



## 4. NETWORK INSTALLATION

In order to attach the Water Meter on a network / pairing device:

Activate the network or the companion device to accept the pairing

1. On the water meter :

- Push for a long time the button, until you reach the second menu and see 'INSTALL' written on the LCD
- Press twice rapidly on the button to edit, a 'YES' should appear.
- If LCD displays 'NO', push once on button to switch to 'YES'.
- Press twice rapidly on the button to accept the installation process
- The Water Meter will send an installation request message for pairing.
- The Water Meter LCD will display a blinking antenna symbol.

2. On the network or the companion device :

- Check that the pairing info are received and that it corresponds to the Water meter, and accept the pairing request. In a network registration, this is automatic if provisioning of the Water meter was already done into the system.
  - On the next installation request message send by the water meter, the network or companion device should respond with an installation success message to confirm installation.
3. The Water meter antenna symbol stops blinking.

### Safety instructions

All installations of product must be done according to safety regulations and rules. The instructions detailed in this guide must be carefully followed in order to prevent from any form of danger for the installation, for the installer or for the end user.

The following safety instructions must be observed at all time:

- The installation and commissioning must only be performed by a qualified and trained installer, authorized to work on domestic water installations. This installer must carefully read and scrupulously follow this meter user manual.
- The installation must be conform to the standard for drinking water installation.
- Local safety regulations must be observed.
- The installation altitude wrt to the sea level must be lower than 2000m.
- The product must be protected from shock and vibration.
- Any inappropriate behaviour not described in this document can lead to injuries or damage of the meter.
- No part inside this product is intended to be replaceable.
- If an installed product is removed from installation and intended to shipped through air transportation, the radio function must be disabled using NFC or other interface.
- According to AWWA, even if section 250.53(D) of the National Electric Code (NEC) requires that "continuity of the grounding path or bonding connection to interior piping shall not rely on water meters", all meters should be installed with permanently ground-strapped strap-ping.

### Installation instructions

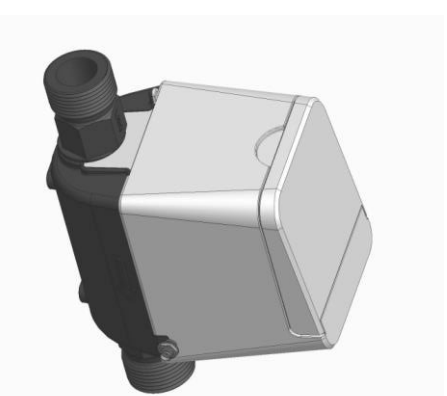
The installation instructions are the following:

- The product must not be exposed to mechanical stress during installation. The intake and outcome piping must be aligned and match the product pipe dimension.
- The meter can be installed on plastic or metallic pipe, after a general closing tap.
- During installation of the meter, the water supply must be cut and the remaining water flush out.
- Do not hold the product casing but the pipe during the installation screwing.
- Always used new gaskets for mounting the product onto the piping.
- The torque applied to screw of the product must be higher than 15 N.m and not overpass 30 N.m whatever the thread and pipe material.
- The water supply must be re-opened smoothly, enabling air bubble to be removed without mechanical impact.
- The provisioning onto the facility radio network can be done using the QR code information written on the product. Be aware that this provisioning over the network could required some time to be effective. The product cannot register on the network until this provisioning is over.
- Once water flows, the radio attachment process starts; and it indicates the radio link quality to the network. When the antenna icon stops blinking, it shows that the network attachment succeed
- If radio link after installation is too poor (no bar next to the antenna symbol) and if product is so-equipped, an external antenna must be installed in a higher place, more likely to receive radio signals and then connected to the product. It should be activated using the optical flag interface or BLE.

# Installation Manual

## UM20 SICONIA WATER Smart METERS

### With LTE LPWAN radio



### Optical Port (optional) & BLE interface (optional)

### Sagemcom Broadband SAS

[www.sagemcom.com](http://www.sagemcom.com)



## 1. METER CHARACTERISTICS

The product is a water meter intended to be installed to count volume of water passing through. It offers measurements of different flow parameters, a CAT-M1™ radio with an optional external antenna connector or a wired interface for connection with centralization system, an optional BLE interface, an optional optical infrared interface and a push button. The measurement data can be displayed on the front panel LCD or are also remotely available via optical, BLE or the radio.

### Certification

The CE marking attests to the conformity of the product with the international technical regulations and harmonized European standards that apply when the product is released on the market, in particular in accordance with the FCC, UL and NSF.

## Innovation, Science and Economic Development Canada “ISED”

This Class B digital apparatus complies with Canadian ICES-003

This product meets the applicable Innovation, Science and Economic Development Canada technical specifications. This device complies with RSS-247 of the Innovation, Science and Economic Development Canada Rules.

Operation is subject to the following two conditions:

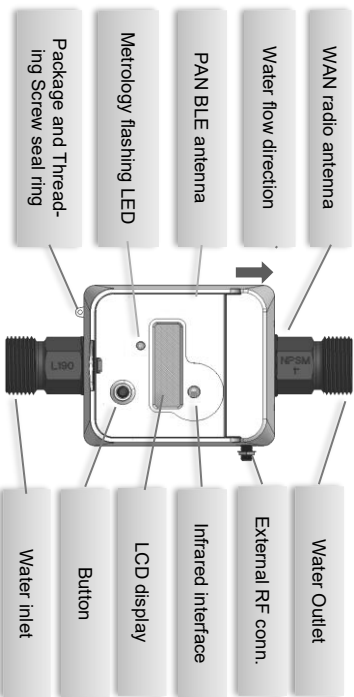
1. This device may not cause harmful interference, and
2. This device must accept any interference received, including interference that may cause undesired operation

### IMPORTANT NOTE: Radiation Exposure Statement:

This equipment complies with radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance 31cm (1 ft) between the device and your body.

### Meters overview

An overview of the product in its standard configuration is presented in the next figure



### Button

The meter is equipped with one push button on the front panel. It is used to navigate through the different menus and sub-screens. Long push to change the menu, short push to change to the next screen of the menu, double short push to edit and validate change.

## 2. COMMUNICATION PORTS

All communication ports are protected and requires a proper identification to work. In case of uninstalling the product from the water pipes and prior to send it by air transportation, unsure that you have deactivated all the radio.

### Bluetooth Low Energy PAN radio (if equipped)

If available on the product, a BLE radio, in the frequency band 2.4 - 2.483 GHz, could be used used to read and write information into the applicative part of the meter.



## Infrared communication port

An optical port compatible with iPHY SIF 115.2kb/s could be available. This port can be used to read and write information into the applicative part of the meter.

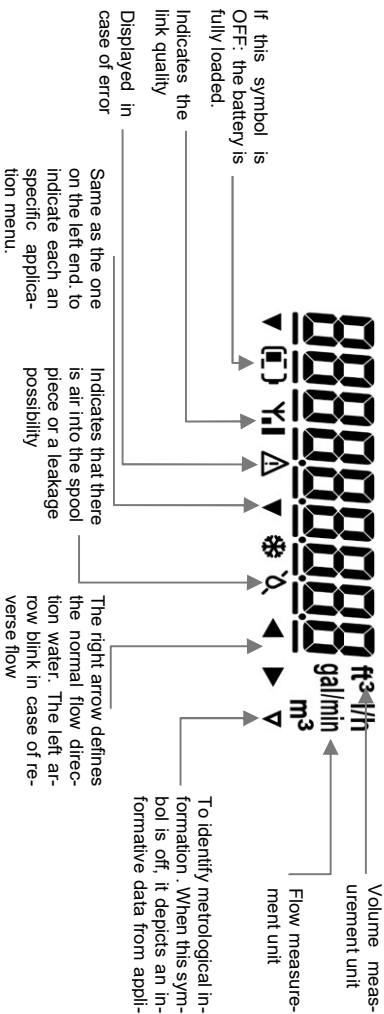
### Remote CAT-M™ WAN radio (if equipped)

The Wide Area Network radio communication port is based on a LTE 4G Cat-M1 into the band 4 and 13.

| Band | Uplink Low Freq. (MHz) | Uplink High Freq. (MHz) | Downlink Low Freq. (MHz) | Downlink High Freq. (MHz) | Band width (MHz) |
|------|------------------------|-------------------------|--------------------------|---------------------------|------------------|
| 4    | 1710                   | 1755                    | 2110                     | 2155                      | 45               |
| 13   | 777                    | 787                     | 746                      | 756                       | 10               |

## 3. LCD DISPLAY

The meter LCD display symbols and meaning are depicted here after:



### MOUNTING

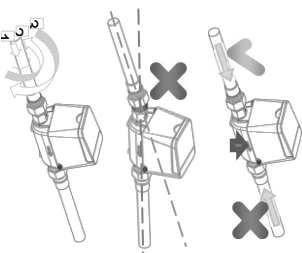
The product must be installed in conformance with . It can be installed whatever the pipe orientation. The arrow on the product pipe must be in the same direction than the normal water flow.

Upstream and backstream water lines must be aligned and must have a connection distance compatible with the product pipe length.

For proper mounting:

Press the rotating nut against the thread of the meter. Make one turn by unscrewing slowly to make sure the thread is correctly engaged.

Then engage, screw the nut by hand and finish with a wrench (30 Nm max) without holding the main housing.



Due to the battery chemical, the guaranteed product lifetime is not achieved when the product is: With the pipe installed Horizontally and the SMA connector downward