



Gas & Water Monitor Installation Manual

English

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A word from the CEO

Welcome to the world of Smappee

You will soon notice that this Smappee Gas & Water Monitor offers nothing but benefits. It immediately gives you clear and simple insights into your gas and water consumption. You'll become more conscious about how you deal with gas and water, which allows you to make savings right away, without compromising on comfort. It might take a bit of getting used to in the beginning, but Smappee will soon become part of your life.

The Smappee energy monitor completes the picture. If you combine both monitors, the app will provide you with an overview of all your home energy consumption – gas, water and electricity –, in real-time per day, per month and per year, with the related costs, on a single device. You can now also leave the house without worrying. After all, you can simply use the app to keep an eye on what's happening in your home.

It will even send you a leak alert if anything is wrong.

As I said: nothing but benefits, for your peace of mind, your energy bill and the planet.



Stefan Grosjean,
Founder and C.E.O. Smappee



Getting started

Overview

The Smappee Gas & Water Monitor is a device that monitors your Gas and Water usage and sends it to the Smappee Cloud, so you can view it in the app at your disposal.

Read this Manual

For a successful installation, please read the following sections of this User Manual.

Step	Description	Page
1	Understanding the Cloud Connection of your Gas & Water Monitor. There are two available connection methods. <ul style="list-style-type: none"> • Radio Frequency (RF) • Bluetooth 	5
2	Understanding the Sensors of your Gas & Water Monitor Depending on the type of your utility meter, you either need an: <ul style="list-style-type: none"> • Optical Sensor or • Magnetic Sensor 	6
3	Examples of Gas & Water Meters	7
4	Installing your Smappee Gas & Water Monitor Selecting the sensor you need, setting the unit of measurement, connecting to the Smappee Energy and more explained	12
5	Configuring the Leak Detection The leak detection can be set in 3 levels.	15
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Box Content

When you open the box, you'll see that there's quite some gear in the small box.

Contents of the box:

- 1 Smappee Gas & Water Monitor
- 2 AA-batteries
- 1 Optical Sensor
- 1 Magnetic Sensor
- 3 mounting strips for the Optical Sensor

System Requirements

In order to use the Smappee Gas and Water, please note the following system requirements:

- Bluetooth Low Energy 4.0 or higher
- Android 4.4 or higher
- iOS 8.1 or higher

Understanding the Cloud Connection

Overview

Before you can use your Smappee Gas & Water Monitor you need to connect it to the Internet and the Smappee cloud. You can do this in two ways:

- Radio Signal via your Smappee Energy meter
- Bluetooth via the Smappee App on your Smartphone or Tablet

You can choose the method of connection during the installation process in the application.

Radio Signal

If you configure this connection method, your Gas & Water Monitor will send its data directly to the Smappee Energy. The data is then sent from the Smappee Energy to the Smappee Cloud, which stores all data securely.

The Radio Signal works on the 433.92 Mhz frequency and has a range of 20-30m within a clear line of sight. Range may differ depending on the situation.

This method's main advantage is that you will receive live data whenever Water or Gas is consumed and a warning if Smappee suspects a leak.

Note: The configuration of the sensors and further settings will still be done via Bluetooth.

Bluetooth

If you configure this connection method, your Gas & Water Monitor's data will be collected over a Bluetooth connection.

On iOS devices, the data will automatically be collected when Bluetooth is turned on and the device is within Bluetooth range of the Smappee Gas & Water Monitor.

For Android devices, to collect the consumption data, you will have to get within Bluetooth range of your Smappee Gas and Water monitor with the Application running on the Main Screen with the Bubbles. Your smartphone will display a message saying 'Starting data collection' and a message when the collection has been finished.

What connection should I choose?

Below you'll find a table describing the main traits of each method of connection.

	Radio Signal	Bluetooth
Preconditions	You use a Smappee Energy in range	No Smappee Energy needed
Available features	<ul style="list-style-type: none"> • View live data • Leak alerts • View live data when not at home 	<ul style="list-style-type: none"> • Data collected when in Bluetooth range • View historic data when not at home
Range	20-30m (65 to 100 ft.), clear line of sight	<7m (23 ft.), within Bluetooth range
Installation	Bluetooth required for installation and configuration	Bluetooth required for installation and configuration

Understanding the Sensors

To be able to monitor your consumption, the Smappee Gas and Water Monitor comes with two sensors. One magnetic and one optical.

You can purchase additional sensors at our Webshop.

Overview

The selection of the sensors is crucial to guarantee proper functioning. The choice of sensor depends on the type of meters you wish to monitor and their available outputs.

Optical Sensor

The optical sensor uses infrared light to monitor the moving hand or reflective digit. It constantly emits an infrared light which, when interrupted or reflected, will send a small pulse to the Smappee Gas and Water. The interruption of the light is the small peak that you will see later on when configuring the optical sensor in the application.

Attaching the optical sensor

The sensor is attached by placing a self-adhesive surface above the digit/dial, with the small square hole aimed at the digit/dial's point.

Magnetic Sensor

The magnetic sensor basically works like a hall sensor. Every time the magnet moves along the sensor, the Magnetic Sensor sends a small pulse to the Gas and Water Monitor.

Attaching the magnetic sensor

Meters that are compatible with a magnetic sensor often have a small hole in them, which fits a magnetic sensor snugly.

In the next section, there will be some examples of water meters and how to attach the right sensor.

Examples of Gas meters and Water meters

Overview

This section shows you some examples of water meters and how to attach the sensor.

There are several models on the market today but the more common ones are shown.

If your meter does not appear in this list, please consult Google as there are numerous pictures of water and gas meters.

Meters with a magnetic output

The picture shows an example of a common water meter.

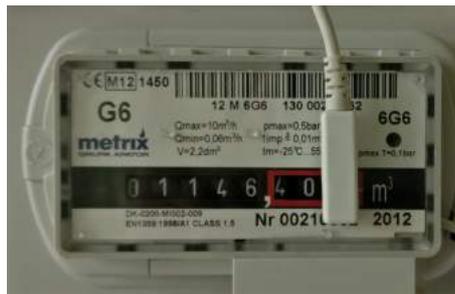
		<p>This water meters has a small opening on the side.</p> <p>The spinning digits don't have a reflective surface, so you can only use a magnetic sensor.</p> <p>This type of water meter uses 2 pulses per Liter (or 1 per ½ Liter)</p>
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Note: At the moment, Smappee is not aware of any Gas meter that can be monitored with a Magnetic sensor. Please feel free to share your experience with Smappee Support at 'support@smappee.com'.

Meters with reflecting digits

The pictures below show meters that have a reflecting surface on one of the digit.

This dot can typically be found on the digit 6, 9 or 0.



This gas meter has a small reflective surface on the last digit.

This can be monitored with an optical sensor.

Meters with a revolving reflective surface

Some meters have a reflecting surface that is attached to a rotating element.

		<p>This meter has a reflective surface It can be monitored by the optical sensor. We advise placing the sensor a bit more off-center for a good result.</p>
		<p>The installation of the sensor on this type of meter is similar to the one mentioned above.</p>

Meters with revolving dials

Gas and Water meters can have revolving dials in a variety of sizes and models. Below you'll find an example of a Gas meter with black dials.

		<p>This gas meter has black dials.</p> <p>It can be monitored by the optical sensor.</p> <p>The sensor should be placed above the fastest spinning dial as seen in the picture.</p>
		<p>The installation of the sensor on this type of meter is similar to the one mentioned above.</p>

Meters with red revolving dials

Some Gas or Water meters have red dials and a very thick cover glass. There is a chance the Smappee Gas & Water Monitor will not be able to monitor these meters. Please contact support@smappee.com for further advice.

		<p>This water meter has red dials and a thick cover glass.</p> <p>It can be monitored by the optical sensor, but in some cases there will be no readings.</p>
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Installing your Smappee Gas & Water Monitor

Overview

The installation of the Smappee Gas and Water will always be done over a Bluetooth connection.

In this section, you will find the different steps of the installation and a guideline to help with the most common pitfalls or installation difficulties.

Starting the installation

To start the installation of your Smappee Gas & Water Monitor, please go to the App and select 'Settings'. There you will find the option 'Smappee Gas and Water' which will lead you to the screen where you can add a new Smappee Gas and Water Monitor.

From now on, please follow the instructions in the app.

Note: If you wish to change the settings of your sensors or the configuration of the leak alerts afterwards, please go to the 'Smappee Gas and Water Monitor' menu, which you can find under 'Settings', and choose Input 1 or Input 2 depending on the Input you wish to configure.

Steps of installation

The installation consists of the following steps:

1. Connecting with Bluetooth
2. Selecting the sensor (optical or magnetic)
3. Calibrating the red line (only with Optical Sensor)
4. Setting the decimals, pulses and unit
5. Saving the configuration to your Smappee
6. Choosing the Communication Method (RF or Bluetooth)
7. Configuring the Leak Detection

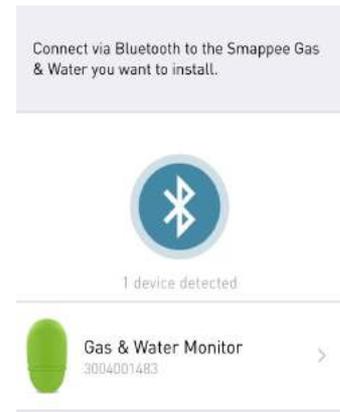
1. Connecting with Bluetooth

At the start of the installation, the application will prompt you to enable Bluetooth.

The Bluetooth connection is necessary for the further installation and further configuration of the Smappee Gas & Water Monitor.

If your Smappee Gas & Water Monitor does not appear on your screen; press 'Back'. This will reinitiate the Bluetooth device-scan.

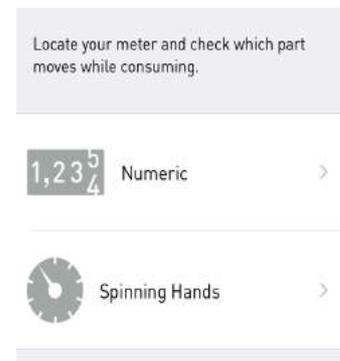
Please note that it can take a few moments before your Smappee Gas & Water Monitor pops up in the screen



2. Selecting the sensor (optical or magnetic)

From here on, the application will assist you in choosing the right type of sensor for your Gas or Water meter.

The suggested sensor depends on the choices you make throughout this configuration wizard.



3. Calibrating the red line (only with Optical Sensor)

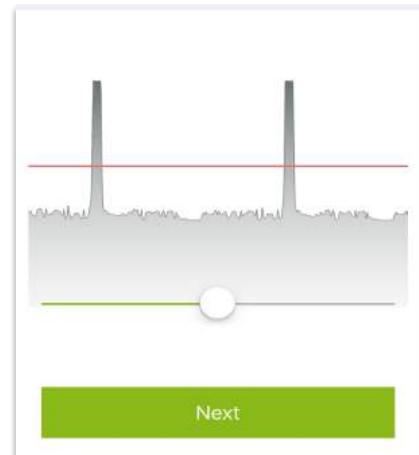
The red line you see on this screen is called the 'threshold'. It serves as an upper limit for the pulses.

The peaks you see in the graph are pulses generated by the optical sensor.

The red line should be in the middle between the top of the pulse and the base of the pulse

If you see no pulses in this screen, please re-connect the sensor with the Smappee and try again.

If the problem persists, please contact Smappee Support at 'support@smappee.com'.



4. Setting the decimals, pulses and unit

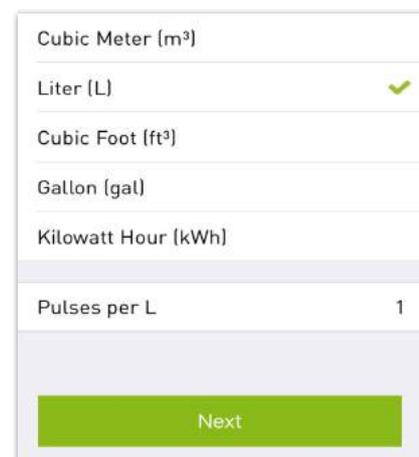
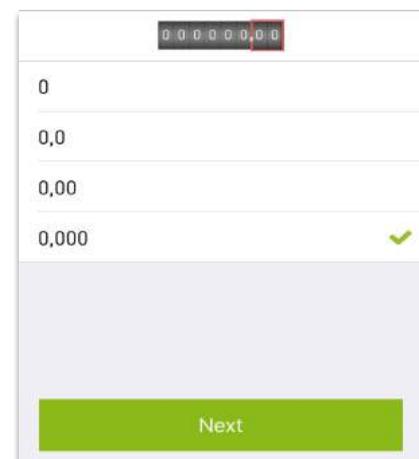
Smappee needs to know how much Gas you consume per rotation, revolution of the dial or hand.

Here you can specify the number of decimals and the unit.

On the bottom of this screen, you will have to choose the amount of pulses per unit.

You should find this on your meter: "pulses per" or "Imp/" ...

If you can't find the pulse weight like on this meter, measure it by tapping eg. 1 L of water and check the Bubbles. Did it add 1L, 2L, ...?



5. Saving the configuration to your Smappee

Save the configuration to your Smappee Gas & Water Monitor and the Smappee Cloud using Bluetooth and your phone's Internet connection.

Note: You should have Internet connection working!

If you want to install a second sensor, it is advised to do it at this step.

To install it at a later time you will have to repeat the installation process up to the 'Save configuration'-step.

6. Choosing the Communication Method (RF or Bluetooth)

If you have a Smappee Energy, you can pair it to the Smappee Gas and Water to receive **live consumption data** and get **leak alerts**.

Note: The configuration of the Smappee Gas and Water will always happen via Bluetooth, even if it's connected to your Smappee Energy.

7. Configuring the Leak Detection

Your Smappee Gas & Water Monitor can provide you with real-time notifications in case of a Leak or Excessive consumption.

It will use the Internet connection of your Smappee Energy it has been connected with.

Note: This function is only available if you have a Smappee Energy and your Smappee Gas & Water Monitor has been connected with it.

Yeehaw! Installation is now finished. Save the settings to Smappee and start tracking your consumption.



2nd sensor Done!

Did you know that your Smappee Energy monitor can notify you anywhere at anytime when a leak is detected?



Next

You can change your monitors sensitivity to send notifications for small, medium, or large leaks. Check info.

Off
Low
Medium
High

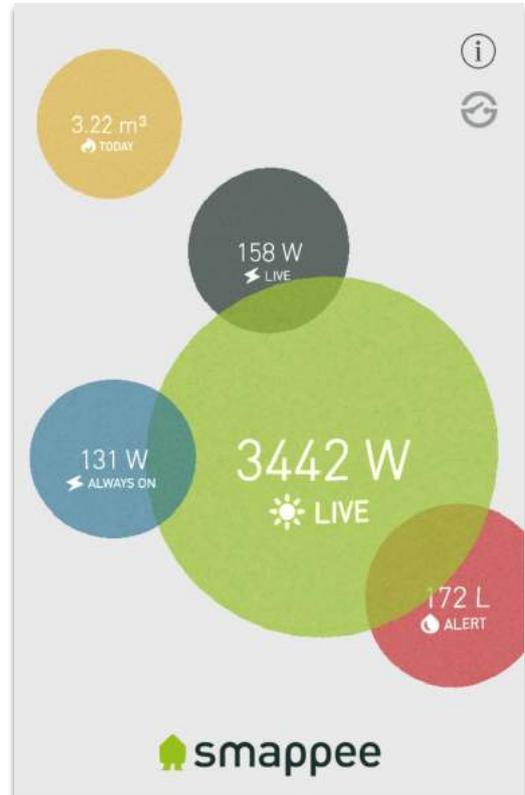
Next

Using the application

Understanding the Bubbles

After successfully installing the Smappee Gas and Water Monitor, you will see two new Bubbles in the main screen.

-  Gas Consumed (m³, ft³, CFH, ...)
-  Water Consumed (m³, L, Gallon, ...)
-  Electricity Consumed (kWh)
-  Solar, Wind, Battery, ... Produced (kWh)
-  Electricity Consumed as "Standby Power" (kWh)
-  Alert! In this situation, the alert applies to the water sensor.



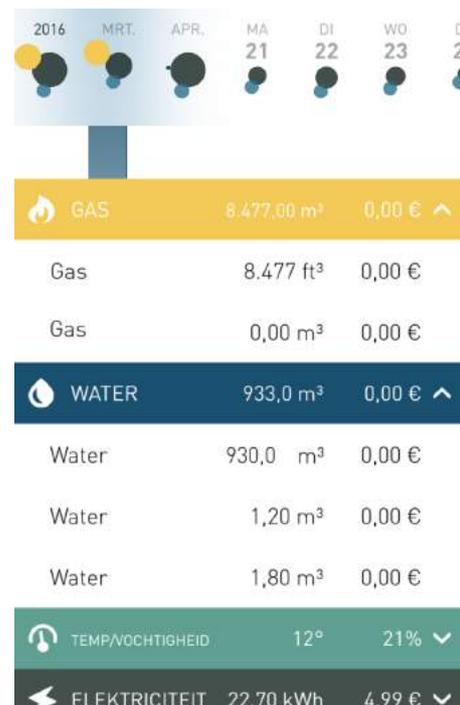
Usage graph

The Usage screen will now show new tabs, 'Gas' and 'Water'.

You can tap on the colored bars.

Adding an extra Sensor or installing a 2nd Gas & Water Monitor will result in multiple gas and water measurements.

You will be able to see each sensor separately with its respective measurement.



F.A.Q.

I need a second Optical Sensor, am I able to switch my Magnetic Sensor out?

Additional sensors can be bought at our Webshop, under the 'Extras' tab.

Is my Water/Gas Meter compatible with the Smappee Gas & Water Monitor?

If your Water/Gas Meter was not mentioned in the examples listed above, you can contact Support to see whether it's compatible or not.

My meters are more than 3 meters apart, is there an extension for the Sensors available?

Unfortunately, there's no extension available for the Sensors yet.

My Smappee Gas & Water Monitor does not show up in the Bluetooth devices list in the Application but I can find it with my phone.

In the Bluetooth step of the installation process, the app will ask you to connect with the Smappee G&W.

In order to do this, you must stay in the application.

If your smartphone is connected with the G&W in your system menu, the application will not be able to find the G&W.

You may not connect to the G&W from your system menu, only in the app.