

# **Energy Monitor**

# The Eaga Energy Monitor

#### Waste less energy, save more money.

With most electricity meters hidden away, keeping an eye on your energy bills isn't always easy. With the Eaga Energy Monitor at hand, you can see:

- · How much electricity you're using as you use it,
- · How much money you're spending on this,
- The amount of electricity you've used over time, and
- The amount of Greenhouse Gas (CO2) produced

This makes it easy for you to reduce electricity waste and lower your bills, helping you to save money and do your bit for the environment and future generations. Plus, it's easy to install and use so you won't need an electrician. Which means you can start monitoring and saving right away.

# What's included?



1 x Sensor Clip



1 x Instruction Manual



1 x Transmitter



3 x AA Batteries



1 x Monitor



1 x Mains Adaptor

# How it works

The Eaga Energy Monitor uses electrical current sensing technology to measure how much power is being used. It does this by monitoring a tiny magnetic field around your household electricity cable. The clip-on sensor relays the amount of current being used to the transmitter. It is then sent wirelessly to the monitor display unit, which then shows how much power is being used.



# Monitor • Key Features



Mode key	Switch between different display screens
Arrow key	Adjust value in setup mode
Set key	- Enter to setup mode - Confirm setup ready - Switch between 24 hours/ 100 days display
Reset key	Reset the monitor unit
Search key	Search for signal and change ID (Total 4 IDs – these are used to match the monitor to the transmitter explained during the Installation Instructions on Page 8)

# Transmitter • Key Features



Check key	Changes the ID and matching between the transmitter and monitor
Reset key	Resets the unit to default factory settings
LED	Light which flashes to indicate the ID number and matching of the transmitter and monitor

# **Safety Information**

Please take time to read all the installation and operating instructions correctly before using your Eaga Energy Monitor.

Please observe the following warning & safety precaution guidelines when setting up and using this product.

- When fitting sensor, if in any doubt, always contact a qualified electrician.
- The Eaga Energy Monitor is a Category II measuring device and is designed for use on permanently installed loads such as distribution panels.
- This unit should only be used in accordance with the manufacturer's guidelines, failure to follow these may result in the unit safety being impaired.
- A 3 Amp fuse should be fitted to the monitor plug top.
- There are no user serviceable parts in the unit and repair is only to be carried out by a qualified person.
- This unit should only be connected to a mains socket which provides an earth connection.
- Follow local laws and recycling plans regarding disposal or recycling of this unit.
- This unit should not be exposed to dripping or splashing of liquids. Do not use unit near water or in bathrooms.
- Do not use the monitor where the use of radio frequency products can cause faults in control devices of other apparatus; aircraft, hospitals, etc.
- Do not expose the unit to undue force, temperature or humidity.
- If the LCD or Monitor display is damaged, please dispose of.
- Dispose of old batteries at an official battery recycling centre and replace with new batteries.
- Remove the batteries before storing the transmitter for prolonged periods.

• Old batteries should be replaced with new batteries only. Do not mix new and old batteries.

# Warning: Sensor should only be attached to insulated mains cable and should not be used on un-insulated cable.

## LCD Display



# **Installation Instructions**

# Simple to install, no electrician required.

Getting your Eaga Energy Monitor up and running is quick and easy.

**Take note!** Before you start make sure that you read the safety information on pages 6 and 7.

Then just follow these **5 simple steps** to ensure the device is set up and working correctly.

#### Step 1 – Insert batteries in transmitter

For your convenience, 3 x AA batteries have been supplied. Insert these into the transmitter making sure that the +/symbols in the transmitter match the +/- symbols at each end of the battery.

#### Step 2 – Matching the transmitter and monitor

Plug the monitor into an electrical socket and have the transmitter within easy reach.

Press the SEARCH key on the back of the monitor. The display will flash  $`\_\_\_$  ' to show that it is searching for the transmitter.

Press the CHECK key on the transmitter once. The LED on the transmitter will flash once.

When the transmitter has been matched with the monitor, the display will flash 'SUCC'.



#### Step 3 – Place sensor clip around the insulated live cable

Look for the insulated live cable on the outgoing side of your electric meter. Place the sensor clip around the cable as shown in the diagram.

This cable is usually one of four and is the one located furthest to the right of the electricity meter.

Take note! Do not apply any force to this cable at anytime.

This cable is double insulated. Place the sensor over the double insulation. **Take note!** No insulation should be removed.

#### Step 4 – Affixing the transmitter and sensor clip

Using fixing screws, you can fix the transmitter to a place of your choice. Then plug the sensor clip into the transmitter.

**Take note!** When fixing the transmitter take care that the fixing screws do not pierce any electrical cable.

#### Step 5 – Place the monitor in desired location

Put the monitor in a place where you can easily view it. Then plug the monitor into a nearby socket.

#### The Monitor is now ready to use

To change the default settings on cost and Greenhouse Gas (CO2), please see the following pages in the instructions.

# If your Energy Monitor does not give you a display of your electricity use please note that:

Nearby wireless devices such as Wi-Fi broadband and baby monitors may prevent you from matching your transmitter and monitor. If this is the case, try using a different ID - these are different frequencies in which the transmitter can send signals to the monitor. The Eaga Energy Monitor has four to choose from.

The monitor is automatically set to ID1. To **change the ID** repeat from Step 2 onwards but this time press the **CHECK key** on the transmitter – two times (for ID2), three times (for ID3) or four times (for ID4) in 4 seconds. The LED on the transmitter will flash the same number of times as you press the CHECK key.

# Factory default settings

The Eaga Energy Monitor has been provided with default settings to help you to get an instant indication of your electricity use, the cost and the Greenhouse Gas (CO2) generated from this. These settings are:

Country Setting	UK
Voltage	240V
Units	Metric
Currency	£ pence/€ cents/\$ cents
Power Units	kW
Energy Units	kWh
Greenhouse Gas	kg
Greenhouse Gas Conversion	0.4Kg CO <sub>2</sub> = 1 kWh
Tariff Rate	15 pence

# Monitor • Operating mode and changing sequence

By pressing the MODE key in sequence, the following screens will display consecutively. Please note that when pressing MODE after Screen 7, this will return you to Screen 1.

Screen 1	£ <b>F</b> ruix	Instant electricity cost
Screen 2	4295*	Instant power consumption
Screen 3		Instant Greenhouse Gas
Screen 4	[]395_	Power consumption of previous hour
Screen 5		Greenhouse Gas generation of previous hour
Screen 6	£	Electricity cost of previous hour
Screen 7		Last 24 hours consumption record / Last 100 days consumption record

The readings on the above screens show the sort of figures likely of an Energy Monitor in operation - please note that these may differ depending upon your electricity use.

The following pages take you through the steps for set up of the above.

# Monitor • Setup mode overview

The Eaga Energy Monitor has a factory default setting of 0.4kg CO2/ kWh. This gives you a standard and accurate indication of the amount of CO2 (Greenhouse Gas) which is generated by your electricity use or kWh. However, if you wish to change this setting, you can follow the stages below.

## 1 Set CO<sub>2</sub> (Greenhouse Gas) per kWh

1	Press <b>mode</b> key to change to CO <sub>2</sub> generation mode (Greenhouse Gas) - Screen 5
2	Press <b>set</b> key to enter CO <sub>2</sub> setup mode
3	Display blinks
4	Default setting is 0.4kg/kWh
5	Press <b>arrow</b> key (Hold 1 second for fast-running digit) to increase the value (Range: 0.1 - 9.9)
6	Setup mode will exit automatically if no keys are pressed for 5 seconds

The Eaga Energy Monitor has a factory default setting in pounds with a value of 0.15/kWh, to customise the following steps should be followed:

## 2 Set cost of electricity per kWh

1	Press <b>mode</b> key to change to electricity cost mode - Screen 6
2	Press <b>set</b> key to enter electricity cost setup mode
3	Currency symbol blinks
4	Press <b>arrow</b> key to change the currency symbol to Pound, Dollar or Euro respectively
5	Default setting is <b>POUND</b> and 15 pence/kWh
6	Press <b>set</b> again to confirm the currency symbol setting
7	Digit display blinks
8	Press <b>arrow</b> key (Hold 1 second for fast-running digit) to increase the value (Range: 0.01 - 9.99)*
9	Setup mode will exit automatically if no keys are pressed for 5 seconds

\*To see the cost of electricity per kWh and how much you pay, you may wish to refer to your most recent electricity bill. This will help with the accuracy of the monitor in measuring the cost of your electricity use as it happens. To refresh the signal between transmitter and monitor the following procedure should be followed:

#### 3 Renew unit ID

1	Press <b>search</b> key at the back of the monitor to change to searc mode	
2	Display blinks '' to indicate signal searching in progress	
3	Display blinks <b>'SUCC'</b> for 5 seconds to indicate ID renew successfully	
4	The monitor then goes back to operating mode	

# Monitor • 24 hours/100 days mode overview

## **Hourly Energy Use**

To view your **hourly energy** used press the **'mode' button** until you see the 'AMP' icon in the top right of the display (figure 1 and screen 7 from the Operating Modes).





This screen will show the energy used in the last hour. To view the energy used in any one of the last 24 hours use the arrow key to navigate.

**Example:** If you press the arrow key 12 times the screen will show the energy used in a one hour period 12 hours ago. The display will alternate between the number 12 (figure 2) and the hourly energy usage (figure 3).





Figure 2 - hour

Figure 3 - energy used

Please note that the figures on the display will be dependent upon your own household energy use.

# Monitor • 24 hours/100 days mode overview

# Average hourly energy use on any given day

To show your **average hourly energy use from the last 100 days**, press the **'set' key**.

The screen will alternate between the day in question and the average hourly energy used on that day - please note that the default day setting is '1' and shows the previous day's average energy use per hour.

To **view any day** in the past 100 days, use the **arrow key** to navigate.

**Example:** If you press the arrow key to show '15' this will display your average energy use from 15 days ago. The display will alternate between the number 15 (figure 4) and the average energy usage (figure 5).





Figure 4 - day

Figure 5 - average energy used

To switch back to the hourly energy usage, press the **'set'** key again.

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To **exit** from the 24 hours/100 days overview, press the **'mode'** key. This will return you to the **instant electricity cost** function or Screen 1 - as shown in figure 6.



Figure 6 - instant electricity cost

**Tip** - with the Eaga Energy Monitor you can compare day to day figures to see if you have reduced your average energy use on any given day (up to 100 days).

Please note that the figures on the display will be dependent upon your own household energy use.

# **Technical specification**

Dimensions	Width mm	Height mm	Depth mm	Weight grams (without batteries)
Monitor	100	111	48	245
Transmitter	74	115	37	121
Sensor Clip	31	52	50	55

Accuracy	<1 Amp	1 - 7 Amps	7 - 71 Amps
Current	Not specified	12%	5%

Display Power Supply	230 – 250V AC 50Hz
Transmitter Power Supply	3xAA/LR6/UM-3 1.5V batteries
Transmitter Power Consumption	2mW
Monitor Power Consumption	0.49W
Operating Temperature	5°C to 45°C at 85% relative humidity
Storage Temperature	-5°C to 55°C at 85% relative humidity

Operating Frequency	433MHz
Communication Range	Maximum 10m*

\*This will depend on such things as the number and thickness of walls

# Terms of warranty

Note: These terms of warranty apply independently of and as a supplement to the statutory and contractual warranty rights, which the purchaser may enforce against his respective direct seller.

#### **Product Warranty & Warranty Period**

The warranty period, during which the Energy Monitor shall be free from any defects in design, materials and workmanship, is valid beginning on the date of purchase for one year.

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This product meets EU consumer safety, health or environmental requirements

RoHS

This product meets the Directive on the restriction of the use of certain hazardous substances in electrical and electronic equipment



The supplier of this product meets the waste electrical and electronic equipment (WEEE) directive and is a certified member of a WEEE compliance scheme



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Danger Mains Voltage

This is a Class II, double insulated electrical appliance

Eaga has been helping to reduce household energy bills since 1990 and is a leader in central heating, insulation and renewable energy. To find out more about how we can help you reduce your bills visit www.Eaga. com.



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