Thank you for choosing the SmartGateways Watermeter Gateway!

The gateway can be connected to your water meter in a few easy steps. It is important that your water meter is equipped with a rotating wheel with a metal plate. The gateway's sensor detects the plate and registers the consumption with every revolution. It is important that the plate is made of iron or has an nfc coil. Version B of the gateway uses a reed sensor to detect magnetic fields.

Step 1. Read This Carefully!

The water meter gateway must be connected to the WiFi network before it is attached to the meter. Therefore, connect the gateway via an adapter with a micro USB connection (5V – 1A). Most telephone usb-adapters will suffice. **Do not attach the gateway to the water meter yet.**

When the gateway is connected for the first time, the red LED lights up. After 30 seconds, the gateway will broadcast its own WiFi network. It is important to first log in to the WiFi network without entering any other information on the portal. After the gateway is connected to the WiFi network, the blue LED will light up. **VERSION A:** Holding something made of metal in front of the sensor will turn off the blue LED on the gateway and the red LED on the sensor on. **VERSION B:** This sensor only reacts to magnetic fields. This makes it possible to see whether the sensor is functioning. For proper placement of the sensor on the meter, it is important that you know when the LEDs go on or off. You can test this yourself by holding something made of metal in front of the cross of the yellow sensor.

Stap 2. Instellen via de wifi portal

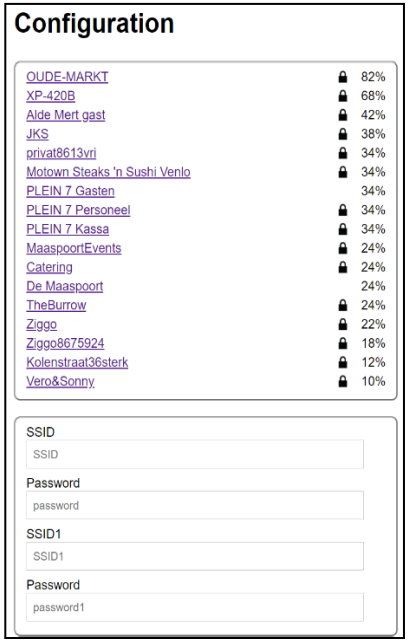
If the gateway is connected for the first time, it will broadcast the WiFi SSID "**SmartGateways WATERMETER**". Connect to this network, the password is "**12345678**" (without quotation marks). Once connected, a configuration screen will automatically appear in your browser. If the configuration screen does not appear, navigate to http://192.168.4.1.

"Select "Configuration" now. A page will appear with all available WiFi networks. This page is displayed next to it."

"Select your network. This will automatically be filled in for SSID and SSID1. Now enter the password. The username or password cannot contain the '&' symbol. SSID1 and password1 do not need to be filled in, as the gateway will ignore this information."

"If the gateway is connected, the blue LED will light up. Now navigate to: **http://connectix_watermeter.local:82** or **http://ip_address_gateway:82** if the first link doesn't work."

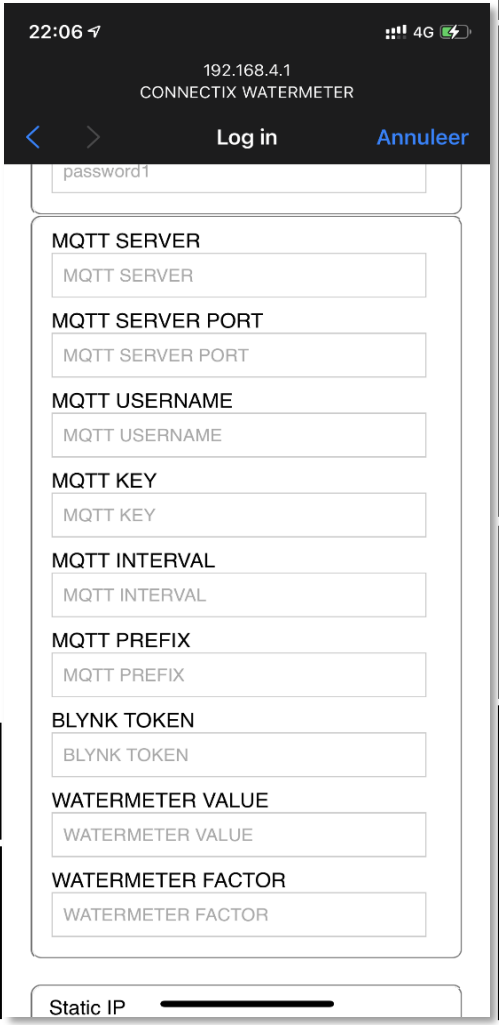
Username: admin
Password: smartgateways



Step 2a. Static ip adres or DHCP

At the bottom of the configuration portal is the IP address assignment. If you use dhcp, leave 0.0.0.0 everywhere. If you want to give the gateway a static IP address, enter the correct IP details. Re-enter SSID and Password when changing from dhcp to static ip address assignment.

Restore to factory settings
1. Disconnect and reconnect the usb cable.
Don't press the reset button yet but wait for the blue led to begin flashing.
2. The blue LED will flash four times. While flashing, press the reset button until the blue LED flashes five times quickly.
6. Release the button.
7. The gateway will now reset and will broadcast the SSID again after twenty seconds.
8. The gateway can be reconfigured by connecting to the SSID.



Step 3. Attaching the sensor to the meter

Make sure the gateway is connected to the WiFi network. The blue LED is now constantly on.
The gateway is equipped with a yellow sensor that detects metal. This must be placed correctly on the meter. **VERSION A:** The red LED on the sensor lights up when the sensor is close to metal. **VERSION B:** The blue LED on the gateway turns off when the sensor approaches a magnet. Version B allows the sensor to be placed directly in the meter's large slot. To do this, first remove the black plastic cap from the top of the meter.

Turn on the tap
Now turn on the tap and make sure that the wheel on the meter turns. Hold the yellow sensor on top of the wheel with the black side up and make sure the red LED on the yellow sensor turns on and off with every revolution. If the red LED on the sensor is not clearly visible, look at the blue LED on the gateway.
When the correct position is found, the sensor can be attached to the meter.

Use the supplied velcro for this. Let the tap run for a while while mounting and pay attention to the LEDs. These indicate whether the sensor is positioned correctly.

If the sensor is properly attached, the tap can be turned off. The gateway can now be provided with the correct meter readings and mqtt data.

Step 4. Setting the correct meter value, pulse factor and mqtt data

--- Take a look at the backside of this manual to see the settings for your meter ---

Make sure the gateway is connected to the WiFi network. The blue LED lights up continuously.

Now briefly press the button on the gateway with a pen. The blue LED will now go out. After 10 seconds, the gateway will broadcast the SSID "SmartGateways WATER METER" again. Connects to this network. The configuration portal appears automatically. If the configuration screen does not appear, surf to http://192.168.4.1.

Select **CONFIGURATION** and now enter the current meter reading in the field "**WATER METER VALUE**". Fill in the field "**WATER METER FACTOR**". If the rotary wheel rotates 1 time with every liter, enter 1 here (99% of all watermeters use this setting). If the wheel turns once every half a liter, enter 0.5 (Kent V100, Version B with reed sensor)

Also enter the MQTT details of your broker on the configuration portal. The port number is 1883 by default. How to install MQTT is described on https://smartgateways.nl/support

By default, an update is sent to the MQTT broker every 10 seconds. If you want to adjust this, enter in seconds at **INTERVAL**. The **PREFIX** is for advanced users. Do not enter anything here if you are not using it. By entering a prefix, Home Assistant or Domoticz may no longer work.

Now select SAVE. The settings are saved and the gateway will now always send the meter reading to the set mqtt broker.

Step 5. Manuals for Home Assistant, Domoticz Homey and others:

There are various manuals on smartgateways.nl and connectix.nl. These include the following:
- Installation of MQTT within Home Assistant
- Installation of the water meter gateway within Home Assistant and Domoticz
- Installation of the SmartGateways Wartermeter app for Homey

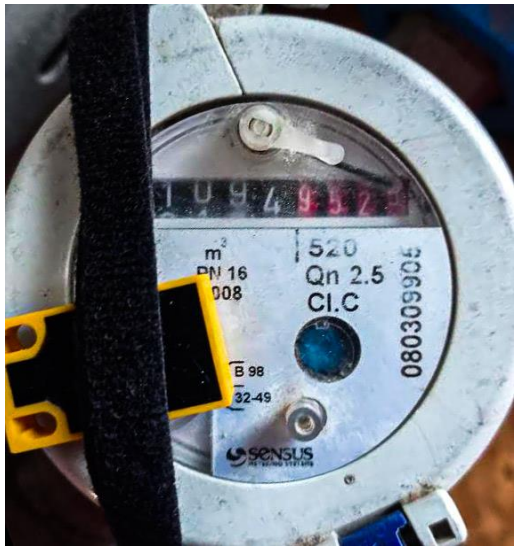
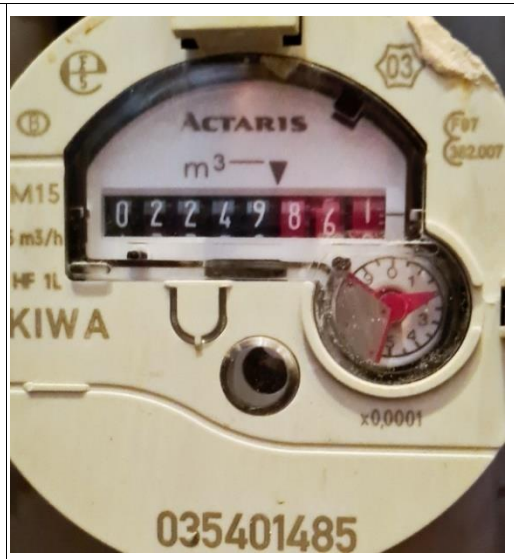
Manuals are constantly updated on SmartGateways.nl and Connectix.nl.

Led notifications

The red LED lights up when the gateway is supplied with power.
The blue LED can light up or flash in different ways.
BLUE LED – OFF: No WiFi connection. Connect to the SSID "SmartGateways WATER METER" and configure the gateway or reset the gateway to factory settings and re-enter the wifi configuration.
BLUE LED – ALWAYS ON: the gateway is connected to the WiFi network and the sensor is not detecting
BLUE LED – FLASHING SLOWLY: normal situation – water flows and sensor detects this
BLUE LED – FLASHING FAST: A firmware update is available. Briefly press the button on the gateway and wait for the gateway to install the update. This may take 2 minutes. The gateway will reboot and start flashing slowly again. If the blue LED does not turn on, reconfigure the gateway. If the immediately starts flashing again, the update has not been downloaded completely, try again until the gateway has started up normally again. Note: certain firewalls block the download, if this is the case, try installing the firmware update via a different WiFi network. If there is an update the mqtt topic changes to watermeter/smart_gateways/update_available = true. If desired, a notification can be made about this.

Configuration examples

The display of a water meter usually consists of a white and red part. When entering the WATERMETER VALUE and WATERMETER FACTOR, the entered value must always be in liters. The factor is the number of revolutions the wheel with metal plate makes per liter. Below are a few examples:

			
WATERMETER VALUE: 719812 WATERMETER FACTOR: 1 Note: The 3rd red number is a two. This is the value indicated by the arrow on the dial on the right	WATERMETER VALUE: 1094952 WATERMETER FACTOR: 1 Note: The 4th red digit does not have to be entered. These are deciliters. The value must always be entered in liters	WATERMETER VALUE: 2249861 WATERMETER FACTOR: 1	WATERMETER VALUE: 1555955.5 WATERMETER FACTOR: 0.5 Note: The Kent/Elster V100 works with 0.5 liters per pulse. The 4th red digit should therefore be after the . (period) to stand. With this meter, the sensor can be placed directly in the large slot of the meter. To do this, first remove the black plastic cap from the top of the meter

Logging the gateway

Investigate the log if problems occur.
Scan this QR code for instructions - https://smartgateways.nl/logging-van-de-gateway/

Internal Webserver / REST-API

Surf to http://connectix_watermeter.local:82/ or http://gateway_ip:82/
The REST-API is available on http://connectix_watermeter.local:82/watermeter/api/read

Frequently asked questions:
- I can no longer see the red LED on the sensor when it is mounted on the meter: The blue LED on the gateway turns off when the red LED on the sensor turns on.
- The gateway's consumption continues when I don't use water: Place the sensor a little more towards the end of the wheel. If this does not solve the problem, the power supply used is not large enough. The gateway must be powered by a 5V, 1A power supply. Incidentally, the consumption of the gateway is 40 mA with an occasional very short peak of 400 mA
- How can I trigger the configuration portal again? This can be done by briefly pressing the button, in this case connect to the WiFi network “SmartGateways WATER METER” and surf to http://192.168.4.1 The portal disappears again after the gateway has been configured.
- Anonymous mqtt is not supported, always use mqtt with a username and password. The max character length of the mqtt input fields are 40 characters.