measuring 3 phase supply and 3 phase generation.
Cable diameter	12.5mm
Max power/current	11.5kW/50Amp per phase
Ambient light mode	RGB LED
Transmitter/receiver	433.92Mhz transmitter receiver, approx. 100m through air & 30m range in buildings
Refresh rate	3 – 20 seconds user changeable
Transmitter power	DC power (supplied) recommended, also optional battery power
USB	1.0 USB-A to USB mini-A cable supplied
Display log memory	Continuously for 28 days
Currency display	£, \$, €, R, P, k, F
Software compatible	Mac and PC
Packaged weight (g)	1150
Equipment compliance with harmonised standards	EN 61558-1:2005 EN 300-220-2 V2.3.1 EN 301 489-1 V1.9.2 EN 61326-1:2006 EN 61326-2-2:2006 EN 61010-1:2010



Simplified version of Wattson for Social Housing or rent-a roof homes, for those who don't receive the FiT so can only benefit from the solar PV by using free generated electricity.

FiT income modes have been removed and a new 'Free Electricity Used' counter has been added. This version has already been specified in multiple large scale roll-outs.

PRODUCT NAME	PRODUCT CODE
Wattson Solar Plus	WSP1-BAEN-UK
Wattson Solar Plus with Easifit	WSPE-EAEN-UK
Wattson Solar Plus for Social Housing	WSP1-SHEN-UK
Wattson Solar Plus for Social Housing with Easifit	WSPE-SHEN-UK

# Wattson XL

WattsonXL is a simple energy monitor for the public display of electricity usage in your business. The display shows in simple cost and colours the electricity in use in the metered area. This helps staff to remember to do the right thing and to take ownership of the electricity in use in their workspace. It forms part of the public face for "behind the scenes" activity, showing colleagues and customers that you are taking positive steps to decrease your carbon footprint.

WattsonXL can be part of a general staff awareness program in your business; it is also a successful information tool on its own, reducing the need for training or literature.



## KEY FACTS

Measure electricity for the whole building

Measures up to 48kW/200Amp per phase.

WattsonXL, save money on your business electricity bill and show the world you care.

## KEY FACTS

Changes colour based on your electricity usage

The simplest way of understanding energy usage at home

Easy & safe to install, works within minutes

Helps you control your household energy bills

Helps you do your bit for the environment

# Wattson Classic

The original energy monitor that encourages the whole family to take interest in saving electricity with its easy to read display and unique coloured light system.

Its portable display allows you to see how much power you are using. The display shows electricity being used in your home in real time, in cost, watts or kg carbon and glows blue when you save money.

Wattson Classic owners report that they save on average 20% on their domestic electricity bills.

- Below your average
- Your average
- Above your average



# Accessories

There is a range of Wattson accessories available to improve usability and reduce installation costs.

## Easifit

Simplifies installation by removing need to install a Henley Block or junction box. Includes 1 x 50 Amp sensor clip, 1 x Y-cable and an installation guide.

## 3 Phase Generation upgrade

Upgrade kit to enable a Wattson Solar Plus to measure 3-phase generation & 3-phase usage too for systems with a junction box already installed. Maximum generation that can be read is 11.5kW per phase, up to combined total of 32.7kW.

## 3 Phase Generation upgrade with Easifit

Upgrade kit to enable a Wattson Solar Plus with Easifit to measure 3-phase generation & 3-phase usage too. It also contains all the kit necessary for systems that have a junction box installed that don't require Easifit. Maximum generation that can be read is 11.5kW per phase, up to combined total of 32.7kW.

## Wattson Display

Display only, includes 1x DC power supply, 1 x USB cable, 1 x manual and quickstart guide.

## PV Sales Kit

The kit features buttons controlling a virtual PV array and three virtual appliances – imitating the sun shining and appliances switching on or off. The Wattson reacts in exactly the same way it does when connected to a real home, so installers can easily show their potential customers how Solar PV will generate money for them through the Feed-in-Tariff. Also available with flight case.



## TX for Wattson

Additional standard transmitter for Wattson. Ideal for systems with load coming off PV from main consumer unit or secondary PV systems. Includes 1 x standard transmitter and 1x DC power supply.

## TXact

A more precise sensor and transmitter to provide near meter level accuracy for the generation reading. Can measure up to 3 phases of usage with additional 50 Amp sensor clips. Includes 1 x TXact transmitter and 1 x P-cable.

## TXL

Additional transmitter for Wattson XL. Includes 1 x transmitter for XL, 3x200 Amp sensor clips and 1x DC power supply.

## 50 Amp Sensor Clips

Additional CT clips for three phase installations. Cable length is 0.75m.

## 3m extension cable

3 metre extension cables for when the sensor and transmitter are some distance apart.

# Technical Specifications

FEATURES	WATTSON DISPLAYS		
	CLASSIC	XL	SOLAR PLUS
Phases measured	Single phase usage with extra clips required for twin and 3 phase	3 phase usage as standard plus single phase generation ( extra 50Amp clip required)	Single phase generation and up to 3 phase usage (extra clips required for twin and 3 phase).
Cable diameter	12.5mm	24 mm	12.5mm
Max power/current	11.5kW/50Amp	46kW/200Amp	11.5kW/50Amp
Resolution of display	1W	4W	1W
Digital display	14 – segment LED	14 – segment LED	14 – segment LED
Ambient light mode	RB LED	RGB LED	RGB LED
Display log memory	28 days	28 days	28 days
Transmitter/receiver	433.92Mhz transmitter receiver, range approx. 100m in air & 30m in buildings	433.92Mhz transmitter receiver, range approx. 100m in air & 30m in buildings	433.92Mhz transmitter receiver, range approx. 100m in air & 30m in buildings
Max radiated power	2.26mW	2.26mW	2.26mW
Refresh rate	3 – 20 seconds, user changeable	3 – 20 seconds, user changeable	3-20 seconds, user changeable
Transmitter power	4 AA batteries (supplied) or DC power, available as accessory	4 AA batteries or DC power, both supplied	4 AA batteries or DC power, both supplied
USB	1.0 USB-A to USB mini-A cable supplied	1.0 USB-A to USB mini-A cable supplied	1.0 USB-A to USB mini-A cable supplied
Currency display	£, \$, €, R, P, k, F	£, \$, €, R, P, k, F	£, \$, €, R, P, k, F
Casing material	Polycarbonate, Polyvinyl and ABS	Polycarbonate, Polyvinyl and ABS	Polycarbonate, Polyvinyl and ABS
Display size (mm)	105 x 170 x 55	105 x 170 x 55	105 x 170 x 55
Transmitter size (mm)	110 x 84 x 26	110 x 84 x 26	110 x 84 x 26
Software compatible	Mac & PC	Mac & PC	Mac & PC
Packaged weight (kg)	1	1.45	1.15
Carton contents	12 units	9 units	12 units
Equipment compliance and conformity	EN 61558-1:2005 EN 300-220-2 V2.3.1 EN 301 489-1 V1.9.2 EN 61326-1:2006 EN 61326-2-2:2006 EN 61010-1:2010 CE RoHS WEEE R&TTE 1995/EC LVD 2006/95/EC EMC 2004/108/EC		

## The Optismart range

Optismart is a growing range of automatic switching devices making it easy for owners of Solar PV to save more money. Optismart products help users reduce electricity bills and improve the payback from renewable energy systems. PV owners can be sure that they are using as much of their free electricity as possible, rather than see it disappear into the grid.

**Optimmersion®** is the intelligent proportional controller that diverts surplus electricity to give you free hot water.

**Optiplug** is the intelligent switch that turns on your appliances when you have enough surplus electricity.

**Optisave** is the smart energy storage solution which saves free or off-peak energy for use when electricity prices are at their highest.

## Wattson Solar Plus

Launched in December 2011, Wattson Solar Plus has established itself as the best-selling monitor in its class. This success can be attributed to its easy to use display that glows green when there is surplus electricity available and shows how much power the homeowner is generating, using and feeding into the grid. It works with all PV, wind and hydro single and three phase systems.

**Wattson Solar Plus** allows users to maximise the use of their renewable energy system by knowing when there is excess generated electricity available so they can use it when it is free rather than buying it later from the grid.

“

Since we installed our Optimmersion® we can't believe how much we have already saved! In November alone we saved £20 in oil bills because we used our own generated surplus electricity to heat our water tank.

”

Jill & Tony, Cambridgeshire

“

I am delighted with my Wattson Solar Plus, it really is a brilliant product.

I will recommend this product to a neighbour who needs to monitor her PV system.

”

Mr McLeod, Dumfries

“

After two days of use of the Optiplug, my home generated energy usage has jumped to 22.32kWh; but my EDF meter has only increased by 11 kWh.

”

David Jones, Northamptonshire

“

I am really pleased with the Optiplug. I am using it to control a low power immersion heater, I can now go out and come back to lots of hot water.

”

Derek Weaver, Isle of Wight



# Optimmersion®

Free hot water from your Solar PV system.

## Free hot water

Your surplus solar power is used to heat water in your existing immersion tank.

## Save money

Drastically reduce your hot water bills as excess electricity is diverted to the immersion heater.

## Maximise return on investment

Estimated payback time is from three years for busy households.

## Automatic solution

The intelligent controller gets to work whether or not you are in the house, meaning you automatically get free hot water.

## Increase efficiency

All of your 'home-grown' electricity is used, minimising what you pay your electricity supplier.

## Total control

Ability to change controller settings and monitor your home's electricity activity to view real results.



Whenever surplus electricity is available, it is diverted to heat your water.

The intelligent proportional controller can be added to any solar power installation and immersion heating system.

Optimmersion®, saving you money on unnecessary energy.



# Technical specifications

FEATURES	OPTIMMERSION
Power consumption of controller	2 watts
Transfer efficiency of throttle	98 %
Max. load current surge (amp)	Half a cycle 250A Non-repetitive 25A
Max. load constant surge (amp)	17 A
Mains frequency tolerance 50Hz	+/- 1Hz
Operating temperature	65 °C operational
Maximum power dissipation at 3kW output	13 watts
Internal fuse	20 Amps 1 <sup>1/4</sup> ceramic
Packaged weight	3.4 kg
Packaged dimensions (cm)	L:34 W:27 H:19

Optimmersion® is available in four versions:

- Optimmersion Simple  
OIMM-BAEN-UK
- Optimmersion Wireless  
OIMM-WIEN-UK
- Optimmersion Wired  
OIMM-SDEN-UK
- Optismart Hot Water  
OSHW-MDEN-UK

Note that the Optimmersion® power throttle changes the power supply to the immersion heating element, so no other electrical device should be connected on the same electrical circuit between the throttle and the heating element.

Live demo: [www.energeno.com/uk/aboutus/optimmersion](http://www.energeno.com/uk/aboutus/optimmersion)

## Features

Diverts only the surplus energy and no more.

The bright and attractive colour display also shows you at a glance what you are saving and what you are using.

Shows how much power is currently being diverted to the immersion heater.

Shows daily total of energy saved.

Suitable for installation at the same time as the Solar PV system or afterwards.

Uses existing immersion heater. Can control power to any resistive load up to 3kW.

Simple power monitoring using AC current clamp.

Automatic low cost electricity boost setting (e.g. Economy 7).

Manual booster control.

Part of the Wattson eco-system and standalone product for non-Wattson users.

Can divert energy to more than one heating element.

Enhanced flexibility with a choice of product versions to suit your home's wiring set up.

In the wireless version, the Wattson transmitter is integrated into the controller.

UK manufactured.

3 year product warranty.

# Optimmersion® versions

**Optimmersion Wired** is the standard Optimmersion, with colour display showing generation, usage, net usage and power diverted to the immersion heater. It has an option to make use of off-peak electricity overnight to ensure water is hot all day. It requires a control wire between the controller and the power throttle.

**Optimmersion Simple** focuses solely on providing free hot water. It has fewer control options and only measures the net power being exported/imported as this is all it needs for controlling the immersion heater. It requires a control wire between the controller and the power throttle.

**Optimmersion Wireless** greatly simplifies and standardises installation by adding a wireless link between the controller and the power throttle. The sensing and control is at the consumer unit and the power throttle can be placed where it is convenient. A Wattson transmitter is built-in for use with a Wattson display and/or Optiplug(s).

Share the benefits of Optimmersion Wireless and Wattson Solar Plus all-in-one with **Optismart Hot Water**.

	Optimmersion Simple OIMM-BAEN-UK SRP £299.99	Optimmersion Wired OIMM-SDEN-UK SRP £354.11	Optimmersion Wireless OIMM-WIEN-UK SRP £405.74	Optismart Hot Water OSHW-MDEN-UK SRP £498.73
Modular design	✓	✓	✓	✓
Number of sensors included	1, directional	2	2	2
Installation kit	✓	✓	✓	✓
Installer and user guides	✓	✓	✓	✓
Colour display	✓	✓	✓	✓
3 switch settings	✓	✓	✓	✓
Manual override	✓	✓	✓	✓
1 hour boost	✓	✓	✓	✓
Off peak boost		✓	✓	✓
Displays energy usage		✓	✓	✓
Displays energy generation		✓	✓	✓
Displays net energy usage	✓	✓	✓	✓
Displays total energy generated		✓	✓	✓
Displays energy diverted to immersion	✓	✓	✓	✓
Displays current function status		✓	✓	✓
Displays time		✓	✓	✓
Max no. parallel wired power throttles	1	5	5	5
Max no. wireless controlled power throttles			5	5
Wattson transmitter incorporated			✓	✓
Wattson display included				✓
Wattson shows diverted power				✓
Wattson shows own energy used (saved)				✓

Additional power throttles available:

Wired Power Throttle OIMM-PSEN-UK

Wireless Power Throttle OIMM-PWEN-UK

**CE** EN 61326-1, EN 61000-3-2  
EN 61000-3-3, EN 60335-1:2012



Optimmersion® is a registered trademark.

# Optiplug

Use your electricity when it's free.

## Save money on bills

Use more of your own electricity, when it's free, rather than having to pay for when it is more expensive.

## Maximise your investment in PV

Use your home-grown electricity whether or not you are at home, and still get paid for generating it.

## Automatic solution

The intelligent socket knows when to switch on and off, so you automatically use your electricity when it is free.

## Smart about free electricity

Optiplug ensures you are using as much of your home-grown electricity as possible, so you don't have to think about it.

AC Power (50/60 Hz)	230V - 250V
Working Temperature (°C)	-10 to 50
Radio Frequency	433 MHz
Max. Current	13 amps
Standby Power Consumption	<0.5 watts
Packaged Weight	157 g
Dimensions (cm)	L:12 W:6 D:8
Certifications	BS 1363-2 CE



Optiplug is the intelligent socket that switches appliances on when you have electricity to spare.

Optiplug learns and understands how much electricity is used by the appliances that are plugged into it.

When there is enough surplus energy for the appliance to run it will switch on, switching off when electricity is no longer free.

Compatible with all Energeno products.

# Product codes

## WATTSON RANGE & ACCESSORIES

Wattson Solar Plus	WSP1-BAEN-UK
Wattson Solar Plus with Easifit	WSPE-EAEN-UK
Wattson Solar Plus for Social Housing	WSP1-SHEN-UK
Wattson Solar Plus for Social Housing with Easifit	WSPE-SHEN-UK
Wattson Classic	WFP1-WHEN-UK
WattsonXL	W1XL-WHEN-UK
Easifit	EFKT-BLEN
Easifit XL	EFXL-BLEN
PV Sales Kit	PVSK-WHEN-UK
PV Sales Kit in Flight case	PVSK-FCEN-UK
Wattson Display	WDIS-WHEN-UK
3 Phase Generation Upgrade	TXX3-WHEN-UK
3 Phase Gen Upgrade with Easifit	TX3E-WHEN-UK
TXact	TXAC-BLEN-UK
TX for Wattson	TXPS-BLEN-UK
TXL	TXL3-BLEN-UK
50 Amp Sensor Clip	CLP1-REDP-INDV
3m extension cable	EX3M-BLCK-W
DC Power Supply	PSU9-WHBL-UK

## OPTISMART RANGE

Optimmersion Simple	OIMM-BAEN-UK
Optimmersion Wired	OIMM-SDEN-UK
Optimmersion Wireless	OIMM-WIEN-UK
Optismart Hot Water	OSHW-MDEN-UK
Wireless Power Throttle	OIMM-PSEN-UK
Wired Power Throttle	OIMM-PWEN-UK
Optiplug	OPLG-F1EN-UK