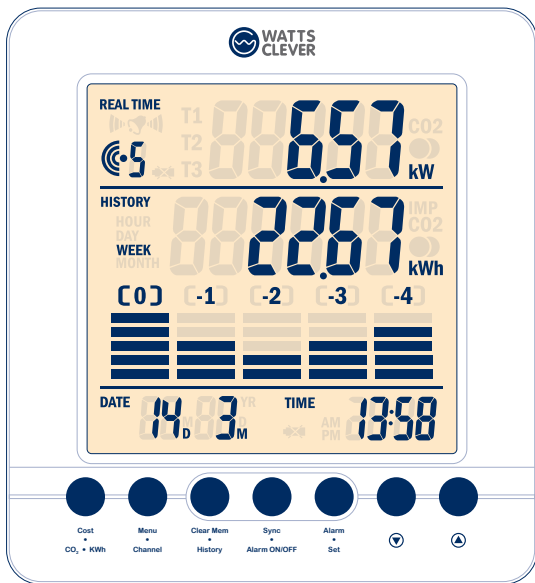




Energy saving made simple

MONITOR • CONTROL • SAVE



WIRELESS

Energy Monitor - LED Smart Meter

Monitor household electricity use

Instruction Manual

EW4030

Welcome

The Watts Clever **WIRELESS Energy Monitor - LED Smart Meter** helps you conserve electricity by showing you how much you use, and what it costs, as you use it. This feedback will help you take steps to reduce your consumption and save money.

The **WIRELESS Energy Monitor - LED Smart Meter** will show you:

- Your current electricity usage
- Your accumulated electricity usage over any time period
- Your estimated per hour usage

And when you program the **WIRELESS Energy Monitor - LED Smart Meter** with your electricity billing rates, it will show you:

- Your electricity cost per hour
- Your accumulated electricity cost over an hour, a day, or any time period
- Your estimated monthly bill

It is important to understand that Watts Clever **WIRELESS Energy Monitor - LED Smart Meter** is only a tool, the actual saving is up to you. By keeping the values in the display as low as possible you will save a lot of money on your electricity bill as well as reduce the CO₂ emission.

Notes on Safety



Caution

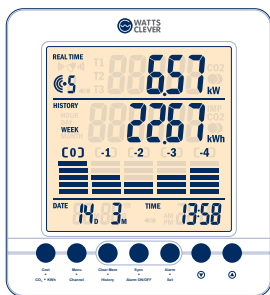
- Please read all instructions before you use the monitoring system.
- Keep the Energy Monitor, Power Transmitter and Optical Sensor away from sources of heat, water or any other liquid.
- Don't locate the Energy Monitor, Power Transmitter and Optical Sensor within reach of children.
- Don't open the product other than to replace the batteries.
- Periodically check all components to ensure there is no damage.
- Use a dry cloth to clean. Don't use solvent, abrasive cleaners or water.
- Don't rely on the displayed information to calculate the cost of your electricity bill. The **WIRELESS Energy Monitor - LED Smart Meter** is an educational device and is NOT intended to replace your energy supplies energy meter.
- Don't use this product where the use of radio frequency products can cause malfunction in other equipment (for instance hospitals, aircraft, etc.).

Contents

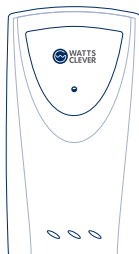
4	Contents of the box
5	Parts
6	Mounting and replacing batteries
	1 Power Transmitter
7	2 Energy Monitor
8	Installation
	1 Power Transmitter
10	2 Energy Monitor
12	Setting
	1 Setting the Menu in the Display
13	2 Setting Alarms
14	3 Setting Rate
15	Troubleshooting
	The Display shows dashes [- - -]
15	Notes

Contents of the box

Thank you for your purchasing **WIRELESS Energy Monitor - LED Smart Meter**. Please verify that your package contains all of the components shown below. If any item is missing. Please contact your reseller immediately.



Energy Monitor



Power Transmitter



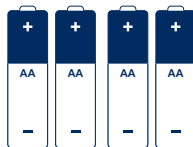
Optical Sensor with mini jack (500mm cable)



Mounting plate (flat & round)



4 x Double-side adhesive sticker

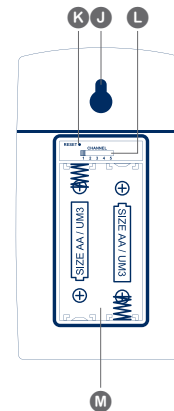
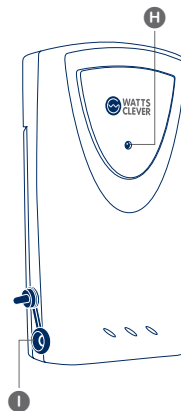


4 x AA Batteries

Parts



- A** Cost - Electricity Cost
CO₂ - CO₂ emission
KWh - Energy consumption (kilowatt / hour)
- B** Menu / Channel
- C** Clear Mem - clear all of the historical data
History - historical data
- D** Sync - Synchronizing button / Alarm ON/OFF
- E** Alarm - alarm setting / Set - Confirm
- F** ⏴ - Down button
- G** ⏵ - Up button



- H** LED Indicator
- I** Sensor Plug
- J** Wall-Mount Recessed Hole
- K** Reset button
- L** Channel switch (1-5 channels)
- M** Battery housing (2 x AA batteries)

Mounting and replacing batteries

1 Power Transmitter

Step 1 • Select the channel

Remove the battery cover of the power transmitter by loosening the screws with a screwdriver. Select channel (1, 2, 3, 4 or 5) in the battery housing of the Power Transmitter (Fig. 1), so that the Power Transmitter is able to recognize the signals of the various transmitters in case more than one transmitter is to be set up.

The number of the channel is selected by setting the [Channel switch ].

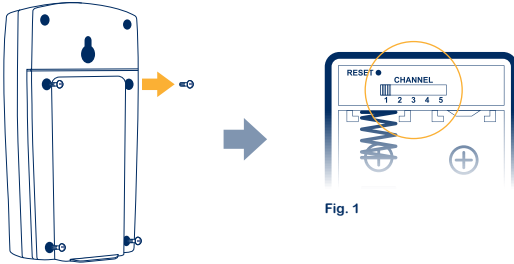




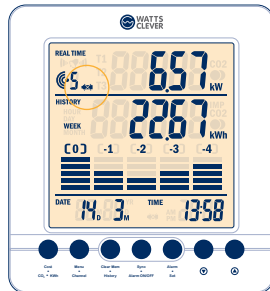
Fig. 1

Step 2 • Place the batteries

Place the 2 x AA batteries in the battery housing when the channel has been selected.

The Power Transmitter will now begin to transmit a signal. Finally the battery cover is again screwed on carefully but firmly.

Make sure the  and  of the batteries are placed as indicated inside the battery housing.



When the batteries in the Power Transmitter are low on power, an indicator in the display of the Energy Monitor will be shown (Fig. 2). If more than one transmitter has been set up, the number of the channel in question should be called to show the indicator for battery change.

Replace the batteries as described earlier.

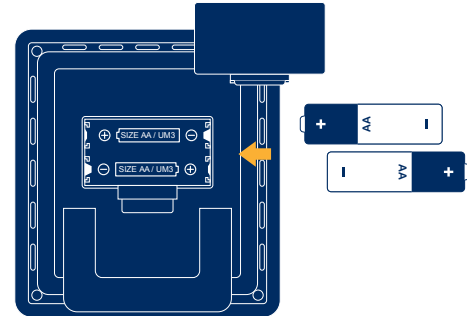
Fig. 2

Mounting and replacing batteries

2 Energy Monitor

Place the batteries

Remove the battery cover on the back of the Energy Monitor, after which 2 x AA 1.5V batteries are placed in the battery housing. Then put the battery cover on again.



Make sure the  and  of the batteries are placed as indicated inside the battery housing.

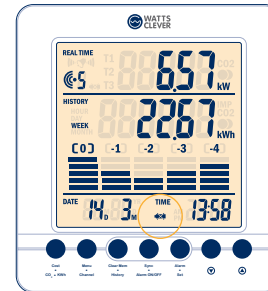


Fig. 3

When the batteries in the Energy Monitor are low on power, an indicator in the display will be shown. (Fig. 3)

When the batteries have been placed in the Energy Monitor, all segments in the display will light up for a short moment.

Replace the batteries as described earlier.

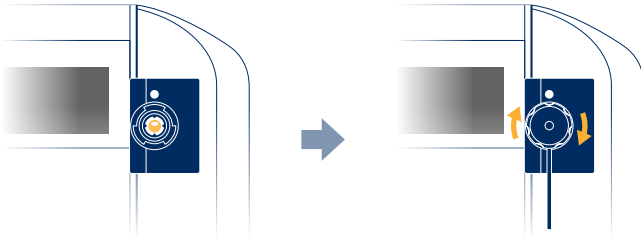
Installation

1 Power Transmitter

Step 1 • Setting up the sensor

Mount the mounting plate (flat or round) to your electricity meter. It is important that the plate is mounted so that the LED diode of your meter is exactly in the middle.

Carefully place the sensor eye into mounting plate. Turn the sensor eye clockwise until you feel the “KICK”, and the sensor is locked on the mounting plate.



You may also choose to use Double-side adhesive sticker (Included) to stick the Optical Sensor eye onto the right position.

It is important to identify what kind of electricity meter you have. **WIRELESS Energy Monitor - LED Smart Meter** fits all newer electronic meters with a so-called impulse LED. This is a small lamp indicating how much electricity you are using, when the LED flash slowly you use less power, when it flash quickly you use more. Normally these meters are set up to flash 1,000 – 10,000 times per kilowatt hour (kWh).

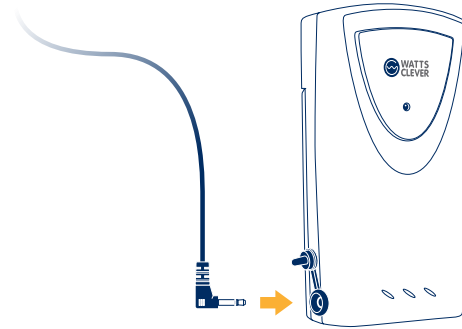
See the example:



Installation

Step 2 • Connect to the Power Transmitter

After mounting the sensor to your electricity meter, connect the mini jack of sensor to the Power Transmitter.



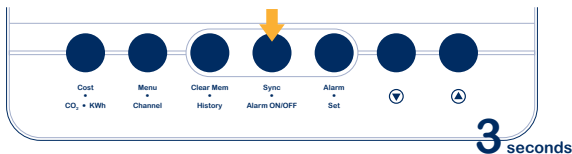
If possible avoid direct light on the sensor when it is in function as this may cause errors in indication on the Energy Monitor.

2 Energy Monitor

Synchronizing Energy Monitor and Power Transmitter

When you use this product for the first time, the Power Transmitter and the Energy Monitor are both set at Channel 1. The Energy Monitor and the Transmitter will synchronize automatically when the battery is inserted.

If the Display shows [- - -] after 15 minutes, make sure the channel for wireless transmission in both the Energy Monitor and the Power Transmitter are at the same channel. Press and Hold the [Sync D] for 3 seconds to start searching for the wireless signal.



The Power Transmitter is programmed with a unique ID so that it only works on your Energy Monitor. The Power Transmitter and the Energy Monitor must be synchronized before the product is put into use.

Switch to another wireless channel

Step 1 • Select the channel in Power Transmitter

First select your desired channel in the Power Transmitter. Then press the [Reset K] to confirm your desired channel on the Power Transmitter.



If you also want to clear all memory of the previous measurement in the Power Transmitter, Press and Hold the [Reset K] for 5 seconds.

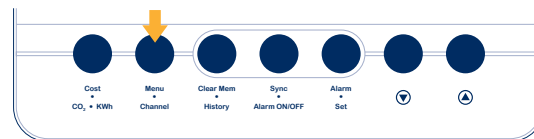
Step 2 • Select the channel in Energy Monitor

You will see the indicator light of the Power Transmitter flashing concurrently with your electricity meter for approximately 15 minutes, after which it will only flash for approximately 40 seconds during each transmission.

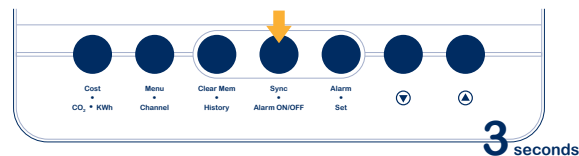


flashing for **15** minutes

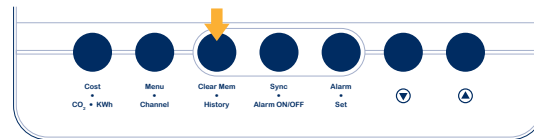
Press the [Channel B] in the Energy Monitor to select your desired channel in the Display.



Press and hold the [Sync D] for 3 seconds to let the Energy Monitor search for the Power Transmitter.



You can press and hold [Clear Mem C] to clear the old memory of your desired channel for all new measurements.

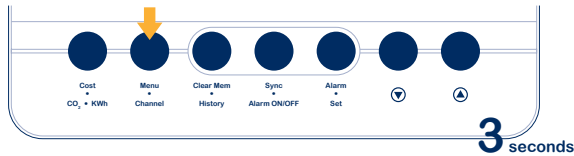


If the Energy Monitor is unable to receive a signal [- - -] displays at the top of the Energy Monitor. Please repeat Step 1.

Setting

1 Setting the Menu in the Display

Press the [Menu **B**] for 3 seconds to enter the Menu setting.



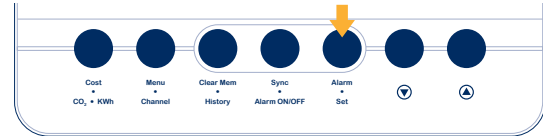
In order to set the Menu as below:

Display Blinks	Setting
1. Displays 12 / 24 hours	
2. Hour	
3. Minutes	
4. Month / Day or Day / Month display	
5. Year in date	
6. Day in date	
7. Month in date	
8. Imp (Impulses) Here you key in how many Impulses your electricity meter transmits, is shown on your meter (e.g. 1,000p /kWh)	
9. CO ₂ Set at 0.44 which is the app. average in Europe.	
10. Electricity price per kWh You may take a look at your electricity bill to see what you pay per kWh inclusive of taxes. Or call your electricity supplier and ask them.	
	Setup with and button. Press [Set E] to confirm the value.

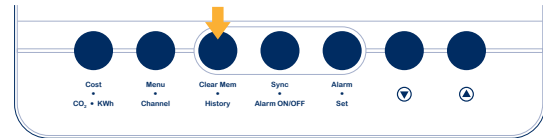
Setting

2 Setting Alarms

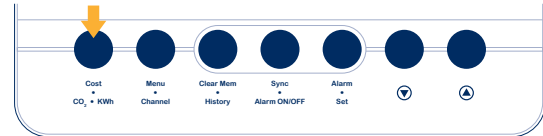
Step 1 • Press the [Alarm **E**] to enter the Alarm setting.



Step 2 • Select by the [History **C**] button, which period you want the Alarm set at (e.g. TIME).



Step 3 • Select with the [Cost / CO₂ / kWh **A**] button whether you want the alarm on price, CO₂ or kWh.



Step 4 • Select the value by pressing the or the button and press [Set **E**] to confirm. A small bell will appear in the display indicating the alarm is activated. (Fig. 4)

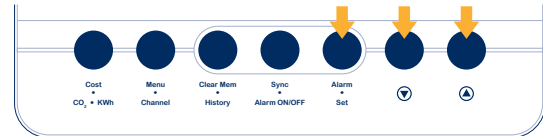


Fig. 4

It is possible to set an alarm on your consumption, in that a way you have the possibility to pay attention to your consumption if it is too high.

3 Setting Rate

To set your rates press the [Cost / CO₂ / kWh **A**] for 3 seconds.

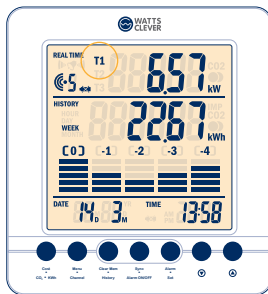
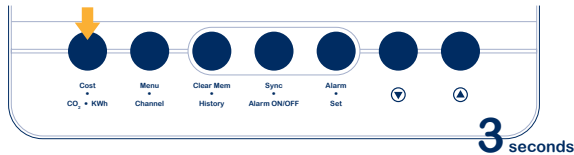


Fig. 5

It is possible to set different prices at different times of the day. This is only relevant if you have different prices on your consumption during the day.

Example:

From 06:00 – 18:00 your electricity price is 1.65

From 18:00 – 24:00 your electricity price is 1.75

From 24:00 – 06:00 your electricity price is 1.35

At the top of the display it will say T1 standing for rate 1 (Fig. 5). Here you input your price and then the time from which this rate applies.

T2 (Rate 2) where you key in your next price and time until you have been through all rates (it is possible to set 3 rates).

The Display shows dashes [- - -]

The Display shows [- - -] when the wireless connection to the Power Transmitter has been lost for 15 minutes.

1. Check or replace the batteries on the Power Transmitter.
2. Press and Hold the [Sync **D**] for 3 seconds , which you find on top of the Energy Monitor to start searching for the wireless signal.

Although wireless signals can pass through solid items and walls, the optimum situation is that there is free space to the Energy Monitor.

The following may be the reason for reception problems:

- a. Too long distance between the Power Transmitter and the Energy Monitor.
- b. The signal is disturbed by materials such as metal surfaces, concrete walls or dense plants.
- c. Disturbances from wireless devices (such as wireless telephones, radio headset, baby alarms) and other electronic devices.

Notes

EC-DECLARATION OF CONFORMANCE

This product contains the approved transmitter and lives up to the essential requirements of Article 3 of the R&TTE 1999/5/EC

Directive, if it is used for its intended use and that the following standards have been applied:

Effective use of radio frequency spectrum

(Article 3.2 of the R&TTE Directive)
applied standards EN 300 220-2 V2.1.2 (2007-06)

Electromagnetic compatibility

(Article 3.1.b of the R&TTE Directive)
applied standards EN 301 489-3 V1.4.1 (2002-08)

Low voltage directive

Applied standards EN 60950-1 : 2006

Further information:

Therefore this product is in accordance with the 73/23/EC directive, EMC Directive 89/336/EC and R&TTE Directive 1999/5/EC (appendix II) and carries the respective CE labelling.



If you are going to discard this product in the future, you should be aware that: Electrical products should not be discarded with the household garbage. If possible, recycle it. You may contact your municipality or the dealer for advice on recycling. (Directive about waste of electrical and electronic equipment)



Tested to comply with CE-standards

Now, WIRELESS Energy Monitor - LED Smart Meter is ready to work for you.

Feedback on your electricity consumption will help you change your energy habits, resulting in lower electricity bills. Many household have saved up to 20% of their electricity bills by using the WIRELESS Energy Monitor - LED Smart Meter.

Typical power consumption for some household appliances:

Television	150 W	Toaster	1000 W
Air conditioner	2000 - 5000 W	Microwave	1000 - 2000 W
Hot water heater	4000 W		

Product Specifications

Model • EW4030

Dimensions • Energy Monitor

117 (W) x 127 (H) x 27.8 (D) mm

LCD Display:

79(W) x 48.5 (H) mm

Power Transmitter:

59 (W) x 110 (H) x 26 (D) mm

Wireless transmission • 433.93 MHz

Transmission cycle • App. 45 sec

Transmission Distance • 30m

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