

# Manual and Datasheet

CubicMeter 2.x

LTCM-02

Non-invasive water meter & leakage detector



**Easy-to-install** water and leak monitor. Alerts if **water leaks** are detected.

Measures **volume** to increase awareness. One design for **multiple pipes**.

**No plumber** required to install, with an average of **two minutes** to install.

**Quandify**

## Thanks for choosing the CubicMeter

The CubicMeter 2 is a smart water meter that helps you understand how much water you consume, while also protecting your home from leaks by constantly monitoring. It is recommended that one CubicMeter is installed per inlet pipe, i.e. one on the hot water pipe and one on the cold water pipe, in order for the system to cover both lines in case of leaks and to improve the system's water flow analysis and predictions.

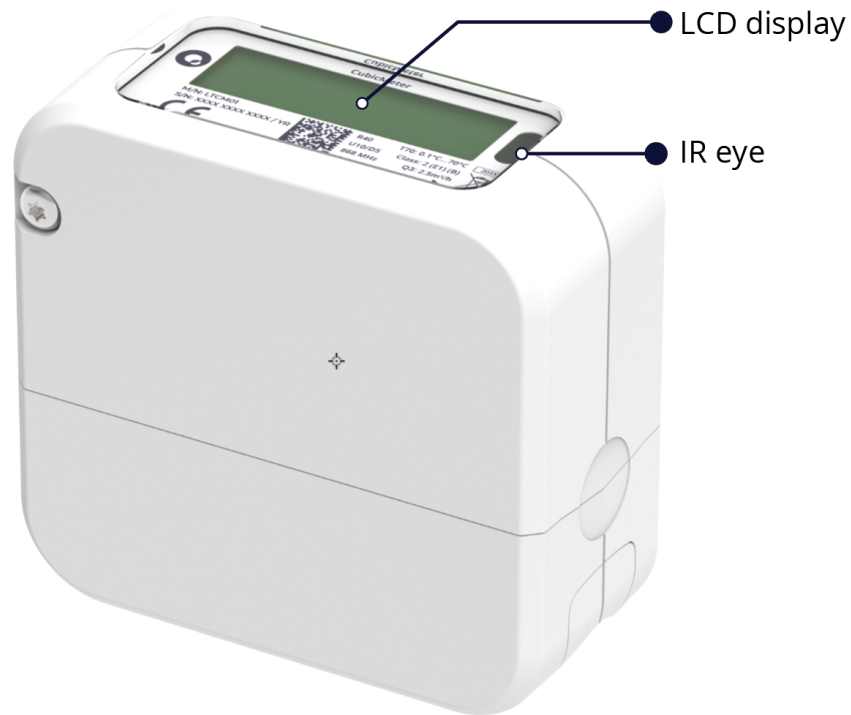
The CubicMeter 2 is extremely easy to install, and it requires no previous experience to perform. It works on pipes between 15 mm - 22 mm outer diameter, and on the following materials: chromed and unchromed copper. This guide will help you get your CubicMeter up and running.

## Still stuck?

Feel free to reach out to us at [support@quandify.com](mailto:support@quandify.com) or visit our website for more information: [quandify.com](https://quandify.com).



## INTRODUCTION

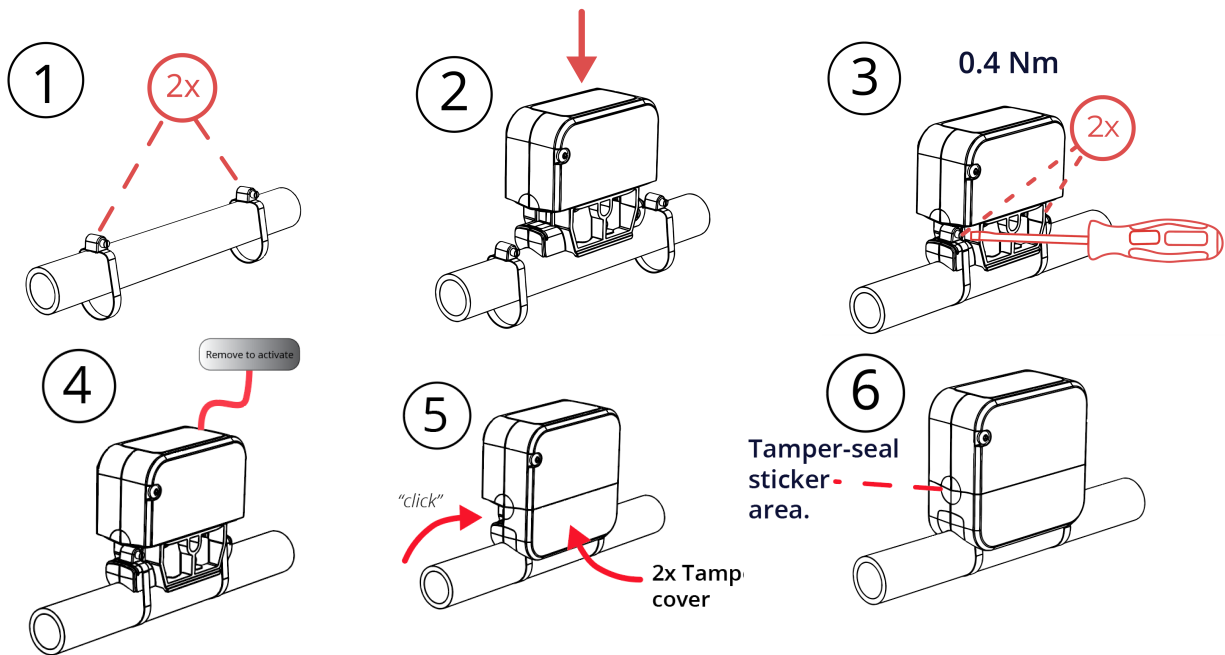
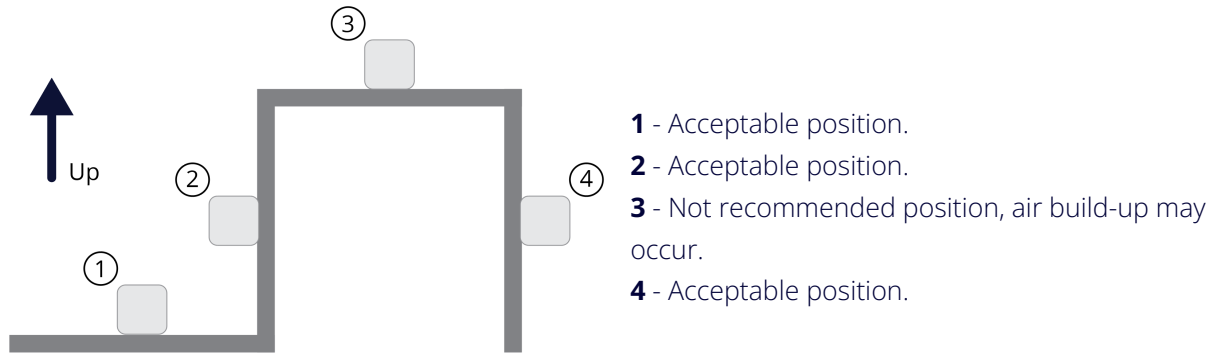


### The box contains:

- CubicMeter 2.0 - 1x
- Stainless steel pipe clamps - 4x
- Tamper-Seal Covers - 2x
- Tamper-Seal Stickers - 2x
- Activation sticker (remove to activate) - 1x

## Installation guide of the CubicMeter

To install the CubicMeter, you must first locate the inlet pipe(s) to your home, before they branch out to the different outlets, such as the shower, toilet, etc. Make sure that the water pipes are not bent or damaged and do not contain any air bubbles. If the installation is not made correctly, Quandify cannot guarantee metering accuracy.



4. Select pipe setting by holding the sticker over the IR-eye.

LCD code	Compatible pipes
Cu XX	Copper pipes
Cr XX	Chromed pipes

Cu 22

Example: Copper pipe 22mm chosen.

Note: The device will start saving data automatically after 1 hour. If the activation sticker is put back on for 15s over the IR eye within 8 hours, after it has been removed, the device will revert to its packaging state.

Details are subject to change.

The company is not liable for possible errors and/or misprints.

## SPECIFICATIONS

Battery:	3.6 VDC Li/SOCl <sub>2</sub> , non-replaceable, up to 10 years
Storage conditions:	5°C ... 55°C
Water temperature:	0.1°C ... 70°C (T70)
Environment:	5°C ... 30°C, indoor usage (B, E1)
Wireless frequency:	868 MHz
Overload flow rate (Q <sub>4</sub> ):	3 125 l/h
Small leak detection:	>1 l/h over several days (alerted wirelessly only)
Medium leak detection:	>10 l/h for at least 40 min
Large leak detection:	>1500 l/h for at least 5 min
Weight:	280 grams (excluding packaging)
Dimensions:	Width: 40 mm, height: 79 mm, length 87 mm
Wireless M-bus protocol:	Wireless M-Bus (C1, format A)
LoRaWAN data resolution:	1 hour (configurable)
Pipe compatibility:	Ø 15 - 22mm, copper and chromed copper
Straight pipe needed:	10D (~15-22 cm) straight pipe before meter
Warranty:	2 years

## Wireless connectivity

For communication the device needs to be within LoRaWAN or Wireless M-bus coverage. If there is no existing coverage, please contact sales to purchase a LoRaWAN gateway from Quandify.



The CubicMeter communicates using 868 MHz radio frequency which allows the meter to be read and controlled remotely using LoRaWAN networks. Contact Quandify Sales to activate LoRaWAN for remote data collection and visualization through our cloud services.



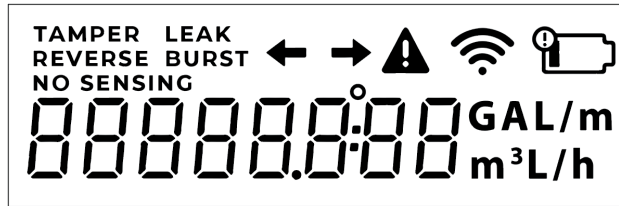
The CubicMeter also communicates with the open wireless M-Bus standard using 868 MHz mode C1, format A and security mode 5. To receive the individual meter encryption key, please fill in the form here:

<https://quandify.com/cm1-key-request-form/>

using your purchase receipt. Link to protocol information:

<https://quandify.com/wmbus-info>.





LCD CODE	Description
TAMPER	Attempt to fraud or in other ways affect the meters. The meter is no longer approved for billing by MID.
LEAK	Possible medium leakage detected.
REVERSE	Water is flowing through the meter in the wrong direction.
BURST	Possible large pipe burst leakage detected.
NO SENSING	Unable to detect water. May be due to the pipe not being filled with water, or a loosely installed meter. Flow is not measured.
	Indicates the momentary direction of the flow (left or right).
	Indicates a faulty metering device, or signals a warning in conjunction with an error/warning code.
	Indicates successful radio transmissions. A single dot indicates a faulty radio module.
	Low battery, less than 180 days remaining.

The units perform an LCD check every 5 minutes where all segments are displayed for a visual verification of the LCD screen's full functionality.

The following information is then displayed in the following order:

- Firmware version
- Firmware checksum in hex format
- Serial number in hex format
- Current water temperature in °C
- Pipe setting
- Event(change) log counter
- If applicable, the last error logged

## MAINTENANCE & SERVICE

CubicMeter is maintenance-free throughout the life of the meter, which is up to 10 years.

Check the LCD display for any warnings or error messages. A list of error/warning codes and its meaning is available here:

<https://quandify.com/product-documents/cubicmeter/error-codes.pdf>.

If a unit is faulty, please contact your authorized distributor for further assistance. All service, including battery replacement must be performed by an authorized Quandify service center.

Some configuration options can be performed via the meter's built-in optical eye or LoRaWAN by authorized personnel.

If external parts need to be replaced, such as pipe clamps and covers, only original manufacturer spare parts should be used. Replacements should only be done by authorized personnel.

To uninstall a meter from a pipe, use a screwdriver to bend away the two tamper-seal covers until it breaks and can be removed. Use pliers to cut the two metal fastening clamps around the pipe. The meter can then be removed.

Contact support at [support@quandify.com](mailto:support@quandify.com) for assistance.